

About this manual

This “Parameter Guide” contains explanations and other information regarding the operations of the parameters and settings on the TRITON proX, TRITON pro, and TRITON. The explanations are organized by mode, page, and tab. Explanations and other information on the effects and their parameters are also provided for each effect. Refer to this guide when an unfamiliar parameter appears in the display, or when you need to know more about a particular function.

Conventions in this manual

References to the TRITON proX, TRITON pro, and TRITON
The TRITON proX, TRITON pro, and TRITON are collectively referred to in this manual as the TRITON.

Switches and knobs []

References to the switches, dials, and knobs on the TRITON’s panel are enclosed in square brackets []. References to **buttons** or **tabs** indicate objects in the LCD display screen.

Parameters in the LCD display screen “ ”

Parameters displayed in the LCD screen are enclosed in double quotation marks “ ”.

Boldface type

Parameter values are printed in boldface type. Content that is of particular importance is also printed in boldface type.

Procedure steps ① ② ③ ...

Steps in a procedure are listed as ① ② ③ ...

ⓘ p. ■, ⓘ ■ – ■

These indicate pages or parameter numbers to which you can refer.

Link ■ – ■

Link indicates a linked parameter on a different page that has the same name or an abbreviated name. ■ – ■ indicates the parameter numbers.

Symbols ▲, note, MIDI, AMSource, D^{mod}, Sync

These symbols respectively indicate cautions, advice, MIDI-related explanations, a parameter that can be selected as an alternate modulation source, a parameter that can be selected as a dynamic modulation source, and a parameter that can use the BPM/MIDI Sync function.

Example screen displays

The values of the parameters shown in the example screens of this manual are only for explanatory purposes, and may not necessarily match the values that appear in the LCD screen of your instrument.

MIDI-related explanations

CC# is an abbreviation for Control Change Number.

In explanations of MIDI messages, **numbers in square brackets []** always indicate hexadecimal numbers.

How to read the “Parameter Guide”

(example)

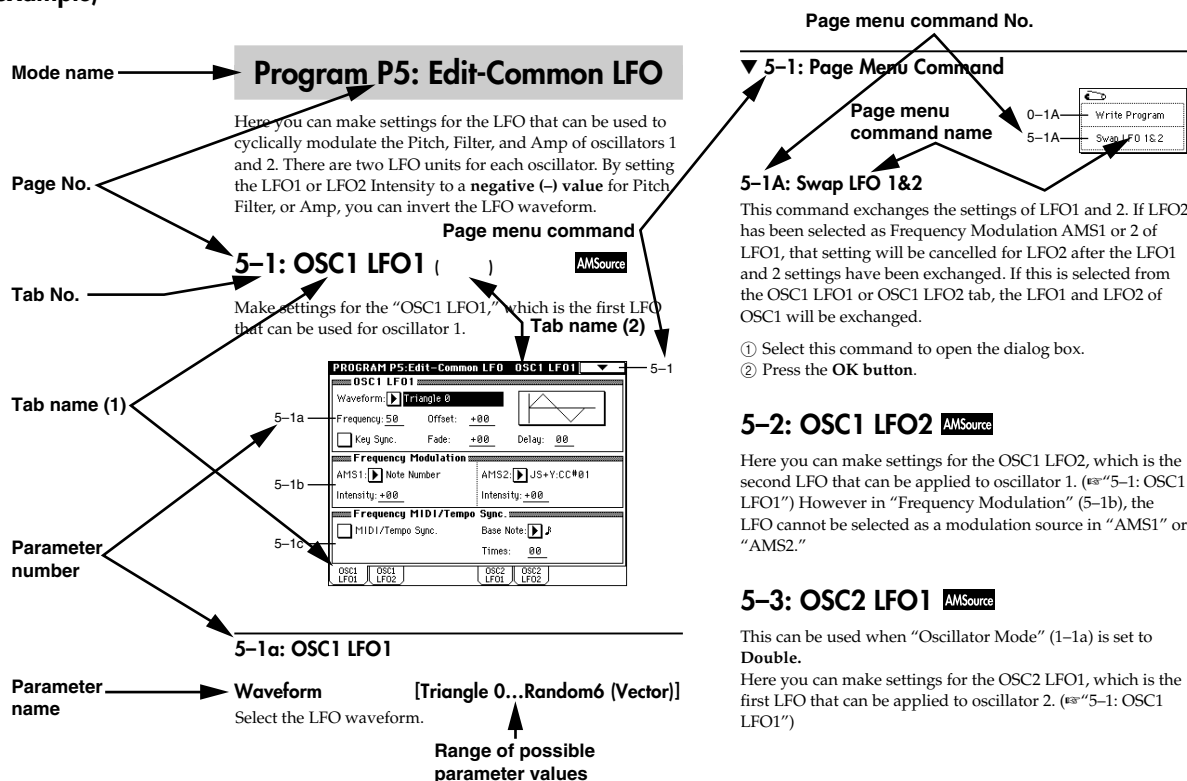


Table of Contents

1. Program mode 1

Program P0: Play	1
0-1: Perf. Edit (Performance Edit)	1
0-2: Arpeggio	3
Program P1: Edit – Basic	4
1-1: Program Basic	4
1-2: OSC Basic	5
1-3: Velo. Zone (Velocity Zone)	7
1-4: Controller (Controller Setup)	8
Program P2: Edit – Pitch	8
2-1: OSC1 P.Mod (OSC1 Pitch Mod.)	8
2-2: OSC2 P.Mod (OSC2 Pitch Mod.)	10
2-3: Pitch EG AMS Source	10
Program P3: Edit – Filter	12
3-1: Filter1	12
3-2: Filter1 Mod.	13
3-3: Filter1 lfo Mod (Filter1 LFO Mod.)	14
3-4: Filter1 EG AMS Source	15
3-5: Filter2	16
3-6: Filter2 Mod.	16
3-7: Filter2 lfo Mod (Filter1 LFO Mod.)	16
3-8: Filter2 EG AMS Source	16
Program P4: Edit -Amp	17
4-1: Amp1 Lvl/Pan (Amp1 Level/Pan)	17
4-2: Amp1 Mod.	17
4-3: Amp1 EG AMS Source	18
4-4: Amp2 Lvl/Pan (Amp1 Level/Pan)	20
4-5: Amp2 Mod.	20
4-6: Amp2 EG AMS Source	20
Program P5: Edit-Common LFO	20
5-1: OSC1 LFO1 AMS Source	20
5-2: OSC1 LFO2 AMS Source	21
5-3: OSC2 LFO1 AMS Source	21
5-4: OSC2 LFO2 AMS Source	22
Program P7: Edit-Arpeggiator	22
7-1: Arpeg. Setup	22
7-2: Scan Zone	24
Program P8: Edit-Insert Effect	24
8-1: Routing	24
8-2: Insert FX	25
8-3: IFX 1	26
8-4: IFX 2	26
8-5: IFX 3	26
8-6: IFX 4	26
8-7: IFX 5	26
Program P9: Edit-Master Effect	27
9-1: Master FX	27
9-2: MFX 1	28
9-3: MFX 2	28
9-4: Master EQ	28

2. Combination mode 29

Combination P0: Play	29
0-1: Prog. Select (Program Select)	29
0-2: Mixer	31
0-3: Arpegg. A (Arpeggio Play A)	32
0-4: Arpegg. B (Arpeggio Play B)	32
Combination P1: Edit-Program/Mixer	32
1-1: Program/Mixer	32
Combination P2: Edit-Trk Param	33
2-1: MIDI Channel (MIDI Ch)	33
2-2: OSC	33
2-3: Pitch	33
2-4: Other	34
Combination P3: Edit-MIDI Filter	35
3-1: MIDI 1 (MIDI Filter -1)	35
3-2: MIDI 2 (MIDI Filter -2)	36
3-3: MIDI 3 (MIDI Filter -3)	36
3-4: MIDI 4 (MIDI Filter -4)	36
Combination P4: Edit-Zone/Ctrl	37
4-1: Key Z (Key Zone)	37
4-2: Vel Z (Vel Zone)	37
4-3: MOSS Setup (MOSS)	38
4-4: Controller (Control)	38
Combination P7: Edit-Arp	39
7-1: Setup	39
7-2: Arpegg. A (Arpeggiator A)	40
7-3: Arpegg. B (Arpeggiator B)	40
7-4: Scan Zone (Scan Zone A/B)	40
Combination P8: Edit-Insert FX	41
8-1: Routing	41
8-2: Insert Fx	42
8-3: IFX 1	42
8-4: IFX 2	42
8-5: IFX 3	42
8-6: IFX 4	42
8-7: IFX 5	42
Combination P9: Edit-Master FX	43
9-1: Master FX	43
9-2: MFX 1 (Master Effect1)	43
9-3: MFX 2 (Master Effect2)	43
9-4: Master EQ	44

3. Sequencer mode 45

Sequencer P0: Play/Rec	45
0-1: Prog. 1-8 (Program T01-08)	45
0-2: Prog. 9-16 (Program T09-16)	45
0-3: Mixer 1-8 (Mixer T01-08)	49
0-4: Mixer 9-16 (Mixer T09-16)	49
0-5: PlyLoop 1-8 (PlayLoop T01-08)	49
0-6: PlyLoop 9-16 (PlayLoop T09-16)	49
0-7: Preference	50
Sequencer P1: Cue List	51
1-1: Cue List	51
Sequencer P2: Trk Param	55
2-1: MIDI Ch 1-8 (MIDI Ch T01-08)	55
2-2: MIDI Ch 9-16 (MIDI Ch T09-16)	55
2-3: OSC 1-8 (OSC T01-08)	55

2-4: OSC 9-16 (OSC T09-16)	55
2-5: Pitch 1-8 (Pitch T01-08)	56
2-6: Pitch 9-16 (Pitch T09-16)	56
2-7: Other 1-8 (Other T01-08)	56
2-8: Other 9-16 (Other T09-16)	56
Sequencer P3: MIDI Filter	57
3-1: MIDI 1 1-8 (MIDI Filter -1 T01-08).	57
3-2: MIDI 1 9-16 (MIDI Filter -1 T09-16).	57
3-3: MIDI 2 1-8 (MIDI Filter -2 T01-08).	58
3-4: MIDI 2 9-16 (MIDI Filter -2 T09-16).	58
3-5: MIDI 3 1-8 (MIDI Filter -3 T01-08).	58
3-6: MIDI 3 9-16 (MIDI Filter -3 T09-16).	58
3-7: MIDI 4 1-08 (MIDI Filter -4 T01-08).	58
3-8: MIDI 4 9-16 (MIDI Filter -4 T09-16).	58
Sequencer P4: Zone/Ctrl.	59
4-1: Key Z 1-8 (Key Zone T01-08)	59
4-2: Key Z 9-16 (Key Zone T09-16)	59
4-3: Vel Z 1-8 (Vel Zone T01-08).	60
4-4: Vel Z 9-16 (Vel Zone T09-16).	60
4-5: MOSS 1-8 (MOSS T01-08)	60
4-6: MOSS 9-16 (MOSS T09-16)	60
4-7: Controller (Controller Setup)	60
Sequencer P5: Track Edit.	61
5-1: Track Edit	61
5-2: Track Name.	68
Sequencer P6: Pattern/RPPR	68
6-1: Pattern Edit	68
6-2: Pattern Name	71
6-3: RPPR Setup	71
Sequencer P7: Arpeggiator	73
7-1: Setup 1-8 (Setup T01-08)	73
7-2: Setup 9-16 (Setup T09-16)	73
7-3: Arpegg. A (Arpeggiator A)	74
7-4: Arpegg. B (Arpeggiator B)	74
7-5: Scan Zone (Scan Zone A/B).	74
Sequencer P8: Insert Effect	75
8-1: Routing 1-8 (Routing T01-08)	75
8-2: Routing 9-16 (Routing T09-16)	75
8-3: Insert FX	76
8-4: IFX 1	76
8-5: IFX 2	76
8-6: IFX 3	76
8-7: IFX 4	76
8-8: IFX 5	76
Sequencer P9: Master Effect	77
9-1: Master FX	77
9-2: MFX 1	77
9-3: MFX 2	77
9-4: Master EQ	78

4. Sampling mode 79

Sampling P0: Recording	79
0-1: Recording	79
0-2: Input/Setup	86
0-3: Preference	87
0-4: Memory Status	87

Sampling P1: Sample Edit	88
1-1: Sample Edit	88
Sampling P2: Loop Edit	94
2-1: Loop Edit	94
Sampling P3: Multisample	96
3-1: Multisample	96
3-2: Preference	98
Sampling P4: Controller Setup	98
4-1: Controller Setup	98
Sampling P8: Insert Effect	99
8-1: Insert FX	99
8-2: IFX 1	100
8-3: IFX 2	100
8-4: IFX 3	100
8-6: IFX 4	100
8-5: IFX 5	100

5. Song Play mode 101

Song Play P0: Program/Mix	101
0-1: Prog. 1-8 (Program T01-08).	101
0-2: Prog. 9-16 (Program T09-16).	101
0-3: Mixer 1-8 (Mixer T01-08)	103
0-4: Mixer 9-16 (Mixer T09-16)	103
0-5: Preference	103
Song Play P1: Track	104
1-1: Status 1-8 (Status/Scale T01-08)	104
1-2: Status 9-16 (Status/Scale T09-16)	104
1-3: MOSS 1-8 (MOSS Setup T01-08)	104
1-4: MOSS 9-16 (MOSS Setup T09-16)	104
Song Play P2: Controller Setup	105
2-1: Controller Setup (Preference)	105
Song Play P3: Select Directory/Jukebox	106
3-1: Select Directory	106
3-1: Jukebox	106
Song Play P7: Arpeggiator	107
7-1: Setup 1-8 (Setup T01-08)	107
7-2: Setup 9-16 (Setup T09-16)	107
7-3: Arpegg. A (Arpeggiator A)	108
7-4: Arpegg. B (Arpeggiator B)	108
7-5: Scan Zone (Scan Zone A/B)	108
Song Play P8: Insert Effect	109
8-1: Routing 1-8 (Routing T01-08).	109
8-2: Routing 9-16 (Routing T09-16).	109
8-3: Insert FX	110
8-4: IFX 1	110
8-5: IFX 2	110
8-6: IFX 3	110
8-7: IFX 4	110
8-8: IFX 5	110
Song Play P9: Master Effect	111
9-1: Master FX	111
9-2: MFX1	111
9-3: MFX2	111
9-4: Master EQ	112

6. Global mode 113

Global P0: Basic Setup	113
0-1: Basic	113
0-2: System Pref. (System Preference)	115
0-3: Audio Input	116
Global P1: MIDI	117
1-1: MIDI	117
Global P2: Controller	121
2-1: Controller	121
Global P3: User Scale	121
3-1: User Scale	121
Global P4: Category Name	122
4-1: Program Cat.	122
4-2: Comb Cat.	122
Global P5: Drum Kit	123
5-1: Sample Setup	123
5-2: Voice/Mixer	125
Global P6: User Arpeggio	126
6-1: Pattern Setup	126
6-2: Pattern Edit	128

7. Disk mode 131

Files, directories, and icons	131
0-1: Load	132
0-2: Save	139
0-3: Utility	141
0-4: Media Info (Media Information)	143

8. Effect Guide 145

Overview	145
Insert Effects (IFX 1, 2, 3, 4, 5)	146
Master Effects (MFX1, 2)	150
Master EQ	153
Individual Outputs	153
Filter/Dynamic	155
Filter and dynamics control effects	155
000: No Effect	155
001: St. Amp Simulation (Stereo Amp Simulation)	155
002: Stereo Compressor	155
003: Stereo Limiter	155
004: Multiband Limiter	156
005: Stereo Gate	157
006: OD/Hi.Gain Wah (Overdrive/Hi.Gain Wah)	157
007: St. Parametric 4EQ (Stereo Parametric 4-Band EQ)	158
008: St. Graphic 7EQ (Stereo Graphic 7 Band EQ)	159
009: St. Wah/Auto Wah (Stereo Wah/Auto Wah)	159
010: St. Random Filter (Stereo Random Filter)	160
011: St. Exciter/Enhncr (Stereo Exciter/Enhancer)	161
012: St. Sub Oscillator (Stereo Sub Oscillator)	161

013: Talking Modulator	162
014: Stereo Decimator	163
015: St. Analog Record (Stereo Analog Record)	163
Pitch/Phase Mod.	164
Pitch/phase modulation effects	164
016: Stereo Chorus	164
017: St. Harmonic Chorus (Stereo Harmonic Chorus)	164
018: Multitap Cho/Delay (Multitap Chorus/Delay)	165
019: Ensemble	165
020: Stereo Flanger	166
021: St. Random Flanger (Stereo Random Flanger)	166
022: St. Env. Flanger (Stereo Envelope Flanger)	167
023: Stereo Phaser	167
024: St. Random Phaser (Stereo Random Phaser)	168
025: St. Env. Phaser (Stereo Envelope Phaser)	168
026: St. Biphase Mod. (Stereo Biphase Modulation)	169
027: Stereo Vibrato	169
028: St. Auto Fade Mod. (Stereo Auto Fade Modulation)	170
029: 2Voice Resonator	170
030: Doppler	171
031: Scratch	172
Mod./P.Shift	173
Other modulation and pitch shift effects	173
032: Stereo Tremolo	173
033: St. Env. Tremolo (Stereo Envelope Tremolo)	173
034: Stereo Auto Pan	174
035: St. Phaser + Trml (Stereo Phaser + Tremolo)	174
036: St. Ring Modulator (Stereo Ring Modulator)	175
037: Detune	176
038: Pitch Shifter	176
039: Pitch Shift Mod. (Pitch Shift Modulation)	177
040: Rotary Speaker	177
ER/Delay	178
Early reflection and delay effects	178
041: Early Reflections	178
042: Auto Reverse	179
043: L/C/R Delay	179
044: Stereo/Cross Delay	180
045: St. Multitap Delay (Stereo Multitap Delay)	180
046: St. Modulation Delay (Stereo Modulation Delay)	181
047: St. Dynamic Delay (Stereo Dynamic Delay)	181
048: St. Auto Panning Dly (Stereo Auto Panning Delay)	182
049: L/C/R BPM Delay	182

050: St. BPM Delay (Stereo BPM Delay)	183	083: Wah – Amp Sim (Wah/Auto Wah – Amp Simulation)	197
051: Sequence Delay	183	084: Decimator – Amp (Decimator – Amp Simulation).	197
Reverb	184	085: Decimator – Comp (Decimator – Compressor).	197
Reverb effects	184	086: Amp Sim – Tremolo (Amp Simulation – Tremolo)	198
052: Reverb Hall	184	087: Cho/Flng – Mt. Dly (Chorus/Flanger – Multitap Delay).	198
053: Reverb SmoothHall	184	088: Phaser – Cho/Flng (Phaser – Chorus/Flanger)	199
054: Reverb Wet Plate	184	089: Reverb – Gate.	199
055: Reverb Dry Plate	184	Double Size.	200
056: Reverb Room	185	Double-size effects (Available for Insert Effects IFX2, 3, and 4)	200
057: Reverb BrightRoom.	185	090: Piano Body/Damper (Piano Body/Damper Simulation).	200
Mono – Mono Chain	185	091: St. Mltband Limiter (Stereo Multiband Limiter)	200
Effects that combine two mono effects connected in series	185	092: OD/HyperGain Wah (Overdrive/Hyper Gain Wah)	200
058: P4EQ – Exciter (Parametric 4-Band EQ – Exciter)	185	093: Vocoder.	201
059: P4EQ – Wah (Parametric 4-Band EQ – Wah/Auto Wah). 186		094: Multitap Cho/Delay (Multitap Chorus/Delay)	202
060: P4EQ – Cho/Flng (Parametric 4-Band EQ – Chorus/Flanger). 186		095: St. Pitch Shifter (Stereo Pitch Shifter).	202
061: P4EQ – Phaser (Parametric 4-Band EQ – Phaser)	187	096: Rotary Speaker OD (Rotary Speaker Overdrive)	203
062: P4EQ – Mt. Delay (Parametric 4-Band EQ – Multitap Delay). . 187		097: Early Reflections	204
063: Comp – Wah (Compressor – Wah/Auto Wah).	188	098: L/C/R Long Delay	204
064: Comp – Amp Sim (Compressor – Amp Simulation)	188	099: St/Cross Long Dly (Stereo/Cross Long Delay)	204
065: Comp – OD/HiGain (Compressor – Overdrive/Hi.Gain).	188	100: LCR BPM Long Dly (L/C/R BPM Long Delay).	205
066: Comp – Param4EQ (Compressor – Parametric 4-Band EQ) . . . 189		101: St. BPM Long Delay (Stereo BPM Long Delay)	205
067: Comp – Cho/Flng (Compressor – Chorus/Flanger).	189	102: Hold Delay	206
068: Comp – Phaser (Compressor – Phaser)	190	Master EQ.	207
069: Comp – Mt. Delay (Compressor – Multitap Delay).	190	Master EQ.	207
070: Limiter – P4EQ (Limiter – Parametric 4-Band EQ).	191	9. Appendices	209
071: Limiter – Cho/Flng (Limiter – Chorus/Flanger)	191	Alternate Modulation Source (AMS)	209
072: Limiter – Phaser	192	About Alternate Modulation.	209
073: Limiter – Mt. Delay (Limiter – Multitap Delay)	192	About Alternate Modulation Sources	209
074: Exciter – Comp (Exciter – Compressor) . . . 193		AMS (Alternate Modulation Source) List	210
075: Exciter – Limiter.	193	Alternate Modulation settings	212
076: Exciter – Cho/Flng (Exciter – Chorus/Flanger)	193	The effect of alternate modulation on various parameters, and example applications	212
077: Exciter – Phaser	194	Dynamic Modulation Source (Dmod)	214
078: Exciter – Mt. Delay (Exciter – Multitap Delay)	194	Dynamic Modulation Source List.	215
079: OD/HG – Amp Sim (Overdrive/Hi.Gain – Amp Simulation) . . . 195		About the BPM/MIDI SYNC function	216
080: OD/HG – Cho/Flng (Overdrive/Hi.Gain – Chorus/Flanger) . . . 195		SW1/2 Assign	217
081: OD/HG – Phaser (Overdrive/Hi.Gain – Phaser).	196	SW1, SW2 Assign List.	217
082: OD/HG – Mt. Delay (Overdrive/Hi.Gain – Multitap Delay) . . . 196		Knob 1..4 B-Assign	218
		Realtime Control Knobs B–Assign List	218
		Foot Switch Assign	219
		Foot Switch Assign List	219
		Foot Pedal Assign	220
		Foot Pedal Assign List	220

MIDI transmission/reception when the TRITON's controllers are operated.	221
TRITON operations when control changes are transmitted/received.	223
Disk mode information	226
Chunks that are supported.	226
About KORG format files	226
Various messages	229
TRITON-SERIES MIDI IMPLEMENTATION	234
Option boards/memory	237
About option boards and memory	237
Please note when installing an option board/memory.	238
Checking after installation	238
Caution when purchasing DRAM SIMM modules.	238
Option board/memory installation procedure	239
Index.	244

* Company names, product names, and names of formats etc. are the trademarks or registered trademarks of their respective owners.

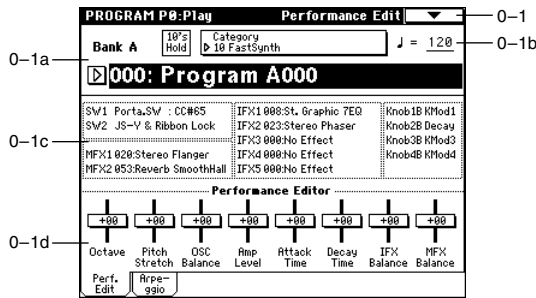
1. Program mode

Program P0: Play

In this display page you can select and play programs.

MIDI All MIDI data in Program P0: Play is transmitted and received on the Global MIDI Channel "MIDI Channel" (Global P1: 1-1a).

0-1: Perf. Edit (Performance Edit)



0-1a: Bank, 10's Hold, Category, Program Number

Bank (Bank Select) [Bank A...F, G, g(1)...g(9), g(d)]

This is the program bank display. Use the front panel BANK [A]-[G] keys to select the bank. Bank G will cycle as follows each time you press the BANK [G] key. G → g(1) → g(2) → g(3) → g(4) → g(5) → g(6) → g(7) → g(8) → g(9) → g(d) → G

note Bank F can be selected if you have installed the separately sold EXB-MOSS option. When installed, the 128 special EXB-MOSS programs will be available.

The TRITON series provides rewritable banks A, B, C, D, and E, each containing 128 programs (total 640). As non-rewritable program areas, it provides banks G (capital programs for GM2), banks g(1)-g(9) (variation programs), and bank g(d) (drums). A list of the factory-set programs is provided in the separate booklet *Voice Name List*.

A, B	for preset programs
C, D	(for preset programs, and EXB-PCM series programs)
E	(for user programs such as programs that use multi-samples from Sampling mode)
F	(for EXB-MOSS programs)
G	GM2 capital bank
g(1)-g(9)	GM2 variation banks
g(d)	GM2 drums bank

10's Hold

When you press the front panel [./10's HOLD] key, the display will indicate ^{10's}Hold, and the ten's place of the program number will be fixed. By pressing a numeric key [0]-[9], you can change the one's place in one keystroke. Use the [△] and [▽] keys to change the 10's place. To exit, press the [./10's HOLD] key once again.

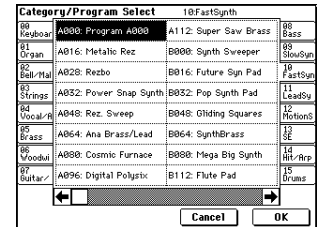
Category

[00...15: name]

This is the program category display.

You can select programs by category. Press the popup button, and the "Category/Program Select" menu will appear.

Category/Program Select menu:



The programs of all banks can be organized using up to 16 categories. Use the tabs located at left and right to select a category, and the programs in the specified category will appear. Press the **OK** button to execute, or press the **Cancel** button to cancel your selection.

The category for each program can be specified in the "Write Program" (0-1A) dialog box.

Program Number: name

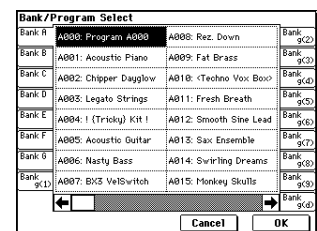
[(A...F)0...127: name, (G...g(d))1...128: name]

This is the number and name of the program.

Here you can select the desired program. When this parameter is selected, you can select programs using the front panel numeric keys [0]-[9], [VALUE] dial, or [△] [▽] keys. When you press the popup button, the "Bank/Program Select" menu will appear. This displays programs by bank, and allows you to select a program.

For details on other ways to select programs such as using a foot switch or by using MIDI program change messages from an external MIDI device, refer to p125, 114 in the *Basic Guide*.

Bank/Program Select menu:



All programs are grouped and displayed by their bank.

When you use the tabs at left and right to select a bank, the programs in the selected bank will appear. Press the **OK** button to execute, or press the **Cancel** button to cancel your selection.

0-1b: ♩ (Tempo)

[040...240, EXT]

This sets the tempo of the arpeggiator (Link: "Arpeggio Tempo ♩" 7-1a). The tempo can also be adjusted by the front panel ARPEGGIATOR [TEMPO] knob. A display of EXT indicates that the "MIDI Clock" setting (Global P1: 1-1a) has been set to **External MIDI** or **External PCI/F**, and that the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

0-1c: Program Information


Information on the selected program is displayed here. This shows the functions that are assigned to the [SW1] and [SW2] keys and to the B mode of REALTIME CONTROL knobs [1], [2], [3], [4], and the names of the effects that are selected for the insertion effects and the master effects.


0-1d: Performance Editor

The Performance Editor lets you edit major program parameters without moving to the Program P1-P9 Edit pages. This edits multiple program parameters within the currently selected program, allowing you to make broad adjustments easily. You can use the Performance Editor when you wish to adjust the depth of effects etc. while you are playing, or to make the initial rough settings to begin the process of creating a new sound.

Editing that you do here will affect the values of the program parameters in the edit buffer.

If you wish to keep the results of your editing, you must write (save) the program (see p.38 in the *Basic Guide*).

 Editing done by the Performance Editor takes place within the valid range of the applicable parameters. If you use the Performance Editor to modify a value, then move to another page or mode, and finally return to Program mode, the previously-edited state will be maintained, but the Performance Editor sliders in the LCD screen will return to a value of +00. Since the Performance Editor is provided as a way of making approximate edits, the balance between parameters may be lost in some cases.

 If the "Enable Exclusive" (Global P1: 1-1b) setting is checked, MIDI exclusive parameter changes will be transmitted whenever you operate the Performance Editor. If these messages are received by a TRITON whose "Enable Exclusive" setting is checked, the Performance Editor corresponding to that message will be modified.

Octave [-03...00...+03]

An adjustment of +01 will raise the pitch one octave. An adjustment of -01 will lower the pitch one octave. However, this setting cannot adjust the pitch higher than 4' (feet) or lower than 32' (feet).

Pitch Stretch [-12...+00...+12]


This simultaneously adjusts the Transpose and Tune of the oscillator. This lets you produce a variety of tonal changes and variations without losing the character of the original sound.

At the +00 setting, the value of the program parameters will be unchanged.

An adjustment of +01 will lower the Transpose value by 1, and simultaneously raise the Tune value by 100.

An adjustment of -01 will raise the Transpose value by 1, and simultaneously lower the Tune value by 100.

However, it is not possible for the Transpose value to exceed the range of ±12, nor the Tune value to exceed the range of ±1200.


 This Performance Editor function cannot be used with bank F.

OSC Balance [-10...0...+10]

This adjusts the level balance between oscillators 1 and 2. At the +00 setting, the value of the program parameters will be unchanged.

Positive (+) settings will lower the oscillator 2 level. With an adjustment of +10, the oscillator 2 level will be 0. The oscillator 1 level will not change.

Negative (-) settings will lower the oscillator 1 level. With an adjustment of -10, the oscillator 1 level will be 0. The oscillator 2 level will not change.

 For programs whose "Oscillator Mode" (1-1a) setting is **Single**, oscillator 2 will not sound. Only the level of oscillator 1 will change. For a **Drums** program, this performance editor will have no effect.

Amp Level [-10...0...+10]

This adjusts the amp level. With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will increase the amp level above the value that was set.

With an adjustment of +10, the amp level will be 127 (maximum).

Negative (-) settings will lower the amp level below the value that was set.

With an adjustment of -10, the amp level will be 0.

Attack Time [-10...0...+10]


This adjusts the amp times of the filter EG and amp EG. With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will lengthen the attack times beyond the values that were set.

With an adjustment of +10, the attack times will be 90.

Negative (-) settings will shorten the attack times.

With an adjustment of -10, the attack times will be 0.

 When you modify "Attack Time," the EG Start Level, Attack Level, Start Level Modulation, and Attack Time Modulation of the amp EG will also be adjusted simultaneously, to allow the maximum effect to be obtained.

Decay Time [-10...0...+10]

This adjusts the Decay Time and Slope Time of the filter EG and amp EG.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will lengthen the Decay Time and Slope Time beyond the values that were set. With an adjustment of +10, the times will be 99.

Negative (-) settings will shorten the Decay Time and Slope Time. With an adjustment of -10, the times will be 0.

IFX Balance [-10...0...+10]

This adjusts the "Wet/Dry" setting of insertion effects 1-5 as a whole.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will raise the Wet levels above the program setting, and lower the Dry levels. With an adjustment of +10, the setting will be "Wet."

Negative (-) settings will lower the Wet levels below the program setting, and raise the Dry levels. With an adjustment of -10, the setting will be "Dry."

MFX Balance [-10...0...+10]

This adjusts the master effect "Return 1" and "Return 2" (9-1c) settings as a whole.

With an adjustment of +00, the value of the program parameters will be unchanged.


Positive (+) settings will raise the return levels above the program setting.

With an adjustment of **+10**, the setting will be 127 (maximum).

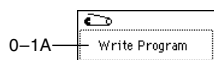
Negative (-) settings will lower the return levels below the program setting.

With an adjustment of **-10**, the setting will be 0.

Octave	Octave of OSC 1 and 2
Pitch Stretch	Transpose and Tune of OSC 1 and 2
OSC Balance	High Multisample, Low Multisample Level of OSC 1 and 2
Amp Level	Amp Level of Amp 1 and 2
Attack Time	Amp EG Attack Time, Start Level, Attack Level, Level Modulation St, Time Modulation At of Amp 1 and 2, and Filter EG Attack Time of Filter 1 and 2
Decay Time	AmpEG Decay Time, Slope Time of Amp 1 and 2; Filter EG Decay Time and Slope Time of Filter 1 and 2
IFX Balance	Wet/Dry balance of the IFX1/2/3/4/5 effects
MFX Balance	Master Effect Return 1, 2

 For the **F bank** programs that can be used when the separately sold EXB-MOSS option is installed, different program parameters will be adjusted. For details refer to the EXB-MOSS owner's manual.

▼ 0-1: Page Menu Command




0-1A: Write Program

This writes the edited program into internal memory. If you wish to keep a program, be sure to write it. An edited program cannot be recovered if you fail to write it before turning off the power or selecting another program.

- When you select this command, the following dialog box will appear.



- The upper line shows the bank name and program name. If you wish to modify the program name, press the text edit button to move to the text edit dialog box, and input the desired program name.
- In "Category," specify the category of the program that you are writing. The category selected here can be used to find this program when selecting a program in Program, Combination, Sequencer, or Song Play modes. With the factory settings, the program categories have been given the names of instruments etc., but you can use "Program Cat." (Global P4: 4-1) to modify these category names.
- Press "To Program" to specify the writing destination.

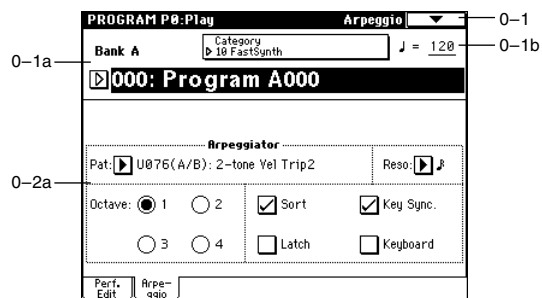
 It is not possible to write to banks G-g(d). If you have edited a program from banks G-g(d) and wish to write it, you must write to banks A-E.

- To execute the Write Program operation, press the **OK button**. To cancel, press the **Cancel button**.

note When you press the front panel [REC/WRITE] key, the "Update Program" dialog box will appear. Here too, you can write to the currently selected program.

0-2: Arpeggiator

Arpeggiator parameters are edited in P7: Edit - Arpeggiator, but major parameters can be edited here as well. When you are playing in Program P0: Play, you can edit the arpeggiator in realtime, such as changing the arpeggio pattern etc. To write (save) the results of your editing, use "Write Program" or "Update Program." You can also use the front panel [TEMPO], [GATE], and [VELOCITY] knobs to edit the arpeggio in realtime (see p.29, 30 in the *Basic Guide*).



0-2a: Arpeggiator

Pat (Pattern No.) [P00...P04, U00(A/B)...U231(D)]

Octave [1, 2, 3, 4]

Reso (Resolution) [♪♪, ♪♪, ♪♪, ♪♪, ♪♪, ♪♪]

Sort

Latch

Key Sync. (Keyboard Synchronize)

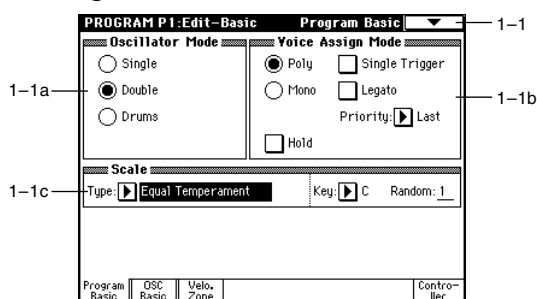
Keyboard

These parameters are linked with the parameters of the same name (and abbreviation) in "7-1b: Arpeggio Setup" (see "P7: Edit-Arpeggiator").

Program P1: Edit – Basic

Here you can make basic settings for the program, such as basic oscillator settings and the scale.

1-1: Program Basic



1-1a: Oscillator Mode [Single, Double, Drums]

Specify the basic program type; whether it will use one or two oscillators, or a drum kit.

Single: The program will use **one oscillator** (Oscillator 1, Filter 1, Amplifier 1). In this case the program will have a **maximum of 62-note polyphony**.

Double: The program will use **two oscillators** (Oscillator 1/2, Filter 1/2, Amplifier 1/2). In this case the program will have a **maximum of 31-note polyphony**.

Drums: The program will use **one oscillator** (as when **Single** is selected), but Oscillator 1 will be assigned a drum kit instead of a multisample. In this case the program will have a **maximum of 62-note polyphony**.

1-1b: Voice Assign Mode

Poly/Mono [Poly, Mono]

Poly: The program will play polyphonically, allowing you play chords.

Mono: The program will play monophonically, producing only one note at a time.

Single Trigger

This is available when the “Poly/Mono” setting is set to **Poly**.

Checked: When the same note is played repeatedly, the previous note will be silenced before the next note is sounded, so that the notes do not overlap.

Legato

This is available when the “Poly/Mono” setting is set to **Mono**.

Checked: Legato is on. When multiple note-on’s occur, the first note-on will retrigger the sound, and the second and subsequent note-on’s will not retrigger.

Unchecked: Legato is off. Notes will always be retriggered when note-on occurs.

When legato is on, multiple note-on’s will not retrigger the voice. If one note is already on and another note is turned on, the first voice will continue sounding. The oscillator sound, envelope, and LFO will not be reset, and only the pitch of the oscillator will be updated. This setting is effective for wind instrument sounds and analog synth-type sounds.

When legato is off, multiple note-on’s will retrigger the voice at each note-on. The oscillator sound, envelope, and LFO will be reset (and retriggered) according to the settings of the program.

▲ If “Legato” is checked, certain multisamples or keyboard locations may produce an incorrect pitch.

Priority [Low, High, Last]

This parameter is valid when “Poly/Mono” is set to **Mono**. It specifies which note will be given priority to play when two or more notes are played simultaneously.

Low: Lowest note will take priority.

High: Highest note will take priority.

Last: Last note will take priority.

Hold [On, Off]

Checked: Hold is **On**. Even when you take your finger off of the key, the note will continue sounding as if it continued to be held. Unless the “Amp1 EG”, “Amp2 EG” (4-3a, 4-6) “Sustain (Sustain Level)” is set to **0**, the sound will continue playing.

This is ideal for playing drum sounds, and when you set “Oscillator Mode” (1-1a) to **Drums**, you should turn **Hold On**.

Unchecked: Hold is **Off**. Except for drum programs, you should normally set **Hold Off**.

▲ If you turn “Hold” **On** for a drum program, keys of the selected drum kit whose “Enable Note Off” parameter (Global P5: 5-2a) is unchecked will be set to Hold On. Keys that are checked will be set to Hold Off. If you select Hold Off, the keys will be set to Hold Off regardless of their “Enable Note Off” setting.

1-1c: Scale

Type [Equal Temperament...User Octave Scale15]

Select the basic scale for the internal tone generator.

Equal Temperament: This is the most widely used scale, where each semitone step is spaced at equal pitch intervals.

Pure Major: In this temperament, major chords of the selected tonic will be perfectly in tune.

Pure Minor: In this temperament, minor chords of the selected tonic will be perfectly in tune.

Arabic: This scale includes the quarter-tone scale used in Arabic music.

Pythagoras: This scale is based on ancient Greek musical theory, and is especially effective for playing melodies.

Werkmeister (Werkmeister III): This is an equal tempered scale that was used since the later Baroque period.

Kirnberger (Kirnberger III): This scale was created in the 18th century, and is used mainly to tune harpsichords.

Slendro: This is an Indonesian gamelan scale in which an octave consists of five notes.

When “Key” is set to **C**, use the C, D, F, G and A notes. (Other keys will sound equal-tempered pitches.)

Pelog: This is an Indonesian gamelan scale in which an octave consists of seven notes.

When “Key” is set to **C**, use the white keys. (The black keys will sound the equal tempered pitches.)

Stretch: This tuning is used for acoustic pianos.

User All Notes Scale: This is the full-range scale (C-1 – G9) that was specified in “User All Notes Scale” (Global P3).

User Octave Scale 00–15: These are the single-octave scales that were specified in “User Octave Scale” (Global P3).

Key (Scale Key) [C...B]

Select the tonic note of the specified scale.

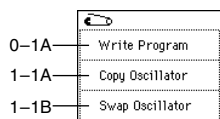
This setting is not valid for **Equal Temperament**, **Stretch**, and **User All Notes Scale**.

Random [0...7]

As this **value is increased**, a greater variance will be applied to the pitch when each note is sounded. Normally you will set this to **0**. This parameter is used when simulating instruments that have natural instability in pitch, such as tape-mechanism organs or acoustic instruments.

⚠ If a scale other than Equal Temperament is selected, the combination of the selected scale and the “Key” setting may skew the tuning of the base key (for example A=440 Hz). If this occurs, use “Master Tune” (Global P0: 0-1a) to correct the pitch.

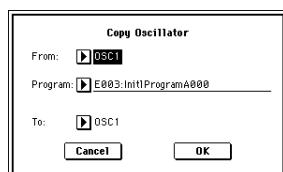
▼ 1-1: Page Menu Command



1-1A: Copy Oscillator

This command copies oscillator settings.

- 1 Select this command to open the following dialog box.



- 2 In “From” specify the oscillator to copy, and in “Program” specify the bank and number of the copy source program.
- 3 In “To,” specify the copy destination oscillator.
- 4 To execute the Copy Oscillator command, press the **OK button**. To cancel, press the **Cancel button**.

1-1B: Swap Oscillator

This command exchanges the settings of oscillators 1 and 2.

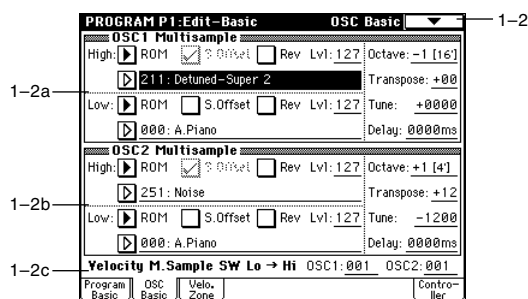
- 1 Select this command to open the dialog box.
- 2 To execute the Swap Oscillator command, press the **OK button**. To cancel, press the **Cancel button**.

1-2: OSC Basic

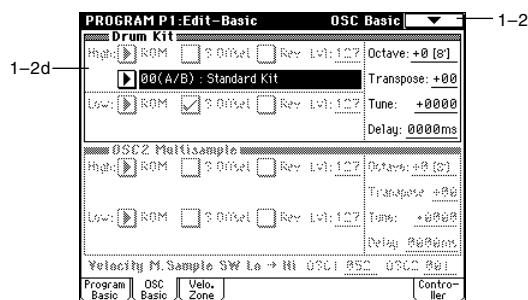
The multisample(s) (waveform) or drum kit on which the program will be based can be selected here for oscillator 1 and/or oscillator 2.

Internal ROM contains **425** different multisamples (preset multisamples) and **73** drum kits. By selecting a RAM multisample, you can use a multisample that you created in Sampling mode or that you loaded in Disk mode. If an EXB-PCM series option has been installed, you will be able to select multisamples from the installed option. The following illustration shows a LCD screen where “Oscillator Mode”

(1-1a) has been set to **Double**. If this is set to **Single**, the “OSC2 Multisample” (1-2b) will not appear and cannot be set.



The following illustration shows the display when “Oscillator Mode” (1-1a) has been set to **Drums**.



1-2a: OSC1 Multisample

Here you can select a multisample.

You can select different multisamples for High and Low, and use velocity to switch between the two multisamples. Start Offset, Reverse, and Level can be adjusted independently for the High and Low multisamples.

High:

Bank [ROM, RAM, EXB*, EXB*]
Multisample Select [000...999]

Specify the bank and multisample number of the High multisample. The multisample you select here will sounded by velocities greater than the value of the “Velocity M.Sample SW Lo→Hi” (1-2c) parameter “OSC1.” If you do not wish to use velocity switching, set “OSC1” to a value of **001**, and select only the High multisample.

ROM: Select a preset multisample. Use “Multisample Select” to select from **000–999**.

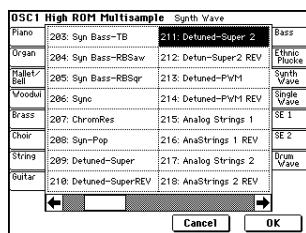
RAM: Select a multisample that you created in Sampling mode or that you loaded in Disk mode. Use “Multisample Select” to select from **000–999**.

EXB*: Multisamples from a separately sold EXB-PCM series option board can be selected. This can be selected only if an option board containing multisamples is installed. “*” will indicate the type of installed option.

⚠ The **EXB*** display will differ depending on the type of option board.

⚠ If a program that uses a multisample from a separately sold EXB-PCM series board is selected, but the necessary multisample is not available because the corresponding EXB-PCM (expansion board) is not installed, the “Bank” field will indicate **ROM**. In this case, the program will not sound. By re-selecting the multisample bank, you can make the program sound.

When you press the “Multisample Select” popup button, a list of multisamples will appear. If ROM is selected as “Bank,” use the dialog box to select the tab for the desired category of instruments, and select a multisample from that category. In the case of other banks, select a multisample from the list in the dialog box.



Each multisample has an upper limit, and may not produce sound when played above that limit.

S.Offset (Start Offset)

This specifies the point at which the multisample will begin sounding. For some multisamples this parameter will have no effect.

Checked: The sound will start from the start offset location that is pre-determined for each multisample. However when a RAM bank is selected, this will depend on the selected multisample. If you select a multisample that includes one of the following types of sample, checking this item will cause playback to start from the Loop Start Address.

- A sample that was recorded (sampled) in Sampling mode
- A sample whose Loop Start Address was edited in Sampling mode after the sample was loaded in Disk mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Disk mode

Unchecked: The sound will start from the beginning of the multisample waveform.

Rev (Reverse)

The multisample will be played in reverse. In the case of ROM or optional (EXB-PCM series) multisamples that were originally specified to loop, or in the case of multisamples that were set to loop in Sampling mode, the multisample will be played back in “one-shot” reverse mode. If the multisample was originally set to reverse, it will playback without change.

Checked: The multisample will playback in reverse.

Unchecked: The multisample will playback normally.

Lvl (Multisample Level) [0...127]

Specify the level of the multisample.

Depending on the multisample, high settings of this parameter may cause the sound to distort when a chord is played. If this occurs, lower the level.

Low:

Bank [ROM, RAM, EXB*, EXB*] Multisample Select [0...999]

The multisample you select here will sounded by velocities less than the value of the “Velocity M.Sample SW Lo→Hi” (1-2c) parameter “OSC1 (OSC1 Velocity Switch).” For details on “S.Offset,” “Rev,” and “Lvl,” refer to “High.”

Octave [-2[32'], -1[16'], +0[8'], +1[4']]

Adjust the pitch in octave units. The normal octave of the multisample is 8' (feet).

Transpose [-12...+12]

Adjust the pitch in semitone steps over a range of ±1 octave.

Tune [-1200...+1200]

Adjust the pitch of the sample in one-cent steps (a semitone is 100 cents) over a range of ±1 octave.

Delay (Delay Time) [0ms...5000ms, KeyOff]

Specify a delay time from note-on until the note will sound. With a setting of **KeyOff**, the sound will begin when note-off occurs. This is used to create sounds such as the “click” that is heard when a harpsichord note is released. In this case, set the “Amp1 EG,” “Amp2 EG” (4-3a, 4-6) “Sustain” parameter to 0.

1-2b: OSC2 Multisample

This will appear when “Oscillator Mode” (1-1a) is set to **Double**.

For details on the settings and function of the parameter, refer to “1-2a: OSC1 Multisample.”

1-2c: Velocity M.Sample SW Lo → Hi (Velocity Multisample Switch Low → High)

OSC1 (OSC1 Velocity Switch) [1...127]

The High and Low multisamples selected for oscillator 1 in “OSC 1 Multisample” (1-2a) will be switched around the velocity value that you specify here.

Notes played with a velocity stronger than this value will be sounded by the High multisample.

OSC2 (OSC2 Velocity Switch) [1...127]

This will appear when “Oscillator Mode” (1-1a) is set to **Double**.

The High and Low multisamples selected for oscillator 2 in “OSC 2 Multisample” (1-2b) will be switched around the velocity value that you specify here.

Notes played with a velocity stronger than this value will be sounded by the High multisample.

1-2d: Drum Kit

Drum Kit [00 (A/B)...63 (User), 64 (GM)...72 (GM)]

Select a drum kit.

00 (A/B)–15 (A/B)	Preset drum kits.
16 (C)–31 (C)	(for user drum kits, EXB-PCM series drum kits)
32 (D)–47 (D)	(for user drum kits, EXB-PCM series drum kits)
48 (User)–63 (User)	(for user drum kits)
64 (GM)–72 (GM)	ROM preset drum kits compatible with GM2.

Octave [-2[32'], -1[16'], +0[8'], +1[4']]

Adjust the pitch in octave units. When using a drum kit, set the Octave to 8'.

When editing a drum program, you must set this parameter to 8'. With other settings, the sounds of the drum kit will be assigned to the wrong notes of the keyboard.

Transpose [-12...+12]

This adjusts the location of the instruments in the selected drum kit. Unless you need to change this, leave it at 0.

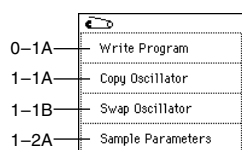
Tune [-1200...+1200]

This adjusts the pitch in one-cent units. The pitch of each drum kit can be adjusted in Global P5: Drum kit.

Delay (Delay Time) [0ms...5000ms, KeyOff]

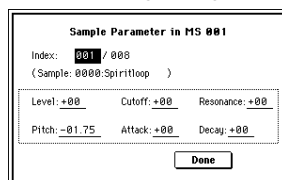
This specifies a delay time from note-on until the sound will begin.

With a setting of **KeyOff**, the sound will begin when note-off occurs. In this case, set the "Amp EG" (4-3a) parameter "Sustain" to 0.

▼ 1-2: Page Menu Command**1-2A: Sample Parameters**

This command lets you adjust the sample playback level, cutoff, resonance, pitch, attack, and decay for each index of a RAM multisample. This command is available when the "Oscillator Mode" (1-1a) is **Single** or **Double**, and you have selected either the "Bank" (RAM) or "Multisample Select" edit cell of either the High or Low sample of OSC1 Multi Sample or OSC2 Multi Sample. The setting will apply to the selected multisample. The setting will also be used when that multisample is selected by another oscillator or program.

- 1 Select this command to open the following dialog box.



- 2 **Index:** Specify the index for which you wish to make settings. The number following "/" is the total number of indexes in the selected multisample.

Sample: indicates the sample number and name for the index.

- 3 For each index, you can make the following settings.
 - Level:** Adjust the volume. Relative to the settings of "Lvl" (1-2a) and "Amp Level" (4-1a, 4-4), **negative (-) values** will decrease the levels, and **positive (+) values** will increase the levels. A setting of **+99** will double the volume, and at a setting of **-99** there will be no sound. This parameter is linked to the "Level" (Sampling P3: 3-1b). The value that was specified in Sampling mode will be displayed here.
 - Cutoff:** Adjust the filter cutoff. This adjustment will be added to the value specified for "(Filter A) Frequency" (3-1b, 3-5) of Filter 1 and 2.
 - Resonance:** Adjust the resonance level of the filter. This adjustment will be added to the value specified for "(Filter A) Resonance" (3-1b, 3-5) of Filter 1 and 2.
 - Pitch:** Adjust the playback pitch in one-cent steps. A setting of **+12.00** raises the pitch one octave, and a setting of **-12.00** will lower the pitch one octave. This parameter is linked with the Sampling P3: Multi Sample parameter

"Pitch" (Sampling P3: 3-1b). The value that was specified in Sampling mode will be displayed here.

Attack: Adjust the attack times of the filter EG and amp EG. This adjustment will be added to the "(Time) Attack" of "Filter 1 EG," "Filter 2 EG," "Amp 1 EG," and "Amp 2 EG" (3-4a, 3-8, 4-3a, 4-6).

Decay: Adjust the decay times of the filter EG and amp EG. This adjustment will be added to the "(Time) Decay" of "Filter 1 EG," "Filter 2 EG," "Amp 1 EG," and "Amp 2 EG" (3-4a, 3-8, 4-3a, 4-6).

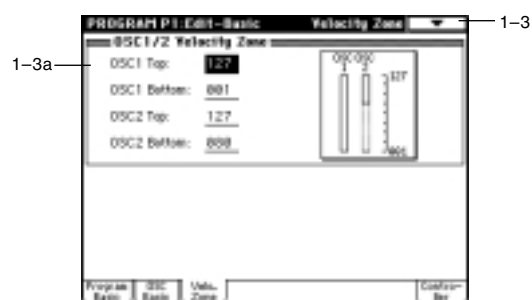
- 4 Press the **Done** button to execute, and close the dialog box.

Please be aware that the Compare function is not available for this command.

1-3: Velo. Zone (Velocity Zone)

Here you can specify the velocity ranges for which oscillators 1 and 2 will sound. In conjunction with the "Velocity M.Sample SW Lo → Hi" (1-2c) settings, these settings will determine how velocity will switch between the High and Low multisamples of the OSC1 Multisample and the OSC2 Multisample, and the range in which a drum kit will sound.

- 1 It is not possible to set the Bottom Velocity greater than the Top Velocity, nor the Top Velocity less than the Bottom Velocity.

**1-3a: OSC 1/2 Velocity Zone****OSC1 Top** [001...127]

Set the maximum velocity value that will sound oscillator 1.

OSC1 Bottom [001...127]

Set the minimum velocity value that will sound oscillator 1.

OSC2 Top [001...127]

Set the maximum velocity value that will sound oscillator 2.

OSC2 Bottom [001...127]

Set the minimum velocity value that will sound oscillator 2.

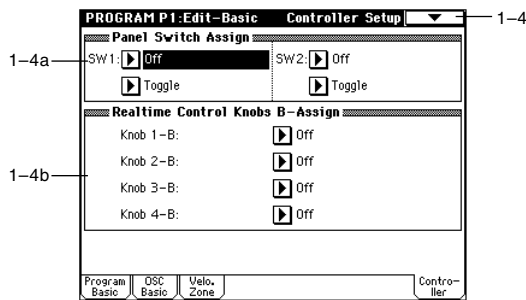
You can also input a value by playing a note on the keyboard while you hold down the [ENTER] key.

▼ 1-3: Page Menu Command

"0-1A: Write Program," "1-1A: Copy Oscillator," and "1-1B: Swap Oscillator."

1-4: Controller (Controller Setup)

These settings specify the functions of the [SW1] key, the [SW2] key, and the B-mode functions of REALTIME CONTROL knobs [1]–[4] in Program mode.



1-4a: Panel Switch Assign

These settings assign functions to the front panel [SW1] and [SW2] keys (see p.217 “SW1, SW2 Assign List”).

SW1 **AMSource** [Off, ..., After Touch Lock]

Assign a function to the [SW1] key.

The on/off status of the switch is saved when the program is written. When you change the function, it will be reset to the “off” state.

Toggle/Momentary [Toggle, Momentary]

Specify how the on/off state of the [SW1] key will change when it is pressed.

Toggle: On/off will alternate each time the switch is pressed.

Momentary: The function will be on only as long as the switch remains pressed.

SW2 **AMSource** [Off, ..., After Touch Lock]

Toggle/Momentary [Toggle, Momentary]

Assign a function to the [SW2] key.

The functions that can be assigned to SW2 are the same as for SW1, except that **SW2 Mod.:CC#81** is available instead of **SW1 Mod.:CC#80**.

1-4b: Realtime Control Knobs B-Assign

Assign functions (mainly various types of control change) to the “B” mode of the front panel REALTIME CONTROL knobs [1]–[4] (see p.218 “Realtime Control Knobs B-Assign List”).

The functions you set here will take effect when you operate the front panel REALTIME CONTROL knobs [1]–[4] in “B” mode.

Knob 1-B **AMSource** [Off, ..., MIDI CC#95]

Knob 2-B **AMSource** [Off, ..., MIDI CC#95]

Knob 3-B **AMSource** [Off, ..., MIDI CC#95]

Knob 4-B **AMSource** [Off, ..., MIDI CC#95]

▼ 1-4: Page Menu Command

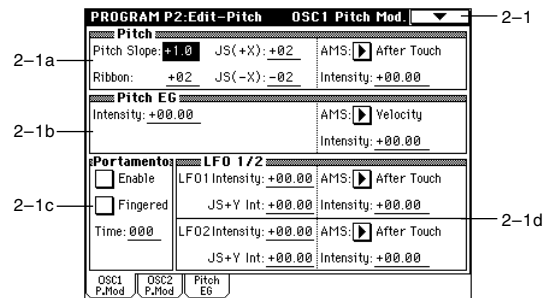
see “0-1A: Write Program,” “1-1A: Copy Oscillator,” and “1-1B: Swap Oscillator.”

Program P2: Edit – Pitch

Here you can make pitch modulation settings for oscillators 1 and 2.

2-1: OSC1 P.Mod (OSC1 Pitch Mod.)

These settings specify how keyboard location will affect the pitch of oscillator 1, and select the controllers that will affect the oscillator 1 pitch and specify the depth of control. Here you can also specify the amount of pitch change produced by the Pitch EG and by LFO1 and LFO2. You can also switch portamento on/off and specify how it will apply.



2-1a: Pitch

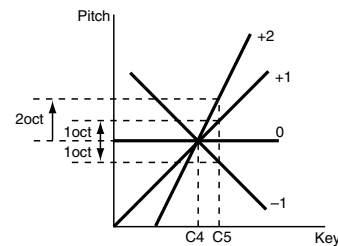
Pitch Slope [–1.0...+2.0]

Normally you will leave this at +1.0.

Positive (+) values will cause the pitch to rise as you play higher on the keyboard, and **negative (–) values** will cause the pitch to fall as you play higher on the keyboard.

With a value of 0, there will be no change in pitch, and the C4 pitch will sound regardless of the keyboard location you play.

How the Pitch Slope and pitch are related



Ribbon [–12...+12]

Specify how greatly the pitch will be changed when you press the ribbon controller. With a value of 12, the pitch can be changed a maximum of one octave.

Positive (+) values will cause the pitch to rise when you press the ribbon controller to the right of center, and **negative (–) values** will cause the pitch to fall.

For example with a setting of +12, pressing the far right edge of the ribbon controller will raise the pitch one octave. With a setting of –12, pressing the far right edge of the ribbon controller will lower the pitch one octave.

At the center of the ribbon controller, the original pitch will remain, so you can use this in conjunction with pressing the ribbon at its right edge to simulate the “hammering-on” techniques used by guitarists.

JS (+X) [-60...+12]

Specify how the pitch will change when the joystick is moved all the way to the right. A setting of **12** produces 1 octave of change.

For example if you set this to **+12** and move the joystick all the way to the right, the pitch will rise one octave above the original pitch.

JS (-X) [-60...+12]

Specify how the pitch will change when the joystick is moved all the way to the left. A setting of **12** produces 1 octave of change.

For example if you set this to **-60** and move the joystick all the way to the left, the pitch will fall five octaves below the original pitch. This can be used to simulate the downward swoops that a guitarist produces using the tremolo arm.

AMS (Alternate Modulation Source)
[Off, (FEG, AEG, EXT)]

Select the source that will modulate the pitch of oscillator 1 (see p.210 "AMS (Alternate Modulation Source) List").

With a setting of **Off**, no modulation will be applied.

Intensity [-12.00...+12.00]

Specify the depth and direction of the effect produced by "AMS."

With a setting of **0**, no modulation will be applied. With a setting of **12.00**, the pitch will change up to one octave.

For example if you set "AMS" to **After Touch** and apply pressure to the keyboard, the pitch will rise if this parameter is set to a **positive (+) value**, or fall if this parameter is set to a **negative (-) value**. The range is a maximum of one octave (see p.212).

2-1b: Pitch EG**Intensity (Pitch EG)** [-12.00...+12.00]

Specify the depth and direction of the modulation that the pitch EG specified in "Pitch EG" (2-3) will apply to the pitch.

With a setting of **12.00**, the pitch will change a maximum of ± 1 octave.

AMS (Alternate Modulation Source) [Off, (KT, EXT)]

Select the source that will control the pitch modulation applied by the pitch EG (see p.210 "AMS (Alternate Modulation Source) List").

With a sampling of **Off**, no modulation will be applied.

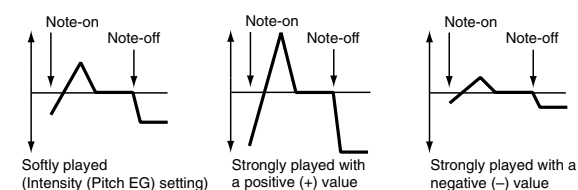
Intensity (AMS) [-12.00...+12.00]

Specify the depth and direction of the effect that "AMS" will have.

For example if you set "AMS" to **Velocity** and set this value to **+12.00**, the velocity will control the range of pitch change produced by the pitch EG in a range of ± 1 octave (see p.212).

As you play more softly, the pitch change will draw closer to the pitch EG levels.

Pitch change (level)



note "Intensity" (Pitch EG) and AMS will be added to determine the depth and direction of the pitch modulation applied by the pitch EG.

2-1c: Portamento

This turns the portamento effect (smooth change in pitch from one note to the next) on/off, and specifies how it will be applied. If SW 1 or 2 are set to **Porta.SW:CC#65**, turning SW1 or SW2 on/off will apply portamento (see p.210 "AMS (Alternate Modulation Source) List" SW1:CC#80, SW2:CC#81, Porta.SW:#65).

MIDI Portamento will also be switched when CC#65 (Portamento SW) is received.

Enable

Checked: Portamento will be applied.

Unchecked: Portamento will not be applied.

Fingered

This parameter is available when "Enable" is checked.

Checked: Portamento will be applied when you continue holding the previous note as you press the next note (legato playing).

Unchecked: Portamento will always be applied, regardless of how you play.

Time (Portamento Time) [000...127]

This parameter is available when "Enable" is checked.

This sets the portamento time. Increasing the value will produce a slower change in pitch.

2-1d: LFO1/2**LFO1 Intensity** [-12.00...+12.00]

Specify the depth and direction of the pitch modulation applied by the OSC 1 LFO1 settings you made in "OSC1 LFO1" (5-1).

With a setting of **12.00**, a maximum of ± 1 octave of pitch modulation will be applied. **Negative (-) values** will invert the LFO waveform.

JS+Y (Joystick +Y) [-12.00...+12.00]

Specify the depth and direction of the effect that joystick movement in the +Y direction (away from yourself) will have on the pitch modulation applied by the OSC1 LFO1. As this **value is increased**, moving the joystick in the +Y direction will cause the OSC1 LFO1 to produce deeper pitch modulation. With a setting of **12.00** a maximum of ± 1 octave of pitch modulation will be applied. **Negative (-) values** will invert the LFO waveform.

AMS (Alternate Modulation Source)
[Off, (PEG, FEG, AEG, KT, EXT)]

Select the source that will control the depth of pitch modulation produced by the OSC1 LFO1 (see p.210 "AMS (Alternate Modulation Source) List").

Intensity [-12.00...+12.00]

Specify the depth and direction of the effect that "AMS" will have.

With a setting of **0**, modulation will not be applied. With a setting of **12.00**, the OSC1 LFO1 will apply a maximum of ± 1 octave of pitch modulation. **Negative (-) settings** will invert the LFO waveform.

For example if "AMS" is set to **After Touch** and you apply

pressure to the keyboard, a **positive (+)** setting of this parameter will cause the pitch modulation created by OSC1 LFO1 to be applied with the normal phase, and a **negative (-)** setting will cause the LFO to be applied with inverted phase. The “LFO1 Intensity,” “JS+Y” and “AMS” settings will be added to determine the depth and direction of the pitch modulation applied by OSC1 LFO1 (p.212).

LFO2 Intensity [-12.00...+12.00]
JS+Y (JoyStick +Y) [-12.00...+12.00]
AMS (Alternate Modulation Source)
 [Off, (PEG, FEG, AEG, KT, EXT)]
Intensity [-12.00...+12.00]
 Refer to the above “LFO1 Intensity” – “Intensity.”

▼ 2-1: Page Menu Command

☞ “0-1A: Write Program,” “1-1A: Copy Oscillator,” and “1-1B: Swap Oscillator.”

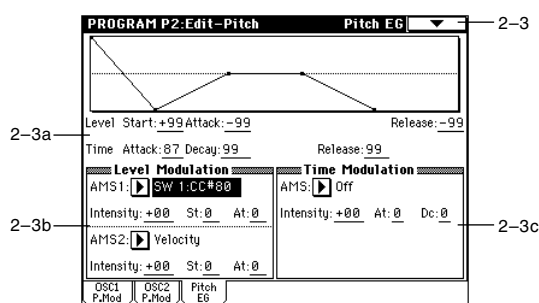
2-2: OSC2 P.Mod (OSC2 Pitch Mod.)

These settings specify how keyboard location will affect the pitch, and select the controllers that will affect the oscillator 2 pitch and specify the depth of control. They also specify the depth at which the pitch EG will affect the pitch of oscillator 2, and the depth of pitch change produced by LFO1 and LFO2. Portamento on/off settings etc. are also found here.

For details on the functions of these parameters, refer to the preceding section “2-1: OSC1 Pitch Mod (Oscillator Pitch Modulation).”

2-3: Pitch EG AMSsource

Here you can make settings for the pitch EG, which creates time-variant changes in the pitch of oscillators 1 and 2. The depth of pitch change produced by these EG settings on oscillator 1 (2) is adjusted by “Pitch EG” (2-1b, 2-2).



2-3a: Pitch EG

These settings specify how the pitch will change over time.

Level:

These parameters specify the amount of pitch change. The actual amount of pitch change will depend on the “Pitch EG” (2-1b, 2-2) parameter “Intensity.” For example with an “Intensity” setting of +12.00, a “Level” setting of +99 would raise the pitch one octave, and a “Level” setting of -99 would lower the pitch one octave.

Start (Start Level) [-99...+99]

Specify the amount of pitch change at note-on.

Attack (Attack Level) [-99...+99]

Specify the amount of pitch change when the attack time has elapsed.

Release (Release Level) [-99...+99]

Specify the amount of pitch change when the release time has elapsed.

Time:

These parameters specify the time over which the pitch change will occur.

Attack (Attack Time) [0...99]

Specify the time over which the pitch will change from note-on until it reaches the pitch specified as the attack level.

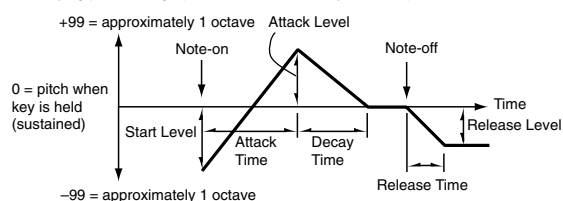
Decay (Decay Time) [0...99]

Specify the time over which the pitch will change after reaching the attack level until it reaches the normal pitch.

Release (Release Time) [0...99]

Specify the time over which the pitch will change from note-off until it reaches the pitch specified as the release level.

Time-varying pitch settings (when Pitch EG Intensity = +12.00)



2-3b: Level Modulation

These settings allow the pitch EG “Level” parameters to be controlled by alternate modulation.

AMS1 (Alternate Modulation Source 1) [Off, (KT, EXT)]

Select the source that will control the pitch EG “Level” parameters (p.210 “AMS (Alternate Modulation Source) List”).

Intensity (AMS1 Intensity) [-99...+99]

Specify the depth and direction of the effect applied by “AMS1.”

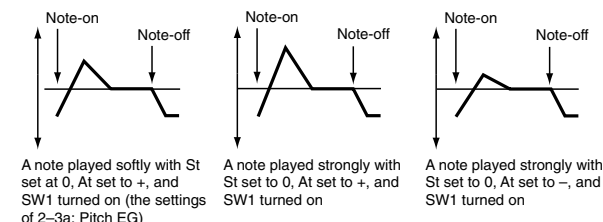
With a setting of 0, the levels specified by “Pitch EG” (2-3a) will be used.

For example if “AMS1” is SW1:CC#80, pressing the [SW1] key to turn it on will change the “Level” parameters of the Pitch EG. (Set “Panel SW Assign” (1-4a) to SW1 Mod.CC#80.) As the absolute value of “Intensity” is increased, the pitch EG levels will change more greatly

when the [SW1] key is turned on. The direction of the change is specified by "St" and "At." When the [SW1] key is turned off, the pitch EG levels will return to their own settings.

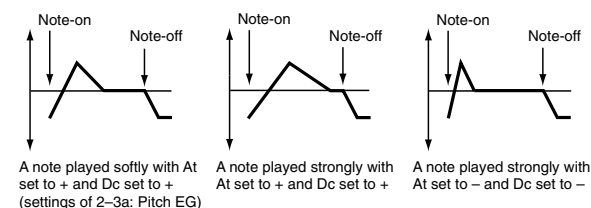
If "AMS1" is set to **Velocity**, increasing the absolute value of "Intensity" will produce increasingly wider change in pitch EG levels for strongly-played notes. The direction of the change is specified by "St" and "At." As you play more softly, the pitch change will draw closer to the pitch EG levels.

Pitch EG change (level) (AMS=SW1/Velocity, Intensity= positive (+) value)



direction of the change is specified by "At" and "Dc." As you play more softly, the pitch EG times will more closely approach the actual settings of the pitch EG.

Pitch EG changes (Time) (AMS = Velocity, Intensity = positive (+) value)



St (AMS1 SW to Start) [-, 0, +]

Specify the direction in which "AMS" will affect the "Start (Start Level)" caused by "AMS1." If "Intensity" is a **positive (+)** value, a setting of + will raise the EG level, and a setting of - will decrease it. With a setting of 0 there will be no change.

At (AMS1 SW to Attack) [-, 0, +]

Specify the direction in which "AMS" will affect the "Attack (Attack Level)" caused by "AMS1." If "Intensity" is a **positive (+)** value, a setting of + will raise the EG level, and a setting of - will decrease it. With a setting of 0 there will be no change.

AMS2 (Alternate Modulation Source 2) [Off, (KT, EXT)]

Intensity (AMS1 Intensity) [-99...+99]

St (AMS2 SW to Start) [-, 0, +]

At (AMS2 SW to Attack) [-, 0, +]

Refer to the preceding paragraphs "AMS1"- "At."

At (AMS SW to Attack) [-, 0, +]

Specify the direction in which "AMS" will affect the "Attack (Attack Time)." With **positive (+)** values of "Intensity," a setting of + will cause the time to be lengthened, and a setting of - will cause the time to be shortened. With a setting of 0 there will be no change.

Dc (AMS SW to Decay) [-, 0, +]

Specify the direction in which "AMS" will affect the "Decay (Decay Time)." With **positive (+)** values of "Intensity," a setting of + will cause the time to be lengthened, and a setting of - will cause the time to be shortened. With a setting of 0 there will be no change.

▼ 2-3: Page Menu Command

☞ "0-1A: Write Program," "1-1A: Copy Oscillator," and "1-1B: Swap Oscillator."

2-3c: Time Modulation

These parameters let you use alternate modulation to control the "Time" parameters of the pitch EG.

AMS (Alternate Modulation Source) [Off, (KT, EXT)]

Select the source that will control the "Time" parameters of the pitch EG (☞p.210 "AMS (Alternate Modulation Source) List").

Intensity [-99...+99]

Specify the depth and direction of the effect that "AMS" will have.

With a setting of 0, the pitch EG times will be just as specified by the "Pitch EG" (2-3a) settings.

The alternate modulation value at the moment that the EG reaches each point will determine the actual value of the EG time that comes next.

For example, the decay time will be determined by the alternate modulation value at the moment that the attack level is reached.

When this parameter is set to values of **16, 33, 49, 66, 82,** or **99,** the specified EG times will speed up as much as 2, 4, 8, 16, 32, or 64 times respectively (or slowed down to 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 of the original time).

For example if "AMS1" is set to **Velocity**, increasing the absolute value of "Intensity" will allow strongly-played notes to increase the changes in pitch EG "Time" values. The

Program P3: Edit – Filter

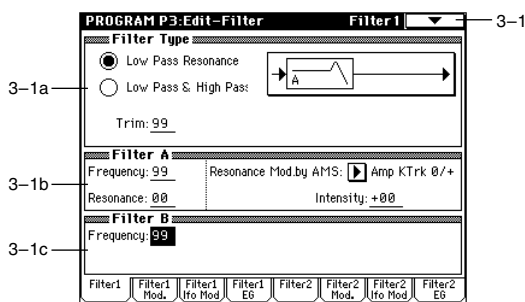
Here you can make settings for the filters that will be used by oscillators 1 and 2. You can select either a 24 dB/octave low pass filter with resonance, or a series connection of a 12 dB/octave low pass filter and a 12 dB/octave high pass filter.

When “Oscillator Mode” (1–1a) is set to **Single**, filter 1 will be used, and when it is set to **Double**, filters 1 and 2 will be used.

When **Single** is selected, tabs relating to filter 2 cannot be selected.

3–1: Filter 1

Here you can specify the basic type for filter 1 (used by oscillator 1), and set the cutoff frequency and resonance.



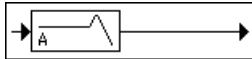
3–1a: Filter Type

Filter Type

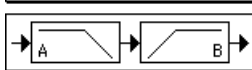
[Low Pass Resonance, Low Pass & High Pass]

Select the type for filter 1.

Low Pass Resonance: 24 dB/octave low pass filter with resonance



Low Pass & High Pass: 12 dB/octave low pass filter and 12 dB/octave high pass filter in series



Trim

[00...99]

Adjust the level at which the audio signal output from OSC1 is input to filter 1A.

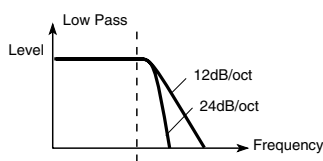
⚠ If this value is raised, the sound may be distorted if Resonance is set to a high value or when you play a chord.

3–1b: Filter A

Frequency (Cutoff Frequency)

[00...99]

Specify the cutoff frequency of filter 1A.



This is a filter that cuts the high-frequency region above the cutoff frequency. This is the most common type of filter, and is used to cut part of the overtone components, making an originally bright timbre sound more mellow (darker). When the “Filter Type” is Low Pass Resonance, the cutoff will have a steeper slope.

Resonance

[00...99]

This emphasizes the overtone components that lie in the region of the cutoff frequency specified by “Frequency,” producing a more distinctive sound. Increasing this value will produce a stronger effect.

Resonance Mod. by AMS

[Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Select the source that will control the “Resonance” level (see p.210 “AMS (Alternate Modulation Source) List”).

Intensity (AMS Intensity)

[–99...+99]

Specify the depth and direction of the effect that “Resonance Mod. by AMS” will have on the resonance level specified by “Resonance.”

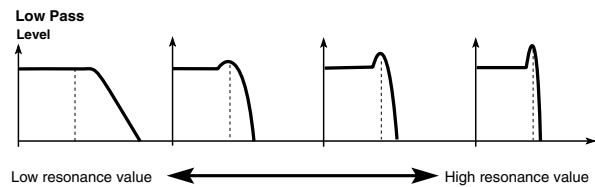
For example if **Velocity** has been selected, changes in keyboard velocity will affect the resonance.

With **positive (+) values**, the resonance will increase as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance” setting.

With **negative (–) values**, the resonance will decrease as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance” setting.

The resonance level is determined by adding the “Resonance” and “Intensity (AMS Intensity)” values.

The effect of resonance



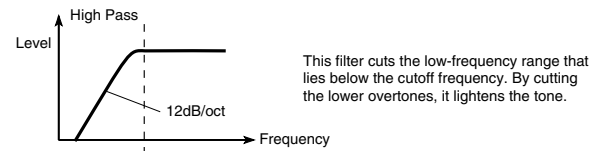
3–1c: Filter B

Frequency (Cutoff Frequency)

[00...99]

Specify the cutoff frequency of filter 1B.

This parameter will be displayed when “Type” (3–1a) is set to **Low Pass & High Pass**.



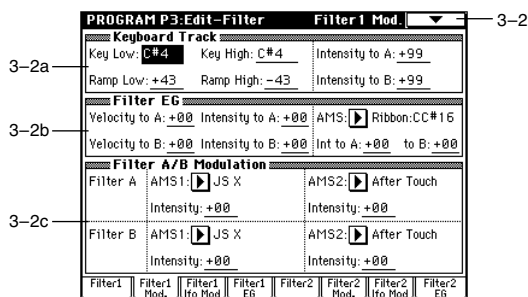
This filter cuts the low-frequency range that lies below the cutoff frequency. By cutting the lower overtones, it lightens the tone.

▼ 3–1: Page Menu Command

☞ “0–1A: Write Program,” “1–1A: Copy Oscillator,” and “1–1B: Swap Oscillator.”

3-2: Filter1 Mod.

These settings let you apply modulation to the cutoff frequency ("Frequency") of filter 1 to modify the tone. When "Filter Type" (3-1a) is **Low Pass Resonance**, parameters for filter B will not be displayed.



3-2a: Keyboard Track AMSource (Filter Cutoff Frequency Keyboard Track)

These settings specify keyboard tracking for the cutoff frequency of filter 1. The way in which the cutoff frequency is affected by the keyboard location you play can be specified by the "Key Low," "Key High," "Ramp Low" and "Ramp High" parameters.

Key (Keyboard Track Key):

Specify the note numbers at which keyboard tracking will begin to apply, and set the "Intensity to A" and "Intensity to B" parameters to specify the depth and direction of the change applied to filter 1 A and B.

For the range of notes between "Key Low" and "Key High," the cutoff frequency will change according to the keyboard location (pitch).

note Note numbers can also be entered by holding down the [ENTER] key while you press a note on the keyboard.

Key Low [C-1...G9]

Keyboard tracking will apply to the range below the specified note number.

Key High [C-1...G9]

Keyboard tracking will apply to the range above the specified note number.

Ramp (Ramp Setting):

Specify the angle of keyboard tracking.

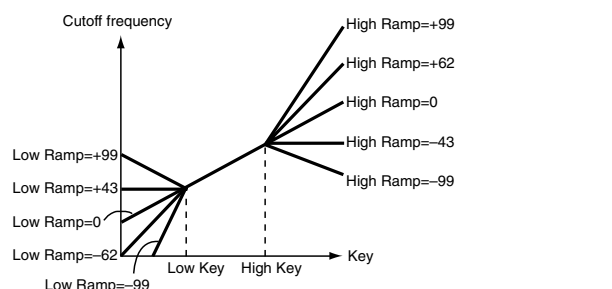
Ramp Low [-99...+99]

Ramp High [-99...+99]

If "Intensity to A" and "Intensity to B" are set to +50, "Ramp Low" is set to -62 and "Ramp High" is set to +62, the angle of the change in cutoff frequency will correspond to the keyboard location (pitch). This means that the oscillation that occurs when you increase the "Resonance" (3-1b) will correspond to the keyboard location.

If you set "Ramp Low" to +43 and "Ramp High" to -43, the cutoff frequency will not be affected by keyboard location. Use this setting when you do not want the cutoff frequency to change for each note.

How cutoff frequency is affected by keyboard location and the Ramp setting ("Intensity to A" and "Intensity to B" = +50)



Intensity to A [-99...+99]

Specify the depth and direction of the effect that the keyboard tracking specified by "Key Low," "Key High," "Ramp Low" and "Ramp High" will have on filter 1A.

With **positive (+) values**, the effect will be in the direction specified by keyboard tracking, and with **negative (-) values** the effect will be in the opposite direction.

Intensity to B [-99...+99]

Specify the depth and direction of the effect that keyboard tracking will have on filter 1B (≡ "Intensity to A").

3-2b: Filter EG

Velocity to A [-99...+99]

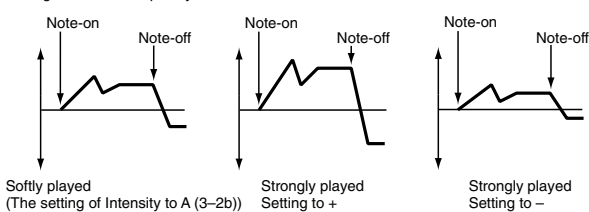
This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG (as set by "Filter 1 EG" 3-4) to control the filter 1A cutoff frequency.

With **positive (+) values**, playing more strongly will cause the filter 1 EG to produce greater changes in cutoff frequency. With **negative (-) values**, playing more strongly will also cause the filter 1 EG to produce greater changes in cutoff frequency, but with the polarity of the EG inverted.

Velocity to B [-99...+99]

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG to control the filter 1B cutoff frequency (≡ "Velocity to A").

Changes in cutoff frequency



Intensity to A [-99...+99]

Specify the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1A cutoff frequency.

With **positive (+) settings**, the sound will become brighter when the EG levels set by Filter 1 EG "Level" and "Time" parameters (3-4a) are in the "+" area, and darker when they are in the "-" area.

With **negative (-) settings**, the sound will become darker when the EG levels set by Filter 1 EG "Level" and "Time" parameters (3-4a) are in the "+" area, and brighter when they are in the "-" area.

Intensity to B [-99...+99]

Specify the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1B cutoff frequency (☞“Intensity to A”).

AMS (Alternate Modulation Source) [Off, (EXT)]

Select the source that will control the depth and direction of the effect that the time-varying changes produced by the filter 1 EG will have on the cutoff frequency of filters 1A and 1B (☞p.210 “AMS (Alternate Modulation Source) List”).

Int to A (AMS Intensity to A) [-99...+99]

Specify the depth and direction of the effect that “AMS” will have on filter 1A. For details on how this will apply, refer to “Intensity to A.”

Int to B (AMS Intensity to B) [-99...+99]

Specify the depth and direction of the effect that “AMS” will have on filter 1B. For details on how this will apply, refer to “Intensity to A.”

note The sum of the settings for “Velocity to A (B),” “Intensity to A (B),” and “(AMS) Int to A (B)” will determine the depth and direction of the effect produced by the filter EG.

3-2c: Filter A/B Modulation

Filter A:

AMS1 (Alternate Modulation Source1) [Off, (PEG, AEG, EXT)]

Select the source that will control modulation of the filter 1A cutoff frequency (☞p.210 “AMS (Alternate Modulation Source) List”).

Intensity [-99...+99]

Specify the depth and direction of the effect that “AMS1” will have.

When “AMS1” is JS X, a **positive (+) value** for this parameter will cause the cutoff frequency to rise when the joystick is moved toward the right, and fall when the joystick is moved toward the left. With a **negative (-) value** for this parameter, the opposite will occur.

This value is added to the setting of the Filter A “Frequency” (3-1b).

AMS2 (Alternate Modulation Source2) [Off, (PEG, AEG, EXT)]

Intensity [-99...+99]

Select “AMS2,” and specify the depth and direction of the effect that the selected source will have (☞“AMS1,” “Intensity”).

Filter B:

This will be displayed when “Filter Type” (3-1a) is **Low Pass & High Pass**.

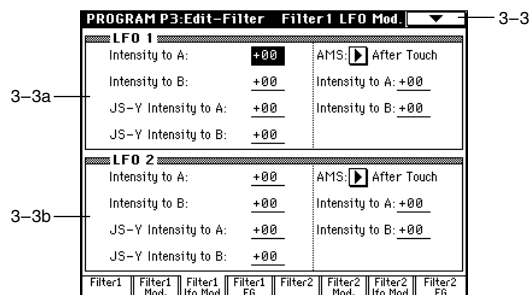
Two alternate modulation sources can be used to modulate the cutoff frequency of filter 1B (☞“Filter A”).

▼ 3-2: Page Menu Command

☞ “0-1A: Write Program,” “1-1A: Copy Oscillator,” and “1-1B: Swap Oscillator.”

3-3: Filter1 Lfo Mod (Filter1 LFO Mod.)

Here you can use the filter 1 LFO to apply cyclic modulation to the cutoff frequency of filter 1 (for oscillator 1) to create cyclical changes in tone.



3-3a: LFO 1

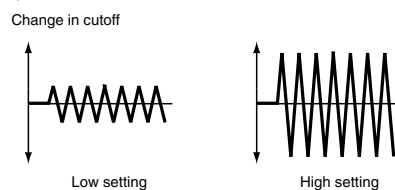
Intensity to A [-99...+99]

Specify the depth and direction of the modulation that OSC1 LFO1 (set by “OSC1 LFO1” 5-1) will have on the cutoff frequency of filter 1A.

Negative (-) settings will invert the phase.

Intensity to B [-99...+99]

Specify the depth and direction of the modulation that OSC1 LFO1 will have on the cutoff frequency of filter 1B (☞“Intensity to A”).



JS-Y Intensity to A [-99...+99]

By moving the joystick in the Y direction (toward yourself), you can control the depth at which OSC1 LFO1 modulates the cutoff frequency of filter 1A. This parameter specifies the depth and direction of the control.

Higher settings of this parameter will produce greater increases in the effect of OSC1 LFO1 on filter 1 when the joystick is moved toward yourself.

JS-Y Intensity to B [-99...+99]

By moving the joystick in the Y direction (toward yourself), you can control the depth at which OSC1 LFO1 modulates the cutoff frequency of filter 1B. This parameter specifies the depth and direction of the control (☞“JS-Y Intensity to A”).

AMS (Alternate Modulation Source) [Off, (PEG, FEG, AEG, KT, EXT)]

Select a source that will control the depth and direction of cutoff frequency change for both filters 1A and 1B (☞p.210 “AMS (Alternate Modulation Source) List”).

Intensity to A [-99...+99]

Specify the depth and direction of the effect that “AMS” will have on filter 1A.

For example if “AMS” is **After Touch**, **higher settings** of this parameter will allow greater change to be applied to OSC1 LFO1 when you apply pressure to the keyboard.

Intensity to B [-99...+99]

Specify the depth and direction of the effect that "AMS" will have on filter 1B (☞ "Intensity to A").

3-3b: LFO 2

Adjust the depth of the cyclic modulation applied by OSC1 LFO2 (set by "OSC1 LFO2" 5-2) to the cutoff frequency of filters 1A and 1B (☞ "LFO 1" 3-3a).

Intensity to A [-99...+99]

Intensity to B [-99...+99]

JS-Y Intensity to A [-99...+99]

JS-Y Intensity to B [-99...+99]

AMS (Alternate Modulation Source)
[Off, (PEG, FEG, AEG, KT, EXT)]

Intensity to A [-99...+99]

Intensity to B [-99...+99]

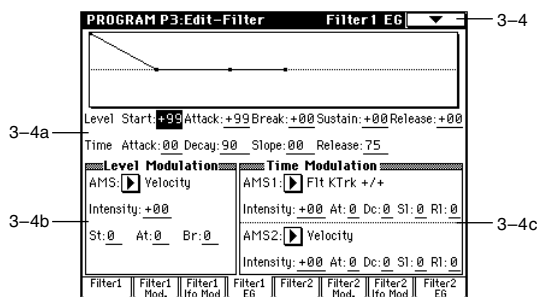
▼ **3-3: Page Menu Command**

☞ "0-1A: Write Program," "1-1A: Copy Oscillator," and "1-1B: Swap Oscillator."

3-4: Filter 1 EG AMSSource

Here you can make settings for the EG that will produce time-varying changes in the cutoff frequency of filters 1A and 1B.

The depth of the effect that these settings will have on the filter 1 cutoff frequency is determined by "Filter EG" (3-2b).



3-4a: Filter 1 EG

Specify the time-varying change produced by the filter 1 EG.

Level:

The result will depend on the filter that was selected in "Filter Type" (3-1a). For example with the **Low Pass Resonance** filter, **positive (+)** values of EG Intensity will cause the tone to be brightened by **positive (+) levels**, and darkened by **negative (-) levels**.

Start (Start Level) [-99...+99]

Specify the change in cutoff frequency at the time of note-on.

Attack (Attack Level) [-99...+99]

Specify the change in cutoff frequency after the attack time has elapsed.

Break (Break Point Level) [-99...+99]

Specify the change in cutoff frequency after the decay time has elapsed.

Sustain (Sustain Level) [-99...+99]

Specify the change in cutoff frequency that will be maintained from after the slope time has elapsed until note-off occurs.

Release (Release Level) [-99...+99]

Specify the change in cutoff frequency that will occur when the release time has elapsed.

Time:

These parameters specify the time over which each change will occur.

Attack (Attack Time) [00...99]

Specify the time over which the level will change from note-on until the attack level is reached.

Decay (Decay Time) [00...99]

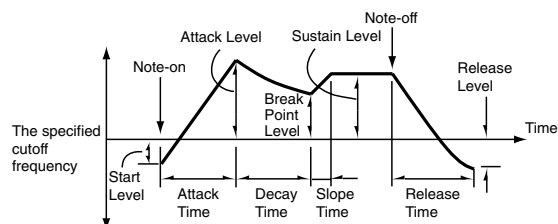
Specify the time over which the level will change from the attack level to the break point level.

Slope (Slope Time) [00...99]

Specify the time over which the level will change after the decay time has elapsed until the sustain level is reached.

Release (Release Time) [00...99]

Specify the time over which the level will change after note-on occurs until the release level is reached.



3-4b: Level Modulation

These settings let you use alternate modulation to control the "Level" parameters of the filter 1 EG.

AMS (Alternate Modulation Source) [Off, (KT, EXT)]

Select the source that will control the "Level" parameters of the filter 1 EG (☞ p.210 "AMS (Alternate Modulation Source) List").

Intensity [-99...+99]

Specify the depth and direction of the effect that "AMS" will have.

For example if "AMS" is **Velocity**, and you set "St," "At" and "Br" to + and set "Intensity" to a **positive (+) value**, the EG levels will rise as you play more strongly. If "Intensity" is set to a **negative (-) values**, the EG levels will fall as you play more strongly.

With a setting of 0, the levels specified by "Filter 1 EG" (3-4a) will be used.

St (Start Level) [-, 0, +]

Specify the direction in which "AMS" will affect "Start (Start Level)." When "Intensity" has a **positive (+) value**, a setting of + for this parameter will allow "AMS" to raise the EG level, and a setting of - will allow "AMS" to lower the EG level. With a setting of 0 there will be no change.

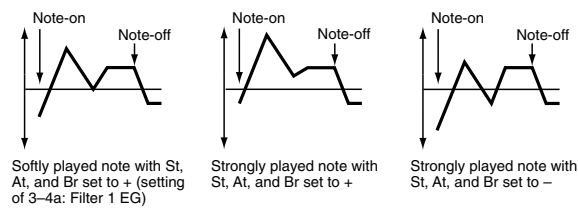
At (Attack Level) [-, 0, +]

Specify the direction in which "AMS" will affect "Attack (Attack Level)." When "Intensity" has a **positive (+)** value, a setting of + for this parameter will allow "AMS" to raise the EG level, and a setting of - will allow "AMS" to lower the EG level. With a setting of 0 there will be no change.

Br (Break Point Level) [-, 0, +]

Specify the direction in which "AMS" will affect "Break (Break Point Level)." When "Intensity" has a **positive (+)** value, a setting of + for this parameter will allow "AMS" to raise the EG level, and a setting of - will allow "AMS" to lower the EG level. With a setting of 0 there will be no change.

Filter 1 EG changes (level) (AMS = Velocity, Intensity = a positive (+) value)



3-4c: Time Modulation

These settings let you use alternate modulation to control the "Time" parameters of the filter 1 EG.

AMS1 (Alternate Modulation Source 1) [Off, (KT, EXT)]

Select the source that will control the "Time" parameters of the filter 1 EG (see p.210 "AMS (Alternate Modulation Source) List").

Intensity [-99...+99]

Specify the depth and direction of the effect that "AMS1" will have.

For example if "AMS1" is set to **Flt KTr +/-**, the EG "Time" parameters will be controlled by the Keyboard Track (3-2a) settings. With **positive (+)** values of this parameter, **positive (+)** values of "Ramp (Ramp Setting)" will lengthen the EG times, and **negative (-)** values of "Ramp (Ramp Setting)" will shorten the EG times. The direction of change is specified by "At," "Dc," "Sl," and "Rl."

With a setting of 0, the times specified by "Filter 1 EG" (3-4a) will be used.

If "AMS1" is set to **Velocity**, **positive (+)** values of this parameter will cause EG times to lengthen as you play more strongly, and **negative (-)** values will cause EG times to shorten as you play more strongly.

With a setting of 0, the times specified by "Filter 1 EG" (3-4a) will be used.

At (Attack Time) [-, 0, +]

Specify the direction in which "AMS1" will affect the attack time. With **positive (+)** values of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of 0 there will be no change.

Dc (Decay Time) [-, 0, +]

Specify the direction in which "AMS1" will affect the decay time. With **positive (+)** values of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of 0 there will be no change.

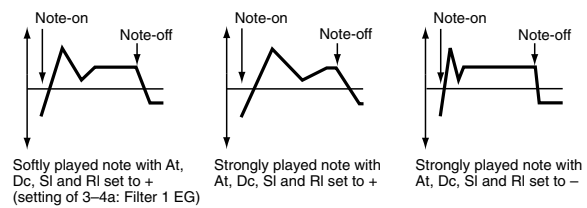
Sl (Slope Time) [-, 0, +]

Specify the direction in which "AMS1" will affect the slope time. With **positive (+)** values of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of 0 there will be no change.

Rl (Release Time) [-, 0, +]

Specify the direction in which "AMS1" will affect the release time. With **positive (+)** values of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of 0 there will be no change.

Filter 1 EG changes (Time) (AMS = Velocity, Intensity = a positive (+) value)



AMS2 (Alternate Modulation Source2) [(EXT, KT)]

Intensity [-99...+99]

At (Attack Time) [-, 0, +]

Dc (Decay Time) [-, 0, +]

Sl (Slope Time) [-, 0, +]

Rl (Release Time) [-, 0, +]

These parameters are the settings for "AMS2" to control the "Time" parameters of the filter 1 EG (see "AMS1"-"Rl").

3-4: Page Menu Command

0-1A	Write Program
1-1A	Copy Oscillator
1-1B	Swap Oscillator
3-4A	Sync Both EGs

3-4A: Sync Both EGs

When this is **checked**, the filter 1 EG and filter 2 EG can be edited simultaneously. (Editing either one will modify the other as well.)

3-5: Filter2

3-6: Filter2 Mod.

3-7: Filter2 lfo Mod (Filter1 LFO Mod.)

3-8: Filter2 EG AMSource

These are the filter 2 parameters (for oscillator 2) (see "3-1: Filter 1"-"3-4: Filter 1 EG").

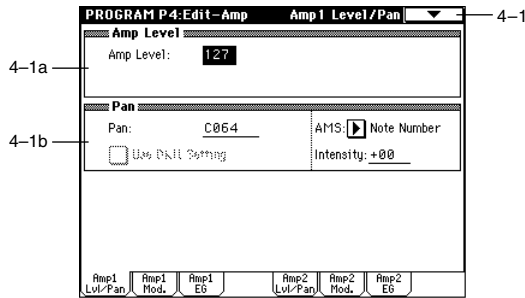
These will appear when "Oscillator Mode" (1-1a) is **Double**.

Program P4: Edit -Amp

Here are the volume-related settings. Amp 1 controls oscillator 1, and amp 2 controls oscillator 2.

4-1: Amp1 Lvl/Pan (Amp1 Level/Pan)

These parameters control the volume and pan of oscillator 1.



4-1a: Amp Level (Amplifier Level)

Amp Level [0...127]

Set the volume of oscillator 1.

MIDI The volume of a program can be controlled by CC#7 (volume) and #11 (expression). The resulting level is determined by multiplying the values of CC#7 and #11. The Global MIDI channel "MIDI Channel" (Global P1: 1-1a) is used for control.

4-1b: Pan (Panpot)

Pan [Random, L001...C064...R127]

Set the pan (stereo location) of oscillator 1.

A setting of **L001** places the sound at far left, **C064** in the center, and **R127** to far right.

Random: The sound will be heard from a different location at each note-on.

MIDI This can be controlled by CC#10 (panpot). A CC#10 value of 0 or 1 will place the sound at the far left, a value of 64 will place the sound at the location specified by the "Pan" setting for each oscillator, and a value of 127 will place the sound at the far right. This is controlled on the global MIDI channel "MIDI Channel" (Global P1: 1-1a).

Use DKit Setting

This is valid when "Oscillator Mode" (1-1a) is set to **Drums**.

Checked: The sound will be output at the "Pan" setting that has been made for each key of the drum kit (Global P5: 5-2b). When "Oscillator Mode" is **Drums**, you will normally use this setting.

Unchecked: All notes will be output as specified by the "Pan" setting (4-1b).

AMS (Alternate Modulation Source)

[Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Select the source that will modify pan (see p.210 "AMS (Alternate Modulation Source) List"). This change will be relative to the "Pan" setting.

Intensity [-99...+99]

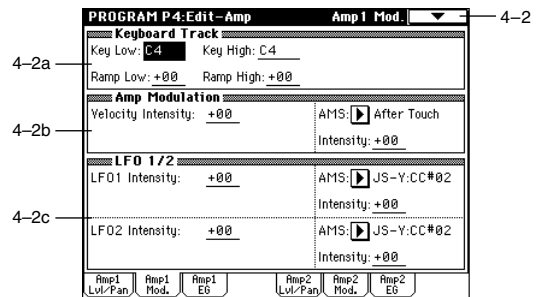
Specify the depth of the effect produced by "AMS." For example if "Pan" is set to **C064** and "AMS" is **Note Number**, **positive (+) values** of this parameter will cause the sound to move toward the right as the note numbers increase beyond the **C4** note (i.e., as you play higher), and toward the left as the note numbers decrease (i.e., as you play lower). **Negative (-) values** of this parameter will have the opposite effect.

▼ 4-1: Page Menu Command

☞ "0-1A: Write Program," "1-1A: Copy Oscillator," and "1-1B: Swap Oscillator."

4-2: Amp1 Mod.

These settings allow you to apply modulation to amp 1 (for oscillator 1) to modulate the volume.



4-2a: Keyboard Track

These parameters let you use keyboard tracking to adjust the volume of oscillator 1. Use the "Key" and "Ramp" parameters to specify how the volume will be affected by the keyboard location that you play.

Key (Keyboard Track Key):

Specify the note number at which keyboard tracking will begin to apply.

The volume will not change between "Key Low" and "Key High."

note The note number can also be input by holding the [ENTER] key and playing a note on the keyboard.

Key Low [C-1...G9]

Keyboard tracking will apply to the range of notes below the note number you specify here.

Key High [C-1...G9]

Keyboard tracking will apply to the range of notes above the note number you specify here.

Ramp (Ramp Setting):

Specify the angle of the keyboard tracking.

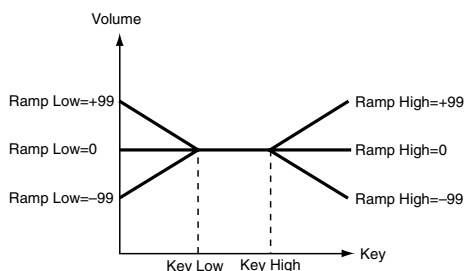
Ramp Low [-99...+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes below the "Key Low" note number. With **negative (-) values**, the volume will decrease.

Ramp High [-99...+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes above the “Key High” note number. With **negative (-) values**, the volume will decrease.

Volume change produced by keyboard location and Ramp settings

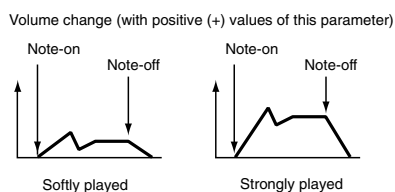


4-2b: Amp Modulation (Amplifier Modulation)

These parameters specify how the volume of oscillator 1 will be affected by velocity.

Velocity Intensity [-99...+99]

With **positive (+) values**, the volume will increase as you play more strongly. With **negative (-) values**, the volume will decrease as you play more strongly.



AMS (Alternate Modulation Source) [Off, (PEG, FEG, EXT)]

Select the source that will control the volume of amp 1 (see p.210 “AMS (Alternate Modulation Source) List”) (EXT) Velocity cannot be selected.

Intensity [-99...+99]

Specify the depth and direction of the effect that “AMS” will have.

The actual volume will be determined by multiplying the value of the changes produced by the amp EG with the values of Alternate Modulation etc., and if the levels of the amp EG are low, the modulation applied by Alternate Modulation will also be less.

For example if “AMS” is set to **After Touch**, **positive (+) values** of this parameter will cause the volume to increase when pressure is applied to the keyboard. However if the EG settings etc. have already raised the volume to its maximum level, the volume cannot be increased further. With **negative (-) values** of this parameter, the volume will decrease when pressure is applied to the keyboard.

4-2c: LFO 1/2

These parameters let you use “OSC1 LFO1” (5-1) and “OSC1 LFO 2” (5-2) to control the oscillator 1 volume.

LFO1 Intensity [-99...+99]

Specify the depth and direction of the effect that “OSC1 LFO1” will have on the volume of oscillator 1. **Negative (-) values** will invert the LFO waveform.

AMS (Alternate Modulation Source) [Off, (PEG, FEG, AEG, KT, EXT)]

Select a source that will control the depth by which “OSC1 LFO1” will modulate the volume of oscillator 1 (see p.210 “AMS (Alternate Modulation Source) List”).

Intensity [-99...+99]

As the absolute value of this setting is increased, the effect of “AMS” on “OSC1 LFO1” will increase. **Negative (-) values** will invert the LFO waveform.

LFO2 Intensity [-99...+99]

AMS (Alternate Modulation Source) [Off, (PEG, FEG, AEG, KT, EXT)]

Intensity [-99...+99]

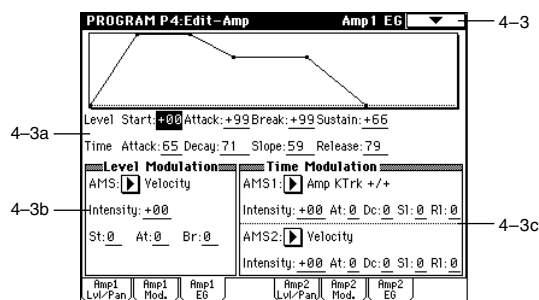
Specify the depth and direction of the effect that “OSC1 LFO 2” will have on the volume of oscillator 1. Refer to the preceding sections “LFO1 Intensity”–“Intensity.”

▼ 4-2: Page Menu Command

see “0-1A: Write Program,” “1-1A: Copy Oscillator,” and “1-1B: Swap Oscillator.”

4-3: Amp1 EG AMSource

These parameters let you create time-varying changes in the volume of oscillator 1.



4-3a: Amp1 EG (Amplifier1 EG)

These parameters specify how the amp 1 EG will change over time.

Level:

Start (Start Level) [00...99]

Specify the volume level at note-on.

If you want the note to begin at a loud level, set this to a high value.

Attack (Attack Level) [00...99]

Specify the volume level that will be reached after the attack time has elapsed.

Break (Break Point Level) [00...99]

Specify the volume level that will be reached after the decay time has elapsed.

Sustain (Sustain Level) [00...99]

Specify the volume level that will be maintained from after the slope time has elapsed until note-off occurs.

Time:

Attack (Attack Time) [00...99]

Specify the time over which the volume will change after note-on until it reaches the attack level. If the start level is 0, this will be the rise time of the sound.

Decay (Decay Time) [00...99]

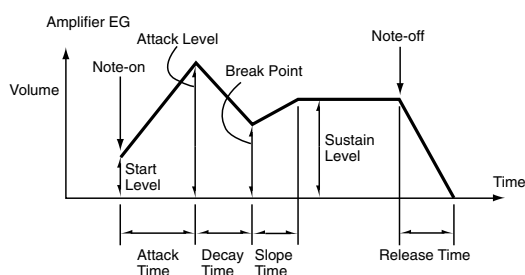
Specify the time over which the volume will change from when it reaches the attack level until it reaches the break point level.

Slope (Slope Time) [00...99]

Specify the time over which the volume will change from when it reaches the break point level until it reaches the sustain level.

Release (Release Time) [00...99]

Specify the time over which the volume will change after note-off until it reaches 0.



4-3b: Level Modulation

These parameters let you use an alternate modulation source to modify the amp 1 EG levels that were specified in "Amp 1 EG" (4-3a).

AMS (Alternate Modulation Source) [Off, (KT, EXT)]

Select the source that will control the "Level" parameters of the amp 1 EG (see p.210 "AMS (Alternate Modulation Source) List").

Intensity [-99...+99]

Specify the depth and direction of the effect that "AMS" will have.

For example if "AMS" is **Velocity**, setting "St," "At," and "Br" to + and setting "Intensity" to a **positive (+) value** will cause the amp 1 EG volume levels to increase as you play more strongly. Setting "Intensity" to a **negative (-) value** will cause the amp 1 EG volume levels to decrease as you play more strongly. With a setting of 0, the levels will be as specified in "Amp 1 EG" (4-3a).

St (Start Level) [-, 0, +]

Specify the direction in which "AMS" will change "Start (Start Level)." If "Intensity" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

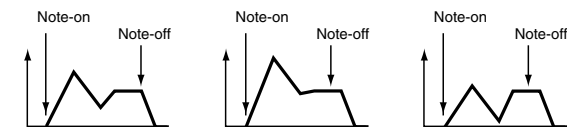
At (Attack Level) [-, 0, +]

Specify the direction in which "AMS" will change "Attack (Attack Level)." If "Intensity" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

Br (Break Point Level) [-, 0, +]

Specify the direction in which "AMS" will change "Break (Break Point Level)." If "Intensity" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

Amp 1 EG changes (Level) (AMS=Velocity, Intensity = a positive (+) value)



Softly played note when St=0 and At and Br are set to + (settings of 4-3a: Amp 1 EG) Strongly played note when St=0 and At and Br are set to + Strongly played note when St=0 and At and Br are set to -

4-3c: Time Modulation

These parameters let you use an alternate modulation source to modify the amp 1 EG times that were specified in "Amp 1 EG" (4-3a).

AMS1 (Alternate Modulation Source 1) [Off, (EXT, KT)]

Select the source that will control the "Time" parameters of the amp 1 EG (see p.210 "AMS (Alternate Modulation Source) List").

With a setting of **Off**, there will be no modulation.

Intensity (AMS1 Intensity) [-99...+99]

Specify the depth and direction of the effect that "AMS1" will have.

For example if "AMS1" is **Amp KTrk +/-**, the (Amp) Keyboard Track settings (4-2a) will control the EG "Time" parameters. With **positive (+) values** of this parameter, **positive (+) values** of "Ramp (Ramp Setting) will cause EG times to be lengthened, and **negative (-) values** of "Ramp (Ramp Setting)" will cause EG times to be shortened. The direction of the change is specified by "At," "Dc," "Sl," and "Rl." When "AMS1" is **Velocity**, **positive (+) values** will cause EG times to lengthen as you play more strongly, and **negative (-) values** will cause EG times to shorten as you play more strongly. With a setting of 0, the EG times will be as specified in "Amp1 EG" (4-3a).

At (Attack Time) [-, 0, +]

Specify the direction of the effect that "AMS1" will have on "Attack (Attack Time)." With **positive (+) values** of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

Dc (Decay Time) [-, 0, +]

Specify the direction of the effect that "AMS1" will have on "Decay (Decay Time)." With **positive (+) values** of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

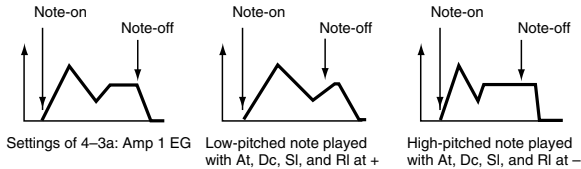
Sl (Slope Time) [-, 0, +]

Specify the direction of the effect that "AMS1" will have on "Slope (Slope Time)." With **positive (+) values** of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

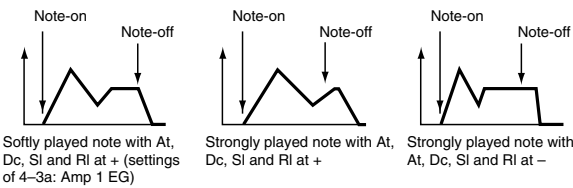
RI (Release Time) [-, 0, +]

Specify the direction of the effect that "AMS1" will have on "Release (Release Time)." With **positive (+) values** of "Intensity," setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

Amp 1 EG changes (Time)
(AMS=Amp KTrk +/-, Intensity = a positive (+) value)
(When Amp Keyboard Track (4-2a) Low Ramp=a positive (+) value, and High Ramp = a positive (+) value)



Amp 1 EG changes (Time) (AMS=Velocity, Intensity=a positive (+) value)



AMS2 (Alternate Modulation Source 2) [Off, (EXT, KT)]

Intensity (AMS2 Intensity) [-99...+99]

At (Attack Time) [-, 0, +]

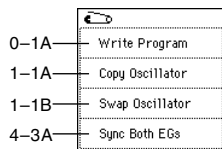
Dc (Decay Time) [-, 0, +]

Sl (Slope Time) [-, 0, +]

RI (Release Time) [-, 0, +]

These parameters specify how "AMS2" will control the amp 1 EG "Time" parameters (AMS1-"RI").

▼ 4-3: Page Menu Command



4-3A: Sync Both EGs

When this is checked, the amp 1 EG and amp 2 EG can be edited simultaneously. (Editing either one will also modify the other.)

4-4: Amp2 Lvl/Pan (Amp1 Level/Pan)

4-5: Amp2 Mod.

4-6: Amp2 EG AMSource

These are the parameters for amp 2 (used for oscillator 2).

(AMS "4-1: Amp 1 Level / Pan"-"4-3: Amp 1 EG.")

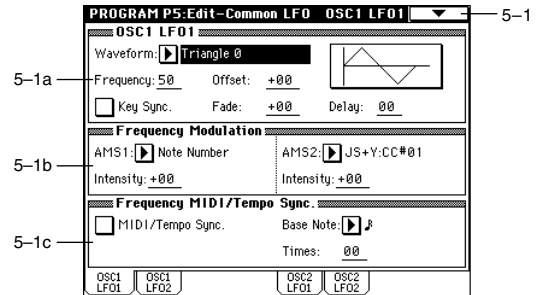
These will appear when "Oscillator Mode" (1-1a) is **Double**.

Program P5: Edit-Common LFO

Here you can make settings for the LFO that can be used to cyclically modulate the Pitch, Filter, and Amp of oscillators 1 and 2. There are two LFO units for each oscillator. By setting the LFO1 or LFO2 Intensity to a **negative (-) value** for Pitch, Filter, or Amp, you can invert the LFO waveform.

5-1: OSC1 LFO1 AMSource

Make settings for the "OSC1 LFO1," which is the first LFO that can be used for oscillator 1.

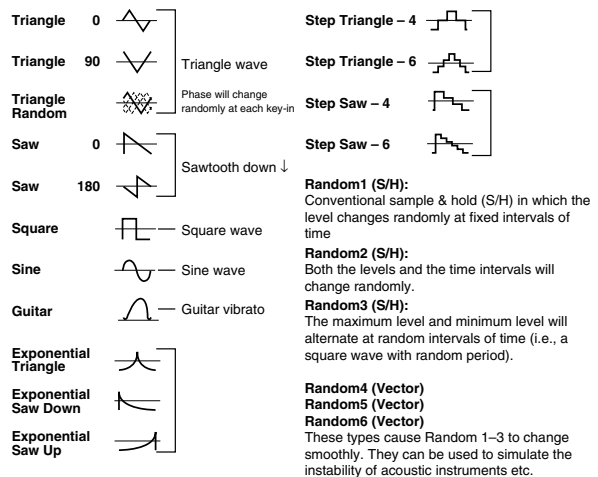


5-1a: OSC1 LFO1

Waveform [Triangle 0...Random6 (Vector)]

Select the LFO waveform.

The numbers that appear at the right of some of the LFO waveforms indicate the phase at which the waveform will begin.



Frequency [00...99]

Set the LFO frequency. A setting of **99** is the fastest.

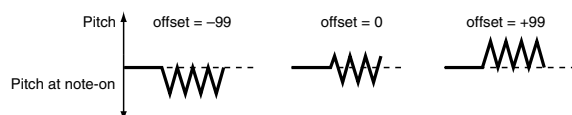
Offset [-99...+99]

Specify the central value of the LFO waveform.

For example with a setting of **0** as shown in the following diagram, the vibrato that is applied will be centered on the note-on pitch. With a setting of **+99**, the vibrato will only raise the pitch above the note-on pitch, in the way in which vibrato is applied on a guitar.

When "Waveform" is set to **Guitar**, the modulation will occur only in the positive (+) direction even if you set "Offset" to **0**.

Offset settings and pitch change produced by vibrato



Key Sync. (Keyboard Synchronize)

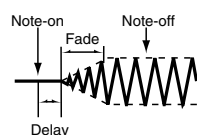
Checked: Key Sync. will be **On**. The LFO will start each time you play a note, and an independent LFO will operate for each note.

Unchecked: Key Sync. will be **Off**, and the LFO effect that was started by the first-played note will continue to be applied to each newly-played note. (In this case, Delay and Fade will be applied only to the LFO when it is first started.)

Fade [00...99]

Specify the time from when the LFO begins to apply until it reaches the maximum amplitude. When "Key Sync." is **Off**, the fade will apply only when the LFO is first started.

How "Fade" affects the LFO (when "Key Sync." is **On**)



Delay [0...99]

Specify the time from note-on until the LFO effect begins to apply.

When "Key Sync." is **Off**, the delay will apply only when the LFO is first started.

5-1b: Frequency Modulation

You can use two alternate modulation sources to adjust the speed of the OSC1 LFO1.

AMS1 (Alternate Modulation Source1) [Off, (PEG, FEG, AEG, LFO2, KT, EXT)]

Select the source that will adjust the frequency of the oscillator 1 LFO1 (see p.210 "AMS (Alternate Modulation Source) List"). OSC1 LFO1 can be modulated by OSC1 LFO2.

Intensity (AMS1 Intensity) [-99...+99]

Specify the depth and direction of the effect that "AMS1" will have.

When this parameter is set to a value of **16, 33, 49, 66, 82, or 99**, the LFO frequency being can be increased by a maximum of **2, 4, 8, 16, 32, or 64** times respectively (or decreased by **1/2, 1/4, 1/8, 1/16, 1/32, or 1/64** respectively).

For example if "AMS1" is **Note Number**, **positive (+) values** of this parameter will cause the oscillator 1 LFO to speed up as you play higher notes. **Negative (-) values** will cause the oscillator 1 LFO to slow down as you play higher notes. This change will be centered on the C4 note.

If "AMS1" is set to **JS +Y**, raising the value of this parameter will cause the oscillator 1 LFO1 speed to increase as the joystick is moved away from yourself. With a setting of **+99**, moving the joystick all the way away from yourself will increase the LFO speed by approximately 64 times.

AMS2 (Alternate Modulation Source2) [Off, (PEG, FEG, AEG, LFO2, KT, EXT)]

Intensity (AMS2 Intensity) [-99...+99]

Make settings for a second alternate modulation source that will adjust the frequency of the oscillator 1 LFO1. (see "AMS1," "Intensity (AMS1 Intensity)")

5-1c: Frequency MIDI/Tempo Sync.

MIDI/Tempo Sync. (MIDI/Tempo Synchronize)

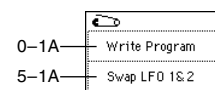
Checked: The LFO frequency will synchronize to the tempo (MIDI Clock). In this case, the values you specified for "Frequency" (5-1a) and "Frequency Modulation" (5-1b) will be ignored.

Base Note [♪, ♪, ♫, ♫, ♫, ♫, ♫, ♫, ♫] Times [01...16]

When "MIDI/Tempo Sync." is checked, these parameters set a note length relative to "♪ (Tempo)" and the multiple ("Times") that will be applied to it. These parameters will determine the frequency of the OSC1 LFO1. For example if "Base Note" is ♫ (quarter note) and "Times" is **04**, the LFO will perform one cycle every four beats.

Even if you change the "♪ (Tempo)" setting of the arpeggiator or sequencer, the LFO will always perform one cycle every four beats.

▼ 5-1: Page Menu Command



5-1A: Swap LFO 1&2

This command exchanges the settings of LFO1 and 2. If LFO2 has been selected as Frequency Modulation AMS1 or 2 of LFO1, that setting will be cancelled for LFO2 after the LFO1 and 2 settings have been exchanged. If this is selected from the OSC1 LFO1 or OSC1 LFO2 tab, the LFO1 and LFO2 of OSC1 will be exchanged.

- ① Select this command to open the dialog box.
- ② Press the **OK** button.

5-2: OSC1 LFO2 AMSource

Here you can make settings for the OSC1 LFO2, which is the second LFO that can be applied to oscillator 1. (see "5-1: OSC1 LFO1") However in "Frequency Modulation" (5-1b), the LFO cannot be selected as a modulation source in "AMS1" or "AMS2."

5-3: OSC2 LFO1 AMSource

This can be used when "Oscillator Mode" (1-1a) is set to **Double**.

Here you can make settings for the OSC2 LFO1, which is the first LFO that can be applied to oscillator 2 (see "5-1: OSC1 LFO1").

5-4: OSC2 LFO2 AMSource

This can be used when “Oscillator Mode” (1-1a) is set to **Double**.

Here you can make settings for the OSC2 LFO2, which is the second LFO that can be applied to oscillator 2 (☞ “5-1: OSC1 LFO1” and “5-2: OSC1 LFO2”).

Program P7: Edit-Arpeggiator

Here you can make settings for the arpeggiator used by the program.

These arpeggiator settings can be linked when you switch programs. To link, check the **Program** item in “Auto Arpeggiator” (Global P0 : 0-1c).

The arpeggiator can be switched on/off by the front panel ARPEGGIATOR [ON/OFF] key. When on, the key LED will light.

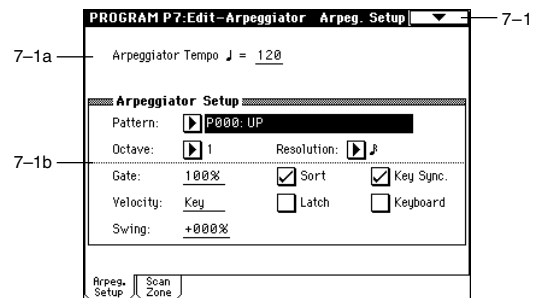
The settings of the front panel ARPEGGIATOR [TEMPO] knob, [GATE] knob, [VELOCITY] knob, and [ON/OFF] key can be saved for each program.

⚡ These settings will be valid when “Auto Arpeggiator” **Program** is checked.

⚡ If Local Control (“Local Control On,” Global P1: 1-1a) is OFF, the keyboard will not trigger the arpeggiator. The arpeggiator will be triggered via MIDI IN. Turn Local Control OFF if you have recorded only the trigger notes on an external sequencer, and wish to playback the external sequencer to trigger the TRITON’s arpeggiator.

If you want the note data generated by the arpeggiator to be recorded on the external sequencer, turn Local Control ON, and turn off the echo back function on your external sequencer.

7-1: Arpeg. Setup



7-1a: Arpeggiator Tempo

Arpeggiator Tempo [040...240, EXT]

Set the tempo (Link: “” 0-1b).

This can also be set by the front panel [ARPEGGIATOR TEMPO] knob.

When “MIDI Clock” (Global P1: 1-1a) is either **External MIDI** or **External PCI/F**, this will indicate **EXT**, and the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

7-1b: Arpeggiator Setup

Refer to p.96 in the *Basic Guide*.

Pattern (Pattern No.) [P00...P04, U00(A/B)...U231(D)]

Select the arpeggio pattern.

P00: UP	(Preset Arpeggio Pattern)
P01: DOWN	(Preset Arpeggio Pattern)
P02: ALT1	(Preset Arpeggio Pattern)
P03: ALT2	(Preset Arpeggio Pattern)


P04: RANDOM	(Preset Arpeggio Pattern)
U00 (A/B)...U199 (A/B)	(for User Arpeggio Pattern)
U200 (C)...U215 (C)	(for EXB-PCM series, User Arpeggio Pattern)
U216 (D)...U231 (D)	(for EXB-PCM series, User Arpeggio Pattern)

P00–P04 are preset arpeggio patterns, U00 (A/B)–U231 (D) are user arpeggio patterns. User arpeggio patterns can be created in Global P6.

note Arpeggio patterns U000 (A/B)–U231 (D) can be selected using the numeric keys [0]–[9] and the [ENTER] key.

Octave [1, 2, 3, 4]

Specify the number of octaves in which the arpeggio will be played (Link: “Octave” 0–2a).

 If a user arpeggio pattern is selected, the range of the arpeggio will depend on the “Octave Motion” (Global P6: 6–1b) setting.

Resolution [♪₃, ♪, ♪₃, ♪, ♪₃, ♪]

Specify the timing resolution of the arpeggio. The notes of the arpeggio will be played at the interval you specify: ♪₃, ♪, ♪₃, ♪, ♪₃, or ♪. The speed of the arpeggio pattern is determined by the “Arpeggiator Tempo” and the “Resolution” (Link: “Reso” 0–2a).

Gate [000...100(%), Step]

Specify the length (gate time) of each note in the arpeggio.

000–100(%): Each note will be played with the specified gate time.

Step: This is available when an user arpeggio pattern U00 (A/B)–U231 (D) is selected for “Pattern.” When this is selected, the gate time specified for each step will be used. The gate time can also be controlled by the front panel ARPEGGIATOR [GATE] knob. Rotating the knob toward the left will shorten the gate time, and rotating it toward the right will lengthen the gate time. When the knob is at the 12 o’clock position, the gate time will be as specified here.

Velocity [001...127, Key, Step]

Specify the velocity of the notes in the arpeggio.

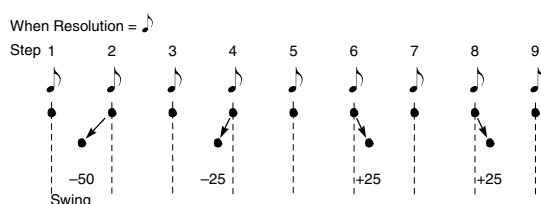
001–127: Each note will sound with the specified velocity value.

Key: Each note will sound with the velocity value at which it was actually played.

Step: This is available when an user arpeggio pattern U00 (A/B)–U231 (D) is selected for “Pattern.” When this is selected, the velocity specified for each step will be used. The velocity can also be controlled by the front panel ARPEGGIATOR [VELOCITY] knob. Rotating the knob toward the left will decrease the velocity, and rotating it toward the right will increase the velocity. When the knob is at the 12 o’clock position, the velocity will be as specified here.

Swing [-100...+100(%)]

This parameter shifts the timing of the odd-numbered notes of the arpeggio.



Sort

This specifies the order in which the notes you press will be arpeggiated (Link: “Sort” 0–2a).

Checked: Notes will be arpeggiated in the order of their pitch, regardless of the order in which you pressed them.

Unchecked: Notes will be arpeggiated in the order in which you pressed them.

Latch

Specify whether or not the arpeggio will continue playing after you take your hand off of the keyboard (Link: “Latch” 0–2a).

Checked: The arpeggio will continue playing after you remove your hand from the keyboard.

Unchecked: The arpeggio will stop when you remove your hand from the keyboard.

Key Sync. (Keyboard Synchronize)

Specify whether the arpeggio pattern will begin when you press a key, or whether it will always follow the “Arpeggiator Tempo” (Link: “Key Sync.” 0–2a).

Checked: The arpeggio pattern will start playing from the beginning when a note-on occurs from a condition where no keys are pressed. This setting is suitable when you are playing in realtime and want the arpeggio to play from the beginning of the measure.

Unchecked: The arpeggio pattern will always play according to the “Arpeggiator Tempo”.

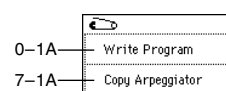
Keyboard

This specifies whether the notes you play on the keyboard will be sounded as usual in addition to being sounded as part of the arpeggio (Link: “Keyboard” 0–2a).

Checked: The notes you play will be sounded on their own, in addition to being sounded as part of the arpeggio. For example if you simultaneously press two or more notes, they will be sounded as usual in addition to being played as arpeggiated notes.

Unchecked: Only the arpeggiated notes will be heard.

▼ 7–1: Page Menu Command



7–1A: Copy Arpeggiator

This command copies arpeggio settings.

① Select this command to open the following dialog box.

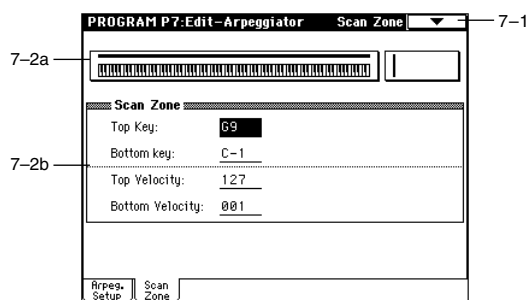


② In “From” specify the copy source arpeggio settings (mode, bank, number).

③ If you are copying from Combination, Song, or Song Play mode, specify whether you wish to copy from **A** or **B**.

④ To execute the Copy Arpeggio operation, press the **OK** button. To cancel, press the **Cancel** button.

7-2: Scan Zone



7-2a: Zone Map

This shows the “Scan Zone” setting.

7-2b: Scan Zone

Top Key [C-1...G9]

Bottom Key [C-1...G9]

These parameters specify the range of notes (keys) for which the arpeggiator will function. “Top Key” is the upper limit, and “Bottom Key” is the lower limit.

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of velocities for which the arpeggiator will function. “Top Velocity” is the upper limit, and “Bottom Velocity” is the lower limit.

note Note number and velocity can also be input by holding down the [ENTER] key and playing a note on the keyboard.

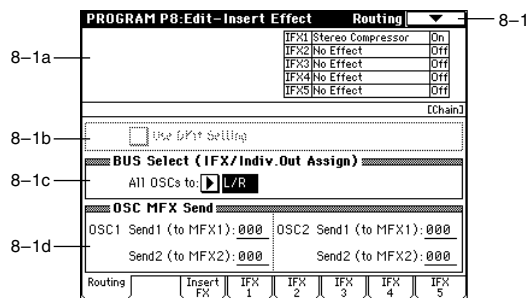
Program P8: Edit-Insert Effect

For details on insertion effects, refer to p.146 “8. Effect Guide.”

8-1: Routing

These settings specify the bus on which the output of the oscillator will be sent, and adjust the send levels to the master effects.

The following diagram shows the LCD screen when “Oscillator Mode” (1-1a) is set to **Single** or **Double**.



8-1a: Routing Map

This shows the status of the insert effects. The insert effect routing, effect name, on/off status, and chain is shown. The types of insert effect, on/off, and chain settings are made in the Insert FX tab (8-2).

8-1b: Use DKit Setting

This will be available when “Oscillator Mode” (1-1a) is set to **Drums**.

Checked: The “BUS Select” (Global P5: 5-2a) setting for each key of the selected drum kit will be used. Check this when you want to apply an insert effect to an individual drum instrument, or to output an individual drum instrument to one of the AUDIO OUTPUT (INDIVIDUAL) jacks. If the “Oscillator Mode” is **Single** or **Double**, this setting has no effect.

Unchecked: The setting of the “BUS Select” (8-1c) parameter described below will be used. All drum instruments will be sent to the specified bus.

8-1c: BUS Select (IFX/Indiv.Out Assign)

All OSCs to (BUS Select)

[L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specify the bus to which oscillators 1 and 2 will be sent.

note If this is set to 1/2 or 3/4, the oscillator pan settings (4-1b, 4-4) will be used to output the sound in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4. When the oscillator pan is controlled by CC#10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at note-on. Unlike the case when this is set to L/R to output the sound from (MAIN) L/MONO and R, the pan of a sounding note will not change in realtime.

If you wish to adjust the pan in realtime during a note and output the sound from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4, set “BUS Select” to IFX1 (or IFX2-

IFX5), set "IFX1" (or IFX2-IFX5) to **000: No Effect**, and set the "BUS Select" (8-2a) after passing through IFX to 1/2 or 3/4.

8-1d: OSC MFX Send (Oscillator Master Effect Send)

OSC1:

Send1 (to MFX1) [000...127]

Set the volume (send level) at which the output of OSC1 will be sent to master effect 1. This is valid when "BUS Select" (8-1c) is set to **L/R** or **Off**.

If "BUS Select" is set to **IFX1, IFX2, IFX3, IFX4** or **IFX5**, the send levels to master effect 1 and 2 are set by "Send 1" and "Send 2" (8-2a) after passing through IFX 1/2/3/4/5 of the Insert FX tabs.

Send2 (to MFX2) [000...127]

Set the volume (send level) at which the output of OSC1 will be sent to master effect 2 (≡ "Send 1 (to MFX1)").

OSC2:

Send1 (to MFX1) [000...127]

Send2 (to MFX2) [000...127]

Set the volume (send level) at which the output of OSC2 will be sent to master effects 1 and 2. These parameters will be valid when "Oscillator Mode" (1-1a) is set to **Double** and "BUS Select" is set to **L/R** or **Off**.

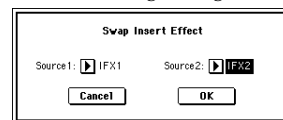
MIDI CC#93 will control the Send 1 level for OSC 1 and 2, and control change #91 will control the Send 2 level for OSC 1 and 2. These are controlled on the global MIDI channel "MIDI Channel" (Global P1: 1-1a). The actual send level is determined by multiplying these values with the send level setting of each oscillator.

- 4 Select the copy destination insert effect. If you check "Post IFX Mixer Setting," the "Chain," "Pan#8," "BUS Select," "Send 1" and "Send 2" settings that follow the copy source insert effect will also be copied. If this is **unchecked**, only the effect type and its parameters will be copied.
- 5 To execute the Copy Insert Effect command, press the **OK** button. To cancel, press the **Cancel** button.

8-1B: Swap Insert Effect

This command swaps (exchanges) insert effect settings.

- 1 Select this command to open the following dialog box.

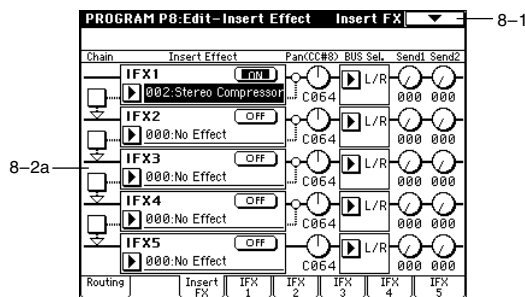


- 2 In "Source 1" and "Source 2," select each of the insert effects that you wish to swap.
- 3 To execute the Swap Insert Effect command, press the **OK** button. To cancel, press the **Cancel** button.

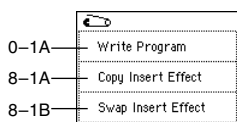
8-2: Insert FX

Here you can select the type of each insert effect, turn it on/off, and make chain settings.

The direct sound (Dry) of an insert effect is always stereo input and output. The input/output of the effect sound (Wet) will depend on the effect type (≡p.146).



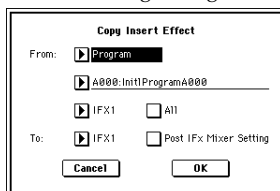
8-1: Page Menu Command



8-1A: Copy Insert Effect

This command copies effect settings from Program, Combination, Song, Sampling, or Song Play mode.

- 1 Select this command to open the following dialog box.



- 2 In "From" select the copy source mode, bank, and number.
- 3 Select the effect that you wish to copy. You can also copy from a master effect. If "All" is **checked**, all effect settings will be copied (i.e., the contents of the Insert FX tab and the effect parameters of IFX 1-5, but not "Ctrl Ch").

⚠ If you are copying from a master effect, the result may not be identical, due to differences in the routing and level settings of a master effect.

8-2a: IFX1, 2, 3, 4, 5 (Insert Effect1, 2, 3, 4, 5)

FX Select (IFX1, 5) [000...089: name]

FX Select (IFX2, 3, 4) [000...102: name]

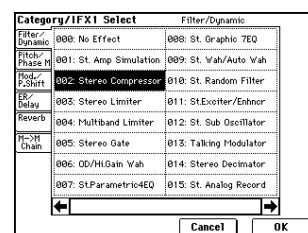
Select the type of each insert effect.

For "IFX1" and "IFX5" you can select from 90 types of effect: **000: No Effect - 089: Reverb-Gate**. Double-size effects cannot be used.

For "IFX2," "IFX3" and "IFX4" you can select from 103 types of effect: **000: No Effect - 102: Hold Delay**.

Category/IFX Select

When you press the popup button, a "Category/IFX Select" list will appear. Press a tab to select a category of effects, and select an effect from that category. Press the **OK** button to execute, or press the **Cancel** button to cancel.



If you select a double-size effect, the insert effect that follows will be unavailable. For example if you select a double-size effect for IFX2, IFX3 cannot be used. Up to two double-size effects can be used. (You can use a normal size effect for IFX1, and double-size effects for IFX2 and IFX4.) (Ⓢp.146)

ON/OFF (Insert Effect On/Off)

Switch the insert effect on/off.

When this is **OFF**, the input will be output without change. (For **000: No Effect**, on/off will produce the same result.)

Each time you press this, the setting will alternate between on/off.

MIDI Separately from this setting, you can use control change #92 to turn off all insert effects together. A value of 0 will be off, and a value of 1-127 will be the original setting. This message is received on the global MIDI channel specified by "MIDI Channel" (Global P1: 1-1a).

Chain

Switch "chain" on/off for each insert effect. For example if the check box between IFX1 and IFX2 is checked, IFX1 and IFX2 will be connected in series. If "BUS Select" (8-1c) is set to **IFX1**, IFX1 and IFX2 will be inserted in series.

A maximum of five insert effects (IFX1-IFX5) can be inserted in series. When effects are chained, the "PAN (CC#8)," "BUS Select," "Send 1" and "Send 2" settings that follow the last IFX in the chain will be used.

Pan(CC#8) (Post IFX Panpot CC#8)

[L000...C064...R127]

Set the pan after the sound has passed through the insert effect. This setting is valid only when the following "BUS Select" is set to **L/R** (Ⓢp.149).

MIDI CC#8 will control.

BUS Sel. (BUS Select) [L/R, 1, 2, 3, 4, 1/2, 3/4, Off]

Specify the bus to which the sound will be sent after passing through the insert effect. Normally you will set this to **L/R**. If you wish to output to AUDIO OUTPUT (INDIVIDUAL), set this to **1, 2, 3, 4, 1/2, or 3/4**. The **Off** setting is used when you wish to use "Send 1" and "Send 2" and in addition connect to the master effects in series.

Send1 (MFX1) [000...127]

Send2 (MFX2) [000...127]

Set the send levels to the master effects 1 and 2 for the sound that has passed through the insert effect. These settings are valid when "BUS Select" (8-2a) has been set to **L/R** or **Off**.

MIDI Control change #93 will control the Send 1 level, and control change #91 will control the Send 2 level. These messages are received on the global MIDI channel specified by "MIDI Channel" (Global P1: 1-1a).

8-3: IFX 1

8-4: IFX 2

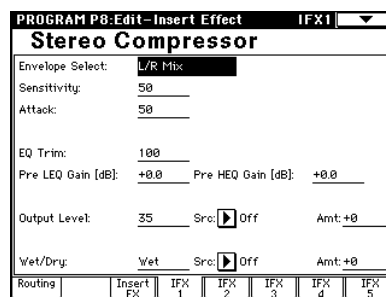
8-5: IFX 3

8-6: IFX 4

8-7: IFX 5

Here you can set the effect parameters for the IFX 1/2/3/4/5 that were selected in the Insert FX tab (Ⓢp.155).

MIDI Effect dynamic modulation (Dmod) is controlled on the global MIDI channel "MIDI Channel" (Global P1: 1-1a).

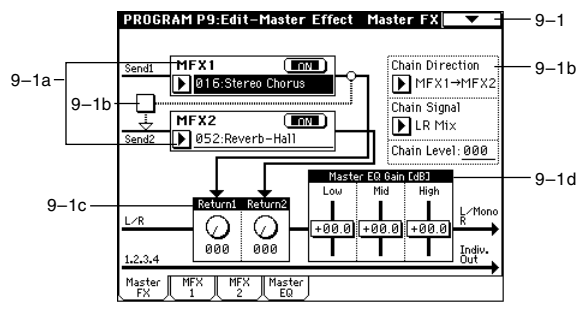


Program P9: Edit-Master Effect

For details on the master effects, refer to p.150 "8. Effect Guide."

9-1: Master FX

Here you can select the master effect types, switch them on/off, specify chaining, and set the master EQ.



9-1a: Master FX (Master Effect)

The master effects do not output the direct sound (Dry). The return level ("Return") sends the effect sound (Wet) to the L and R bus, and this is mixed with the direct sound (i.e., the output from P8: Routing tab "BUS Select" L/R, or the L/R output from Insert FX tab "BUS Select").

The master effects are mono-in stereo-out. The sound that is panned to L and R after passing through the oscillator and insert effects is mixed to a mono signal as adjusted by the "Send 1" and "Send 2" levels, and input to the master effects.

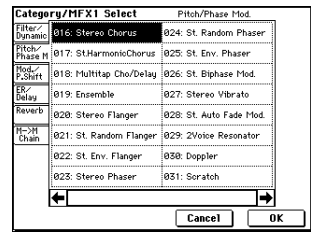
▲ The master effects are **mono-in stereo-out**. Even when a stereo-input type effect is selected, the input will be monoaural.

MFX1 Effect Select [000...089: name]

Select the effect type for master effect 1. You can select from 90 types of effect: 000: No Effect-089: Reverb-Gate. (Double-size effects cannot be selected.) If 000: No Effect is selected, the output from the master effect will be muted.

Category/MFX Select

When you press the popup button, a "Category/MFX Select" menu will appear. Press a tab to select the desired category of effect, and select an effect from the list. Press the OK button to execute, or press the Cancel button to cancel.



ON/OFF (Master Effect On/Off)

Switch master effect 1 on/off. When off, the output will be muted. This will alternate on/off each time it is pressed.

MIDI Separately from this setting, you can use CC#94 to switch this on/off. A value of 0 will be off, and a value of 1-127 will be the original setting. This is controlled on the global MIDI channel "MIDI Channel" (Global P1: 1-1a).

MFX2 Effect Select [000...089: name]

Select the effect type for master effect 2 (MFX1 Effect Select").

ON/OFF

Switch master effect 2 on/off. Refer to the above explanation of "ON/OFF." MFX2 can also be turned on/off by control change #95.

9-1b: Chain

Chain

Checked: Chain (series connection) will be turned on for MFX1 and MFX2.

Chain Direction [MFX1->MFX2, MFX2->MFX1]

Specify the direction of the connection when MFX1 and MFX2 are chained.

MFX1->MFX2: Connect from MFX1 to MFX2.
MFX2->MFX1: Connect from MFX2 to MFX1.

Chain Signal [LR Mix, L Only, R Only]

When chain is On, this parameter specifies how the stereo output signal of the first master effect will be connected to the input (mono) of the next master effect.

L/R Mix: The stereo output L/R of the first master effect will be mixed before being input to the next master effect.

L Only, R only: Only the left or right channel of the output will be input to the next master effect.

Chain Level [000...127]

When chain is On, this sets the level at which the sound is sent from the first master effect to the next master effect.

9-1c: Return Level

Return 1 [000...127]

Return 2 [000...127]

Adjust the return levels from the master effects to the L/R bus (main output L/MONO, R).

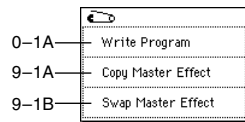
9-1d: Master EQ Gain [dB]

Set the gain for the three-band EQ located immediately before the sound of the L/R bus is sent from the AUDIO OUTPUT (MAIN OUT) L/MONO and R jacks. This is linked with the various "Gain" parameters of Master EQ (9-4).

Low [-18.0...+18.0]
Mid [-18.0...+18.0]
High [-18.0...+18.0]

The cutoff frequency for "Low," "Mid" and "High" and the "Q" of "Mid" can be adjusted in the Master EQ tab. These settings are in "dB" units.

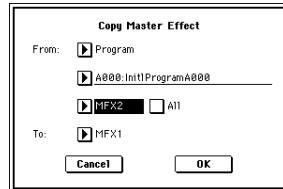
▼ 9-1: Page Menu Command




9-1A: Copy Master Effect

This command lets you copy any desired effect settings from Program, Combination, Song, Sampling, or Song Play modes.

- 1 Select this command to open the following dialog box.



- 2 In "From," select the copy source mode, bank, and number.
- 3 Select the effect that you wish to copy. If you select **MFX 1** or **2**, "Return" (return level) will be copied at the same time. If you select **Master EQ**, only the master EQ settings will be copied. You can also copy from an insert effect. If you check "All," all settings of the master effects and master EQ will be copied.

 If you copy from an insert effect the result may not be identical, due to differences in routing and level settings.

- 4 Select the copy destination master effect.
- 5 To execute the Copy Master Effect command, press the **OK button**. To cancel, press the **Cancel button**.

9-1B: Swap Master Effect

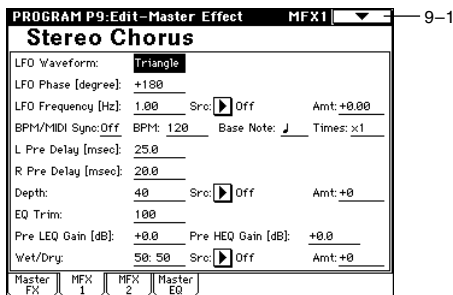
This command swaps (exchanges) the settings of MFX1 and MFX2.

- 1 Select this command to open the dialog box.
- 2 To execute the Swap Master Effect command, press the **OK button**. To cancel, press the **Cancel button**.

9-2: MFX 1

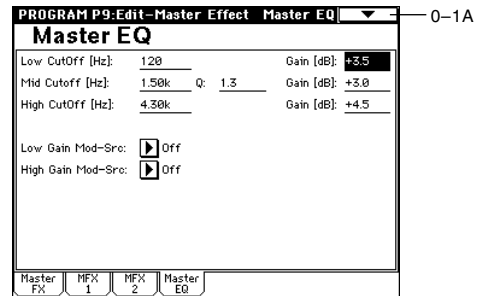
9-3: MFX 2

Make effect parameter settings for the MFX1 and 2 effects that were selected in the Master FX tab (p.155).



9-4: Master EQ

The master EQ is a three-band stereo EQ. It is used to adjust the overall tonality of the sound immediately before the L/R bus is output to the AUDIO OUTPUT (MAIN OUT) L/MONO and R jacks (p.207).

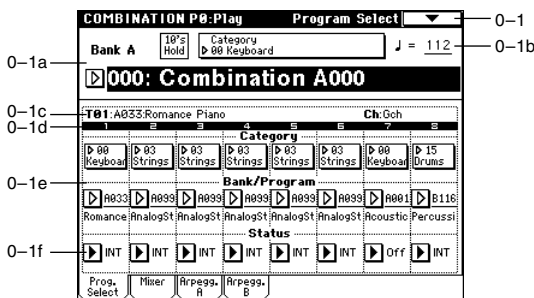


2. Combination mode

Combination P0: Play

In this display page you can select and play Combinations.

0-1: Prog. Select (Program Select)



0-1a: Bank, 10's Hold, Category, Combination Number

Bank

[Bank A...D]

This is the Combination bank display.

Use the front panel BANK [A]–[D] keys to select the bank. On the TRITON, there are a total of 512 combination programs in four rewritable banks (A, B, C, D), each containing 128 combinations.

A, B	for preset combinations
C, D	(for preset combinations, and EXB-PCM series combinations)

10's Hold If you have selected the “Bank/Program” edit cell for a timbre 1–8 in the Prog. Select tab, BANK [A]–[D] will switch the program banks for timbres 1–8.

10's Hold

When you press the front panel [./10's HOLD] key, the display will indicate **10's Hold**, and the ten's place of the combination number will be fixed. By pressing a numeric key [0]–[9], you can change the one's place in one keystroke. Use the [△] and [▽] keys to change the 10's place.

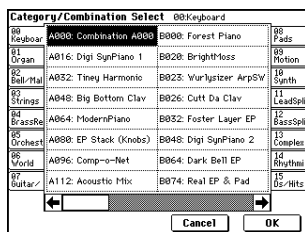
To exit, press the [./10's HOLD] key once again.

Category (Combination Category) [00...15: name]

This is the combination category display.

You can select combinations by category. Press the popup button, and the “Category/Combination Select” menu will appear.

Category/Combination Select menu:



The combinations of all banks can be organized using up to 16 categories. Use the tabs located at left and right to select a category, and the combinations in the specified category will

appear. Press the **OK** button to execute, or press the **Cancel** button to cancel your selection.

The category for each combination can be specified in the “Write Combination” dialog box.

Combination Number: name [0...127: name]

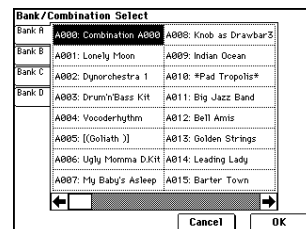
This is the number and name of the combination.

Here you can select the desired combination. When this parameter is selected, you can select combinations using the front panel numeric keys [0]–[9], [VALUE] dial, or [△] [▽] keys.

When you press the popup button, the “Bank/Combination Select” menu will appear. This displays combinations by bank, and allows you to select a combination.

For details on other ways to select combinations such as using a foot switch or by using MIDI program change messages from an external MIDI device, refer to p.125, 114 in the *Basic Guide*.

Bank/Combination Select menu:



All combinations are grouped and displayed by their bank. When you use the tabs at left to select a bank, the combinations in the selected bank will appear. Press the **OK** button to execute, or press the **Cancel** button to cancel your selection.

0-1b: ♩ (Arpeggiator Tempo) [040...240, EXT]

This sets the tempo of the arpeggiator. The tempo can also be adjusted by the front panel ARPEGGIATOR [TEMPO] knob. A display of **EXT** indicates that the “MIDI Clock” setting (Global P1: 1–1a) has been set to **External MIDI** or **External PCI/F**, and that the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

0-1c: Selected Timbre Information

This shows information on the timbre (1–8) that is currently selected for editing.

T (Timbre) [No.: Bank No., Prog No. and name]

This shows the timbre number, and the program bank, number and name selected for that timbre.

Ch [01...16, Gch]

This is the MIDI channel number specified for the timbre.

0-1d: Timbre Number (1, 2, 3, 4, 5, 6, 7, 8)

This is the timbre number.

0-1e: Category, Bank/Program

Category (Category Name) [00...15: name]

The program for each timbre can be selected by program category. When you press the popup button, the Category/Timbre Program Select menu will show programs arranged by category, and you can select a program from this list. This is useful when you wish to find programs in a specific category, or when you need to find a different program in the same category (see p.1 “Category/Program Select menu”). This parameter is linked with “Category” (1-1b).

Bank/Program

The program for each timbre can be selected by program bank.

When you press the popup button, the Bank/Timbre Program Select menu will show the programs arranged by bank, and you can select a program from this list (see p.1 “Bank/Program Select menu”). If one of these edit cells has been selected, you can use the front panel [BANK] keys, numeric keys [0]–[9], [VALUE] dial, [VALUE] slider, or [△] [▽] keys to make a selection. At this time, the [BANK] key LED will light to indicate the selected program bank. This parameter is linked with “Bank/Program” (1-1b).

note Bank F can be selected if you have installed the separately sold EXB-MOSS option. When installed, the 128 special EXB-MOSS programs will be available.

MIDI When you select a combination on the TRITON, a MIDI program change for the selected combination number will be transmitted on the global MIDI channel “MIDI Channel” (Global P1: 1-1a). At the same time, bank select, program change, and volume (CC#7) messages will be transmitted on the MIDI channel specified for each timbre that is set to “Status” (0-1f, 2-1a) of EXT or EX2. However, these messages will not be transmitted for timbres that are set to the same MIDI channel as the global MIDI channel. In this case, EX2 timbres will show the “Bank/Program” Bank as “–”, and will transmit the bank number that was specified in “Bank Select” (2-1a).

MIDI messages transmitted when you operate the TRITON are transmitted on the global MIDI channel. At the same time, timbres whose “Status” is EXT or EX2 will transmit the same messages on their own MIDI channel.

If bank select and program change messages are received on a MIDI channel that matches the MIDI channel of a timbre whose “Status” is INT, the program of that timbre will change. However if the MIDI channel of the incoming message matches the global MIDI channel “MIDI Channel,” then the combination will change.

If you do not want the combination to change, you can either change the global MIDI channel so that it does not match the channel on which the program change messages are being received, or you can **uncheck** “Enable Combination Change” (Global P1: 1-1b). Alternately, you can **uncheck** “Enable Bank Change” (Global P1: 1-1b) so that only the program number will change and the bank will remain the same.

If you wish to change a program without changing the combination, you can also set “Enable Program Change” (3-1a) so that the program will change on certain timbres but not on others.

Program Name

This displays part of the program name selected for the timbre. In the case of the GM2 variation bank or the GM2 drums bank, the variation bank (1)–(9) or drums bank (d) will be indicated.

0-1f: Status

Status [INT, Off, EXT, EX2]

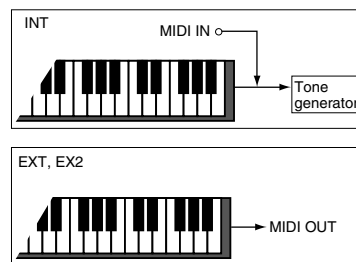
For each track, this specifies the status of MIDI and the internal tone generator. This parameter is linked with “Status” (2-1a).

INT: When you play the TRITON, the internal tone generator will sound, and will also sound in respond to MIDI messages received from an external MIDI device.

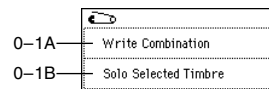
Off: The program will not sound. Nor will MIDI data be transmitted.

EXT: Playing the TRITON will not cause it to sound, but will transmit data via MIDI to control external MIDI devices.

EX2: Instead of the A–g(d) bank numbers that can be selected on the TRITON, the bank numbers selected in “Bank Select” (2-1a) will be transmitted via MIDI. “Bank Select” (2-1a) is valid when EX2 is selected. In other respects this is the same as EXT.



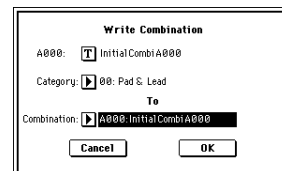
▼ 0-1: Page Menu Command



0-1A: Write Combination

This command writes an edited combination into the TRITON's internal memory. Be sure to write any combination that you wish to keep. If the power is turned off or a different combination selected before you write an edited combination, your edits cannot be recovered.

① Select this command to open the following dialog box.



- ② The upper line shows the bank name and combination name. To edit the combination name, press the text edit button to access the text edit dialog box, and input the desired combination name.
- ③ In “Category” you can assign a category to the combination you are writing. The category you specify here can be used when you search for combinations in Combination P0. With the factory settings, families of instruments are assigned as combination category names, but you can modify in Global P4-2: “Comb Cat.” (Combination Category).

- ④ In “To Combination,” select the writing destination.
- ⑤ To execute the Write Combination command press the **OK button**. To cancel, press the **Cancel button**.

note When you press the front panel [REC/WRITE] key, the “Update Combination” dialog box will appear. Here also you can write to the currently selected combination.

0-1B: Solo Selected Timbre

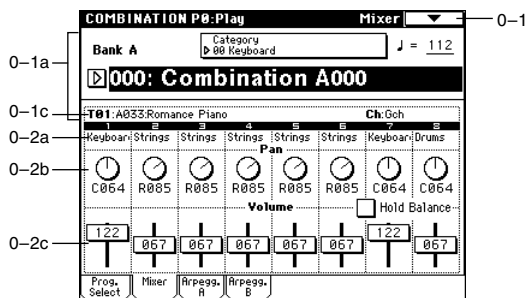
The Solo function will be switched on/off each time you select this command.

If this is **checked**, the Solo function will be on, and only the currently selected timbre will sound. All other timbres will be muted. To solo another timbre, select a parameter for that timbre. “Selected Timbre Information” (0-1c) will indicate [Solo]. To cancel the Solo function, select the “Solo Selected Timbre” page menu command once again. This command is not available in tabs or pages that do not contain parameters for individual timbres.

MIDI If a timbre that is muted by the Solo function has been set to a “Status” (0-1f, 2-1a) of **EXT** or **EX2**, MIDI note-on/off messages will not be transmitted by that timbre.

0-2: Mixer

Here you can set the pan and volume for each timbre 1-8.



0-2a: Program Category

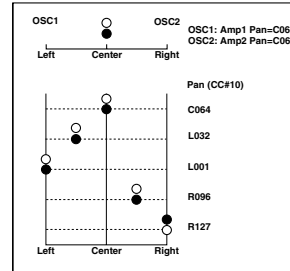
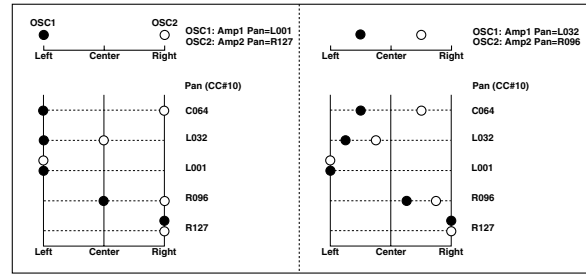
Part of the program category name for the timbre program is displayed here.

0-2b: Pan (Panpot)

Pan (Panpot) [RND, L001...C064...R127]

Set the pan for each timbre 1-8. This parameter is linked with “Pan” (1-1c).

L001...C064...R127: A setting of **L001** is far left and **R127** is far right. A setting of **C064** will reproduce the pan setting that was made for the oscillator in Program mode.



If a mono-type insertion effect is inserted, the setting you make here will be ignored. In this case, the “Pan (CC#8)” (8-2) parameter in Insert FX tab will adjust the panning of the sound after the insertion effect (see p.149 “3. Mixer”).

RND: The oscillator pan will change randomly at each note-on.

MIDI If “Status” (0-1f, 2-1a) has been set to **INT**, MIDI control change #10 (panpot) messages can be received to control the setting. CC#10 values of 0 or 1 will place the sound at far left, 64 at center, and 127 at far right. Pan can be controlled by messages received on the “MIDI channel” (2-1a).

0-2c: Volume

Volume

[000...127]

Adjust the volume of each timbre 1-8. This parameter is linked with “Volume” (1-1d).

MIDI The volume of each timbre is determined by multiplying this volume value with the MIDI volume (CC#7) and expression (CC#11). If “Status” (0-1f, 2-1a) has been set to **INT**, incoming MIDI CC#7 or CC#11 messages will control the volume of a timbre. (However these messages will not affect the setting of this parameter.)

If “Status” is **EXT** or **EX2**, the value of this parameter will be transmitted as MIDI CC#7 when the combination is changed. However this will not be transmitted by a timbre that is set to the same MIDI channel as the global MIDI channel. This message is transmitted on the “MIDI channel” (2-1a) specified for each timbre.

Hold Balance

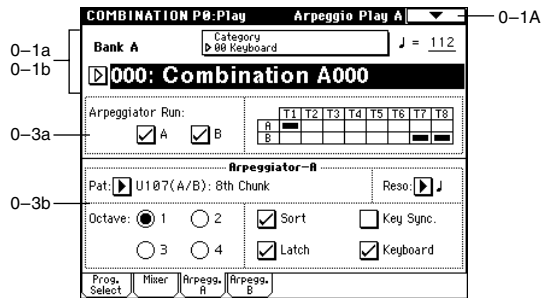
Checked: When any one of the volume sliders is moved, the volume of the other timbres will change as well. The volume balance of timbres 1-8 will be maintained. This is useful when you wish to adjust the overall volume.

0-3: Arpegg. A (Arpeggio Play A)

0-4: Arpegg. B (Arpeggio Play B)

Here you can make arpeggiator settings for the combination. A combination can run two arpeggiators simultaneously. Arpeggiator parameters can be edited in P7: Edit-Arpeg., but certain major parameters can be edited in these pages as well. You can edit these parameters in realtime, for example by changing the arpeggio pattern while playing in Combination P0: Play.

To save the edits you make, use "Write Combination." The arpeggiator can also be edited in realtime by the front panel ARPEGGIATOR [TEMPO] knob, [GATE] knob, and [VELOCITY] knob.



0-3a: Arpeggiator Run A, B, Timbre assign

Arpeggiator Run A, B

Specify whether arpeggiator A and/or B will start up when the ARPEGGIATOR [ON/OFF] key is pressed. Only the arpeggiator(s) you select here will run. When the arpeggiator is on, A and B can be switched on/off. This is linked with "Arpeggiator Run A, B" (7-1b).

Timbre assign

This indicates the arpeggiator A and B assignment status for each timbre 1-8. These settings are made in "Arpeggiator Assign" (7-1b).

0-3(4)b: Arpeggiator A (B)

Pat (Pattern No.) [P00...P04, U00(A/B)...U231(D)]

Octave [1, 2, 3, 4]

Reso (Resolution) [♪₃, ♪, ♪₃, ♪, ♪₃, ♪]

Sort

Latch

Key Sync. (Keyboard Synchronize)

Keyboard

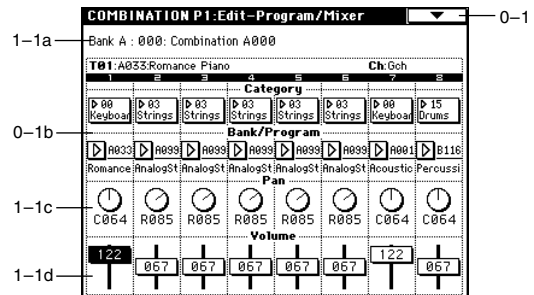
Set the various parameters of the combination arpeggiator (↔ "Program P7: Edit-arpeggiator").

These parameters are linked to the parameters of the identical name (and abbreviation) in "7-2(3): Arpegg. A (B)."

Combination P1: Edit-Program/Mixer

1-1: Program/Mixer

For each timbre 1-8, set the bank, program, pan and volume. These parameters are linked with the identically-named parameters in the P0: Program Select tab and Mixer tab.



1-1a: Bank No.: Prog No.: Prog Name

Bank No.: Prog No.: Prog Name

This shows the combination bank, number, and name selected in Combination P0: Play.

1-1b: Category, Bank/Program

↔ Link: "Category" (0-1e), Link: "Bank/Program" (0-1e)

1-1c: Pan

↔ Link: "Pan" (0-2b)

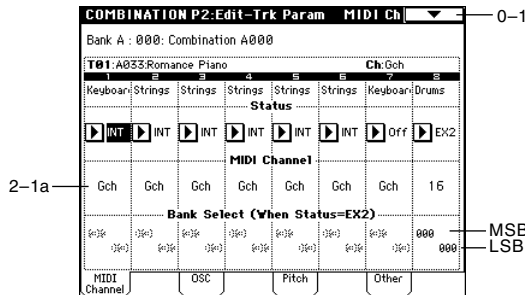
1-1d: Volume

↔ Link: "Volume" (0-2c)

Combination P2: Edit-Trk Param

2-1: MIDI Channel (MIDI Ch)

Here you can make MIDI settings for each timbre.



2-1a: Status, MIDI Channel, Bank Select

Status [INT, Off, EXT, EX2]

Link: "Status" (0-1f).

MIDI Channel [01...16, Gch]

Set the MIDI transmit/receive channel for each timbre 1-8.

Gch: The timbre will use the channel that has been selected as the global MIDI channel "MIDI Channel" (Global P1: 1-1a).

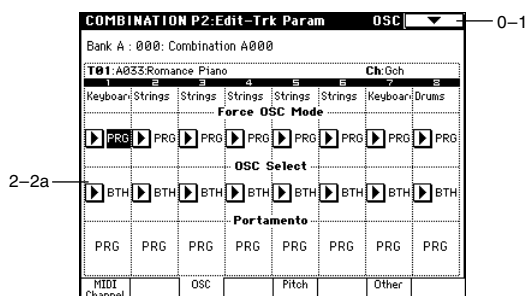
When "Status" is INT, MIDI messages will be received on the channel you specify here. If this setting is the same as the global MIDI channel, the internal tone generator will sound according to the internal settings. If this is set to EXT or EX2, playing the TRITON will transmit MIDI messages on the MIDI channel specified here. (Messages will also be transmitted simultaneously on the global MIDI channel.)

Bank Select (When Status=EX2) [000:000...127:127]

Specify the bank number that will be transmitted when "Status" is set to EX2. If "Status" is not set to "EX2," this setting has no effect.

2-2: OSC

These settings specify how each timbre will be sounded.



2-2a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode [PRG, Poly, MN, LGT]

Specify the Voice Assign Mode (Program P1: 1-1b) of the program selected for each timbre 1-8.

PRG: The settings of the program will be used.

Poly: The timbre will play polyphonically, regardless of the settings of the program.

MN (Mono): The timbre will play monophonically, regardless of the settings of the program.

LGT (Legato): The timbre will play monophonically, with single triggering (legato).

With settings of MN or LGT, the note priority will be according to the "Priority" (Program P1: 1-1b) setting of the program.

OSC Select [BTH, OS1, OS2]

Specify the "Oscillator Mode" of the program selected for each timbre 1-8. If the "Oscillator Mode" (Program P1: 1-1a) is Double, you can specify that either or both oscillators sound.

BTH (Both): OSC1 and 2 will sound as specified by the settings of the program.

OS1: Only OSC1 will sound.

OS2: Only OSC2 will sound. (If "Oscillator Mode" is Single or Drums, there will be no sound.)

Portamento [PRG, Off, 001...127]

Make portamento settings for each timbre 1-8.

PRG: Portamento will be applied as specified by the program settings.

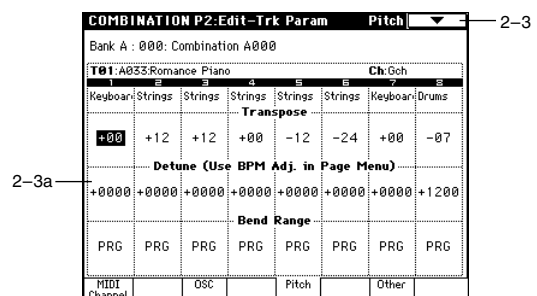
Off: Portamento will be off, even if the original program settings specified for it to be on.

001...127: Portamento will be applied with the portamento time you specify here, even if it is turned off by the program settings.

MIDI If the "Status" (0-1f, 2-1a) is set to INT, CC#05 (portamento time) and #65 (portamento switch) messages will be received to control and change this setting. (If the setting is PRG, #05 portamento time will not be received.) These messages will be received on the MIDI channel specified for each timbre by "MIDI Channel" (2-1a).

2-3: Pitch

Here you can make pitch-related settings for each timbre.



2-3a: Transpose, Detune, Bend Range

Transpose [-24...+24]

Adjust the pitch of each timbre in semitone steps.
12 units equal one octave.

MIDI When "Status" (0-1f, 2-1a) is INT, this parameter will affect the pitches sounded by the TRITON. When "Status" is EXT, this parameter will affect the note numbers of the MIDI note messages that are transmitted. For example if you make settings of +04 and +07 respectively for two timbres that are set to EXT, playing the C key will transmit a C note number on the global MIDI channel, and at the same time will also transmit E and G note numbers on the MIDI channels of those timbres.

Detune (Use BPM Adj. in Page Menu) [-1200...+1200]

Adjust the pitch of each timbre in one-cent units.

0: Normal pitch.

note You can also use the "Detune BPM Adjust" page menu command to automatically make a detune setting from a calculation in BPM units.

MIDI "Transpose" and "Detune" can be controlled via MIDI RPN messages. Depending on the "Oscillator Mode" (Program P1: 1-1a) settings of the programs used by timbres 1-8, they can be controlled as follows. When "Oscillator Mode" is **Single** or **Double** MIDI RPN Coarse Tune can be received to control and change the setting of "Transpose," and RPN Fine Tune can be received to control and change the setting of "Detune."

When "Oscillator Mode" is **Drums**

MIDI RPN Coarse Tune and Fine Tune can be received to control and change the setting of "Detune." The controllable range is ± 1 octave for coarse tune and fine tune together.

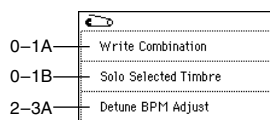
Bend Range [PRG, -24...+24]

Specify the amount of pitch change that will occur when the pitch bender is operated, in semitone units.

PRG: The pitch range specified by the program will be used.
-24+24: This setting will be used regardless of the setting in the program.

MIDI The MIDI RPN Pitch Bend Change message can be received to control this and change the setting. (However it will not be received if this parameter is set to PRG.) This message is received on the MIDI channel for each timbre set by "MIDI Channel" (2-1a).

▼ 2-3: Page Menu Command

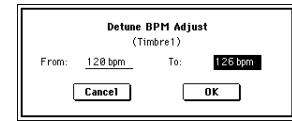


2-3A: Detune BPM Adjust

This command can be used when you wish to modify the BPM of a phrase or rhythm that uses a phrase or rhythm loop multisample or multisample that was created to match a specific BPM in Sampling mode, or that was loaded in Disk mode (Program P1: 1-2a, 1-2b, Global P5: 5-1b, 5-1c). This command changes the BPM by modifying the pitch. When timbre "Detune" is selected, this command will

apply to the selected timbre. When you execute the command, the selected "Detune" value will be set.

① Select this command to open the following dialog box.



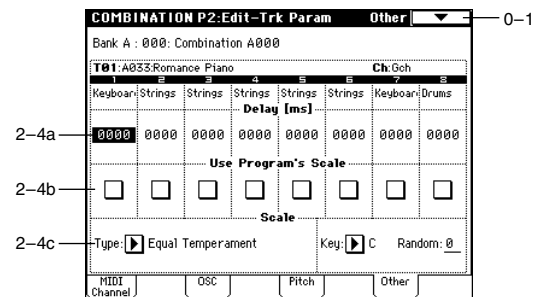
② In "From" specify the original BPM value. In "To" specify the desired BPM value. The appropriate "Detune" value will be calculated automatically from these two values. For example if you set "From" to 60 bpm and "To" to 120 bpm, the "Detune" parameter will be set to +1200 (one octave up).

③ To execute the Detune BPM Adjust command, press the **OK button**. To cancel, press the **Cancel button**.

⚠ The detune value that is calculated when you execute this command will be added to "Detune" +0000. You must set the "From" BPM value to the value when "Detune" is +0000. For example if you execute "From" 60 BPM "To" 120 BPM, and then execute "From" 120 BPM "To" 60 BPM, will not return to the original result. (Rather, this will set Detune= -1200, which is one octave down.)

2-4: Other

Here you can make various other settings for each timbre.



2-4a: Delay [ms]

Delay [ms] (Delay Time) [0000...5000, KeyOff]

For each timbre, this specifies a delay time from note-on until the sound begins.

KeyOff: The note will begin sounding at note-off. In this case, the sound will not die away if the sustain level of the program's amp EG is other than 0. This setting is used when creating harpsichord sounds.

Normally you will set this to 0.

2-4b: Use Program's Scale

Use Program's Scale

Each timbre can use the scale that is specified by "Scale" (Program P1: 1-1c).

Checked: The scale specified by the program will be used.

Unchecked: The scale specified by "Scale" (2-4c) will be used.

2-4c: Scale

Specify the scale that the combination will use.

Type [Equal Temperament...User Octave Scale 15]

Select the type of scale (☞“Type” Program P1: 1-1c).

Key (Scale Key) [C...B]

Select the tonic key of the selected scale (☞“Key” Program P1: 1-1c).

Random [0...7]

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on (☞“Random” Program P1: 1-1c)

Combination P3: Edit-MIDI Filter

These settings allow you to apply filters to the MIDI data that will be transmitted and received by each timbre 1-8. For example even if two timbres are being played by the same MIDI channel, you can make settings so that the damper pedal will apply to one but not the other.

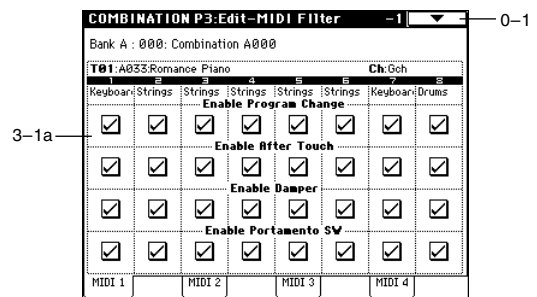
Checked: Transmission and reception of MIDI data is enabled. When “Status” (0-1a, 2-1a) is **INT**, operations of the built-in controllers or incoming MIDI data will apply the effect of the checked item to the program of the corresponding timbre. (The effect dynamic modulation function is not affected by this setting.) When “Status” is **EXT** or **EX2**, operations of the built-in controllers will transmit MIDI data on the channel of that timbre. MIDI transmission and reception settings for the entire TRITON are made in “MIDI Filter” (Global P1: 1-1b).

The MIDI 3 and MIDI 4 tabs contain MIDI filters for assignable controllers (whose function can be set by the user), and if these are assigned to MIDI control changes, the filter settings will affect those control changes.

In this case, if the assignable controllers have been set to control changes that are also found in the MIDI 1 or MIDI 2 tabs, the settings in the MIDI 1 and MIDI 2 tabs will take priority. Also, if the same control change is assigned to two or more controllers in the MIDI 3 and MIDI 4 tabs, checking any one of them will enable that control change.

Unchecked: Transmission and reception of MIDI data is disabled.

3-1: MIDI 1 (MIDI Filter -1)



3-1a: Enable Program Change, Enable After Touch, Enable Damper, Enable Portamento SW

Enable Program Change

Specify whether or not MIDI program change messages will be transmitted and received.

Enable After Touch

Specify whether or not MIDI after touch messages will be transmitted and received.

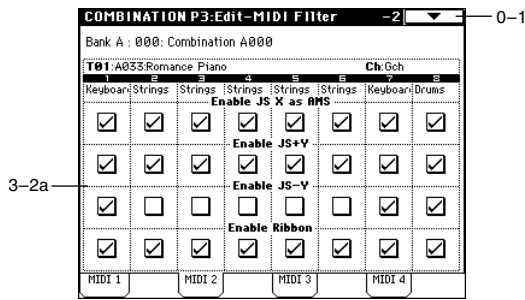
Enable Damper

Specify whether or not MIDI control change #64 hold (damper pedal) messages will be transmitted and received.

Enable Portamento SW

Specify whether or not MIDI control change #65 portamento on/off messages will be transmitted and received.

3-2: MIDI 2 (MIDI Filter -2)



3-2a: Enable JS X as AMS, Enable JS+Y, Enable JS-Y, Enable Ribbon

Enable JS X as AMS

Specify whether or not MIDI pitch bend messages (the X axis of the TRITON's joystick) will be received to control the AMS (see p.209 "Alternate Modulation Source (AMS)") effect assigned to JS X. (This is not a filter for MIDI pitch bend message reception.)

Enable JS+Y

Specify whether or not MIDI control change #1 (the +Y axis of the TRITON's joystick, or specified as the "B" assignment of a realtime control knob) will be transmitted or received.

Enable JS-Y

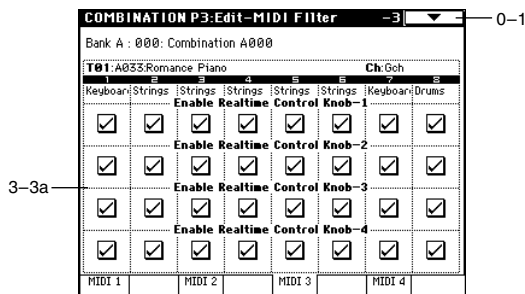
Specify whether or not MIDI control change #2 (the -Y axis of the TRITON's joystick, or specified as the "B" assignment of a realtime control knob) will be transmitted or received.

Enable Ribbon

Specify whether or not MIDI control change #16 (the TRITON's ribbon controller, or specified as the "B" assignment of a realtime control knob) will be transmitted or received.

3-3: MIDI 3 (MIDI Filter -3)

Specify whether or not the effects of A and B modes for the REALTIME CONTROL knobs [1], [2], [3] and [4] will be transmitted and received. In "A" mode, the MIDI control message for each knob is fixed. In "B" mode, the message for each knob can be assigned in Controller tab (4-5).



3-3a: Enable Realtime Control Knob -1...4

Enable Realtime Control Knob -1

Specify whether or not the "A" mode MIDI control message #74 (the TRITON's low pass filter cutoff frequency) and the "B" mode MIDI control message assigned to knob [1] will be transmitted and received.

Enable Realtime Control Knob -2

Specify whether or not the "A" mode MIDI control message #71 (the TRITON's low pass filter resonance or high pass filter cutoff frequency) and the "B" mode MIDI control message assigned to knob [2] will be transmitted and received.

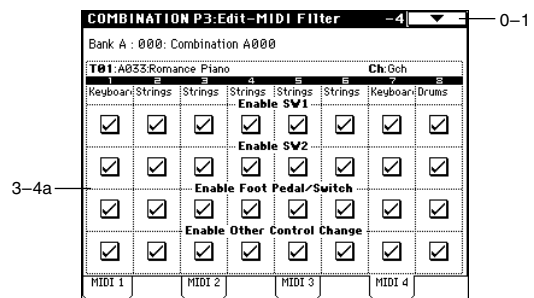
Enable Realtime Control Knob -3

Specify whether or not the "A" mode MIDI control message #79 (the TRITON's filter EG intensity) and the "B" mode MIDI control message assigned to knob [3] will be transmitted and received.

Enable Realtime Control Knob -4

Specify whether or not the "A" mode MIDI control message #72 (the EG release time for the TRITON's filter and amplifier) and the "B" mode MIDI control message assigned to knob [4] will be transmitted and received.

3-4: MIDI 4 (MIDI Filter -4)



3-4a: Enable SW1, Enable SW2, Enable Other Control Change

Enable SW1, Enable SW2

Specify whether or not the effect of the [SW1] and [SW2] keys will be transmitted and received. The function of these keys is specified in Controller tab (4-4). This filter setting is valid for settings of SW1 Mod.:CC#80, SW2 Mod.:CC#81, or Porta.SW:CC#65.

Enable Foot Pedal/Switch

Specify whether or not the effect of the ASSIGNABLE PEDAL/SWITCH will be transmitted and received. The function is assigned in Global P2. This filter setting is valid when a MIDI control change is assigned.

Enable Other Control Change

Specify whether or not MIDI control messages not covered in the preceding items MIDI Filter 1-4 will be transmitted and received.

Combination P4: Edit-Zone/Ctrl

4-1: Key Z (Key Zone)

These settings specify the keyboard range in which each timbre will sound.

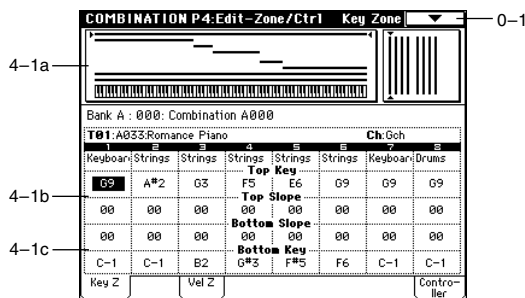
The top/bottom key parameters specify the range of notes in which **timbres 1-8** will sound, and the top/bottom slope parameters specify the range over which the original volume will be reached.

By setting timbres of different sounds to ranges that do not overlap, you can play different sounds in different ranges of the keyboard (**Key Split**).

By setting the ranges to overlap, you can play two or more sounds with a single note (**Layer**).

If you set the slopes (the grayed portion) to overlap, the sounds will overlap, and the proportion of the overlap will change according to the keyboard location (**Positional Cross-fade**).

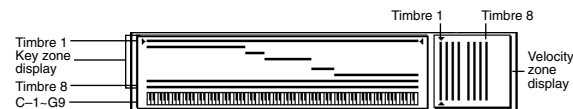
Note It is not possible to set the bottom key above the top key of the same timbre. Nor is it possible for the top and bottom slopes to overlap.



4-1a: Zone Map

This area indicates the note and velocity ranges in which each timbre will sound.

The LCD screen will display a line to indicate the range of notes and velocities that will sound, and will show the slope portion in gray.



4-1b: Top Key, Top Slope

Top Key [C-1...G9]

Specify the top key (upper limit) of the notes that will sound each timbre 1-8.

Note You can also set this parameter by holding down the [ENTER] key and playing a note.

Top Slope [00...72]

Specify the range of keys (12 is one octave) over which the volume will be reached starting from the top key.

0: The volume will be at the original level from the top key.
12: The volume will increase gradually as you play downward, and will reach the original volume one octave below the top key.

60: The volume will increase gradually as you play downward, and will reach the original volume five octaves below the top key.

4-1c: Bottom Slope, Bottom Key

Bottom Slope [00...72]

Specify the range of keys (12 is one octave) over which the volume will be reached starting from the bottom key.

0: The volume will be at the original level from the top key.
12: The volume will increase gradually as you play upward, and will reach the original volume one octave above the top key.

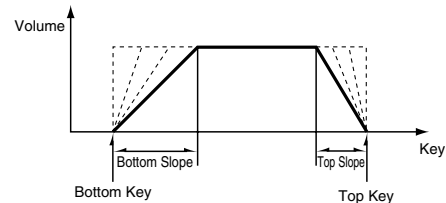
60: The volume will increase gradually as you play upward, and will reach the original volume five octaves above the top key.

Bottom Key [C-1...G9]

Specify the bottom key (lower limit) of the notes that will sound each timbre 1-8.

Note You can also set this parameter by holding down the [ENTER] key and playing a note.

How volume will change according to keyboard location



4-2: Vel Z (Vel Zone)

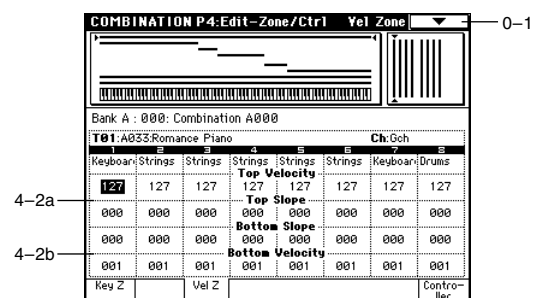
Set the Top/Bottom Velocity parameters to specify the range of velocities that will sound each timbre 1-8, and set the Top/Bottom Slope parameters to specify the range over which the volume will change.

By setting two or more timbres to velocity zones that do not overlap, you can use variations in playing dynamics to play different sounds (**Velocity Switch**).

If you set two or more timbres to velocity zones that overlap, the sounds will be heard together (**Layer**).

If the slope ranges (gray line) overlap, different sounds will be sounded together, and your playing dynamics will determine the proportion of each sound (**Velocity Cross-fade**).

Note It is not possible to set the bottom velocity greater than the top velocity for the same timbre. Nor can the top slope and the bottom slope overlap.



4-2a: Top Velocity, Top Slope

Top Velocity [1...127]

Specify the maximum velocity value that will sound each timbre 1-8.

note This value can also be entered by holding down the [ENTER] key and playing a note.

Top Slope [0...120]

Specify the number of velocity steps over which the original volume will be reached, starting from the Top Velocity.

0: The volume will be at the original value from the top velocity.

120: The volume will decrease as the velocity approaches the top velocity.

4-2b: Bottom Slope, Bottom Velocity

Bottom Slope [0...120]

Specify the number of velocity steps over which the original volume will be reached, starting from the Bottom Velocity.

0: The volume will be at the original value from the bottom velocity.

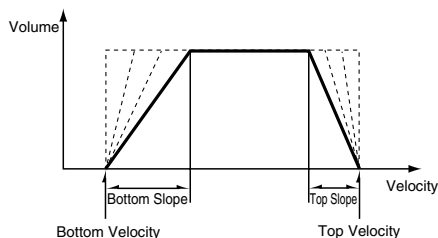
120: The volume will decrease as the velocity approaches the bottom velocity.

Bottom Velocity [1...127]

Specify the minimum velocity value that will sound each timbre 1-8.

note This value can also be entered by holding down the [ENTER] key and playing a note.

How volume will change according to keyboard location

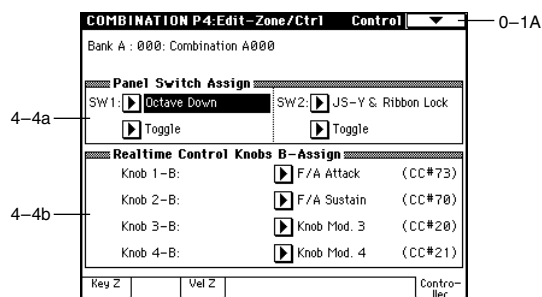


4-3: MOSS Setup (MOSS)

This page is displayed when the separately sold EXB-MOSS option has been installed. For details refer to the owner's manual included with the EXB-MOSS.

4-4: Controller (Control)

Here you can set the Combination mode functions of the [SW1] key, [SW2] key, and the B-mode functions of REALTIME CONTROL knobs [1]-[4].



4-4a: Panel Switch Assign

These settings assign the function of the front panel [SW1] and [SW2] keys (see p.217 "SW1, SW2 Assign List"). Since the function assignments of the [SW1] and [SW2] keys made for the program assigned to each timbre are not valid for the combination, they must be newly set by these parameters.

SW1 (SW1 Assign) **AMSource** [Off, ..., After Touch Lock]
SW1 Mode [Toggle, Momentary]
SW2 (SW2 Assign) **AMSource** [Off, ..., After Touch Lock]
SW2 Mode [Toggle, Momentary]

see "Panel Switch Assign" (Program P1: 1-4a).

4-4b: Realtime Control Knobs B-Assign

These settings assign functions (mainly various control changes) to the "B" mode of the front panel REALTIME CONTROL knobs [1]-[4] (see p.218 "Realtime Control Knobs B-Assign List"). The functions you specify here will be controlled when you operate the front panel REALTIME CONTROL knobs [1]-[4] in "B" mode.

Since the REALTIME CONTROL knob [1]-[4] function assignments made for the program assigned to each timbre are not valid for the combination, they must be newly set by these parameters.

Knob 1-B **AMSource** [Off, ..., MIDI CC#95]
Knob 2-B **AMSource** [Off, ..., MIDI CC#95]
Knob 3-B **AMSource** [Off, ..., MIDI CC#95]
Knob 4-B **AMSource** [Off, ..., MIDI CC#95]

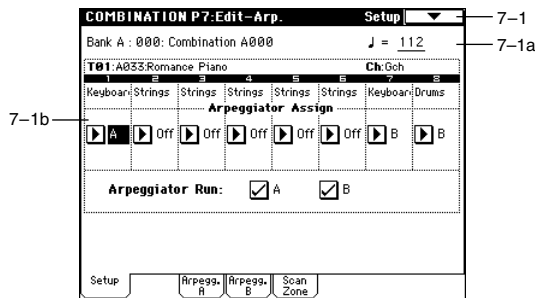
see "Realtime Control Knobs B-Assign" (Program P1: 1-4b).

Combination P7: Edit-Arp

These parameters specify how the arpeggiator will function within the combination. Two arpeggiators can be running simultaneously.

This offers a variety of possibilities, such as applying separate arpeggio patterns to two sounds that have been assigned as a keyboard split, or using velocity to switch between two arpeggio patterns.

7-1: Setup



7-1a: ♩ (Arpeggiator Tempo) [040...240, EXT]

☞ “♩ (Arpeggiator Tempo)” (0-1b).

7-1b: Arpeggiator Assign, Arpeggiator Run A, B

Arpeggiator Assign [Off, A, B]

Assign arpeggiator A or B to each timbre 1-8. When the front panel ARPEGGIATOR [ON/OFF] key is on, the arpeggiator specified for each timbre will operate according to “Arpeggiator Run A, B” and these settings.

Off: The arpeggiator will not operate.

A: Arpeggiator A will operate. Make settings in the Arpeggiator A tab to select the arpeggio pattern and set parameters.

B: Arpeggiator B will operate. Make settings in the Arpeggiator B tab to select the arpeggio pattern and set parameters.

MIDI If the “Status” (0-1f, 2-1a) of the timbre is INT or BTH, each timbre 1-8 to which arpeggiator A or B is assigned will be sounded by the note data generated by the arpeggiator, regardless of the “MIDI Channel” (2-1a) setting of the timbre. If a timbre is set to EXT or EX2, MIDI note data will be transmitted on the “MIDI Channel” of each timbre.

In this case, arpeggiator A (or B) will be triggered (operated) by all MIDI channels specified for the “MIDI Channel” (2-1a) parameter of any timbre 1-8 assigned to arpeggiator A or B.

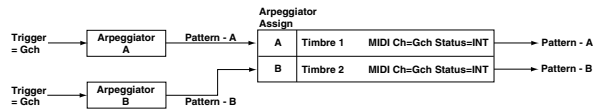
🔊 If Local Control (“Local Control On,” Global P1: 1-1a) is ON, the keyboard will not trigger the arpeggiator. The arpeggiator will be triggered via MIDI IN. Turn Local Control OFF if you have recorded only the trigger notes on an external sequencer, and wish to playback the external sequencer to trigger the TRITON’s arpeggiator.

If you want the note data generated by the arpeggiator to be recorded on the external sequencer, turn Local Control ON, and turn off the echo back function on your external sequencer.

Example 1)

Set the “MIDI Channel” (2-1a) of timbres 1 and 2 to Gch, and set “Status” (0-1e, 2-1a) to INT. Assign arpeggiator A to timbre 1 and arpeggiator B to timbre 2, and check “Arpeggiator Run A, B” (0-3a, 7-1b).

- When the front panel ARPEGGIATOR [ON/OFF] key is off, timbres 1 and 2 will sound simultaneously (layered) when you play the keyboard.
- When the front panel ARPEGGIATOR [ON/OFF] key is turned on, timbre 1 will be played by arpeggiator A, and timbre 2 will be played by arpeggiator B.



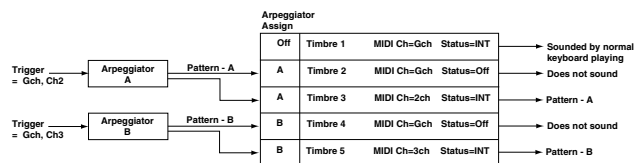
Example 2)

The “MIDI Channel” (2-1a) of timbres 1, 2, 3, 4, and 5 are set respectively to Gch, Gch, 02, Gch, and 03. Their “Status” (0-1e, 2-1a) is set respectively to INT, Off, INT, Off, and INT. Assign arpeggiator A to timbres 2 and 3, assign arpeggiator B to timbres 4 and 5, and check “Arpeggiator Run A, B” (0-3a, 7-1b).

- When the front panel ARPEGGIATOR [ON/OFF] key is off, playing the keyboard will sound only timbre 1. (Timbres 2 and 4 are receiving the Gch, but they will not sound since their “Status” is Off.)
- When you turn on the front panel ARPEGGIATOR [ON/OFF] key, arpeggiator A will operate for timbres 2 and 3, and arpeggiator B will operate independently for timbres 4 and 5. (Arpeggiators A and B are triggered by receiving note data on any MIDI channel of an assigned timbre, but in this example they are being triggered from the Gch.)

When you play the keyboard, arpeggiator A will operate for timbres 2 and 3, but only timbre 3 whose “Status” is INT will sound. Similarly, arpeggiator B will operate for timbres 4 and 5, but only timbre 5 whose “Status” is INT will sound.

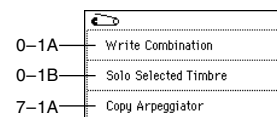
In this way, you can make settings so that a timbre does not sound when the arpeggiator is off, but sounds only when the arpeggiator is on.



Arpeggiator Run A, B

☞ Link: “Arpeggiator Run A, B” (0-3a).

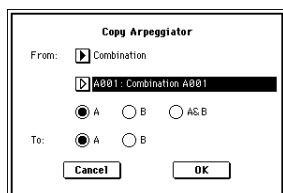
▼ 7-1: Page Menu Command



7-1A: Copy Arpeggiator

This command copies arpeggiator settings.

- 1 Select this command to open the following dialog box.

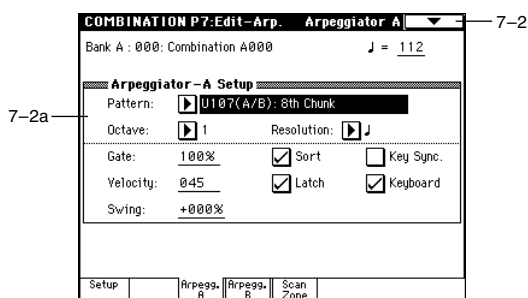


- 2 In "From" select the copy source (mode, bank, number) arpeggiator.
If you are copying from Combination, Song, or Song Play mode, select either **A** or **B** to if you wish to copy settings from only one arpeggiator, or select **A&B** if you wish to copy the settings of both arpeggiators.
- 3 If you are copying from a Program, or are copying either A or B from Combination, Song, or Song Play mode, select either A or B as the "To" copy destination.
- 4 To execute the Copy Arpeggiator command, press the **OK** button. To cancel, press the **Cancel** button.

7-2: Arpegg. A (Arpeggiator A)

7-3: Arpegg. B (Arpeggiator B)

The Arpegg. A tablets you make settings for arpeggiator A. The Arpegg. B tablets you make settings for arpeggiator B. You can also use the "Copy Arpeggiator" page menu command to copy arpeggiator settings from Program mode or another mode.



7-2(3)a: Arpeggiator-A(B) Setup

Pattern (Pattern No.)*	[P00...P04, U00(A/B)...U231(D)]
Octave*	[1, 2, 3, 4]
Resolution*	[♪ ₃ , ♪, ♪ ₃ , ♪, ♪ ₃ , ♪]
Gate	[000...100%, Step]
Velocity	[001...127, Key, Step]
Swing	[-100...+100%]
Sort*	
Latch*	
Key Sync. (Keyboard Sync.)*	
Keyboard*	

These parameters are the arpeggiator A settings for the combination.

☞ "Program 7-1: Arpeg. Setup (Arpeggiator Setup)"

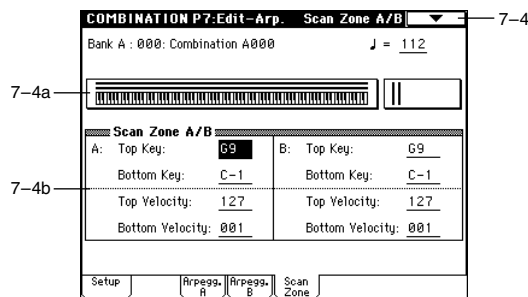
* These parameters are linked with the parameters of the same name (and abbreviation) found in "0-3(4): Arpegg. A."

7-2: Page Menu Command

☞ "0-1A: Write Combination," "7-1A: Copy Arpeggiator"

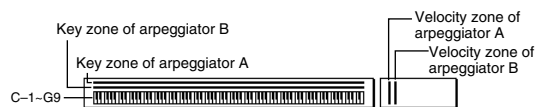
7-4: Scan Zone (Scan Zone A/B)

These settings specify the note and velocity ranges that will operate arpeggiators A and B.



7-4a: Zone Map

This shows the "Scan Zone" for each arpeggiator, A and B.



7-4b: Scan Zone A/B

A:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Specify the range of notes (keys) that will operate arpeggiator A. "Top Key" specifies the upper limit, and "Bottom Key" specifies the lower limit.

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of velocities that will operate arpeggiator A. "Top Velocity" specifies the upper limit, and "Bottom Velocity" specifies the lower limit.

B:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of notes (keys) and velocities that will operate arpeggiator B (☞ "A").

note The values of these parameters can also be entered by playing a note on the keyboard while you hold down the [ENTER] key.

▼ 7-4: Page Menu Command

☞ “0-1A: Write Combination” and “7-1A: Copy Arpeggiator”

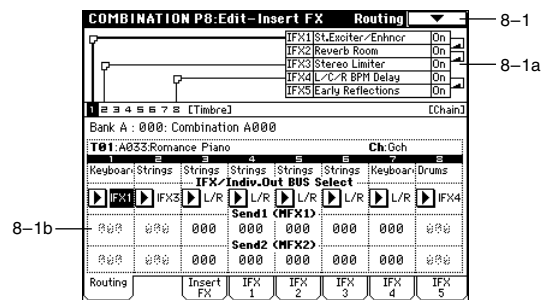
Combination P8: Edit-Insert FX

Here you can make insertion effect settings. You can also specify the bus routing for the program used by each timbre 1-8.

☞ For details on insertion effects, refer to p.146 “8. Effect Guide.”

8-1: Routing

Specify the bus to which the program used by each timbre 1-8 will be sent. Here you can also set the send levels to the master effects.



8-1a: Routing Map

This shows the status of the insert effects. For each insert effect, this indicates the routing, the name of the selected effect, the on/off status, and chain status. The effect type, on/off status and chain status can be modified in the Insert FX tab (8-2).

8-1b: IFX/Indiv.Out BUS Select (BUS Select), Send 1 (MFX1), Send2 (MFX2)

IFX/Indiv.Out BUS Select (BUS Select)

[DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

For each timbre 1-8, these parameters specify the bus to which the program oscillator(s) will be sent. The current settings can also be viewed in the “Routing Map.”

DKit: This can be selected only if the program for which settings are being made is a drum program (“OSC Mode” = Drums). With a setting of **DKit**, the “BUS Select” (Global P5: 5-2b) setting made for each key of the drum kit will be used. For example if the “BUS Select” settings of the drum kit have assigned Snare sounds to IFX1 and Kick sounds to IFX2, setting this parameter to **DKit** will send the Snare sounds to IFX1 and Kick sounds to IFX2. If you wish to modify these routings, use the page menu command “Drum Kit IFX Patch” (8-1C).

⚠ If this is set to **1/2** or **3/4**, the programs of timbres 1-8 will be sent in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4. If the pan of the program oscillator is controlled by MIDI control change #10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at the moment of note-on. Unlike the case when this parameter is set to **L/R** to output the sound from (MAIN) L/MONO and R, the pan of a sounding note will not change in real-time.

If you wish to move the pan of a sounding note in real-

time and output it from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4, you must set "BUS Select" to IFX1 (or IFX2-IFX5), select 000: No Effect for "IFX1" (or IFX2-IFX5) (8-2), and for the sound that has passed through the IFX, set "BUS Select" (8-2) to either 1/2 or 3/4.

Send1 (MFX1) [000...127]
Send2 (MFX2) [000...127]

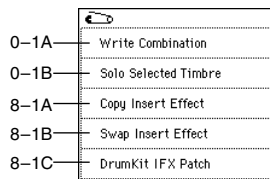
For each timbre 1-8, these parameters set the send level to master effects 1 and 2. These settings are valid when "BUS Select" is set to L/R or Off. When IFX 1, 2, 3, 4 or 5 are selected, the send levels to master effects 1 and 2 are set by the "Send 1" and "Send 2" parameters of the Insert FX tab, after the sound has passed through IFX1-5.

If "BUS Select" is set to 1, 2, 3, 4, 1/2, or 3/4, these settings are ignored.

MIDI Control change #93 can be used to control the Send 1 level, and #91 to control the Send 2, and modify their respective settings. These messages will be received on the MIDI channel specified for each timbre in the P2: MIDI Channel tab.

The actual send levels are determined by multiplying this value with the send level "Send 1" and "Send 2" (Program P8: 8-1d) for each oscillator of the program selected for the timbre.

▼ 8-1: Page Menu Command



8-1A: Copy Insert Effect

☞ "Program P8: 8-1A: Copy Insert Effect."

However, the MIDI control channel specified for "Ctrl Ch" of the IFX1-5 tabs will not be copied.

8-1B: Swap Insert Effect

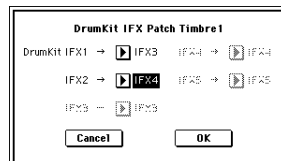
☞ "Program P8: 8-1B: Swap Insert Effect."

However, the MIDI control channel specified for "Ctrl Ch" of the IFX1-5 tabs will not be copied.

8-1C: DrumKit IFX Patch

This command applies a patch to the "BUS Select" settings of each key of the drum kit, allowing you to temporarily change the connections to the insert effects. This command is available only if a drum program has been selected for the timbre and the "BUS Select" (8-1b) parameter is set to Dkit. Furthermore, this command can be executed only if the "BUS Select" (Global P5: 5-2b) for the individual keys of that drum kit are set to IFX1-5.

① Select this command to open the following dialog box.



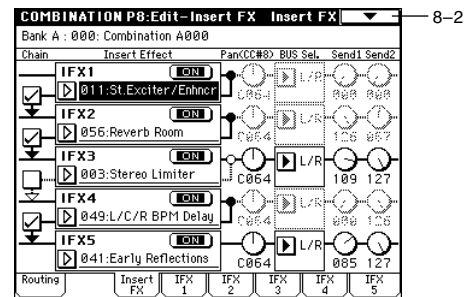
- ② In the Drum Kit "IFX" popup, select the insert effect to which you want to patch.
- ③ To execute the Drum Kit Insert Effect Patch command, press the **OK** button. To cancel, press the **Cancel** button. To restore the condition of the drum kit, execute IFX1→IFX1, IFX2→IFX2, IFX3→IFX3, IFX4→IFX4, and IFX5→IFX5.

8-2: Insert Fx

Here you can select the type of each insert effect, turn it on/off, and make chain settings etc.

These parameters are the same as in Program mode (☞ Program mode "8-2: Insert Fx").

However, unlike the case in Program mode, "Pan (CC#8)," "Send 1 (MFX1)" and "Send 2 (MFX2)" will be controlled on the MIDI channels that are set in the IFX1-5 tabs. The control changes used are the same as in Program mode.



▼ 8-2: Page Menu Command

☞ "0-1A: Write Combination," "8-1A: Copy Insert Effect," and "8-1B: Swap Insert Effect."

8-3: IFX 1

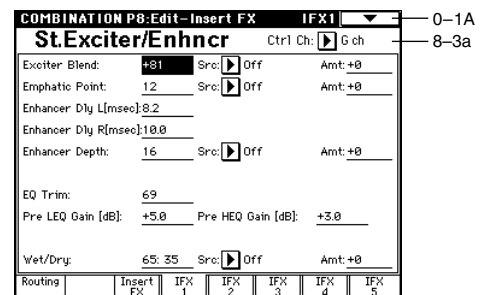
8-4: IFX 2

8-5: IFX 3

8-6: IFX 4

8-7: IFX 5

These are the parameters for IFX1, 2, 3, 4, and 5 that were selected in the Insert FX tab (☞ p.155).



8-3a: Ctrl Ch [Ch01...16, Gch, All Routed]

MIDI This parameter specifies the MIDI channel that will be used to control effect dynamic modulation (Dmod), pan following the insert effect (CC#8), Send 1 (CC#93), and Send 2 (CC#91).

The channel number of the timbre routed through this IFX will be followed by a "*" displayed at the right of Ch01-16. If two or timbres with different MIDI channel settings are routed through the same IFX, this parameter specifies which of these channels will be used to control the effect.

Gch: The global MIDI channel "MIDI Channel" (Global mode P1: 1-1a) will be used to control the effect. Normally you will set this to **Gch**.

All Routed: The channel of any timbre routed through this effect can be used to control the effect. (Channels of each routed timbre will be indicated by "*".)

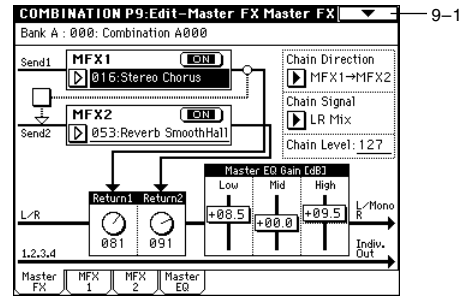
⚠ If the "BUS Select" (8-1b) of a timbre for which a drum program is selected is set to **DKit**, the MIDI channel of that timbre will be valid if any IFX1-5 is set to **All Routed**, regardless of the "BUS Select" (Global P5: 5-2b) settings or the settings of the "DrumKit IFX Patch" page menu command.

Combination P9: Edit-Master FX

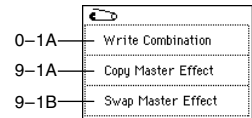
☞ For details on master effects, refer to p.150 "8. Effect Guide."

9-1: Master FX

Here you can select the type of each master effect, turn it on/off, and make chain and master EQ settings. These settings are the same as in Program mode (☞ "Program 9-1: Master FX").



▼ 9-1: Page Menu Command



9-1A: Copy Master Effect

☞ "Program P9: 9-1A: Copy Master Effect." However, the MIDI control channel that is specified by "Ctrl Ch" of the MFX 1 and 2 tabs will not be copied.

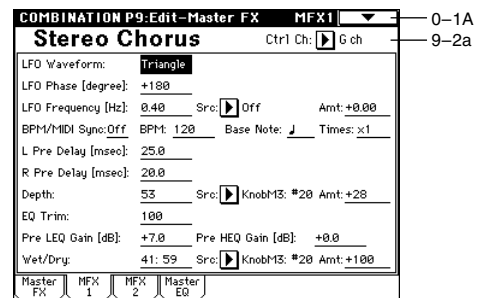
9-1B: Swap Master Effect

☞ "Program P9: 9-1B: Swap Master Effect." However, the MIDI control channel that is specified by "Ctrl Ch" of the MFX 1 and 2 tabs will not be swapped.

9-2: MFX 1 (Master Effect1)

9-3: MFX 2 (Master Effect2)

Here you can set the parameters for the MFX 1 and 2 effects that were selected in the Master FX tab (☞ p.155).

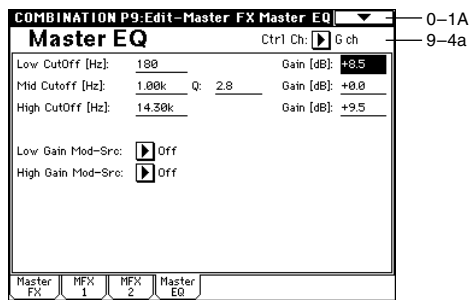


9-2a: Ctrl Ch**[Ch01...16, Gch]**

MIDI This parameter specifies the MIDI channel that will control dynamic modulation (Dmod) for the master effect. With a setting of **Gch**, the global MIDI channel “MIDI Channel” (Global P1: 1-1a) will be used for control. Normally you will set this to **Gch**.

9-4: Master EQ

The master EQ is a three-band stereo EQ. It is located immediately before the AUDIO OUTPUT (MAIN OUT) L/MONO and R from the L/R bus, and adjusts the overall tonal character of the sound (see p.207).



9-4a: Ctrl Ch**[Ch01...16, Gch]**

MIDI This parameter specifies the MIDI channel that will control dynamic modulation (Dmod) for the master EQ. With a setting of **Gch**, the global MIDI channel “MIDI Channel” (Global P1: 1-1a) will be used for control. Normally you will set this to **Gch**.

3. Sequencer mode

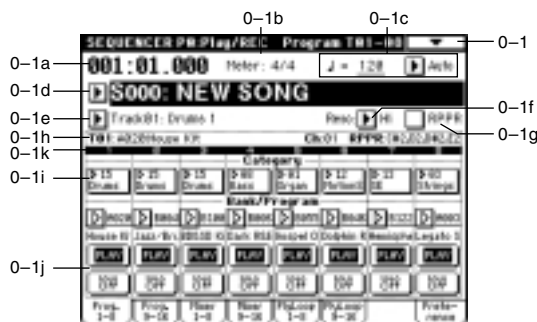
In Sequencer mode you can use the built-in 16-track sequencer to play, record and edit songs. You can also record and play patterns, make settings for the RPPR (Realtime Pattern Play Recording) function, play songs that use the arpeggiators, record patterns, and create Cue Lists to playback multiple songs consecutively.

⚠ These settings and the song data you recorded are not backed up when the power is turned off. Before turning off the power, be sure to save important data on a floppy disk, external SCSI device, or a data filer. Immediately after the power is turned on, memory will not contain any song data, so in order to playback the sequencer, you will need to load data from the floppy disk, or receive a MIDI bulk data dump from an external MIDI sequencer (see p.139, 120, refer to p.40 in the *Basic Guide*).

Sequencer P0: Play/Rec

- 0-1: Prog. 1-8 (Program T01-08)
- 0-2: Prog. 9-16 (Program T09-16)

Here you can make basic settings for playback and recording of songs and select the program that will be used by each track.



0-1a: Location [001:01.000...999:15.191]

This is the current location of the song. From the left, the numbers are the measure, beat, and clock. When you modify these values, the current location will change.

MIDI When "MIDI Clock" (Global P1: 1-1a) is **Internal**, changing the location will cause Song Position Pointer messages to be transmitted. If this parameter is set to **External MIDI** or **External PC I/F**, Song Position Pointer messages from the specified source will change the location.

⚠ The range in which the beat and clock can be modified will depend on the currently specified time signature.

0-1b: Meter [*/**, 1/4...16/16]

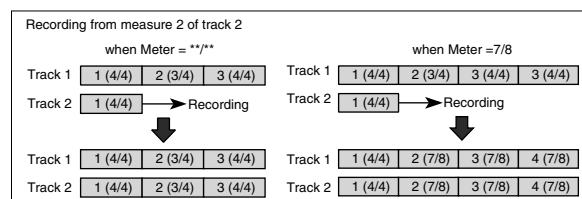
This is the time signature at the current location of the song. The time signature can be changed at each measure.

*/**. This will be displayed when you press the [REC/WRITE] key. Specify this when you wish to use the time signature that is already recorded for that measure, and wish to

record without changing the time signature.

1/4-16/4, 1/8-16/8, 1/16-16/16: This is the time signature at the current location of the song. After pressing the front panel [REC/WRITE] key, specify the time signature here. Then press the [START/STOP] key to begin recording, and the specified time signature will be recorded on the **Master Track** and on previously-recorded tracks. Be aware that if you press the [START/STOP] key during the pre-count to stop recording, the time signature will not be recorded.

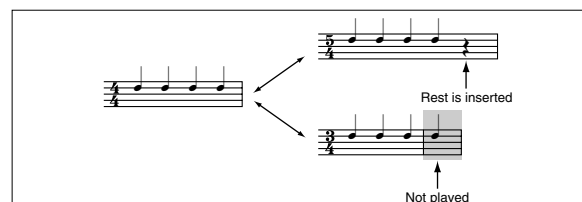
Normally, you will specify the time signature when you record the first track, and select */** when recording subsequent tracks.



Changing the time signature in the middle of a measure

If you know beforehand the location at which you wish to change time signatures in the middle of a measure, use "Insert Measure" (5-1H) to specify and insert the time signature for each measure of the same time signature, and then record your musical data. Alternatively, if you wish to change the time signature in the middle of a song which already contains musical data, use "Track Select" to specify the **Master Track** (or any **Track01-16** which contains data), and use "Event Edit" (5-1B) to modify the time signature of the Bar event.

If the number of beats in a measure increases when you modify the time signature, rests will be inserted in the portion that was added. Conversely if the number of beats decreases, that portion will not be played. However if you return to the original time signature, the data that had been hidden will once again be played.



0-1c: Tempo

This sets the playback tempo of the song and the tempo of the arpeggiator.

♪ (Tempo) [040...240, EXT]

040...240: When the "Tempo Mode" is **Manu**, this tempo will be used for recording and playback. When "Tempo Mode" is **REC**, this tempo will be recorded on the master track.

EXT: This will appear when "MIDI Clock" (Global P1: 1-1a) is either **External MIDI** or **External PCI/F**. The tempo of the internal sequencer will synchronize with the MIDI Clock messages received from an external sequencer etc. When "MIDI Clock" is **Internal**, the above tempo setting (040...240) will be used.

MIDI If **Tempo** is selected as an alternate modulation source, ♩ = 120 will be the base value.

Tempo Mode

[Auto, Manu, REC]

Auto: The tempo will follow the tempo of the **Master Track**. The tempo of the master track can be specified by using "Event Edit" (5-1B) with **Master Track** chosen in "Track Select," or by the **REC** operation described below. When Auto is selected, it will not be possible to modify the "♪ (Tempo)" setting while a song is playing or recording (or during standby).

Manu (Manual): The "♪ (Tempo)" setting will be used.

REC: Tempo changes will be recorded on the **Master Track**. Select this after pressing the [REC/WRITE] key. When REC is selected and you are recording in realtime, modify the "Tempo" value to change the tempo. This cannot be selected when the Preferences tab item "Recording Setup" is set to **Loop All Tracks**. Tempo changes can also be created using "Event Edit" (5-1B) or "Create Control Data" (5-1L).

note If you wish to record only the tempo changes, set "Recording Setup" (0-7a) to **OverDub**, and the tempo will be recorded on the master track without being affected by the musical data of "Track Select."

0-1d: Song No. and name

[000...199: name]

Select the song that you wish to record or play.

If you wish to create a new song, you can either select a number from the popup menu for which the song name is blank, or use the numeric keys [0]–[9] to directly specify the song number, then press the [ENTER] key to access the dialog box, and finally press the **OK** button.

MIDI If "MIDI Clock" (Global P1: 1-1a) is **Internal**, changing the song will cause Song Select and Song Position Pointer messages to be transmitted. If "MIDI Clock" is **External MIDI** or **External PCI/F**, Song Select messages can be received from the specified source to change songs. When the song changes, tracks whose track status is **EXT**, **EX2** or **BOTH** will transmit Bank Select, Program Change, Volume, Panpot, Poramento, Send1, 2, Post IFX Pan, and Post IFX send 1, 2 messages on the MIDI channel of the respective track.

0-1e: Track Select

[Track01...Track16, Master Track]

Track01–Track16: Select the track(s) that will record or play song data.

The track names specified in "Track Name" (5-2).

When you perform realtime recording on a single track, the musical data will be recorded on the track you select here. When you perform realtime recording on two or more tracks simultaneously (☞ "Multi REC" 0-7a), the "PLAY/MUTE/REC" (0-1j) will select the recording track, regardless of the setting you make here.

Master Track: Select the master track when you wish to use the P5: Track Edit page menu commands to edit the tempo track. When using realtime recording or step recording, it is not possible to record the master track alone.

MIDI When you play the keyboard of the TRITON and operate its controllers, the internal tone generator will sound according to the settings (program, level etc.) of the tracks that are selected here (if "Status" 2-1a is **INT** or **BOTH**), and other tracks whose MIDI channels match will also sound at the same time (if "Status" is **INT** or **BOTH**). Messages will also be transmitted on the MIDI channels of these tracks (whose "Status" is **EXT**, **EX2** or **BOTH**).

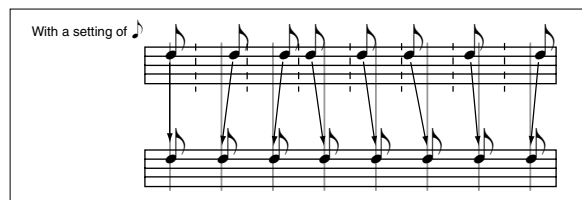
0-1f: Reso (Realtime Quantize Resolution)

[Hi, ♩₃ ... ♩]

This corrects the timing of data as it is recorded in realtime. (It does not affect previously-recorded data.)

Hi (High Resolution): Timing will not be corrected. Data will be recorded at the maximum resolution (♩/192).

♩₃ – ♩: Data will be corrected to the nearest interval of the specified timing as it is recorded. For example if you select ♩₃, data will be corrected to the nearest 32nd note triplet interval. If you select ♩, data will be corrected to the nearest quarter note interval.



Since all that musical data that is recorded will be corrected to the specified timing resolution, coarse settings of this parameter will cause continuous controllers such as pitch bend to be recorded in "stairstep" fashion.

In such cases, use a setting of **Hi** to record, and then use "Quantize" (5-1N) to correct only the desired type of data (notes etc.). It is best to avoid recording at a stiff resolution to begin with.

0-1g: RPPR (Realtime Pattern Play/Recording) ON/OFF

This turns the RPPR (Realtime Pattern Play/Recording) function on/off. RPPR lets you assign a pattern to each note of the keyboard, so that the pattern will playback (or be recorded) when you press the appropriate key.

Checked: The RPPR function will be on. If a pattern has been assigned to each key in the P6: RPPR Setup tab, pressing that key will perform the assigned pattern (☞ P6-3: RPPR Setup).

0-1(2)h: Selected Track Information

This shows information on the track (1-16) that is currently selected for editing.

T (Track) No.: Bank No.: Prog No. and name

This displays the track number, and the bank, number, and name of the program selected for that track.

Ch

[01...16]

This shows the MIDI channel number specified for the track.

RPPR

[No Assign, C#2...C8]

This shows the key number(s) that will start the RPPR pattern assigned to the track. (If there are numerous keys, not all will be shown. To view all of the assignments, use the P6-1: Pattern Edit tab.)

0-1i: Program Track01...08**0-2i: Program Track09...16**

Select the program that will be used by each track.

Category (Category name) [00...15: name]

The program to be used by the track can be selected by category. Press the popup button, and the Category/Track Program Select menu (P0: 0-1a) will show the programs by category, allowing you to select the desired program. This is convenient when you wish to find a specific type of program, or to select a different program of the same category.

Bank/Program [A...F/0...127, G...g(d)/1...128]

Select the program that will be used by the track. Press the popup button, and the Bank/Track Program Select menu (P0: 0-1a) will display the programs organized by bank, allowing you to make your selection. When this parameter is selected, you can use the front panel [BANK] keys, the numeric keys, the [VALUE] dial, [VALUE] slider, and [△] [▽] keys to select a program. At this time, a [BANK] key LED will light to indicate the bank from which a program was selected.

The program you select here will be used when the song is played or recorded from the beginning. If the program is changed while recording, the program change will be recorded as musical data, and the program will change during playback. However if musical data (program change data) is already recorded, the program will change at that point.

MIDI If the P2: MIDI Channel tab "Status" is either **INT** or **BTH**, programs can be selected by receiving MIDI program change messages. Also, when the song is changed or when the song returns to the beginning, tracks whose "Status" is **EXT**, **EX2** or **BTH** will transmit the bank and program numbers via MIDI. Tracks whose "Status" is **EX2** will show Bank as "--" and will transmit the bank number that was selected in the P2: MIDI Channel tab "Bank Select" setting.

Program Name

This displays a portion of the name of the program that is selected for the track. In the cases of a GM level 2 variation bank or the GM level 2 drums bank, this shows the variation bank (1)–(9) or drums bank (d).

0-1(2)j: PLAY/MUTE/REC, SOLO ON/OFF**PLAY/MUTE/REC [PLAY, MUTE, REC]**

Here you can mute each track, and select the recording track(s) when performing multi-track recording. During playback, or for single-track recording (normal recording), it is possible only to select **PLAY** or **MUTE** for tracks (playback tracks) other than the recording track. For multi-track recording, tracks can be set to **PLAY**, **MUTE**, or **REC**. The setting will alternate each time you press the **PLAY/MUTE/REC** button.

PLAY: The track will play.

MUTE: The track will be muted (silent).

REC: This will be displayed during single-track recording (normal recording). It cannot be selected.

When you use multi-track recording (the Preferences tab "Multi REC" is on), select **REC** for the tracks that you wish to record.

SOLO ON/OFF**[SOLO ON, SOLO OFF]**

This turns the Solo function on/off. Only the track that is set to **SOLO ON** will sound. Other tracks will be muted.

MIDI If tracks whose "Status" (2-1a, 2a) is **BTH**, **EXT**, or **EX2** are muted by Mute or by the Solo function, note on/off messages will not be transmitted on the MIDI channel selected for those tracks. (However, tracks selected by "Track Select" (0-1e) are an exception.)

When the page menu command "Solo Selected Track" (0-1B) is on, its Solo status will be given priority (if ON). When you press "SOLO ON/OFF" or the parameter of another track, only that track will be soloed, and will sound.

0-1(2)k: Track Number (1...8, 9...16)

This displays a track number.

▼ 0-1: Page Menu Command

0-1A	Memory Status	Copy From Combi	0-1F
0-1B	Solo Selected Track	Load Template Song	0-1G
0-1C	Rename Song	Save Template Song	0-1H
0-1D	Delete Song	FF/REW Speed	0-1I
0-1E	Copy From Song	Set Location	0-1J

0-1A: Memory Status

This displays the remaining amount of sequencer memory.

0-1B: Solo Selected Track

The Solo function will alternate on/off each time you select this command.

When **checked**, the Solo function will be turned on, and only the currently selected track will sound. Other tracks will be muted. To solo another track, select a parameter of the desired track. "Selected Track Information" (0-1h, 2h) will indicate [Solo].

To defeat the Solo function, select the "Solo Selected Track" page menu command once again. This function cannot be selected in tabs or pages which contain no parameters for individual tracks.

When this Solo function is on, only the selected track will be soloed and will sound when you press "SOLO ON/OFF" or a parameter of another track – even if two or more "SOLO ON/OFF" (0-1j) buttons are turned on.

MIDI If the tracks that have been muted by the Solo function have a "Status" (2-1a) setting of **EXT**, **EX2**, or **BTH**, the MIDI note-on/off messages of that track will not be transmitted.

0-1C: Rename Song

Here you can rename the selected song. A name of up to sixteen characters can be input.

0-1D: Delete Song

This command deletes the currently selected song.

- ① Select this command to access the dialog box.
- ② If you wish to execute the Delete Song command, press the **OK** button. To cancel, press the **Cancel** button. When you execute this command, the musical data, setting data, and patterns etc. of the currently selected song will be erased, and the memory area allocated to that song will be freed.

0-1E: Copy From Song

This command copies all setting data and musical data from the specified song to the currently selected song.

- 1 Select this command to open the following dialog box.

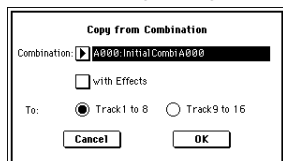


- 2 In "From," specify the copy source song number.
- 3 Select the data that you wish to copy. "All" will copy all setting data and musical data (track events and patterns, etc.). "Without Track/Pattern Events" will copy only the setting data of songs, except for Play Loop and RPPR data.
- 4 To execute the Copy Song operation, press the **OK button**. To cancel, press the **Cancel button**. Be aware that if you execute "All," all setting data and musical data of the currently selected song will be erased and rewritten by the data from the copy source song. If you execute "Without Track/Pattern Events," song setting data other than Play Loop and RPPR will be rewritten.

0-1F: Copy From Combi (Copy from Combination)

This command copies the parameters of the specified combination to the setting data of the currently selected song.

- 1 Select this command to open the following dialog box.



- 2 In "Combination," select the copy source destination.
- 3 If you **check** "with Effects," the insertion effect, master effect, and master EQ settings will also be copied.
- 4 In "To," select the copy destination tracks (1-8 or 9-16).
- 5 To execute the Copy From Combination command, press the **OK button**. To cancel, press the **Cancel button**. Be aware that when you execute this command, the setting data of the currently selected song will be erased, and overwritten by the data of the selected combination.

0-1G: Load Template Song

This command loads a template song as a song. The built-in sequencer contains sixteen different **preset template songs** (P00-15) that contain preset settings for programs and effects appropriate for various musical styles. You are also free to create your own favorite settings for programs, track parameters, and effects, and save them as one of sixteen **user template songs** (U00-15) (☞ "Save as User Template Song" 0-1H).

- 1 Select this command to open the following dialog box.



- 2 In "From," specify the template song that you wish to load.
- 3 To load the template song, press the **OK button**. To cancel, press the **Cancel button**. When you execute the command, song setting data other than PlayLoop and RPPR will be copied.

0-1H: Save Template Song (Save as User Template Song)

This command saves the program selections, track parameters, and effect settings etc. of the song as a user template song U00-15. The settings you save here can also be loaded in Song Play mode.

- 1 Select this command to open the following dialog box.

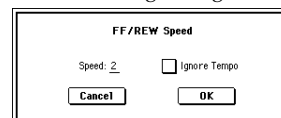


- 2 In "To," specify the user template song (U00-15) in which the data will be saved.
- 3 To save the template song, press the **OK button**. To cancel, press the **Cancel button**. Be aware that when you execute this command, all setting data of the save destination User Template Song will be erased and rewritten.

0-1I: FF/REW Speed

This allows you to set the speed at which fast-forward or rewind will occur when you press the [FF] key or [REW] key.

- 1 Select this command to open the following dialog box.

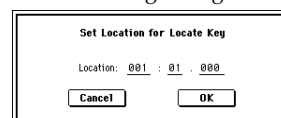


- 2 In "Speed," specify the speed (relative to the playback tempo) at which fast-forward and rewind will occur. With a setting of 2, this will occur at double the playback tempo; with a setting of 3, triple the tempo; and with a setting of 4, quadruple the tempo. However in sections where the playback data is dense, the fast-forward or rewind speed may slow down.
- 3 If "Ignore Tempo" is **checked**, the playback tempo and note length will be ignored, and fast-forward and rewind will be performed as fast as possible. The speed of fast-forward and rewind will differ between sections where the playback data is dense and sections where it is sparse. If this item is **unchecked**, fast-forward and rewind will be performed at the speed you specify for "Speed."
- 4 To execute the settings, press the **OK button**. To cancel, press the **Cancel button**.

0-1J: Set Location (Set Location for Locate Key)

When you press the [LOCATE] key, you will move to the location specified here. Even when this dialog box is not opened, you can set this value to the current location by holding down the front panel [ENTER] key and pressing the [LOCATE] key.

- 1 Select this command to open the following dialog box.



- 2 In "Location," specify the location to which you will move when you press the [LOCATE] key. If you specify 001:01:000, you will move to the beginning of the song when you press the [LOCATE] key.
- 3 To execute the settings, press the **OK button**. To cancel, press the **Cancel button**.

0-3: Mixer 1-8 (Mixer T01-08)

0-4: Mixer 9-16 (Mixer T09-16)

Here you can set the pan and volume of each track. The pan and volume that you specify here will be used when you playback or record from the beginning of the song. If you change the settings during recording, the changes will be recorded as musical data, and pan and volume will change during playback. You can also change the settings during playback. However when the song reaches a location where pan or volume data was recorded, the settings will change accordingly.



0-3(4)a: Program Category

This area shows a portion of the category name for the program used by the track.

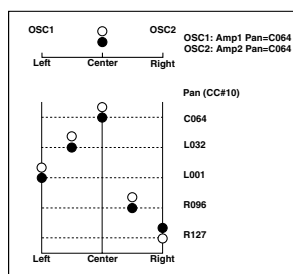
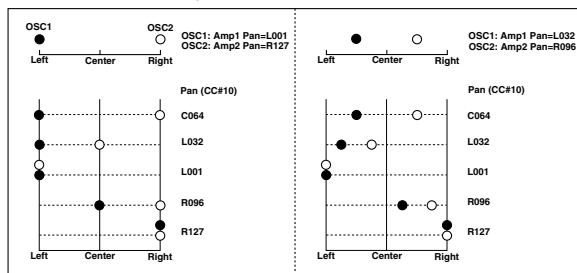
0-3(4)b: Pan

Pan (Panpot)

[RND, L001...C064...R127]

Set the pan of tracks 1-16.

L001...C064...R127: A setting of L001 is far left, and R127 is far right. A setting of C064 will reproduce the pan setting of the oscillator in Program mode.



If a mono-type insertion effect is inserted, this setting will be ignored. In this case, the P8: Insert Effect Insert FX tab "Pan (CC#8)" setting will adjust the pan of the sound following the insertion effect.

RND: The sound will be panned randomly at each note-on.

MIDI If "Status" (2-1a, 2a) is INT or BTH, CC#10 Panpot can be received to control the panning. When receiving CC#10, a value of 0 or 1 is far left, 64 is center, and 127 is far right. When you change the song or return to the beginning of the song, tracks whose "Status" is EXT, EX2 or BTH will transmit the pan you specify here as a MIDI message (except for RND).

0-3(4)c: Volume

Volume

[000...127]

Set the volume of tracks 1-16.

MIDI When "Status" (2-1a) is INT or BTH, CC#7 Volume can be received to control the volume. The volume of a track is determined by multiplying the MIDI Volume (CC#7) and Expression (CC#11) values. When you change the song or return to the beginning of the song, tracks whose "Status" is EXT, EX2 or BTH will transmit the volume you specify here as a MIDI Volume message.

0-5: PlyLoop 1-8 (PlayLoop T01-08)

0-6: PlyLoop 9-16 (PlayLoop T09-16)

When playing/recording a song, you can independently loop the playback of tracks 1-16.



0-5(6)a: Play Loop

Track Play Loop

Turn looping on/off for each track 1-16.

Checked: That track will loop between "Start Measure" and "End Measure."

Loop Start Measure

[001...999]

Specify the first measure of the loop.

Loop End Measure

[001...999]

Specify the last measure of the loop.

[Example]

- 1 Create a basic rhythm section. Select a drum program for track 1, and realtime-record a four-measure phrase.
- 2 Record the bass on track 2. Turn "Track Play Loop" on for track 1, and set the "Start Measure to 001 and the "End Measure" to 004. Start realtime recording, and track 1 will repeatedly play measures 1-4. While listening to the drum part, record a eight-measure bass phrase on track 2.
- 3 We will record backing guitar riffs on track 3. Check "Track Play Loop" for track 3, and set "Start Measure" to 001 and "End Measure" to 008. When you start realtime

recording, track 1 will repeatedly play measures 1–4 and track 2 will repeatedly play measures 1–8. While listening to these tracks playback, record the backing guitar riffs.

In this way, you can use “Track Play Loop” to make the real-time recording process more efficient (see p.67 in the *Basic Guide*).

0–7: Preference

Here you can select the method of realtime recording, and set the metronome.



0–7a: Recording Setup

Select the method of realtime recording. Refer to p.64 in the *Basic Guide* for the realtime recording.

Over Write

When recording for the first time, you will normally select this method.

To begin recording, press the [REC/WRITE] key and then the [START/STOP] key. To stop recording, press the [START/STOP] key once again.

Be aware that when this method of recording is used to record on a track that already contains data, any previously existing data will be erased from the measure at which you begin recording and from all subsequent measures.

Over Dub

Select this when you wish to add data to a previously-recorded track.

To begin recording, press the [REC/WRITE] key and then the [START/STOP] key. To stop recording, press the [START/STOP] key once again.

Previously-recorded data will remain in the track, and the newly-recorded data will be added.

Manual Punch In

Select this method when you wish to use the [REC/WRITE] key or a foot switch to re-record selected portions of a previously-recorded track.

Press the [START/STOP] key to playback the song. When you reach the measure at which you wish to begin re-writing the data, press the [REC/WRITE] key or the foot switch, and recording will begin. When you are finished recording, press the [REC/WRITE] key or the foot switch once again, and recording will end.

The area between the points where you pressed the [REC/WRITE] key or the foot switch the first and second times will be replaced by the newly recorded data.

Auto Punch In

Select this method when you wish to automatically re-record selected portions of a previously-recorded track. Before you begin, use the “M-M (Start Measure - End Measure)” fields at the right to specify the range of measures that will be rewritten.

Press the [REC/WRITE] key and then the [START/STOP] key, and playback will occur until the specified measure is reached. Then, recording will occur only over the specified area (“Start Measure”–“End Measure”), rewriting it with the newly recorded data.

M–M (Start Measure–End Measure) [001...999]

Specify the first and last measure that will be re-recorded.

Loop All Tracks

Select this method when you wish to repeatedly record a specified area of a track, and continue adding data. This is suitable for creating drum patterns, etc.

Before you begin, use the “M-M (Start Measure - End Measure)” fields at the right to specify the range of measures that will be recorded.

Press the [REC/WRITE] key and then the [START/STOP] key, and playback will occur until the specified measure is reached. Then, recording will occur repeatedly over the specified area (“Start Measure”–“End Measure”). Previously-recorded data will remain, and the new data will be added. While recording, you can check “Remove Data” to delete unwanted data.

If “Multi REC” is checked, this parameter will not be available.

M–M (Start Measure–End Measure) [001...999]

Specify the range of measures in which recording will be repeated.

Remove Data

This is available when **Loop All Tracks** is chosen in “Recording Setup.”

Checked: You can delete unwanted musical data while recording with **Loop All Tracks**. During recording, press the key (note number) that corresponds to the musical data you wish to delete. All occurrences of that note number will be deleted for the interval that you continue holding down the key. Controller data can also be erased in a similar way. For example while you move and hold the joystick in the X (horizontal) direction, bender data will be erased. While you apply pressure to the keyboard, after touch data will be erased.

Also, you can press and hold down the [REC/WRITE] key to delete all musical data for as long as the key is held.

Multi REC

Checked: Multi-track recording mode will be selected. This is not available if **Loop All Tracks** has been selected for “Recording Setup.” Use this mode when you wish to simultaneously record multiple tracks. When you check this box, the “PLAY/MUTE/REC” (0–1j, 2j) buttons of all tracks will simultaneously be set to **REC**. In this case, pressing a “PLAY/MUTE/REC” button will cycle the setting through **REC**→**PLAY**→**MUTE**, allowing you to make the desired setting. Select **REC** for the tracks that you wish to record, and begin recording (see p.73 in the *Basic Guide*).

This mode can also be used when you wish to playback a connected multi-track sequencer, and record all of the MIDI data it transmits in one pass into the TRITON’s sequencer. Multiple channels of MIDI data can be received and simultaneously recorded onto multiple tracks.

In this case, tracks whose “PLAY/MUTE/REC” setting is

REC will record MIDI data whose channel matches their own MIDI channel setting, regardless of the “Track Select” (0–1e) setting.

In this case you will probably want to set “MIDI Clock” (Global P1: 1–1a) to **External**, and synchronize to the external sequencer. However, changes in tempo will not be recorded.

Unchecked: Single track recording mode will be selected. Recording will occur on the track selected by “Track Select.”

0–7b: Metronome Setup

Here you can make metronome settings.

Sound [Only REC, REC & Play, Off]

Only REC: The metronome will sound only during recording.

REC & Play: The metronome will sound during recording and playback.

Off: The metronome will not sound. However, the pre-count will sound before recording begins.

This parameter is linked to “Metronome Sound” (6–1b).

BUS (Output) Select [L/R, L, R, 1, 2, 3, 4, 1/2, 3/4]

Select the output destination of the metronome sound.

L/R, L, R: Output from OUTPUT (MAIN) L/Mono and/or R.

1, 2, 3, 4, 1/2, 3/4: Output from OUTPUT (INDIVIDUAL) 1, 2, 3, 4 respectively.

Level [000...127]

Set the volume of the metronome.

Precount [Measure] [0...2]

Specify the pre-count that will occur before recording begins.

With a setting of 0, recording will begin the instant you press the [START/STOP] key (after first pressing the [REC/WRITE] key).

▼ 0–7: Page Menu Command

☞ “▼ 0–1: Page Menu Command”

Not selected “Solo Selected Track” (0–1B).

Sequencer P1: Cue List

1–1: Cue List

The cue list allows you to playback multiple songs in succession. You can specify a number of repetitions for each song. The TRITON allows you to create twenty cue lists. In a single cue list you can freely connect up to 99 songs.

Each unit in a cue list is called a “step,” and you can specify a song number and a repeat (number of repetitions) for each step.

For example you could create each part of a song (intro, melody A, melody B, break, solo backing, ending etc.) as an individual song, and use a cue list to play the intro twice, melody A four times, melody B four times, the break twice, melody A four times ... etc. to produce the entire song. In cases when you wish to change the structure of the song, this Cue List function can help you work more efficiently. The page menu command “Convert to Song” (1–1D) lets you convert the songs in a cue list into a single song. For example you can use a cue list to create the backing, convert the cue list to a song, and then add solo phrases on unused tracks.



1–1a: Location, Meter, ♩, Tempo Mode

Location [0001:01.000...9999:15.191]

This displays the current location within the selected cue list. From the left, the numbers indicate the measure, beat, and clock.

The range of the beat and clock will depend on the time signature of the corresponding song.

MIDI When “MIDI Clock” (Global P1: 1–1a) is **Internal**, changing the location within a cue list will cause Song Position Pointer messages to be transmitted. If “MIDI Clock” is **External MIDI** or **External PCI/E**, this message can be received from the specified source to change the location within the cue list.

If the location exceeds the allowable data range of a Song Position Pointer message, it will not be transmitted.

Meter (Time Signature) [1/4...16/16]

This displays the time signature of the currently-playing song.

♩ (Tempo) [040...240]

Specify the tempo at which the song in the cue list will be played (☞ “0–1c: Tempo”).

Tempo Mode

[Auto, Manu]

Auto: Playback will use the tempo specified by the currently playing song. During playback, the “♩ (Tempo)” setting cannot be modified.

Manu (Manual): Tempo specified in the song will be ignored, and playback will use the tempo specified above for “♩ (Tempo).”

1-1b: Cue List No. and Name

[C00...C19]

Select the cue list that you wish to play.

When using a cue list to play songs, you must first load the necessary data into internal memory, either from floppy disk, or by a MIDI data dump from an external sequencer (see p.40 in the *Basic Guide*).

MIDI When “MIDI Clock” (Global P1: 1-1a) is **Internal**, selecting a cue list in this page will cause a Song Select message (corresponding to the cue list number) and Song Position Pointer message to be transmitted. When “MIDI Clock” is **External MIDI** or **External PCI/E**, a Song Select message from the specified source will switch cue lists.

1-1c: Track Select, Selected Track Information

Track Select

[Track01...Track16: name]

Select the track that you wish to play manually from the keyboard along with the playback. While a cue list is playing, you can play along using the track settings and musical data of the song selected by the current “Step.” The track you select here will also follow the track settings and musical data of the currently playing song. If you wish to continue using the same program to play along from the keyboard with consecutive songs, specify the same program for this track in the songs of each Step.

Selected Track Information

This area shows the program bank number, program number, and name of the track selected in “Track Select.”

1-1d: Selected Step Information, Step, Song, Repeat, Load FX?

This creates a cue list. Immediately after the power has been turned on, two steps will be displayed by default: “Step” 01 (S000: NEW SONG is selected) and “Step” 02 (End is selected). In this condition, selecting a song for “Step” 01 will cause that song to playback once. If you set “Repeat” to 02, that song will playback twice.

With “Step” 01 selected, press the **Insert button** to insert a step. For example, you might set “Step” 01 to “Song” S001 and “Repeat” 02, and set “Step” 02 to “Song” S002 and “Repeat” 02. When you press the [START/STOP] key, song 1 (S001) would play twice, and song 2 (S002) would play twice.

In this way you can arrange multiple songs in a cue list and specify the number of repetitions for each.

Selected Step Information

This shows information on the currently selected or playing “Step.”

STEP: The xx in xx/yy is the currently-playing step number, and yy is the total number of steps (the last step is not included).

SONG: This shows the number and name of the song for the currently selected/playing step.

Length: This shows the number of measures in the song for the currently selected or playing step.

Step [Measure]

[01...100 (M0001...M9999)]

This shows the step number and its beginning measure.

When playback is stopped, the step currently selected by “Current Step” (1-1e) will be a black triangle. When you use the [START/STOP] key to begin playback, it will begin from this step. While a cue list is playing, the playing step will be a black triangle.

“Measure” shows the beginning measure of each step. It cannot be edited.

Song (Song Select)

[S000...S199: name]

This selects the song for the step. It cannot be selected during playback.

You can also select whether playback will end with the last step in the cue list, or whether playback will return to “Step” 01 and continue endlessly.

End: Playback will end.

Continue to Step01: Playback will return to “Step” 01, and the cue list will continue playing endlessly. To stop, press the [START/STOP] key.

Repeat

[01...64, FS]

Specify the number of times that the song of this step will be repeated.

FS: A foot switch connected to the rear panel can be used to specify the point at which the song will stop repeating.

When you press the foot switch, that repetition of the song will finish playing, and then playback will continue to the next step. Set “Foot Switch Assign” (Global P2: 2-1a) to **Cue Repeat Control**.

Load FX? (Load Effect?)

Check this box if you wish to load effect settings as well when playback moves to the song of the next step.

⚠ Depending on the effect settings, a certain amount of time may be required to switch effects. In this case, playback will not be smoothly connected from song to song.

If you want to transition smoothly from song to song, check “FX Load?” in “Step” 01. For the remaining steps, do not check “FX Load?” With these settings, the effects will be set before playback begins, so there will be no time lag to interrupt the smooth transition between songs. Although it is not possible to change the effect types in the middle of a cue list, you can use the dynamic modulation function or MIDI control changes (effect control) to apply reverb more deeply to certain songs, or raise the LFO speed for other songs, etc. When using a cue list to construct a song, we recommend this method. When you execute the “Convert to Song” (1-1D) page menu command, the effect settings of the “Step” 01 song will be specified at the beginning of the song that is created by the conversion.

Even when “Load FX?” is not checked, there may be a time lag in the transition from one song to the next, depending on the musical data in the song. There may also be cases in which the musical data at the transition between songs does not play at the correct timing. To fix this, you can edit the musical data of the song, or convert the cue list to a single song. If you use “Convert to Song” (1-1D) to convert the cue list to a song, there will be no time lag at the transition, and the musical data will play at the correct timing.

1-1e: Insert, Cut, Copy, Current Step

Insert

When you press the **Insert button**, the step data that was temporarily saved in the buffer by the **Copy button** or **Cut button** will be inserted at the “Current Step.” (If copy or cut has not been executed, default data will be inserted.)

Cut

When you press the **Cut button**, the “Current Step” will be cut, and its data will be saved temporarily in the buffer. If you **Insert** immediately after you cut, the data will return the state in which it was before you cut.

Copy

When you press the **Copy button**, the data of the “Current Step” will be saved temporarily in the buffer. Press the **Insert button** to insert the copied step into the “Current Step.”

Current Step

[01...100]

Select the step that will be inserted, cut or copied. If you wish to playback from a step in the middle of the cue list, select the desired step here, and press the [START/STOP] key.

▼ 1-1: Page Menu Command

0-1A	Memory Status	Convert to Song	1-1D
1-1A	Rename Cue List	Copy Song	1-1E
1-1B	Delete Cue List	FF/REW Speed	0-1I
1-1C	Copy Cue List	Set Location	0-1J

1-1A: Rename Cue List

This command renames the selected cue list. A name of up to sixteen characters can be input.

1-1B: Delete Cue List

This command deletes the currently selected cue list.

- ① Select this command to open the dialog box.
- ② To execute the Delete Cue List command, press the **OK button**. To cancel, press the **Cancel button**. When you execute this command, the data of the currently selected cue list will be deleted.

1-1C: Copy Cue List

This command copies the settings of another cue list to the currently selected cue list. Be aware that when you execute this command, the data of the currently selected cue list will be deleted, and rewritten by the copy source data.

- ① Select this command to open the following dialog box.



- ② In “From,” specify the copy source cue list.
- ③ To execute the Copy Cue List command, press the **OK button**. To cancel, press the **Cancel button**.

1-1D: Convert to Song (Convert Cue List to Song)

This command converts a cue list consisting of multiple songs to a single song. Although it is not possible to record additional tracks into a cue list, you can convert the cue list to a song, and then record solos etc. onto open tracks. Also,

it will be necessary to convert a cue list to a song if you wish to write it to a floppy disk as SMF data. During the conversion, the track and effect settings of the song specified for “Step” 01 will be copied to the beginning of the resulting song, and all track and effect settings of subsequent songs will use the settings of the song for “Step” 01.

The “Convert to Song” command converts a cue list to a song as described below.

Song/Track parameters will use the settings of the “Step” 01 song.

- ▲ The MIDI channel of each track will be according to the settings of the “Step” 01 song. If “Step” 02 and following songs have different settings, it may not be possible to convert the playback result of the cue list into a song. As far as possible, try to keep the MIDI channel assignments consistent between songs that you intend to use as part of a play list that will be converted into a song.

The following track parameters will not be reflected in the conversion. As with the MIDI channels, we recommend that you keep these settings consistent between all songs in the cue list.

PLAY/MUTE, SOLO ON/OFF, Status, MIDI Channel, Bank Select(When Status = EX2), Force OSC Mode, OSC Select, Delay, Use Programs Scale, MIDI Filter, Key Zone, Velocity Zone

Converting Song/Track parameters into track events

Second and subsequent repeats of the “Step” 01 song, and the settings of “Step” 02 and following songs will all be converted into track events (musical data). The following data will be converted.

Track1-16	Bank/Program, Pan, Volume, Portamento, Detune, Bend Range
Master Track	Tempo, Meter

If “Pan” (0-3b, 4b) is **Random**, it will be converted to **C064**. If “Portamento” (2-3a, 4a) is **PRG**, or if “Bend Range” is **PRG** or a **negative value**, these will not be reflected in the conversion.

- ▲ “Detune” (2-5a, 6a) will be divided into RPN Fine Tuning and Coarse Tuning, and converted into events. For example if the “Detune” setting of **+600**, Fine Tuning will be 00 and Coarse Tuning will be 6. Fine Tuning will modify the playback pitch (Detune). Coarse Tuning will change the notes that are played back (Transpose). For this reason with some programs such as drum programs, the playback result produced by a cue list may not be reproduced when the cue list is converted into a song.

Converting “Track Play Loop” (P0: PlyLoop 1-8, 9-16 tab)

If “Track Play Loop” is on, the area from “Loop Start” to “Loop End” will be expanded as far as the last measure in the master track.

Example)

If “Track Play Loop” is **M005-M008**, and the master track contains 10 measures, the data will be expanded from the beginning of the track as **M005, 6, 7, 8, M005, 6, 7, 8, M005, 6**.

Converting patterns

Patterns in the “Step” 01 song will be copied as patterns of the converted song.

If there is a second or subsequent repeat for “Step” 01, or if the tracks of “Step” 02 and subsequent songs contain patterns, they will be expanded into track events (musical data).

“Transpose” settings

If the “Transpose” (2–5a, 6a) of the tracks in “Step” 02 and subsequent songs differ from the settings of the “Step” 01 song, the note numbers of the note data will be shifted.

Example)

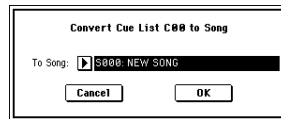
If “Step” 01 “Transpose” = +1 and “Step” 02 “Transpose” –1, the actual note numbers of the “Step” 02 track note data will be shifted downward by 2.

If “Repeat” is set to FS (Foot Switch), it will be converted as “Repeat” 1.

When you execute “Convert to Song” to convert a cue list to a song, the repeat settings within the cue list and the pattern and track play loop settings of the songs used by the cue list will all be converted into events such as note data. For this reason, the amount of data will increase significantly, and in some cases there may not be enough internal memory to perform the conversion. In particular if the cue list uses long songs, or if numerous repeats have been specified, or if many patterns are used by the songs, you should try executing the “Convert to Song” command from time to time as you create the cue list, in order to verify the amount of memory that will be required for the conversion.

A cue list that is longer than 999 measures cannot be converted into a song.

- 1 Select the cue list (C00–C19) that you wish to convert into a song.
- 2 Select this command to open the following dialog box.



- 3 In “To Song,” specify the song into which the cue list will be converted. If you select a new song, a dialog box will ask you for confirmation. Press the **OK button** to create a new song and convert the cue list to that song. If you select an existing song that already contains settings and/or musical data, executing this command will erase the data of that song and rewrite it with the data that was converted from the cue list. Before you execute, be sure that you will not be losing important data.
- 4 To execute the conversion, press the **OK button**. To cancel, press the **Cancel button**. After executing this command, you can press the [COMPARE] key to return to the state before execution.

1-1E: Copy Song

This command creates a song from a specified portion of a song in a cue list. For example if you have an eight-measure song and want to repeat measures 5–8, you can use this command to create a four-measure song out of that portion. Then you can assign the resulting song to a step in a cue list, and repeat it.

- 1 In “Current Step,” select the desired step.
- 2 Select this command to open the following dialog box.



- 3 In “From Measure,” specify the first measure in the copy source song. In “To End of Measure,” specify the last measure.

- 4 In “To Song,” specify the song into which the data will be converted. If you select a new song, a dialog box will ask you for confirmation. Press the **OK button** to create a new song and copy the data to that song. If you select an existing song that already contains settings and/or musical data, executing this command will erase the data of that song and rewrite it with the data from the copy source. Before you execute, be sure that you will not be losing important data.
- 5 If you check “Replace to original Song in Cue List” and execute this command, the “Current Step” song will be replaced by the newly created song. If you execute without checking this box, the newly created song can be selected later for the desired step of the cue list.
- 6 To execute the Copy Song operation, press the **OK button**. To cancel, press the **Cancel button**.

Sequencer P2: Trk Param

2-1: MIDI Ch 1-8 (MIDI Ch T01-08)

2-2: MIDI Ch 9-16 (MIDI Ch T09-16)

Here you can make MIDI-related settings for each track.



2-1(2)a: Status, MIDI Channel, Bank Select

Status [INT, Off, BTH, EXT, EX2]

This sets the status of MIDI and the internal tone generator for each track.

INT: When the musical data recorded in the track is played back, or when you use “Track Select” (0-1e) to select a track that is set to **INT** and play the keyboard and operate the controllers, the internal tone generator of the TRITON will sound, and MIDI data will not be transmitted to an external device.

Off: The program will not sound, nor will MIDI data be transmitted.

BTH: The operation of both **INT** and **EXT** will be performed. When the musical data recorded in the track is played back, or when you select a track that is set to **BTH** and play the keyboard and operate the controllers, the internal tone generator of the TRITON will sound, and at the same time MIDI data will also be transmitted to an external device.

EXT: When the musical data recorded in the track is played back, or when you select a track that is set to **EXT** and play the keyboard and operate the controllers, MIDI data will be transmitted to an external device, but the internal tone generator of the TRITON will not sound.

When you switch songs or reset to the beginning of the song, tracks that are set to **EXT** will transmit program change, volume, panpot, portamento, send 1, 2, post IFX pan, and post IFX send 1, 2 MIDI messages.

EX2: “Bank Select” will be enabled. Instead of the A-g(d) bank numbers that can be selected on the TRITON, the bank number you specify here will be transmitted. In other respects this is the same as **EXT**.

MIDI MIDI data is transmitted and received on the MIDI channel that is specified separately for each track by “MIDI Channel.”

	Recorded data Keyboard and controller operations		Received data	
Status	Internal tone gener- ator	MIDI OUT	Internal tone gener- ator	MIDI OUT
INT	●	×	●	—
EXT, EX2	×	●	×	—
BTH	●	●	●	—

MIDI Channel [01...16]

Specify the MIDI channel that the track will use to transmit and receive musical data. The MIDI channel you specify here will be the receive channel when “Status” is **INT**, the transmit channel when it is **EXT** or **EX2**, and the receive/transmit channel when it is **BTH**. Tracks set to **INT** which have the same MIDI channel will sound and be controlled identically when they receive MIDI data or data from the sequencer tracks.

Bank Select [000:000...127:127]

When “Status” is set to **EX2**, this sets the bank number that will be transmitted. When “Status” is other than **EX2**, this setting has no effect.

2-3: OSC 1-8 (OSC T01-08)

2-4: OSC 9-16 (OSC T09-16)

These parameters specify how each track will be sounded.



2-3(4)a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode [PRG, Poly, MN, LGT]

Select the “Voice Assign Mode” (Program P1: 1-1b) of the program selected for each track 1-16 (ⓈCombination P2: 2-2a).

OSC Select [BTH, OS1, OS2]

Specify the “Oscillator Mode” of the program selected for each track 1-16. If the “Oscillator Mode” is Double, you can use this setting to make only one or the other oscillator sound (ⓈCombination P2: 2-2a).

Portamento [PRG, Off, 001...127]

Specify the portamento effect for each track 1-16 (ⓈCombination P2: 2-2a).

MIDI The portamento setting you make here will be used when the song is played or recorded from the beginning. If you change the setting while recording, it will be recorded as part of the musical data. (However if you set this to **PRG**, it will not be recorded.) You can change this setting during playback. However if you come to any Portamento On/Off data or Portamento

Time data that was recorded, the settings will change accordingly.

When the track whose "Status" (2-1a) is **INT** or **BTH**, MIDI control change (CC) #5 (Portamento Time) and CC#65 (Portamento Switch) can be received to control this and change the setting. (If the setting is **PRG**, CC#05 Portamento Time will not be received.)

When you switch songs or return to the beginning of the song, tracks whose "Status" is **BTH**, **EXT**, or **EX2** will transmit this setting via MIDI. If this is **Off**, CC#65 with a value of 0 will be transmitted. If this is **000-127**, a CC#65 of 127 and CC#05 of 1-127 will be transmitted. If this is set to **PRG**, nothing will be transmitted.

This data is transmitted on the MIDI channel specified for each track by "MIDI Channel" (2-1a).

2-5: Pitch 1-8 (Pitch T01-08)

2-6: Pitch 9-16 (Pitch T09-16)

Here you can make pitch-related settings for each track.



Bend Range [PRG, -24...+24]

Specify the range of pitch change that will occur when the pitch bender is operated.

PRG: The pitch range specified by the program will be used.
-24+24: Regardless of the setting of the program, pitch bending will use the range you specify here.

MIDI This setting can be controlled and changed by received MIDI RPN Pitch Bend Range messages. (These messages will not be received if the setting is **PRG**.)

▼ 2-5: Page Menu Command

0-1A	Memory Status	Load Template Song	0-1G
0-1B	Solo Selected Track	Save Template Song	0-1H
0-1C	Rename Song	FF/REW Speed	0-1I
0-1D	Delete Song	Set Location	0-1J
0-1E	Copy From Song	Detune BPM Adjust	2-5A
0-1F	Copy From Combi		

2-5A: Detune BPM Adjust

When the program selected for a track uses a phrase or rhythm loop multisample or sample that you created to match a specific BPM in Sampling mode or loaded from disk in Disk mode (≡Program P1: 1-2a, Global P5: 5-1b, 5-1c), you can use this command to change the BPM of the phrase or rhythm. The BPM can be adjusted by modifying the pitch. This command is available for a track when the "Detune" setting of that track is selected. When you execute this command, the selected "Detune" value will be adjusted. For the procedure, refer to "Detune BPM Adjust" (Combination P2: 2-3A).

2-5(6)a: Transpose, Detune, Bend Range

Transpose [-24...+24]

Adjust the pitch of each track in semitone steps. 12 steps are one octave.

Detune (BPM Adj. in Page Menu) [-1200... +1200]

Adjust the pitch of each track in one-cent steps from the normal pitch.

0: Normal pitch.

You can use the "Detune BPM Adjust" (2-5A) page menu command to make a calculation in BPM units and set Detune automatically.

MIDI "Transpose" and "Detune" settings do not affect the note data that is transmitted via MIDI. "Transpose" and "Detune" are controlled by received MIDI RPN messages. The "Oscillator Mode" (Program P1:1-1a) of the programs selected for tracks 1-16 will be controlled as follows.

- If "Oscillator Mode" is **Single** or **Double**, MIDI RPN Coarse Tune messages can be received to control and change the "Transpose" setting, and Fine Tune messages to control and change the "Detune" setting.
- If "Oscillator Mode" is **Drums**, MIDI RPN Coarse Tune and Fine Tune messages can be received to control and change the "Detune" setting. The range of control will be ±1 octave when Coarse Tune and Fine Tune are added. These messages will be received on the MIDI channel that is specified for each track by "MIDI Channel" (2-1a).

2-7: Other 1-8 (Other T01-08)

2-8: Other 9-16 (Other T09-16)

Here you can make additional settings for each track.



2-7(8)a: Delay [ms] (Delay Time)

[0000...5000, KeyOff]

Specify a delay time from when a track receives a note-on until it actually sounds.

KeyOff: The sound will begin when note-off occurs. In this case, the sound will continue indefinitely unless the amp EG Sustain Level of the program is other than 0. This setting is useful for simulating harpsichord sounds. Normally you will leave this at 0.

2-7(8)b: Use Program's Scale

Each track can use the scale that is specified for the program by "Scale" (Program P1: 1-1c).

Checked: The scale of the program will be used.

Unchecked: The scale specified by "Scale" (2-7c) will be used.

2-7c: Scale

Specify the scale that will be used for the song.

Type [Equal Temperament...User Octave Scale15]

Select the type of scale (☞"Type" Program P1: 1-1c).

Key (Scale Key) [C...B]

Select the tonic key of the selected scale (☞"Key" Program P1: 1-1c).

Random [0...7]

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on (☞"Random" Program P1: 1-1c).

Sequencer P3: MIDI Filter

Here you can select whether or not to apply filtering to the MIDI data received by tracks 1-16. For example even if two tracks are receiving the same MIDI channels, one can be made to respond to damper pedal activity while the other does not.

note These MIDI filter settings have no effect on the MIDI messages that have already been recorded.

note These MIDI filter settings do not affect the transmission of MIDI messages that have already been recorded. These settings affect the MIDI messages that are transmitted when you adjust program, pan, volume, portamento and send 1/2 parameters of a track whose "Status" (2-1a, 2a) is set to **BTH**, **EXT**, or **EX2**.

Checked: Reception of MIDI data is enabled. Tracks whose "Status" (2-1a) is **INT** or **BTH** will receive MIDI messages whose channel matches and whose types are checked. The types of effect that are checked will be applied to the program of each track when the TRITON's controllers are operated or when MIDI data is received. (The effect dynamic modulation function is not affected by these settings.) Settings that regulate MIDI transmission/reception of the TRITON itself are made in "MIDI Filter" (Global P1: 1-1b). If the user-assignable controllers that can be filtered in the MIDI 3 and MIDI 4 tabs are set to MIDI control changes, filtering will be performed for these control changes. In this case, any control change filtering that is being performed in the MIDI 1 and MIDI 2 tabs will be given priority. Furthermore, if the same control change is assigned to multiple controllers for which there are filter settings in the MIDI 3 and 4 tabs, checking any one of these will enable that control change.

Unchecked: Reception of MIDI data is disabled.

3-1: MIDI 1 1-8 (MIDI Filter -1 T01-08)

3-2: MIDI 1 9-16 (MIDI Filter -1 T09-16)



3-1(2)a: Enable Program Change, Enable After Touch, Enable Damper, Enable Portamento SW

Enable Program Change

Specify whether or not MIDI program change messages will be received.

Enable After Touch

Specify whether or not MIDI after touch messages will be received.

Enable Damper

Specify whether or not MIDI control message #64 Hold (damper pedal) will be received.

Enable Portamento SW

Specify whether or not MIDI control message #65 Portamento On/Off will be received.

3-3: MIDI 2 1-8 (MIDI Filter -2 T01-08)

3-4: MIDI 2 9-16 (MIDI Filter -2 T09-16)



3-3(4)a: Enable JS X as AMS, Enable JS+Y, Enable JS-Y, Enable Ribbon

Enable JS X as AMS

Allow incoming MIDI pitch bend messages (the X-axis of the TRITON's joystick) to control the AMS (Alternate Modulation Source) that is specified for JS X. (This is not a reception filter for MIDI pitch bend messages.)

Enable JS+Y

Specify whether or not MIDI control message #1 (the +Y axis of the TRITON's joystick, or assigned to B-mode of the REALTIME CONTROL knobs [1]-[4]) will be received.

Enable JS-Y

Specify whether or not MIDI control message #2 (the -Y axis of the TRITON's joystick, or assigned to B-mode of the REALTIME CONTROL knobs [1]-[4]) will be received.

Enable Ribbon

Specify whether or not MIDI control message #16 (the TRITON's ribbon controller, or assigned to B-mode of the REALTIME CONTROL knobs [1]-[4]) will be received.

3-5: MIDI 3 1-8 (MIDI Filter -3 T01-08)

3-6: MIDI 3 9-16 (MIDI Filter -3 T09-16)

Here you can specify whether the A and B-mode effects of the REALTIME CONTROL knobs [1]-[4] will be transmitted and received. The A-mode MIDI controller messages for each knob are fixed. The B-mode messages can be set in Sequencer 4-7: Controller tab.



3-5(6)a: Enable Realtime Control Knob 1...4

Enable Realtime Control Knob 1

Specify whether or not the A-mode MIDI control message #74 (the TRITON's low pass filter cutoff frequency) and the B-mode MIDI control message will be received.

Enable Realtime Control Knob 2

Specify whether or not the A-mode MIDI control message #71 (the TRITON's low pass filter resonance or high pass filter cutoff frequency) and the B-mode MIDI control message will be received.

Enable Realtime Control Knob 3

Specify whether or not the A-mode MIDI control message #79 (the TRITON's filter EG intensity) and the B-mode MIDI control message will be received.

Enable Realtime Control Knob 4

Specify whether or not the A-mode MIDI control message #72 (the release time of the TRITON's filter and amplifier EG's) and the B-mode MIDI control message will be received.

3-7: MIDI 4 1-8 (MIDI Filter -4 T01-08)

3-8: MIDI 4 9-16 (MIDI Filter -4 T09-16)



3-7(8)a: Enable SW1, Enable SW2, Enable Foot Pedal/Switch, Enable Other Control Change

Enable SW1, Enable SW2

Specify whether or not the effect of the [SW1] and [SW2] keys will be received. The function of these keys can be set in Sequencer 4-7: Controller tab. This is valid when the switches are set to **SW1 Mod.:CC#80, SW2 Mod.:CC#81** or **Porta.SW:CC#65**.

Enable Foot Pedal/Switch

Specify whether or not the effect of the ASSIGNABLE PEDAL/SWITCH will be received. The function of this switch is set in Global P2. This is valid when the switch is set to a MIDI control change.

Enable Other Control Change

Specify whether or not MIDI controller messages other than those included in MIDI Filter 1-4 will be received.

Sequencer P4: Zone/Ctrl

4-1: Key Z 1-8 (Key Zone T01-08)

4-2: Key Z 9-16 (Key Zone T09-16)

Here you can specify the range of keys that will be sounded by each track.

Top/Bottom Key settings specify the range of notes that will be sounded by **tracks 1-16**, and Top/Bottom Slope settings specify the range from the top/bottom key until the original volume is reached.

MIDI These settings do not affect MIDI transmission/reception. All note data that is received will be recorded into the internal sequencer, and all note data from the internal sequencer or from the keyboard will be transmitted.



4-1a: Zone Map

This shows the range of notes and velocities that will be sounded by each track 1-16.

The note and velocity ranges are shown as lines, and the slope area within the range is shown in gray.



4-1(2)b: Top Key, Top Slope

Top Key

[C-1...G9]

Specify the top key (upper limit) that will be sounded by each track 1-16.

Top Slope

[00...72]

Specify the key range (12 is one octave) from the top key until the original volume is reached.

4-1(2)c: Bottom Slope, Bottom Key

Bottom Slope

[00...72]

Specify the key range (12 is one octave) from the bottom key until the original volume is reached.

Bottom Key

[C-1...G9]

Specify the bottom key (lower limit) that will be sounded by each track 1-16. For details on these parameters and on the diagram, refer to "Combination P4-1: Key Z (Key Zone)."

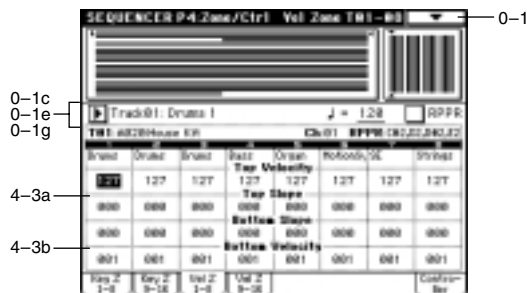
note You can also enter a value for these parameters by playing a note while you hold down the [ENTER] key.

4-3: Vel Z 1-8 (Vel Zone T01-08)

4-4: Vel Z 9-16 (Vel Zone T09-16)

Top/Bottom Velocity specify the range of velocities that will be sounded by tracks 1-16, and Top/Bottom Slope specify the range over which the volume will be adjusted.

MIDI These settings do not affect MIDI transmission/reception. All note data that is received will be recorded into the internal sequencer, and all note data from the internal sequencer or from the keyboard will be transmitted.



4-3(4)a: Top Velocity, Top Slope

Top Velocity [1...127]

Specify the maximum velocity that will be sounded by each track 1-16.

Top Slope [0...120]

Specify the range of values over which the volume will be adjusted from the top velocity until the original volume is reached.

4-3(4)b: Bottom Slope, Bottom Velocity

Bottom Slope [0...120]

Specify the range of values over which the volume will be adjusted from the bottom velocity until the original volume is reached.

Bottom Velocity [1...127]

Specify the minimum velocity that will be sounded by each track 1-16.

For details on these parameters and on the diagram, refer to "Combination P4-2: Vel Z (Velocity Zone)."

note You can also enter a value for these parameters by playing a note while you hold down the [ENTER] key.

4-5: MOSS 1-8 (MOSS T01-08)

4-6: MOSS 9-16 (MOSS T09-16)

This page is displayed when the separately sold EXB-MOSS option has been installed. For details refer to the owner's manual included with the EXB-MOSS.

4-7: Controller (Controller Setup)

Here you can set the functions that the [SW1] key, [SW2] key, and the B-mode functions that the REALTIME CONTROL knobs [1]-[4] will have in Sequencer mode.

MIDI When these switches or knobs are operated during recording, the MIDI messages that you assign here will be recorded.



4-7a: Panel Switch Assign

Assign functions to the front panel [SW1] and [SW2] keys (see p.217 "SW1, SW2 Assign List").

Since the functions assigned to these switches and knobs by the program of each track will not be valid, you can make new assignments here.

SW1 (SW1 Assign) **AMSource** [Off, ..., After Touch Lock]

SW1 Mode [Toggle, Momentary]

SW2 (SW2 Assign) **AMSource** [Off, ..., After Touch Lock]

SW2 Mode [Toggle, Momentary]

see "Panel Switch Assign" (Program P1: 1-4a).

4-7b: Realtime Control Knobs B-Assign

Here you can set the B-mode functions (mainly various control changes) that the front panel REALTIME CONTROL knobs [1]-[4] will have in Sequencer mode (see p.218 "Realtime Control Knobs B-Assign List"). The functions you specify here will operate when you rotate the front panel REALTIME CONTROL knobs [1]-[4] in B-mode.

Since the functions assigned to these knobs by the program of each track will not be valid, you can make new assignments here.

Knob 1-B **AMSource** [Off, ..., MIDI CC#95]

Knob 2-B **AMSource** [Off, ..., MIDI CC#95]

Knob 3-B **AMSource** [Off, ..., MIDI CC#95]

Knob 4-B **AMSource** [Off, ..., MIDI CC#95]

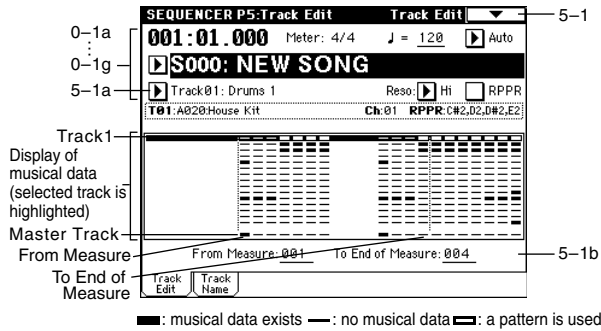
see "Realtime Control Knobs B-Assign" (Program P1: 1-4b).

Sequencer P5: Track Edit

5-1: Track Edit

Here you can edit the settings of the currently selected track and the musical data that has already been recorded, as well as perform step recording.

When you wish to edit musical data or perform step recording, first use the tab page window to select the track and specify the desired area. Then select the appropriate page menu command.



5-1a: Track Select

[Track01...Track16, Master Track]

Select the track that you wish to edit (or copy from) or record.

If you wish to select all tracks, it is not necessary to specify them here. (Check the "All Tracks" item within the dialog box of the page menu command.)

Master Track: Edit the tempo or time signature of the master track.

5-1b: From Measure/To End of Measure

Specify the range of measures that you wish to edit (or copy from) or step-record.

From Measure [001...999]

Specify the first measure.

To End of Measure [001...999]

Specify the last measure.

5-1: Page Menu Command

0-1A	Memory Status	Delete Measure	Quantize	5-1G	5-1N
5-1A	Step Recording	Insert Measure	Shift/Erase Note	5-1H	5-1O
5-1B	Event Edit	Repeat Measure	Modify Velocity	5-1I	5-1P
5-1C	Erase Track	Copy Measure	FF/REW Speed	5-1J	0-1I
5-1D	Copy Track	Move Measure	Set Location	5-1K	0-1J
5-1E	Bounce Track	Create Ctrl Data	5-1L		
5-1F	Erase Measure	Erase Ctrl Data	5-1M		

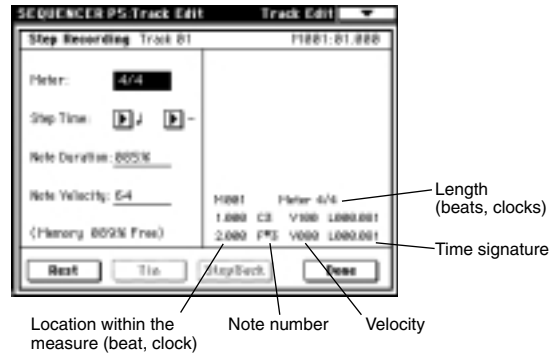
5-1A: Step Recording

Step recording allows you to specify the length and velocity of each note numerically, and to input the pitches from the keyboard. You can use the **Rest** button and **Tie** button to input a rest or tie.

Be aware that if you step-record onto a track which already contains sequence data, all data will be erased from the measure specified in "From Measure" and all subsequent measures.

To input data with a continuously-changing value such as pitch bend, it is best to use "Create Ctrl Data" (5-1L). To input individual data events such as program changes, use "Event Edit" (5-1B).

- Use "Track Select" to select the track into which you wish to input data, and use Track Edit tab item "From Measure" to specify the measure at which you wish to begin input.
- When you select this command, the following dialog box will appear.



- In "Meter," set the time signature. This will show the time signature that has already been set for the measure. If you change the time signature setting, the time signature data of the measures you record will change, and all tracks will change to the time signature you specified.
- In "Step Time," specify the length of the basic step that you wish to input, in terms of a note value. The number of clocks in each note value is shown below.

(0:24)	(0:48)	(0:96)	(1:00)	(2:00)	(4:00)
(0:36)	(0:72)	(0:144)	(1:96)	(3:00)	(6:00)
(0:16)	(0:32)	(0:64)	(0:128)	(1:64)	(2:128)

- In "Note Duration," specify the length that the note will actually be held, relative to the "Step Time." In general, 100% will be tenuto, 85% will be normal, and 50% will be staccato.
- Use "Note Velocity" to specify the velocity value (keyboard playing strength) of the note data. With the [PAUSE] key pressed, you can hold down the [ENTER] key and play a note on the keyboard to specify the velocity value.
- Input the note events described below by playing notes on the keyboard or by pressing the buttons in the lower part of the dialog box.

Inputting notes

When you press a key on the keyboard, that note number will be input as a note of the length specified in ④. When you press a chord on the keyboard, those note numbers will be input as chords of the length specified in ④. Since each of the note numbers you press before releasing all of the keys will be input at the same location, the notes will be input as a chord even if they are actually played at different times.

Each time you press and release the keyboard, the location will advance by the length specified in ④.

• **Inputting rests**

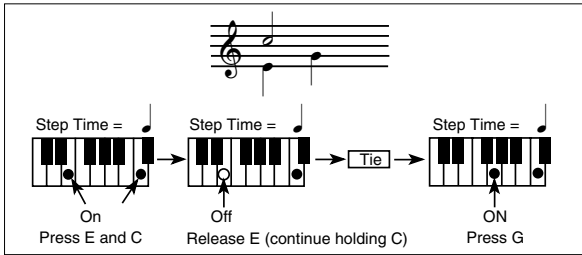
Press the **Rest button** to input a rest of the length specified in ④.

• **Inputting a tie**

If you press the **Tie button** without pressing the keyboard, the previously-input note will be tied, and lengthened by the amount specified in ④.

If you press the **Tie button** while holding down a note, the note you are playing will be tied, and lengthened by the amount specified in ④.

You can even input notes as shown in the following diagram.



• **Deleting a note or rest**

To delete a note or rest, press the **StepBack button**. The location will move backward by the amount specified in ④, and the data in that interval will be deleted.

• **Auditioning the next note before input**

If you wish to make sure of the next note before you actually input it, press the [PAUSE] key (the LED will light). Now when you press a key, you will hear sound but the note will not be input. Press the [PAUSE] key once again (the LED will go dark) to cancel the pause mode and resume input.

- ⑧ When you are finished with step recording, press the **Done button**. If you press the [COMPARE] key, you will return to the condition of before you began step recording.

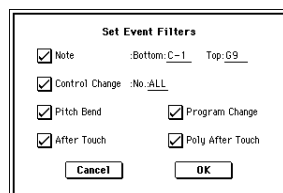
5-1B: Event Edit

Here you can edit individual events of music data that were input.

- ① Use "Track Select" to select the track that you wish to edit, and use the Track Edit tab "From Measure" field to specify the measure at which you wish to begin editing.
- ② If you selected **Track01-16** in "Track Select," selecting this command will open the **Set Event Filters** dialog box. In the Set Event Filters dialog box you can select the types of events (musical data) that will appear and can be edited in the event edit window.

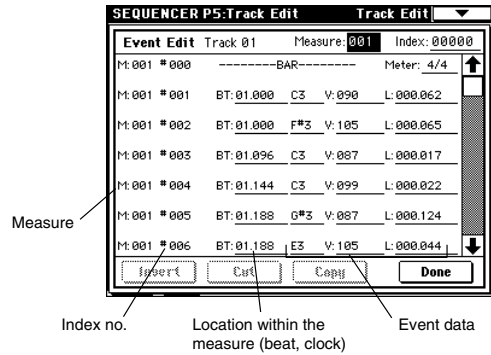
For "Note" you can set "Bottom" and "Top" to specify the range of notes. These settings can also be entered by holding down the [ENTER] key and pressing a key. Normally you will leave these set at **C-1** and **G9**.

"Control Change" lets you specify the control change number. Normally you will leave this set at **ALL**.



If you selected **Master Track** in "Track Select," this dialog box will not appear.

- ③ Press the **OK button** to open the Event Edit dialog box.



- ④ In the upper part of the dialog box, "Measure" and "Index" show the measure that you are editing and the events of the index numbers within the measure. You can touch the scroll bar located at the right to move to the event that you wish to edit.
- ⑤ Select the event that you wish to edit, and use the [VALUE] dial etc. to modify its value(s).
- By modifying the value of the "BT" (Beat. Tick) location within the measure, you can move the event within the measure.
 - You can edit each event by modifying its data value(s). When you select a note event, it will sound.
- ⑥ You can press the buttons located at the bottom of the dialog box to edit events as follows.

• **Inserting an event**

Select the location "BT" at which you wish to insert an event, and press the **Insert button** to insert an event.

• **Deleting an event**

Select the event that you wish to delete, and press the **Cut button** to delete the event.

• **Moving an event**

You can use the **Cut button** and **Insert button** to move an event (by "cut and paste").

Use the **Cut button** to delete the event that you wish to move, then use the **Insert button** to insert it at the desired location.

You can also move an event by modifying its "BT" value.


• **Copying an event**

Select the event that you wish to copy, and press the **Copy button**. Then select the copy destination and press the **Insert button** to insert the event at that location.

- ⑦ When you are finished event editing, press the **Done button**. If you press the [COMPARE] key you will return the data to the condition in which it was before you began event editing.

The following table shows the types of musical data that can be edited by "Event Edit" and the range of their values.

BAR (displayed only) (Measure line)		Meter: 1/4...16/16 *1 (Time signature)
C-1...G9 *2 (Note data)	V: 1...127 *2 (Velocity)	L: 000.000...15984.000 (Length: beats, clocks)
PAFT (Polyphonic after touch)	C-1...G9 (Note number)	0...127 (Value)
CTRL (Control change)	C: 0...101 (Control change number)	0...127 (Value)
PROG (Program change)	Bank: A...F, 000...127, G, g(1)...g(9) g(d), --- (Program bank)	P: 0...127, 1...128 (G, g(1)...g(d)) (Program number)
AFTT (After Touch)	0...127 (value)	
BEND (Pitch bend)	-8192...+8191 (value)	

-  *1 Be aware that since the time signature is recorded in the master track, modifying it from any track will affect the same measure of all tracks, causing them to be played in that time signature.

note *2 Note data and velocity values can also be entered by holding down the [ENTER] key and playing a note on the keyboard.

Pattern numbers will be displayed in locations in which a pattern has been “put” (placed). At the end of the track there will be an indication of **End of Track**.

5-1C: Erase Track

This command erases the data from the specified track. However, it is not possible to erase the master track by itself.

- 1 In “Track Select,” select the track that you wish to erase.
- 2 Select this command to open the following dialog box.



If you check “All Tracks,” the musical data of all tracks will be erased.

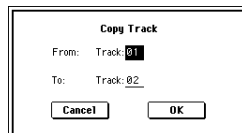
- 3 To execute the Erase Track command, press the **OK button**. To cancel, press the **Cancel button**.

5-1D: Copy Track

This command copies musical data from the copy source track to the specified track.

Be aware that when you execute the Copy Track command, any track data that was in the copy destination track will be erased.

- 1 Select this command to open the following dialog box.



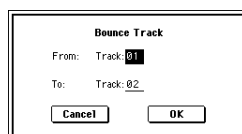
- 2 In “From,” select the copy source track. In “To,” select the copy destination. (By default, “From” will be the track you selected in “Track Select.”)
- 3 To execute the Copy Track command, press the **OK button**. To cancel, press the **Cancel button**.

5-1E: Bounce Track

This command combines the musical data of the bounce source and bounce destination tracks, and places the combined data in the bound destination. All musical data in the bounce source will be erased.

If MIDI control data existed in the bounce source track and bounce destination track, unexpected results may occur in the playback after the bounce command is executed. If this occurs, use “Event Edit” (5-1B) or “Erase Control Data” (5-1M) to edit the MIDI control data of the two tracks before you use Bounce Track.

- 1 Select this command to open the following dialog box.



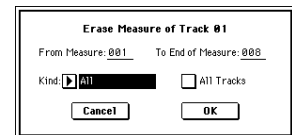
- 2 In “From,” specify the bounce source track. In “To” specify the bounce destination track. (By default, “From” will be the track you selected in “Track Select.”)

- 3 To execute the Bounce Track command, press the **OK button**. To cancel, press the **Cancel button**.

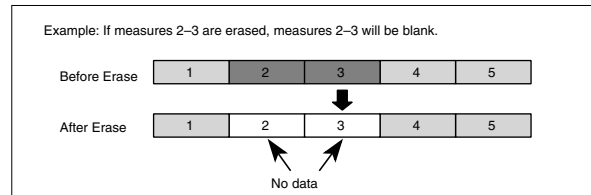
5-1F: Erase Measure


This command erases the specified type(s) of musical data from the specified range of measures. The Erase Measure command can also be used to delete only a specific type of data. Unlike the Delete Measure command, executing the Erase Measure command does not cause the subsequent measures of musical data to be moved forward.

- 1 Use “Track Select” to select a track.
- 2 Select this command to open the following dialog box.



- 3 In “From Measure” select the first measure to be erased, and in “To End of Measure” select the last measure to be erased. (By default, “From Measure” and “To End of Measure” will be set to the range that you specified in the Track Edit tab.)
- 4 In “Kind,” specify the type of data that will be erased. **All** will erase all types of data from the track, **Note** will erase note data, **Control Change** will erase control change data, **After Touch** will erase both channel pressure and polyphonic key pressure data, **Pitch Bend** will erase pitch bend data, and **Program Change** will erase program change data.
- 5 If you check “All Tracks,” the specified type of data will be erased from all tracks.
- 6 To execute the Erase Measure command, press the **OK button**. To cancel, press the **Cancel button**.



-  If control data extends across a line between measures that were erased and measures that were not erased, only the data within the range being erased will be erased. However if note data extends across two or more measures, deleting any of the intervening measures will delete that note data from the following measures as well.

note Note data can also be erased using “Shift/Eraser Note” (5-1O). Use this command when you wish to erase a specific range of notes, or to erase notes from a specific “Beat.Tick.”

note Control Change data can also be erased using “Erase Control Data” (5-1M). Use this when you wish to erase a specific type of control change, or to erase control change data from a specific “Beat.Tick” range.

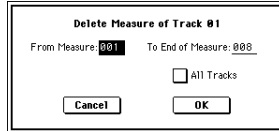
5-1G: Delete Measure

This command deletes the specified measures.

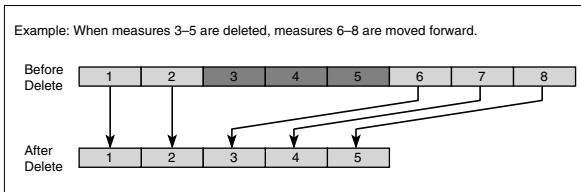
When the Delete Measure command is executed, the musical data following the deleted measures will be moved forward in units of a measure.

- 1 Use “Track Select” to select the track.

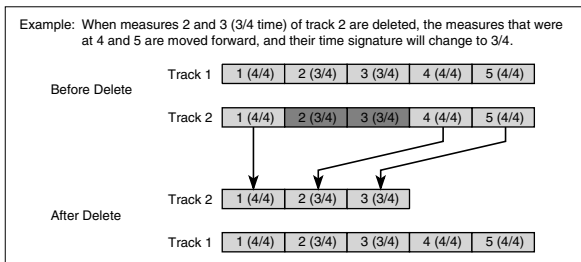
- ② Select this command to open the following dialog box.



- ③ In “From Measure” select the first measure that you wish to delete, and in “To End of Measure” select the last measure that you wish to delete. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit tab.)
- ④ If you wish to delete musical data from all tracks including the master track, check “All Tracks.” If this is **not checked**, data will be deleted only from the track that was selected by “Track Select.”
- ⑤ To execute the Delete Measure command, press the **OK** button. To cancel, press the **Cancel** button.



- ⚡ If in ④ you uncheck “All Tracks” and execute this operation, the measures will not be deleted from the master track. Time signature and tempo data will remain unchanged, and the time signature and tempo of the measures that were moved forward as a result of the Delete operation will change.



- ⚡ If in ④ you check “All Tracks” and execute this operation, the specified measures of musical data will be deleted from all tracks including the master track, and the time signature and tempo will also move forward by the number of measures that were deleted. If control data extends across a line between measures that were deleted and measures that were not deleted, only the data within the range being deleted will be erased. However if note data extends across two or more measures, deleting any of the intervening measures will delete that note data from the following measures as well.

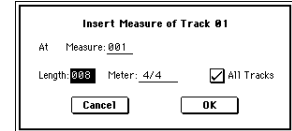
5-1H: Insert Measure

This command inserts the specified number of measures into the specified track. When you execute the Insert Measure command, the musical data following the insert location will be moved backward.

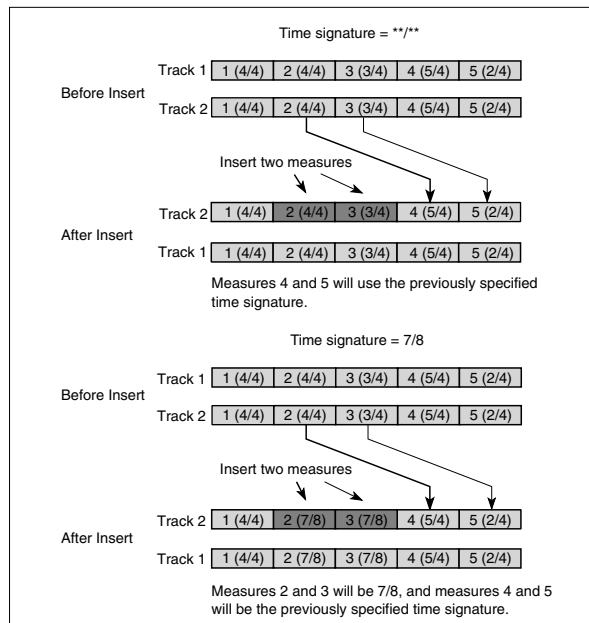
If musical data is inserted into an area across which note data has been tied, a note-off will be created immediately before the inserted measure, and the subsequent portion of the note will be deleted.

- ① In “Track Select,” specify the track into which you wish to insert.

- ② Select this command to open the following dialog box.



- ③ In “At Measure,” specify the measure location at which the data will be inserted. (The measure you specified in Track Edit tab “From Measure” will be set as a default.)
- ④ In “Length,” specify the number of measures that will be inserted.
- ⑤ In “Meter,” specify the time signature of the measures that will be inserted. If you want the inserted measures to match the existing time signature, specify ****/****. With any setting other than ****/****, the time signature of the inserted measures will change, and the specified time signature will apply to all tracks for those measures.
- ⑥ If you wish to insert measures into all tracks including the master track, check “All Tracks.” The musical data following the inserted measures will playback in the same way it did before the measures were inserted. If “All Tracks” is **unchecked**, the measures will be inserted into the specified track. At this time, the musical data following the inserted location will be moved backward by the number of measures that were inserted. However, the time signature and tempo will not move.
- ⑦ To execute the Insert Measure command, press the **OK** button. To cancel, press the **Cancel** button.

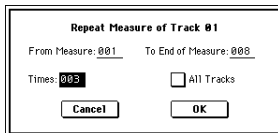


5-1I: Repeat Measure

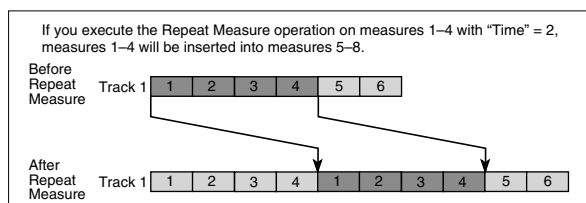
This command repeatedly inserts the specified measures for the specified number of times. When you execute the Repeat Measure command, the measures will be inserted following the measure specified by “To End of Measure,” and musical data following the inserted data will be moved backward. It is convenient to use this command when you have a song that you playback with “Track Play Loop” (0–5a, 6a) turned on, and wish to expand it into musical data.

- ① Use “Track Select” to select the track whose measures you wish to repeat.

- 2 Select this command to open the following dialog box.



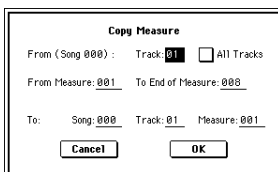
- 3 In “From Measure” and “To Measure,” specify the range of measures that will be repeated. (By default, “From Measure” and “To Measure” will be set to the range you specified in the Track Edit tab.)
- 4 In “Times,” specify the number of repetitions. For example if you set “From Measure” to 001, “To End of Measure” to 004, and “Times” to 2, the musical data of measures 1–4 will be inserted into measures 5–8. The result will be that measures 1–4 will be played twice.
- 5 If you wish to repeat the musical data of all tracks including the master track, **check** “All Tracks.”
- 6 To execute the Repeat Measure command, press the **OK button**. To cancel, press the **Cancel button**.



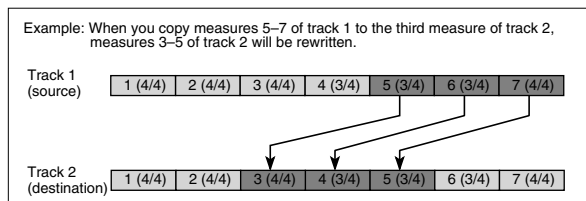
5–1J: Copy Measure

This command copies measures of musical data from the copy source to the specified measure location. When you execute the Copy Measure command, the track data at the copy destination will be rewritten.

- 1 Select the copy source song.
- 2 Select this command to open the following dialog box.



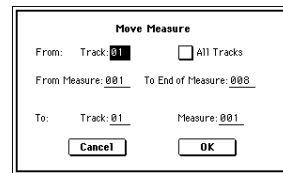
- 3 In “From: Track,” select the copy source track. (By default, this will be the track you selected in “Track Select.”) If you **check** “All Tracks,” the musical data of all tracks including the master track will be copied.
- 4 In “From Measure” and “To Measure,” specify the range of copy source measures. (By default, “From Measure” and “To Measure” will be the range that you specified in the Track Edit tab.)
- 5 In “To: Song,” specify the copy destination song. In “Track” (when “All Tracks” is **unchecked**) specify the copy destination track. In “Measure,” specify the first measure where the copied measures will be inserted.
- 6 To execute the Copy Measure operation, press the **OK button**. To cancel, press the **Cancel button**.



5–1K: Move Measure

This command moves measures of musical data to a specified destination. When you execute the Move Measure command, musical data following the move source will be moved forward according to the number of measures moved, and musical data following the move destination will be moved backward correspondingly.

- 1 Select this command to open the following dialog box.

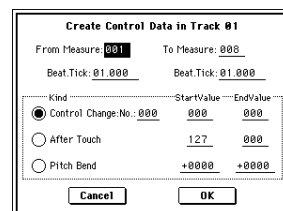


- 2 In “From: Track,” select the move source track. (By default, this will be the track you selected in “Track Select.”) If you **check** “All Tracks,” musical data of all tracks including the master track will be moved.
- 3 In “From Measure” and “To End of Measure,” specify the range of measures that will be moved. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit tab.)
- 4 In “To: Track” (if “All Tracks” is **unchecked**), specify the move destination track. In “Measure,” specify the first measure of the move destination.
- 5 To execute the Move Measure command, press the **OK button**. To cancel, press the **Cancel button**.

5–1L: Create Ctrl Data (Create Control Data)

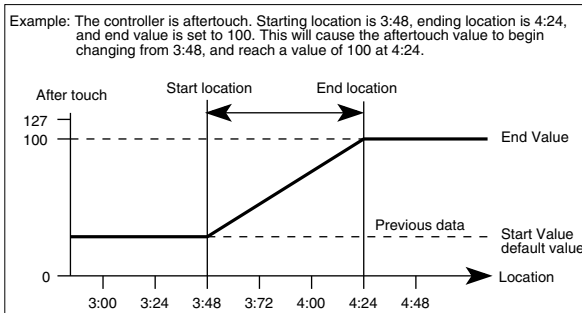
This command gradually varies continuous-type data (e.g., control change, after touch, pitch bend, tempo) in the specified area.

- 1 In “Track Select,” select the track on which you wish to perform the Create Control Data command. If you wish to create tempo data, select **Master Track** as the track. In this case, the step 4 item “Kind” will be set to “Tempo.”
- 2 Select this command to open the following dialog box.



- 3 Specify the range into which the control data will be inserted. In “From Measure” and “To End of Measure” specify the measures, and in “Beat.Tick” specify the beat and clock. (By default, “From Measure” and “To End of Measure” will be set to the range you specified in the Track Edit tab.)
- 4 In “Kind,” select the type of musical data (events) that you wish to create: **Control Change**, **After Touch**, or **Pitch Bend**. For **Control Change**, you can also select the control change number (e.g., p.223).
- 5 In “Start Value,” select the starting value of the control data. In “End Value,” select the ending value of the control data. By default, the “Start Value” will be set to the value of the existing data at the start location. If you wish to create control data that changes smoothly from the starting location, you can leave the “Start Value” unchanged, and set only the “End Value.”

- ⑥ To execute the Create Control Data command, press the **OK button**. To cancel, press the **Cancel button**.

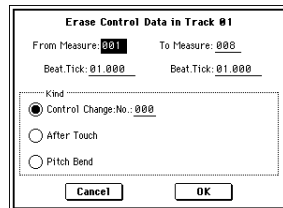


When you execute Create Control Data, a large amount of sequencer memory will be consumed. For this reason it may not be possible to execute this command if there is a limited amount of memory remaining. In such cases, first use “Quantize” (5-1N) to quantize the data and remove unnecessary control data. Alternatively, you could quantize the data that was inserted by the Create Control Data command.

5-1M: Erase Ctrl Data (Erase Control Data)

This command erases data such as control changes, after touch, pitch bend, or tempo in the specified range.

- ① In “Track Select,” select the track from which you wish to erase control data. If you wish to erase tempo data, select **Master Track**. In this case, the “Kind” item in step ④ will be “Tempo.”
- ② Select this command to open the following dialog box.



- ③ Specify the range from which you wish to erase control data. In “From Measure” to “To End of Measure” specify the measures, and in “Beat.Tick” specify the beat and clock. (By default, “From Measure” and “To End of Measure” will be the range that was specified in the Track Edit tab.)
- ④ In “Kind,” select the type of musical data (events) you wish to erase: **Control Change**, **After Touch**, or **Pitch Bend**. For **Control Change** you can also select the control change number (esp.p.223).
- ⑤ To execute the Erase Control Data command, press the **OK button**. To cancel, press the **Cancel button**.

note If you wish to erase all control change data from specified measures, you can also use “Erase Measure” (5-1F) and set “Kind” to **Control Change**. However, this Erase Control Data command allows you to specify the range using “Beat.Tick,” and also to erase only specific types of control change data.

5-1N: Quantize

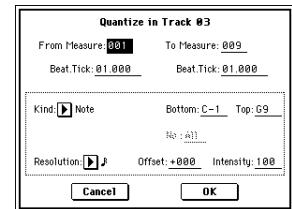
This command corrects the timing of musical data that has already been input. When you execute the Quantize operation, the musical data will be affected as follows.

- When you execute Quantize on note data, the timing of the note-on will be corrected, but the length (duration of the note) will not be affected.

- If the Quantize resolution is set to Hi, the timing will be adjusted to units of the base resolution (1/192), so note data will not be affected. However, continuous controller data such as joystick or after touch which occupies a large amount of memory will be processed so that two or more data events of an identical type existing at a single interval of the timing resolution will be combined into a single event, thus conserving memory.

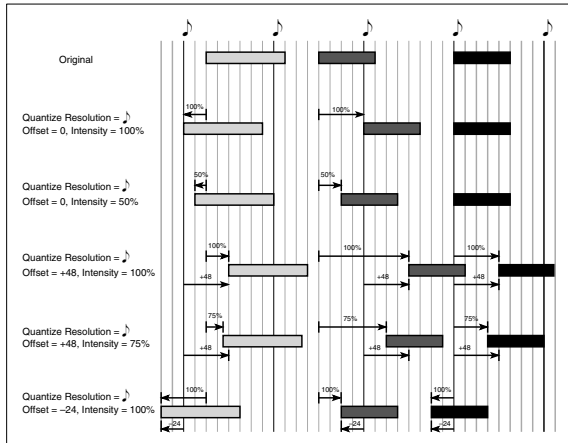
Similarly, two or more data events of an identical type existing at the identical timing will be combined into one, also conserving memory.

- ① In “Track Select,” specify the track.
- ② Select this command to open the following dialog box.



- ③ Specify the range that will be quantized. In “From Measure” and “To End of Measure,” specify the measures. In “Beat.Tick” specify the beat and clock. (By default, “From Measure” and “To End of Measure” will be the range that you specified in the Track Edit tab.)
- ④ In “Kind,” select the type of musical data (events) that you wish to quantize: **All**, **Note**, **Control Change**, **After Touch**, **Pitch Bend**, or **Program Change**. If you select **Note**, you can set “Bottom” and “Top” to specify the range of notes. This is convenient when you wish to quantize only a specific note (for example, only the snare in the drum track). “Bottom” sets the lower limit of the **Note** range. If you wish to quantize all notes, set this to **C-1**. “Top” sets the upper limit of the **Note** range. If you wish to quantize all notes, set this to **G9**. Note settings can also be entered by holding down the [ENTER] key while you press a key. If you select **Control Change**, you can also limit the type of control change data that will be quantized by specifying the control change number. If you wish to quantize all control change data, select **All**. If you select **After Touch**, both channel pressure and polyphonic key pressure will be quantized.
- ⑤ In “Resolution,” specify the timing resolution to which the data will be corrected. By setting a lower resolution you can save more memory, but the timing of the playback may not be acceptable.
- ⑥ In “Offset,” specify the number of clock by which the data will be moved forward or backward relative to the standard timing. A setting of **96** will be ♩, and **48** will be ♪. Positive (+) settings will adjust the data forward, and negative (-) settings will adjust the data backward. This allows you to simulate “pushing” or “dragging” the beat.
- ⑦ In “Intensity,” specify the degree of sensitivity to which the timing will be corrected; i.e., how close to the locations specified by ⑤ and ⑥ the data will be moved. With a setting of **0**, no correction will take place. With a setting of **100**, the data will be moved all the way to the timing intervals specified by ⑤ and ⑥.
- ⑧ To execute the Quantize command, press the **OK button**. To cancel, press the **Cancel button**.

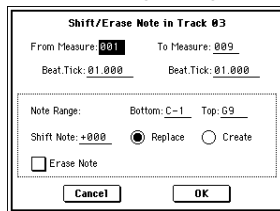
* By varying the Offset and Intensity settings you can create quantize effects such as the following.



5-10: Shift/Erase Note

This command shifts (moves) or erases the specified note numbers in a specified track and range of measures.

- ① In "Track Select," select the track on which you wish to execute the Shift/Erase Note command.
- ② Select this command to open the following dialog box.



- ③ Specify the range in which you wish to shift or erase note numbers. In "From Measure" and "To End of Measure," specify the measures. In "Beat.Tick," specify the beat and clock. (By default, "From Measure" and "To End of Measure" will be the range that you specified in the Track Edit tab.)
- ④ Specify the range of notes that you wish to shift or erase. "Note Range: Bottom" specifies the lower limit, and "Top" specifies the upper limit. If you wish to edit all notes, set "Bottom" to C-1 and "Top" to G9. These settings can also be made by holding down the [ENTER] key as you play a note.

Shifting notes

- ⑤ In "Shift Note," specify the amount by which you wish to move the note. The amount of shift is set in semitone steps over a range of -127 to +127. +1 will shift the note a semitone upward.
- ⑥ Select either "Replace" to move the note numbers, or "Create" to generate additional notes. For example if you are editing a track that uses a drum program, you can use "Replace" to exchange a snare sound for a different snare sound, or use "Create" to add a sound effect to the snare sound. Alternatively, you can use "Create" to add an octave doubling to an existing guitar phrase, etc.
- ⑦ To execute the Shift Note command, press the **OK button**. To cancel, press the **Cancel button**.

Erasing notes

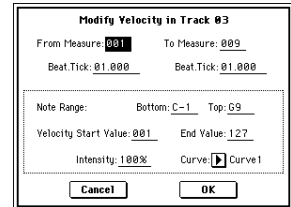
- ⑤ Check "Erase Note." If you wish to erase all note data in the specified range of measures, you can also use the "Erase Measure" command (5-1F) and set "Kind" to **Note**. However, this Shift/Erase Note command lets you specify the "Beat.Tick" range, and to erase only specific note data.

- ⑥ To execute the Erase Note command, press the **OK button**. To cancel, press the **Cancel button**.

5-1P: Modify Velocity

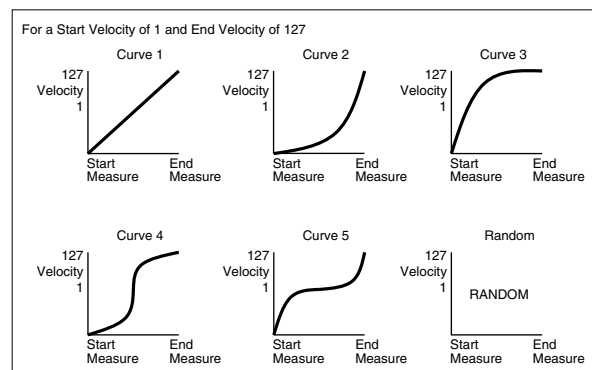
This command modifies the velocity values of notes in the specified area so that they will change over time according to a selected curve.

- ① In "Track Select," specify the track whose velocity will be modified.
- ② Select this command to open the following dialog box.



- ③ Specify the range in which note velocity will be modified. "From Measure" and "To End of Measure" specify the measure, and "Beat.Tick" specify the beat and clock. (By default, "From Measure" and "To End of Measure" will be set to the range that you specified in the Track Edit tab.)
- ④ Specify the range of notes that will be affected by the Modify Velocity command. Note Range "Bottom" is the lower limit, and "Top" is the upper limit. If you wish to edit all notes, set "Bottom" to C-1 and "Top" to G9. These settings can also be made by holding down the [ENTER] key as you play a note on the keyboard.
- ⑤ In "Velocity Start Value" specify the value at which the velocity data will start, and in "Velocity End Value" specify the final velocity value. These settings can also be made by holding down the [ENTER] key as you play a note on the keyboard.
- ⑥ In "Intensity," specify the degree to which the velocity data will be adjusted toward the curve you specify in ⑦. With a setting of 0 [%], the velocity will not change. With a setting of 100 [%], the velocity will be exactly as described by the curve.
- ⑦ "Curve"* lets you select from six types of curve to specify how the velocity will change over time.
- ⑧ To execute the Modify Velocity operation, press the **OK button**. To cancel, press the **Cancel button**.

* The six curves are as follows.



5-2: Track Name

Here you can assign a name to each track.



5-2a: Track Name

Rename the selected track. A name of up to sixteen characters can be input.

Sequencer P6: Pattern/RPPR

On the TRITON you can use **preset patterns P000-149**, and **user patterns U00-99**. One song can contain up to one hundred user patterns. Preset patterns suitable for use in a drum track are provided in memory, and can be selected from any song.

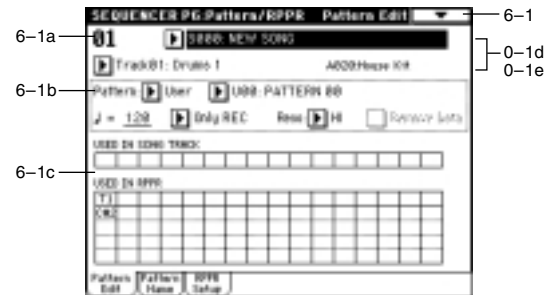
Preset patterns cannot be edited, but you may copy a preset pattern to a user pattern, and edit.

User patterns can be created by realtime recording (including recording that uses the arpeggiator), step recording, the Get From Track command (obtaining data from a track), or the Copy Pattern command (copying from another pattern) (see p.68 in the *Basic Guide*).

These patterns can be assigned to each key by the RPPR (Realtime Pattern Play/Recording) function and played by pressing a single key, and the resulting performance can be recorded on the sequencer (see RPPR Setup).

6-1: Pattern Edit

Here you can record a pattern, edit it, and assign it to a track in a song.



6-1a: Location

Location

This shows the current location of the selected pattern, in measure units.

6-1b: Pattern Edit

If you wish to record pattern data, use "Pattern" and "Pattern Select" to select a user pattern and pattern number. Next, use the "Pattern Parameter" page menu command to set the number of measures in the pattern and its time signature. Then you can perform realtime recording in the Pattern Edit tab, or step recording by using the "Step Recording (Loop Type)" page menu command. Finally, use page menu commands as desired to perform event editing or other types of editing.

Pattern (Pattern Type)

[Preset, User]

Select the type of pattern.

If **Preset** is selected, it will not be possible to record. You will be able to select and execute the "Copy Pattern," "Bounce Pattern," "Put to Track," and "Copy to Track" page menu commands.

Pattern Select

[P00...P99, U00...U99]

Select a pattern. User patterns can be renamed in the "Pattern Name" tab.

♪ (Tempo)**[040...240]**

Specify the playback tempo of the pattern. “(Tempo)” (0-1c).

Metronome Sound [Only REC, REC & Play, Off]

Specify whether the metronome will sound during recording or playback. This setting is linked with “Sound” (0-7b). Other metronome-related parameters such as Bus Select, Level, and Pre-count are set in “Metronome Setup” (0-7b). (“Metronome Setup” 0-7b)

Reso (Realtime Quantize Resolution) [Hi, ... ♩]

Specify how the timing of the data being recorded into the pattern will be corrected. “Reso (Realtime Quantize Resolution)” (0-1f).

Remove Data

Checked: This allows you to remove unwanted musical data while you record. During recording, hold down the key(s) (note number) corresponding to the musical data that you wish to remove, and only the data for those note numbers will be removed as long as you continue holding down the key. Controller data can also be removed in this way. For example while you move the joystick in the X (horizontal) direction, pitch bend data will be removed. While you apply pressure to the keyboard, after touch data will be removed. Alternatively, you can hold down the [REC/WRITE] key to delete all musical data for as long as you continue holding down the key.

6-1c: USED IN SONG TRACK, USED IN RPPR**USED IN SONG TRACK**

This area indicates the song tracks in which the selected pattern is used.

USED IN RPPR

This area indicates the RPPR in which the selected pattern is used. The assigned key and the specified track are shown.

▼ 6-1: Page Menu Command

0-1A	Planary Status	Bounce Pattern	6-1F
6-1A	Step Recording (Loop Type)	Get From Track	6-1G
6-1B	Event Edit	Put To Track	6-1H
6-1C	Pattern Parameter	Copy To Track	6-1I
6-1D	Erase Pattern	FF/REW Speed	0-1H
6-1E	Copy Pattern		

6-1A: Step Recording (Loop Type)

Here you can perform step recording into a pattern. This is available when a user pattern is selected.

- ① In “Pattern” and “Pattern Select,” specify the pattern. By default, the pattern length is one measure. If you wish to change the number of measures in the pattern, set the “Pattern Parameter” (6-1C).
- ② The remaining steps are the same as when step recording on a track. Refer to steps ② and following in “Step Recording” (5-1A). However, step recording a pattern differs from step recording a track in that when you reach the end of the pattern, you will return to the beginning and continue recording, in this way continuing to add more data.

6-1B: Event Edit

Here you can edit individual events of the musical data in a pattern. Use “Pattern” and “Pattern Select” to specify the pattern, and then select this command. The remaining steps are the same as when Event Editing a track. “Event Edit” (5-1B).

6-1C: Pattern Parameter

This command specifies the number of measures and the time signature of the selected pattern.

- ① Use “Pattern” and “Pattern Select” to specify the pattern.
- ② Select this command to open the following dialog box.

Set Pattern Parameter of U00

Length: 01 Meter: 4/4

Cancel OK

- ③ In “Length,” specify the number of measures in the pattern.
- ④ In “Meter,” specify the time signature of the pattern. However, this time signature is only temporary, and when you “put” the pattern in a track of a song, the pattern will play according to the time signature of that measure.
- ⑤ To execute the Pattern Parameter settings, press the **OK button**. To cancel, press the **Cancel button**.

6-1D: Erase Pattern

This command erases the musical data from the selected pattern.

- ① Use “Pattern” and “Pattern Select” to specify the pattern.
- ② Select this command to open the following dialog box.

Erase Pattern U00

All Patterns

Cancel OK

- ③ If you **check** “All Pattern,” all user patterns in the song will be erased. If “All Patterns” is **not checked**, only the pattern specified in ① will be erased.
- ④ To execute the Erase Pattern command, press the **OK button**. To cancel, press the **Cancel button**.

6-1E: Copy Pattern

This command copies the settings and musical data of the selected pattern to another pattern.

User patterns belong to a particular song, but you can use the Copy Pattern command to use a pattern in another song. Also, while preset patterns cannot be edited, you can copy a preset pattern to a user pattern and then edit and save it as a user pattern. Be aware that when you execute the Copy Pattern operation, the pattern settings and musical data of the copy destination will be erased.

- ① Select this command to open the following dialog box.

Copy Pattern

From (Song 000) : Pattern: U00

To: Song: 001 Pattern: U01

Cancel OK

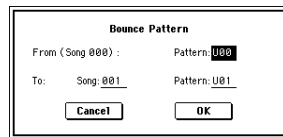
- ② In From: “Pattern,” specify the copy source pattern. (By default, this will be the song and pattern that was selected in the tab page.)
- ③ In To: “Song” and “Pattern,” specify the copy destination song and pattern. For “Pattern,” only user patterns U00-U99 can be specified.
- ④ To execute the Copy Pattern command, press the **OK button**. To cancel, press the **Cancel button**.

6-1F: Bounce Pattern

This command combines the musical data of the bounce source pattern and bounce destination pattern, and places the combined musical data in the bounce destination. The time signature and length of the pattern following execution will be according to the settings of the bounce destination. Unlike the Track Bounce operation, the musical data of the bounce source will not be erased.

If MIDI control data exists in the selected pattern and in the bounce destination pattern, the resulting playback following the bounce operation may produce unexpected results. We recommend that you use "Event Edit" (6-1B) to prepare the MIDI control data of the two patterns before executing the Bounce Pattern command.

- 1 Use "Pattern" and "Pattern Select" to specify the bounce source pattern.
- 2 Select this command to open the following dialog box.

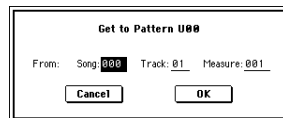


- 3 In "From "Pattern," select the bounce source pattern. (By default, the song and pattern that are selected in the tab page will be chosen.)
- 4 In "To: Song" and "Pattern," select the bounce destination song and pattern. For "Pattern," only user patterns U00-U99 can be specified.
- 5 To execute the Bounce Pattern command, press the **OK** button. To cancel, press the **Cancel** button.

6-1G: Get From Track

This command loads musical data from a track into the specified pattern.

- 1 Use "Pattern" and "Pattern Select" to specify the pattern.
- 2 In "Pattern Parameter" (6-1C), specify the pattern length of the "get" destination.
- 3 Select this command to open the following dialog box.



- 4 In "Song," select the "get" source song.
- 5 In "Track," select the "get" source track.
- 6 In "Measure," specify the first measure of the "get" source.
- 7 To execute the Get From Track command, press the **OK** button. To cancel, press the **Cancel** button.

6-1H: Put To Track

This command places a pattern into a track.

Unlike the Copy to Track command, this command only places the pattern number in the song, so that when playback reaches that point, the pattern will be recalled. The musical data of the pattern will not actually exist in the track.

By creating patterns that contain frequently-used phrases or drum patterns, and then placing them on the tracks, you can conserve memory.

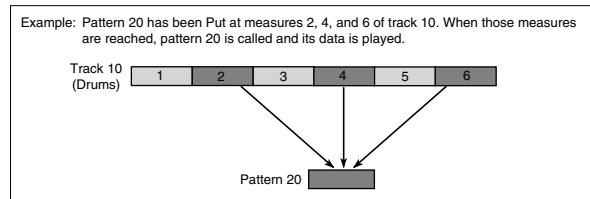
Be aware that when you edit a pattern, all locations in the song where that pattern has been placed will be affected.

When you execute the Put to Track command, the musical data will be affected as follows.

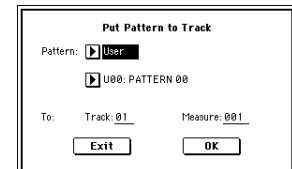
- Musical data previously existing at the "put" destination will be erased.

- The pattern that you "put" will playback according to the time signature that is specified by the measures of the "put" destination.
- Control data such as pitch bend etc. (but not including volume data) previously existing in the track will be reset immediately before the measure at which the pattern was "put." If you wish to use control data such as pitch bend in the measures in which a pattern is "put," you must first write the control data into the pattern (see p.69 in the *Basic Guide*).

To delete a pattern that has been placed in a track you can use "Erase Measure" (5-1F), specifying the area in which the pattern was "put," and setting "Kind" to **All**.



- 1 Select this command to open the following dialog box.



- 2 In "Pattern" and "Pattern Select," select the "put" source pattern. (By default, this will be the pattern selected in tab)
- 3 In "To Track," select the "put" destination track.
- 4 In "Measure," specify the first measure of the "put" destination.
- 5 To execute the Put to Track command, press the **OK** button. When you execute the command, "Measure" will automatically count up. If you wish to, you can continue "putting" the pattern. To exit the command, press the Exit button.

6-1I: Copy To Track

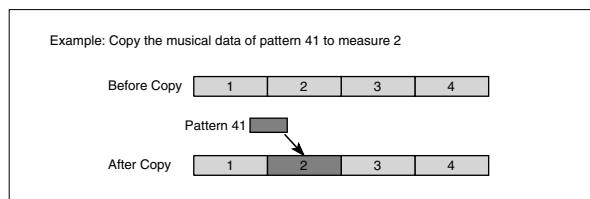
This command copies the specified area of musical data from the specified pattern to a track as musical data.

Unlike the Put To Track command, this command actually writes the musical data of the pattern into the track, so that you can edit the copied data in the track. Even if you later edit the copy source pattern, the musical data of the song will not be affected.

When you execute the Copy to Track command, the musical data will be affected as follows.

- Musical data previously existing in the copy destination measures will be erased.
- The musical data that is copied will playback according to the time signature specified at the beginning of the copy destination measures.

The procedure is the same as for the Put to Track command. See "Put To Track" (6-1H).



6-2: Pattern Name



6-2a: Pattern name [U00...U99: name]

Here you can rename a pattern U00–U99. A name of up to sixteen characters can be input.

6-3: RPPR Setup

Here you can make settings for the RPPR (Realtime Pattern Play/Recording) function. RPPR lets you assign a pattern from a song to each key, and then playback patterns simply by pressing individual notes on the keyboard. The results can also be recorded.

For each song, you can assign either a preset pattern or a user pattern to each of the seventy two keys in the range C#2–C8. For each key, you can specify the pattern, track number, and how the pattern will be played.

⚠ The arpeggiator is not operated by patterns played back by RPPR. When RPPR is on, keys for which no pattern is assigned will sound the track selected by “Track Select.” At this time, the arpeggiator will operate if either arpeggiator A or B is selected for that track and turned on. RPPR will not be triggered by notes generated by the arpeggiator.

⚠ When Local Control is OFF (“Local Control On” Global P1: 1-1a), the keyboard will not trigger RPPR pattern playback. Notes received at MIDI IN on the channel of the track currently selected by “Track Select” will trigger patterns. If you have recorded only the trigger notes on an external sequencer and wish to playback the external sequencer to trigger RPPR patterns on the TRITON, set Local Control OFF.

If you want the note data generated by RPPR to be recorded on the external sequencer, set Local Control ON, and turn off the echo back function of the external sequencer.

⚠ In the RPPR Setup page, RPPR is turned on automatically. This will be the same result as when the RPPR check box in each page is checked.



6-3a: Keyboard & Assigned drawing

This shows the selected key, and the keys to which a pattern has been assigned by the RPPR function. (Assignments are not possible for the keys displayed in gray.)

6-3b: RPPR Setup

KEY (Key Select) [C#2...C8]

Select the key that you wish to edit. The following parameters will apply to the key that you select here.

This can also be selected by holding down the [ENTER] key and playing a note on the keyboard.

Assign

Checked: When you play the key specified by “KEY,” the pattern selected in “Pattern” will be triggered.

Unchecked: That key will sound the currently selected track at the corresponding pitch, just as in normal Sequencer mode.

Pattern (Pattern Type) [Preset, User]

Pattern Select [P000...149, U00...99]

Select the RPPR pattern for the key selected in “KEY.” If the selected user pattern contains no musical data, there will be no sound when you press that key.

Track [Track No. and name]

Select the track that will be used for the RPPR pattern selected for the “KEY.” When you play the key, the pattern will be played according to the settings of the track you select here. Track settings are made in P0: Song Play/REC, P2: Trk Param, P3: MIDI Filter, and P4: Zone/Ctrl. When you record in realtime with the RPPN function turned on, the data will be recorded on the track you select here. (For the recording procedure, refer to p.73 in the *Basic Guide*)

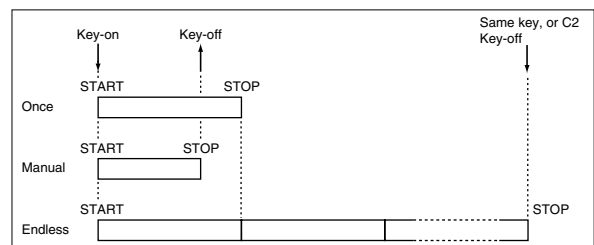
Mode [Once, Manual, Endless]

Specify how the pattern of the specified “KEY” will be played.

Once: When you press the key, the pattern will playback only once to the end.

Manual: The pattern will continue repeating as long as you continue holding the key, and will stop when you release the key.

Endless: The pattern will continue repeating even after you release the key. To stop the pattern playback, press any note below C2, or press the same key once again.



Shift [-12...+12]

Adjust the playback pitch of the pattern for the specified “KEY” in semitone steps over a range of ±1 octave. With a setting of 0, the pattern will be played at its original pitch.

Sync [Off, Beat, Measure, SEQ]

Specify how the pattern playback will be synchronized when you press the specified “KEY.”

Off: The pattern will begin playing at the moment you press the note.

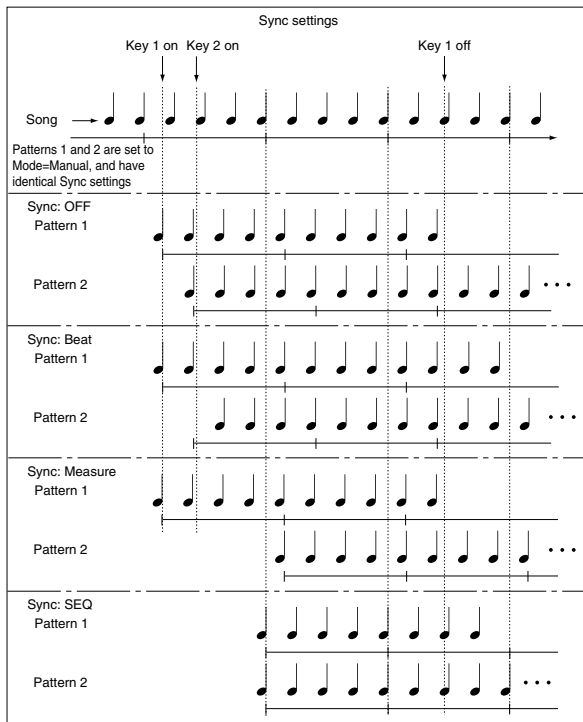
Beat: The pattern will synchronize to the beats of the pattern that was started by the first key (i.e., the first note-on that occurs from a condition where no notes of the keyboard are pressed). This setting is suitable when you wish to play phrase patterns in unison.

Measure: The pattern will synchronize to the measures of the pattern that was started by the first key. This setting is suitable for rhythm, bass or drum patterns.

SEQ: The pattern will synchronize to the measures of the sequencer song.

6-3c: Selected Track Information (Track No.: Bank No., program No., name and Ch)

This shows the program bank, number, program name, and MIDI channel of the track selected in the RPPR Setup tab.



- When **Beat** or **Measure** are selected, pattern playback will begin when you press the first key. The second and subsequent patterns that are triggered from the keyboard will synchronize to the pattern that was started by the first key; with a setting of **Beat** they will synchronize in steps of a beat, and with a setting of **Measure** they will synchronize in steps of a measure.
- When **SEQ** is selected, the pattern will playback in synchronization with the measures of the sequencer song. The pattern will synchronize with the currently-playing song, so you must start the song before you play notes on the keyboard.
- **Beat**, **Measure**, and **SEQ** will cause the pattern to start immediately if you play the key within a thirty-second note of the timing of the respective beat or measure, but if you play the key later than this, the start of the pattern will be delayed by a beat.

Stopping playback of a RPPR pattern


By pressing C2 or any lower note, all the patterns being played by RPPR will stop.

The patterns of keys whose "Sync" setting is **Off** will stop immediately, but the playback of other keys will stop at the beginning of the next beat or measure. Pattern playback of keys whose "Sync" setting is **Off** can be stopped immediately by rapidly pressing C2 or any lower note twice in succession.

Sequencer P7: Arpeggiator


Here you can specify how the arpeggiator will operate in Sequencer mode. These settings can be made for each song. In Sequencer mode (as in Combination mode), you can run the two arpeggiators simultaneously. This allows you to apply different arpeggio patterns to two sounds that have been split across the keyboard, or use velocity to switch between two different arpeggio patterns, etc.

In Sequencer mode, the musical data generated by the arpeggiator during song track or pattern realtime-recording can be recorded. While you record, you can modify the arpeggio pattern and parameters, and adjust the [GATE] knob and [VELOCITY] knob etc.

 It is not possible to set the tempo of the arpeggiator and the sequencer independently.

When “MIDI Clock” (Global P1: 1–1a) is **Internal**, the arpeggiator can be synchronized to the start timing of the internal sequencer.

- When you turn on the arpeggiator and press the [START/STOP] key, the arpeggiator will synchronize to the timing of the sequencer.
- When you press the [START/STOP] key, the arpeggiator and sequencer will both stop. If you wish to stop only the arpeggiator, press the ARPEGGIATOR [ON/OFF] key.

 When “MIDI Clock” is **External MIDI** or **External PC I/F**, the MIDI realtime clock messages transmitted from the external MIDI device connected to MIDI IN or the TO HOST connector can perform the same type of control.

Even in this case, you can start/stop using the [START/STOP] key of the TRITON’s sequencer.

7-1: Setup 1–8 (Setup T01–08)

7-2: Setup 9–16 (Setup T09–16)



7-1(2)a: Arpeggiator Assign, Arpeggiator Run A, B

Arpeggiator Assign

[Off, A, B]

This assigns arpeggiator A or arpeggiator B to each track 1–16. When the front panel ARPEGGIATOR [ON/OFF] key is turned on, the arpeggiator specified for each track will run, subject to the “Arpeggiator Run A, B” settings and setting here.


Off: The arpeggiator will not operate.


A: Arpeggiator A will operate. Use the Arpeggiator A tab to select the arpeggio pattern and set the parameters.

B: Arpeggiator B will operate. Use the Arpeggiator B tab to select the arpeggio pattern and set the parameters.


For tracks that you wish to realtime-record, select either arpeggiator **A** or **B**. If you specify an arpeggiator for two or more tracks, the arpeggiator will play each of the tracks you specify.

You can set **A** and **B** to two different MIDI channels, and control one from the keyboard and the other from an external MIDI device connected to MIDI IN. You can also use multi-track recording (**MultiREC**) to simultaneously record the note data that is generated from the two arpeggiators.

 The arpeggiator cannot be triggered by the notes played by the sequencer.

 If the tracks 1–16 assigned to arpeggiators A and B have a “Status” (2–1a) of **INT** or **BTH**, they will be played by the note data generated by the arpeggiator. If the “Status” is **BTH**, **EXT**, or **EX2**, MIDI note data will be transmitted on the “MIDI Channel” of each track.

In this case, arpeggiator A or B will be triggered by the “MIDI Channel” (2–1a) of any track 1–16 to which the corresponding arpeggiator is assigned.

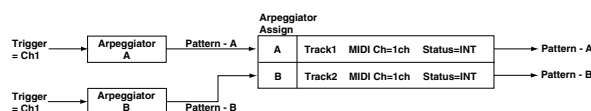
 If the (“Local Control On” Global P1: 1–1a) is turned OFF, the arpeggiator will not be triggered by note data from the keyboard. It will be triggered by note data received at MIDI IN. If you wish to record just the trigger notes on an external sequencer and run the TRITON’s arpeggiator in this way, turn Local Control OFF.

If you want the note data generated by the arpeggiator to be recorded on the external sequencer, turn Local Control ON, and turn off the echo back function of the external sequencer.

Example 1)

On tracks 1 and 2, set “MIDI Channel” (2–1a) to **01** and “Status” (2–1a) to **INT**. Assign arpeggiator A to track 1 and arpeggiator B to track 2, and check “Arpeggiator Run A, B” (7–1a). In “Track Select,” choose **Track01**. With the front panel ARPEGGIATOR [ON/OFF] key OFF, play the keyboard and tracks 1 and 2 will sound simultaneously.

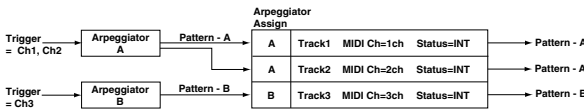
When you turn on the front panel ARPEGGIATOR [ON/OFF] key and play the keyboard, arpeggiator A will operate for track 1 and arpeggiator B will operate for track 2.



Example 2)

For tracks 1, 2 and 3, set the "MIDI Channel" (2-1a) to 01, 02, and 03 respectively, and set "Status" (2-1a) to INT. Assign arpeggiator A to tracks 1 and 2, and arpeggiator B to track 3. Check the "Arpeggiator Run A, B" (7-1a) setting.

- In "Track Select," choose **Track01**.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is off will play the sound assigned to track 1.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is on will cause arpeggiator A to operate for tracks 1 and 2, and produce sound for both tracks.
- In "Track Select," choose **Track02**.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is off will play the sound assigned to track 2.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is on will cause arpeggiator A to operate for tracks 1 and 2, and produce sound for both tracks.
- In "Track Select," choose **Track03**.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is off will play the sound assigned to track 3.
Playing the keyboard when the front panel ARPEGGIATOR [ON/OFF] key is on will cause arpeggiator B to operate for track 3, and play the sound assigned to track 3.
- Alternatively, you could choose **Track01** in "Track Select" to run arpeggiator A for tracks 1 and 2, and use an external MIDI device connected to the TRITON's MIDI IN to send note data to MIDI channel 3 to play arpeggiator B.



Arpeggiator Run A, B

When the ARPEGGIATOR [ON/OFF] key is on, the arpeggiator(s) that are checked here will function for the track(s) to which they are assigned by "Arpeggiator Assign." When the arpeggiator is on, A and B can be turned on/off independently.

▼ 7-1: Page Menu Command

0-1A	Memory Status	Copy From Combi	0-1F
0-1B	Solo Selected Track	Copy Arpeggiator	7-1A
0-1C	Rename Song	FF/REW Speed	0-1I
0-1D	Delete Song	Set Location	0-1J
0-1E	Copy From Song		

7-1A: Copy Arpeggiator

This command copies arpeggiator settings.
☞ "Combination 7-1A: Copy Arpeggiator."

7-3: Arpegg. A (Arpeggiator A)

7-4: Arpegg. B (Arpeggiator B)

In the Arpegg. A tab you can make settings for arpeggiator A, and in the Arpegg. B tab you can make settings for arpeggiator B. The "Copy Arpeggiator" (7-1A) page menu command can also be used to copy arpeggiator settings from another mode such as Program mode.



7-3(4)a: Arpeggiator-A(B) Setup

- Pattern (Pattern No.)** [P000...P004, U000(A/B)...U231(D)]
- Octave** [1, 2, 3, 4]
- Resolution** [♪₃, ♪, ♪₃, ♪, ♪₃, ♪]
- Gate** [000...100(%), Step]
- Velocity** [001...127, Key, Step]
- Swing** [-100...+100(%)]
- Sort**
- Latch**
- Key Sync. (Keyboard Synchronize)**
- Keyboard**

These are the arpeggiator parameters for the song. (☞ "Program 7-1: Arpegg. Setup (Arpeggiator Setup)")

7-5: Scan Zone (Scan Zone A/B)

Specify the range of notes and velocities that will trigger each arpeggiator A and B.



7-5a: Zone Map

This shows the "Scan Zone" settings for arpeggiators A and B (☞ "Combination "Zone Map" 7-4a).

7-5b: Scan Zone A/B

A:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Specify the range of notes (keys) that will trigger arpeggiator A. "Top Key" is the upper limit, and "Bottom Key" is the lower limit.

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of velocities that will trigger arpeggiator A. "Top Velocity" is the upper limit, and "Bottom Velocity" is the lower limit.

B:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of notes (keys) and velocities that will trigger arpeggiator B (☞ "A").

note The value of these parameters can also be input by holding down the [ENTER] key and playing a note on the keyboard.

Sequencer P8: Insert Effect

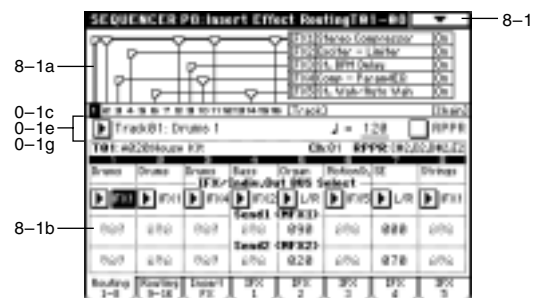
Here you can make insert effect settings, and specify the bus etc. for the program used by each track 1-16.

☞ For details on insert effects, refer to p.146 "8. Effect Guide."

8-1: Routing 1-8 (Routing T01-08)

8-2: Routing 9-16 (Routing T09-16)

Specify the bus to which the program oscillator(s) of each track 1-16 will be sent. You can also set the amount of signal that will be sent to the master effects.



8-1a: Routing Map

This shows the status of the insert effects: the insert effect routing, the names of the selected effects, the on/off status, and chaining. The effect type, on/off, and chain settings can be made in the Insert FX tab.

8-1(2)b: IFX/Indiv.Out BUS Select (BUS Select), Send1 (MFX1), Send2 (MFX2)

IFX/Indiv.Out BUS Select (BUS Select)

[DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

These settings specify the bus to which the program oscillator(s) of each track 1-16 will be sent. The status of the settings can also be viewed in the "Routing Map"

(☞ Combination P8-1: Routing).

⚠ When 1/2 or 3/4 are selected, the program of the corresponding track 1-16 will be output in stereo from AUDIO OUTPUT (INDIVIDUAL) 1 and 2 or 3 and 4. If you use CC#10 (pan) or AMS (Alternate Modulation Source) to control the panning of the program oscillator, the new pan setting will be applied at the next note-on. Unlike the case when you select L/R to output the sound from (MAIN) L/MONO and R, the pan of a sounding note cannot be varied in realtime.

If you wish to vary the pan of a sounding note in realtime, and output the result from AUDIO OUTPUT (INDIVIDUAL) 1 and 2 or 3 and 4, set "BUS Select" to IFX1 (or IFX2-IFX5), select 000: No Effect for "IFX1" (or IFX2-IFX5) (8-3), and select either 1/2 or 3/4 for "BUS Select" (8-3) after the signal passes through IFX.

Send1 (MFX1) [000...127]
Send2 (MFX2) [000...127]

Here you can adjust the send levels from tracks 1–16 to master effects 1 and 2. This is valid when “BUS Select” is set either to L/R or Off. If IFX 1, 2, 3, 4, or 5 is selected, the send level to the master effects 1 and 2 is set by the “Send 1” and “Send 2” parameters located in the Insert FX tab, after the signal passes through IFX 1–5.

These settings have no effect if “BUS Select” is set to 1, 2, 3, 4, 1/2 or 3/4.

The send 1 and 2 settings you make here will be used when the song is played or recorded from the beginning. If you change the settings while recording, the change will be recorded as part of the musical data, and the send amount will change when the data is played back. You can also change these settings during playback. However if send 1 and 2 data has been recorded, the settings will change accordingly.

MIDI If “Status” (2–1a) is either INT or BTH, CC#93 and #91 can be received to control send 1 and 2 respectively and change their settings. When you switch songs or return to the beginning of a song, tracks whose “Status” is EXT, EX2 or BTH will transmit these settings via MIDI. This data will be transmitted on the MIDI channel of each track as set by “MIDI Channel” (2–1a). The actual send level is determined by multiplying the value of these parameters with the send level settings of the oscillator(s) of the program used by the track (“Send1” and “Send2,” Program P8: 8–1d).

▼ 8–1: Page Menu Command

0–1A	Memory Status
0–1B	Solo Selected Track
8–1A	Copy Insert Effect
8–1B	Swap Insert Effect
8–1C	DrumKit IFX Patch
0–1I	FF/REW Speed
0–1J	Set Location

8–1A: Copy Insert Effect

☞ “Program P8: 8–1A: Copy Insert Effect.”
 However, the MIDI control channel specified in “Ctrl Ch” of the IFX 1–5 tab will not be copied.

8–1B: Swap Insert Effect

☞ “Program P8: 8–1B: Swap Insert Effect.”
 However, the MIDI control channel specified in “Ctrl Ch” of the IFX 1–5 tab will not be swapped.

8–1C: DrumKit IFX Patch

☞ “Combination P8: 8–1C: DrumKit IFX Patch.”

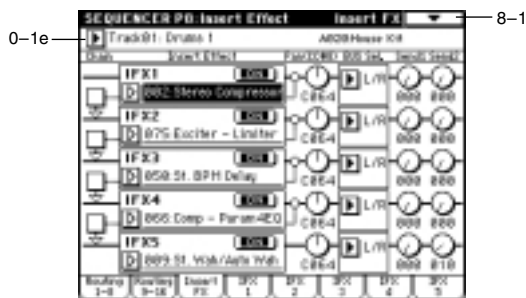
8–3: Insert FX

Here you can select the type of the insert effects, turn them on/off, and make chain settings.

These functions are the same as in Program mode. Please refer to Program mode “8–2: Insert FX.”

However, unlike the case in Program mode, “Pan (CC#8), “Send 1(MFX1)” and “Send 2 (MFX2)” will be controlled by the MIDI channels specified in each of the IFX 1–5 tabs. The control changes used are the same as in Program mode. The pan (CC#8), send 1 and 2 settings you make here will be used when the song is played or recorded from the beginning. If you change the settings while recording, the changes will be recorded as part of the musical data, and the settings will change when the data is played back. You can also change these settings during playback. However if pan (CC#8), send 1, or 2 data has been recorded, the settings will change accordingly.

MIDI If “Status” (2–1a, 2a) is either INT or BTH, CC#8, #93, and #91 can be received to control the pan following the insert effect, send 1, or send 2 respectively, and change their settings. When you switch songs or return to the beginning of the song, tracks whose “Status” is BTH, EXT, or EX2 will transmit these settings via MIDI. This data will be transmitted on the MIDI channels specified in the IFX 1–5 tabs (8–4 – 8–8).



8–4: IFX 1

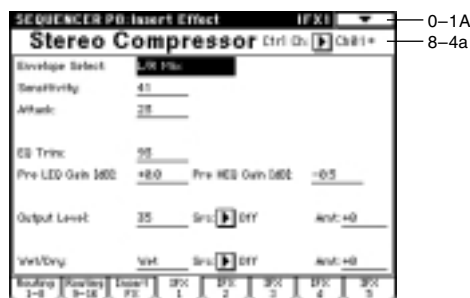
8–5: IFX 2

8–6: IFX 3

8–7: IFX 4

8–8: IFX 5

Set the parameters for the effects selected for IFX 1–5 in the Insert FX tab (☞p.155).



8-4(-8)a: Ctrl Ch [Ch01...16, All Routed]

MIDI Select the MIDI channel that will control effect dynamic modulation (Dmod), pan following the insert effect (CC#8), Send 1 (CC#93), and Send 2 (CC#91).

An asterisk "*" will appear at the right of the channel number **Ch01-16** for tracks that are routed through these IFX. If you have routed multiple tracks that have differing MIDI channel settings, you can specify here which of these channels will be used to control the effect.

All Routed: Control can be performed from any of the MIDI channels of the tracks that are routed.

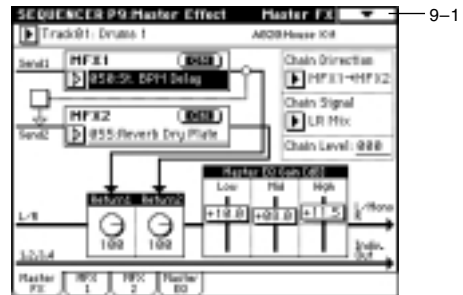
⚠ If you have selected **DKit** as the "BUS Select" (8-1b) of a track for which a drum program is selected, the MIDI channel of that timbre will be valid if **All Routed** is selected for any one of IFX 1-5, regardless of the "BUS Select" (Global P5: 5-2b) setting of the drum kit, or of the setting of the "DrumKit IFX Patch" page menu command.

Sequencer P9: Master Effect

For details on the master effects, refer to p.150 "8. Effect Guide."

9-1: Master FX

Here you can select the type of master effects, turn them on/off, and make chain and master EQ settings. These parameters are the same as in Program mode. "Program 9-1: Master FX (Master Effects)"



▼ 9-1: Page Menu Command

0-1A	Memory Status
9-1A	Copy Master Effect
9-1B	Swap Master Effect
0-1I	FF/REW Speed
0-1J	Set Location

9-1A: Copy Master Effect

"Program P9: 9-1A: Copy Master Effect." However, the MIDI control channel specified in "Ctrl Ch" of the MFX 1 and 2 tabs will not be copied.

9-1B: Swap Master Effect

"Program P9: 9-1B: Swap Master Effect." However, the MIDI control channel specified in "Ctrl Ch" of the MFX 1 and 2 tabs will not be swapped.

9-2: MFX 1

9-3: MFX 2

Here you can set the parameters of the MFX 1 and 2 effects that were selected in the Master FX tab (p.155).



9-2(3)a: Ctrl Ch**[Ch01...16, Gch]**

MIDI Specify the MIDI channel that will control dynamic modulation (Dmod) for the master effects. If **Gch** is selected, the global MIDI channel "MIDI Channel" (Global P1: 1-1a) will be used.

9-4: Master EQ

The master EQ is a three-band stereo EQ. It is used to perform overall equalizing (tonal adjustment) on the sound from the L/R bus immediately before it is output to AUDIO OUTPUT (MAIN OUT) L/MONO and R (see p.207).



0-1A

9-4a

9-4a: Ctrl Ch**[Ch01...16, Gch]**

MIDI Specify the MIDI channel that will control dynamic modulation (Dmod) for the master EQ. If **Gch** is selected, the global MIDI channel "MIDI Channel" (Global P1: 1-1a) will be used.

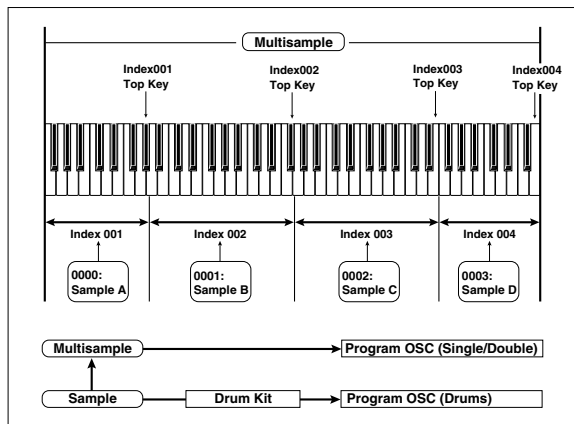
4. Sampling mode

In Sampling mode you can record 48 kHz 16 bit samples. On the TRITON, "sampling" refers to a process in which analog audio signals from a mic or audio device connected to the AUDIO INPUT jack are converted into digital form and recorded into internal memory. The sound that is converted into digital form can be processed by an insert effect is being sampled.

The TRITON comes with 16 Mbytes of sample memory (waveform memory). This allows approximately 2 minutes and 54 seconds of monaural sampling, or approximately 1 minute and 27 seconds of stereo sampling. By installing one or two 72-pin SIMM boards you can expand the memory to a maximum of 64 Mbytes (two 32 Mbyte SIMM boards). In this case, you will be able to record up to four monaural samples that are each 2 minutes and 54 seconds long, for a total of 11 minutes 39 seconds (or four stereo samples that are each approximately 1 minute and 27 seconds long, for a total of 5 minutes 49 seconds). (For details on the 72-pin SIMM boards that can be used and on the installation procedure, see p.237)

In Sampling mode, samples that have been sampled or loaded from storage media can be assigned to an index (zone) to create a multisample. One multisample can contain many indexes

A multisample you create can easily be converted into a program (see "Convert MS To Program" 0-1G). When a multisample is converted, filter, amp, and effect settings etc. will be made, and it can be played as a program. This program can also be used in Combination mode or Sequencer mode. Samples can also be used as drum samples in a drum kit.



note Sampling (sample recording) can be performed in any page P0-P8 of Sampling mode by using the [REC/WRITE] and [START/STOP] keys (For the sampling procedure, refer to p.78 in the *Basic Guide*). Recording settings such as the input level can be made in P0: Recording, and these settings are also valid in the other pages.

note The selected multisample or sample can be played from the keyboard in any page, allowing you to hear the results of your editing.

! When you turn off the power, all multisample and sample data in Sampling mode will be lost. Before you turn off the power, be sure to save important data to floppy disk or external SCSI device (see p.40 in the *Basic Guide*). If a separately sold EXB-SCSI option is installed, data can be saved on an external SCSI device. Immediately after the power is turned on, memory will contain no

multisamples or samples, so you will first need to load previously-saved data from a floppy disk or external SCSI device before you can playback or edit it.

! There is no Compare function that allows you to restore edited data to the state before it was edited. If you wish to preserve the unedited state of the data, use "Copy MS" (0-1E) or "Copy Sample" (0-1B) etc. to make a copy of the multisample or sample before you begin editing.

In some of the page menu commands in P1 or P2, you can **uncheck** the "Overwrite" item in the dialog box so that the unedited sample data will be preserved even after you execute the command (see 1-1: Page Menu Command "About Overwrite").

! When executing a sample edit operation or when you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been edited or sampled.

! **Cautions regarding sample data**

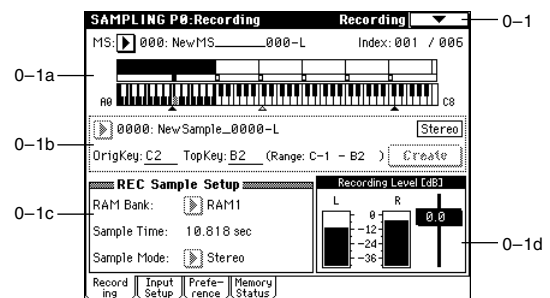
- The sample data memory areas Bank 1, 2, 3, and 4 each contain 16 MB. Of this 16 MB (8,388,608 samples), sixteen samples (the first and last eight samples) are used as internal work area.
- The first and last samples of each sample are used as internal work area. These two samples are added automatically when a sample is recorded or when an .AIFF or .WAVE file is loaded. This means that if you record a sample of one second, this will result in 48,000 samples of data, but four samples will be added to this, so that sampling memory will actually contain 48,004 samples of data.

Sampling P0: Recording

Here you can set the input level and make other basic settings for sampling (sample recording), and make basic settings for multisamples and samples. Normally you will record samples in this page.

0-1: Recording

Here you can select the multisample that you wish to record, specify the index sample, make settings, select the memory bank, and adjust the final level of the input signal.



0-1a: MS (Multisample), Index, Keyboard & Index

MS (Multisample) [000...999]

Select the multisample.

Each multisample consists of the samples for one or more indexes (an "index" is a range or zone of keys).

note This parameter is linked with the identically-named parameters in P1-P3.

To create a new multisample,

- 1 In the popup menu, either select a number whose multisample name is blank, or use the numeric keys [0]-[9] to specify a new multisample and press the [ENTER] key to access the "Create New Multisample" dialog box.



- 2 If you wish to create a stereo multisample, check "Stereo."
- 3 To create the multisample, press the **OK button**. To cancel, press the **Cancel button**.
A multisample will be created as follows (example).
Mono type 001: NewMS_001
Stereo type 001: NewMS_001-L,
001: NewMS_001-R

Index [xxx (001...128)/yyy (001...128)]

Select the index for which you wish to sample.

Each zone in a multisample is called an "index." For example on the TRITON (61 note keyboard), a multisample could be divided into six zones of one octave (12 keys) each. Each of these zones is referred to as an "index." You will assign a sample to each of these indexes.

xxx: The selected index. Choose the desired index.

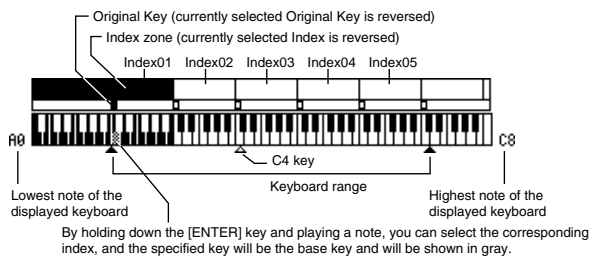
yyy: The total number of indexes in the multisample.

note You can also select an index by holding down the [ENTER] key and playing a note on the keyboard. The index that includes that note will be selected. The key you specify will be the base key, and will be displayed in gray in "Keyboard & Index" (≡ "Keyboard Index").

note This parameter is linked with the same parameter of P1: Sample Edit, P2: Loop Edit, and P3: Multisample. The sampling and editing that you perform in each page will apply to the index you select here.

Immediately after the power is turned on, this will be **001/001**. This indicates that only one index exists. To increase the number of indexes, use "Create" in this page. When you press the **Create button**, indexes will automatically be added from the left-most zone, as **002/002**, **003/003**, ... (The position, zone width, and original key location of the index that is created when you press the **Create button** can be set in Create Zone Preference (0-3a, 3-2a). You are also free to modify the zone width and original key location later.)

Keyboard & Index



This displays the zones and original keys of the selected multisample. The black triangle shows the keyboard range, and the white triangle shows the C4 key. The note numbers at left and right show the keyboard note range that is displayed.

note The base key (displayed in gray)

- When you press the [START/STOP] key in P1: Sample Edit, the sample of the selected index will playback (in one-shot mode) between the "Edit Range Start" and "Edit Range End." At this time, the playback pitch will be according to the pitch of the key specified here.
- Playback in the grid display of P1 and P2 will be according to the playback pitch of the key selected here, and the specified tempo BPM/resolution (set in P1 and P2).
- The "Pitch BPM Adjust" (3-1A) function is based on the playback pitch of the key you specify here.

You can use the "Keyboard Display" (0-1J) page menu command to change the displayed range of the keyboard.

0-1b: Sample, Original Key, Top Key, Range, Create

Here you can set the sample, original key, and range of the selected index.

Sample [----: ---No Assign----, 0000...3999]

Select a sample that you sampled or loaded in Disk mode, and play a note within the index range to sound that sample.

note This parameter is linked with the identically-named parameters in P1-P3 (Multisample tab). Sampling and editing that you perform in these pages will apply to the sample you select here.

----: ---No Assign---- No sample is assigned to the index.

There will be no sound when you play the keyboard.

To record a sample, select a vacant sample such as **0000**.


When you record a sample, data will be loaded into the selected sample. The sample name (such as NewSample_0000) will be shown beside the number. This sample name can be modified using the "Rename Sample" (0-1C) page menu command.

You can also record a sample even when **----:---No Assign----** is displayed. In this case, a sample number will be selected automatically.

Even if you record to a sample that already contains data, the selected sample will not be overwritten—the data will automatically be sampled to a vacant sample, and the newly recorded sample will replace the previous sample in the index. If you wish to delete a sample, execute the "Delete Sample" (0-1A) page menu command.

OrigKey (Original Key) [C-1...G9]

Specify the key that will play the sample at its original pitch (i.e., the pitch at which it was recorded). The pitch will change in semitone steps relative to the original key. For example, suppose that you recorded a sample with "OrigKey" of F2. When the zone of the index is C2-B2, pressing the F2 key would playback the sample at its original pitch. Pressing F#2 would playback the sample a semitone higher. Pressing E2 would playback the sample a semitone lower. The pitch of this sampled sound will change in semitone steps between C2 and B2, centered at F2. The original key location can also be viewed in "Keyboard & Index."

 If "Constant Pitch" (3-1b) is **checked**, the sample will be sounded at its original pitch by all notes in the zone.

TopKey (Top Key) [C-1...G9]

Specify the highest key in the zone of the index. The zone is defined by this "Top Key." For example, suppose that you set a "Top Key" of B2 for index 001/002, and a "Top Key" of B3 for index 002/002. This means that the zone of index 001 will be B2 and lower, and the zone of index 002 will be C3-B3.


Range

This indicates the zone (area) that was determined by the "Top Key" setting.

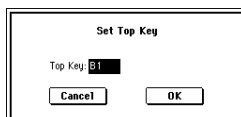
The sample selected by "Sample" will sound in this area. The zone for each index can also be viewed in "Keyboard & Index."

Create

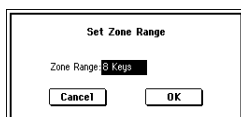
This creates an index. Use this when you wish to add a sample to a multisample. When you press the **Create** button, a new index will be created according to the Create Zone Preference (0-3a, 3-2a) parameters "Position," "Zone Range," and "Original Key Position." If you wish to delete an index or exchange indexes, use P3: Multisample.

 If when you execute "Create" (0-1b, 3-1c) or "Insert" (3-1c) it is not possible to create a new index according to your Create Zone Preference settings, one of the following dialog boxes will appear. If you wish to create a new index, perform the following procedure.

- **Set Top Key:** Select "Index" 001, set "Position" (0-3a, 3-2a) to **Left (to Selected Index)**, and execute "Create" or "Insert" to open the dialog box. So that a new index can be created at the left of index 1, re-set the "Top Key" setting, and press the **OK** button.



- **Set Zone Range:** If you execute "Create" when it is not possible to create a new index according to the Create Zone Preference settings, the following dialog box will appear. This dialog box will also appear if you execute "Insert" when it is not possible to create a new index with the contents of the "Cut" or "Copy" (3-1c). Re-set the "Zone Range" (0-3a, 3-2a), and press the **OK** button.



Stereo

A "Stereo" indication will appear here if you have selected a stereo multisample or sample, or if you recorded a sample with "Sample Mode" (0-1c) set to **Stereo**.

About stereo multisamples and stereo samples

Stereo multisamples: Under the following conditions, two multisamples will be handled as a stereo multisample.

- If you checked "Stereo" when creating a new multisample (i.e., selected a new multisample in "MS" 0-1a)
 - If you executed the "MS Mono To Stereo" (0-1H) page menu command
 - If you sampled with "Sample Mode" (0-1c) set to **Stereo**
- In these cases, a stereo multisample that meets the following conditions will be created automatically.


1. The last two characters of the two multisample names will be -L and -R respectively, and the earlier portion of the names are identical.
2. The two multisamples will have the same number of indexes, and their zone settings are identical.


Stereo samples: Under the following condition, two samples will be handled as a stereo sample.

- When the samples were recorded with a "Sample Mode" (0-1c) setting of **Stereo**.
- If you executed the "Sample Mono To Stereo" (0-1H) page menu command

In this case, a stereo sample that meets the following conditions will be created automatically.

1. The last two characters of the sample name will be -L and -R respectively, and the earlier portion of the names are identical.
2. Two samples that satisfy condition 1. for stereo multisamples are selected.

 Stereo multisamples and samples are distinguished internally by their multisample name or sample name. If you use "Rename MS" (0-1F) or "Rename Sample" (0-1C) etc. to modify the multisample name or sample name, please pay attention to the above conditions.

 As a condition of a stereo sample, the sampling rates must be identical. You can verify the sampling rate of a sample by using the page menu command "Rate Convert" (1-1K). Be aware that if you use "Rate Convert" to convert the -L and -R samples to differing sampling rates, they will not be handled as a stereo sample.

0-1c: REC Sample Setup (Recording Sample Setup)

Here you can select the memory bank into which you will sample, specify the sampling time, and select either mono or stereo sampling.


RAM Bank [RAM1, RAM2, RAM3, RAM4]

Select the memory bank into which you will sample. The sample data memory is organized into four banks, each with 16 Mbytes. The TRITON comes with 16 Mbytes of memory (SIMM) installed as standard. In this case, **RAM1** will always be selected as the memory bank, and it will not be possible to select **RAM2, 3, or 4**.

By installing separately sold 72-pin SIMM boards you can expand the memory to a maximum of 64 Mbytes (two 32 Mbyte SIMM boards) (P.237).

Installed SIMM boards and available banks

RAM Bank	Slot No.	16M-SIMM	32M-SIMM
RAM1	Slot1	16Mbyte	16Mbyte
RAM2	Slot1		16Mbyte
RAM3	Slot2	16Mbyte	16Mbyte
RAM4	Slot2		16Mbyte

 The TRITON is shipped with a 16 Mbyte SIMM installed in Slot 1. In this condition, you can select only **RAM1** as the “RAM Bank.” If a 16 Mbyte SIMM is installed in Slot 2, you will be able to select **RAM1** (16 Mbyte) and **RAM3** (16 Mbyte). If a 32 Mbyte SIMM is installed in Slot 2, you will be able to select **RAM1** (16 Mbyte), **RAM3** (16 Mbyte) and **RAM4** (16 Mbyte). If a 32 Mbyte SIMM is installed in both Slot 1 and Slot 2, you will be able to select all banks, and the total capacity will be 64 Mbytes.

Sample Time

Specify the time that you wish to sample. This can be set in 0.001 second increments. Immediately after the power is turned on, this will show the remaining memory (available sampling time) of the selected memory bank. If you record a sample in this condition ([REC]→[START]→[STOP]), the change in time will be displayed automatically.

If you have sufficient memory, it is a good idea to set an ample “Sample Time,” and to use the “Truncate” (1-1A, 2-1A) page menu command after you sample to delete unwanted portions of the sample and reduce it to the minimum size necessary. You can also press the [START/STOP] key to stop recording after you have recorded the desired material (☞ For details on the sampling procedure, refer to p.78 in the *Basic Guide*).

The remaining amount of memory will depend on the following conditions.

1. The amount of memory that is installed.
2. Whether the sample is stereo or mono. When the “Sample Mode” (0-1c) is set to **Stereo**, the memory capacity will be halved.
3. The time specified for “Pre Trigger REC” (0-2b: a function that automatically samples the sound even before you begin sampling) will be subtracted from the amount of memory that actually remains.

Sample Mode [L-Mono, R-Mono, Stereo]

Select the channel(s) to be sampled, to specify whether a mono or a stereo sample will be recorded.

Depending on the “Audio Input (SAMPLING)” (0-2a) settings, the external source from the AUDIO INPUT 1 and 2 jacks will be sent, either as direct sound without being routed through an effect, or as effect-processed sound routed through an insertion effect, to the L/R bus and sampled from the L and R channels.

L-Mono: The sound of the internal L channel will be sampled in mono.

R-Mono: The sound of the internal R channel will be sampled in mono.

Stereo: The sound of the internal L and R channels will be sampled in stereo. When you sample in stereo, a stereo multsample or sample will be created.

Example 1:

Sampling a monaural source connected to AUDIO INPUT 1 without applying internal effects

“Input1 Pan”	(0-2a)	L000
“Level”	(0-2a)	127
“BUS(IFX)Select”	(0-2a)	L/R
“Recording Level [dB]”	(0-1d)	as appropriate
“Sample Mode”	(0-1c)	L-Mono

Example 2:

A monaural source connected to AUDIO INPUT 1 routed through the internal insertion effect IFX 052: Reverb Hall, and sampled in stereo

“Input1 Pan”	(0-2a)	C064
“Level”	(0-2a)	127
“BUS(IFX)Select”	(0-2a)	IFX1
IFX1(P8)		select 052: Reverb Hall and make settings
“Recording Level [dB]”	(0-1d)	as appropriate
“Sample Mode”	(0-1c)	Stereo

Example 3:


A stereo source connected to AUDIO INPUT 1 and 2, and sampling without applying internal effects

“Input1 Pan”	(0-2a)	L000
“Level”	(0-2a)	127
“BUS(IFX) Select”	(0-2a)	L/R
“Input2 Pan”	(0-2a)	R127
“Level”	(0-2a)	127
“BUS(IFX)Select”	(0-2a)	L/R
“Recording Level [dB]”	(0-1d)	as appropriate
“Sample Mode”	(0-1c)	Stereo

Example 4:

A stereo source connected to AUDIO INPUT 1 and 2, routed through internal insertion effect IFX1 008: St.Graphic 7EQ, and sampled in stereo

“Input1 Pan”	(0-2a)	L000
“Level”	(0-2a)	127
“BUS(IFX)Select”	(0-2a)	IFX1
“Input2 Pan”	(0-2a)	R127
“Level”	(0-2a)	127
“BUS(IFX)Select”	(0-2a)	IFX1
IFX1(P8)		select 008: St.Graphic 7EQ and make settings
“Recording Level [dB]”	(0-1d)	as appropriate
“Sample Mode”	(0-1c)	Stereo

 When you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been sampled.

0-1d: Recording Level [dB]

[-inf, -72.0... 0.0...+18.0]

Adjust the final level of the signal that will be sampled.

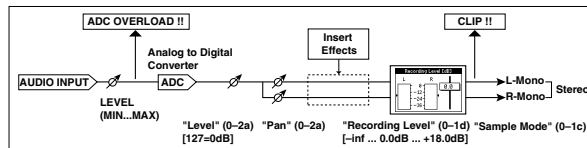
note This is linked with the identically-named parameter in P0-2: Input/Setup.

When you press the [REC/WRITE] key you will enter sampling standby mode. Use the slider to adjust the signal level. Initially set this to 0.0, and make adjustments so that the level is as high as possible without exceeding 0 dB in the bar display. If 0 dB is exceeded, the display will indicate “CLIP!” This means that the level of the sampling signal is too high, so use the slider to adjust the level.

note In order to sample with the maximum dynamic range, use the rear panel [LEVEL] knob to adjust the level as high as possible without making "ADC OVERLOAD!!" appear. Then set "Level" (0-2a) to 127, and adjust "Recording Level" (0-1d, 0-2c) as high as possible without making the "CLIP!!" indication appear.

! In the sampling standby condition after you press the [REC/WRITE] key, the sound that is output from the AUDIO OUTPUT L/MONO, R and from the headphones will be adjusted by the "Recording Level" slider, but when you cancel sampling standby condition or cancel sampling, the sound will be output at the 0 dB level. If you have lowered the "Recording Level" below 0 dB, please be careful of sudden changes in volume.

! If the sound is still distorted even if you lower the "Recording Level," it is possible that distortion is occurring in the input stage of the AUDIO INPUT, or that distortion is being caused by the settings of the internal effect. Excessive signal levels in the input stage of the AUDIO INPUT can be verified in the P0: Input Setup tab. If an indication of "ADC OVERLOAD!!" appears above the "Recording Level" bar display, the distortion is due to excessive levels in the input stage of the AUDIO INPUT. Adjust the rear panel [LEVEL] knob until the "ADC OVERLOAD!!" display no longer appears. If there is still distortion even after [LEVEL] has been lowered, it is possible that the distortion is being caused by the settings of the internal effect. Lower the "(Input 1, 2) Level" (0-2a), or adjust the effect settings.



note If you have sampled at a low input level, you can execute Normalize in "Normalize/Level Adj." (1-1I) to amplify the level to the maximum possible without clipping.

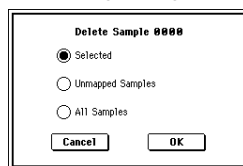
▼ 0-1: Page Menu Command

0-1A	Delete Sample	Convert HS To Program	0-1G
0-1B	Copy Sample	HS Mono To Stereo	0-1H
0-1C	Rename Sample	Sample Mono To Stereo	0-1I
0-1D	Delete HS	Keyboard Display	0-1J
0-1E	Copy HS		
0-1F	Rename HS		

0-1A: Delete Sample

This command deletes all samples, the currently selected sample, or samples that are not mapped to a multisample (i.e., unused samples).

① Select this command to open the following dialog box.



② Use the radio buttons to specify which samples will be deleted.

Selected: The currently selected sample will be deleted. The sample assignment for "Index" (0-1a) will change to ---No Assign---

Unmapped Samples: All samples that are not mapped (used) in a multisample will be deleted.

All Samples: All samples in memory will be deleted. The sample assignments of all multisamples will change to ---No Assign---

③ To execute the Delete Sample command, press the **OK** button. To cancel, press the **Cancel** button.

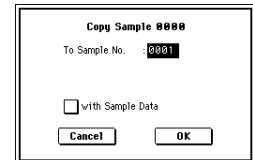
! If the sample data (waveform data) of the sample you delete is being used by another sample, the sample data itself will not be deleted. Only the sample will be deleted.

0-1B: Copy Sample

This command copies the currently selected sample to another sample.

note The copy destination sample number will automatically be included in the sample name of the copy destination. If necessary, use "Rename Sample" (0-C) to rename it. When doing so, make sure that the name is not identical to any other sample name. (The sample name is used to distinguish stereo samples. [p.81](#))

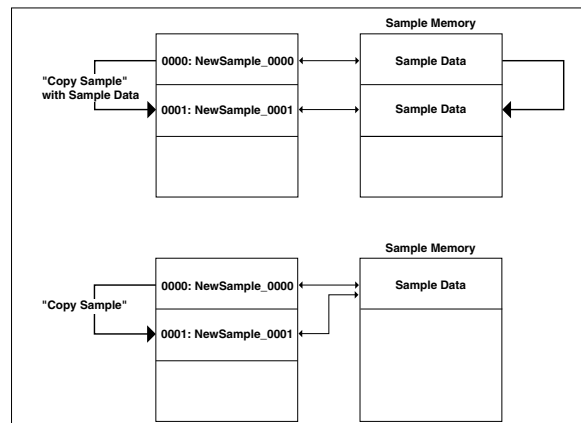
① Select this command to open the following dialog box.



② Specify the sample number of the copy destination.

Stereo When copying a stereo sample, specify both the L and R channels for the copy destination sample number.

③ If you check "with Sample Data": Executing the copy will simultaneously copy the sample data (waveform data) as well. The copy source and copy destination samples will exist as completely independent samples. For example, you would use this when you wish to start with the same sample data, and edit it separately in P1: Sample Edit to create two or more different types of sample. If you do **not** check "with Sample Data": Executing the copy will not copy the sample data (waveform data). The newly created sample will share the sample data of the copy source sample. For example, you would use this when you wish to use P2: Loop Edit to create two or more versions of the same sample data with different loop addresses. Sample memory area will not be consumed by this type of copy. If you use P1: Sample Edit to edit the sample data, the results will affect all samples that share this sample data.

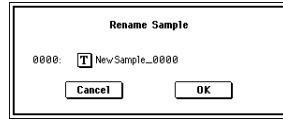


- To execute the Copy Sample command, press the **OK button**. To cancel, press the **Cancel button**.

0-1C: Rename Sample

This command lets you modify the name of the currently selected sample.

- Select this command to open the following dialog box.



- Press the text edit button to open the text edit dialog box, and input the desired sample name (up to sixteen characters).

Stereo If the multisample is stereo and a stereo sample is selected, you can input up to fourteen characters for the sample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the sample of either the L or the R channel, the other sample will automatically be renamed.

- To execute the Rename Sample command, press the **OK button**. To cancel, press the **Cancel button**.

0-1D: Delete MS (Delete Multisample)

This command deletes the currently selected multisample or all multisamples.

- Select this command to open the following dialog box.



- All Multisamples:** Check this if you wish to delete all multisamples.
- Delete Samples too?:** Check this if you also wish to delete the samples included in the deleted multisample(s).
- To execute the Delete Multisample command, press the **OK button**. To cancel, press the **Cancel button**.

⚠ Even if you also choose to delete the samples that are included in the deleted multisample(s), any sample data (waveform data) used by these samples that is shared with other samples will not be deleted. Only the sample itself will be deleted.

0-1E: Copy MS (Copy Multisample)

This command copies the selected multisample to another multisample.

note The copy destination multisample number will automatically be included in the multisample name of the copy destination. If necessary, use "Rename MS" (0-1F) to rename it. When doing so, make sure that the name is not identical to any other multisample name. (The multisample name is used to distinguish stereo multisamples. [p.81](#))

- Select this command to open the following dialog box.



- Specify the copy destination multisample number.

Stereo When copying a stereo multisample, copy both the L and R channels of the copy destination multisample number.

- To execute the Copy Multisample command, press the **OK button**. To cancel, press the **Cancel button**. When a multisample is copied, the samples assigned to the multisample will also be copied at the same time. At this time, they will be automatically copied to vacant sample numbers. The sample data (waveform data) will be shared between the copy source and copy destination. (Additional sample memory area will not be consumed.)

0-1F: Rename MS (Rename Multisample)

This command modifies the name of the currently selected multisample.

- Select this command to open the following dialog box.



- Press the text edit button to move to the text edit dialog box, and input a multisample name of up to sixteen characters.

Stereo If the selected multisample is **stereo**, up to fourteen characters can be input as the multisample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the multisample of either the L or the R channel, the other multisample name will automatically be renamed.

- To execute the Rename Multisample command, press the **OK button**. To cancel, press the **Cancel button**.

0-1G: Convert MS To Program (Convert Multisample To Program)

This command converts the selected multisample into a program.

If you have recorded a sample or created a multisample and would like to play it in Program mode, Combination mode, or Sequencer mode, you must create a program that uses that multisample for its oscillator.

It is possible to set the Program mode OSC1 and OSC2 parameters "Multisample High, Low" (Program P1: 1-2a) to select a RAM bank, so that a multisample that you created in Sampling mode can be used in the program, and then to make program settings to specify how the multisample will be sounded.

However by executing this "Convert MS To Program" command, you can quickly and easily convert the Sampling mode settings into the desired program, without having to make Program mode settings as described above.

- Select this command to open the following dialog box.





- Press the text edit button to access the text edit dialog box, and input a multisample name of up to sixteen characters. The name you specify here will be the program name.
- If "Use Destination Program Parameters" is **unchecked**: Executing the command will replace the multisample of the convert destination program with the multisample that is selected here, and will initialize the settings of the remaining program parameters. The sound that you hear

in Sampling mode will be accurately reproduced by the program.

A monaural multisample will be converted into a program with an “Oscillator Mode” (Program P1: 1–1a) of **Single**, and a stereo multisample will be converted into a **Double** program.

If “Use Destination Program Parameters” is **checked**: Executing this command will replace the multisample of the convert destination program with the multisample that is selected here, and will not initialize the settings of the remaining program parameters. Use this setting if you wish to use the parameter settings of a preset program, etc.

 If you **check** “Use Destination Program Parameters,” be aware of the following points.

- If the selected multisample is mono, the “Oscillator Mode” of the convert destination program must be **Single**. Conversely, if the selected multisample is stereo, the “Oscillator Mode” of the convert destination program must be **Double**. If you attempt to execute this command when these conditions are not satisfied, a message will indicate “Oscillator Mode conflicts.” You will need to change the “Oscillator Mode” setting of the convert destination program.
 - **[Stereo]** If the selected multisample is stereo, the stereo position of the multisample in Sampling mode can be reproduced by setting the convert destination program to the following pan settings: “Amp 1 Pan” **L000**, and “Amp 2 Pan” **R127** (Program P4: Amp 1 Lvl/Pan tab and Amp 2 Lvl/Pan tab).
- ④ In “To Program,” select the convert destination program. When the edit cell is selected, you can use the front panel numeric keys [0]–[9], the [VALUE] dial, the [VALUE] slider, and [△] [▽] keys to make a selection. When you press the popup button, the Bank/Program Select menu will appear. Here you can select a program by bank.
-  It is recommended that you use **bank E** as the program bank for Sampling mode. You can specify any bank A–E for the convert destination program, but the factory settings and the preset programs/combinations included with the EXB-PCM series are designed for banks A, B, C and D. Specify bank E to make the most efficient use of the banks.
- ⑤ To execute the Convert Multisample To Program command, press the **OK button**. To cancel, press the **Cancel button**.

0–1H: MS Mono To Stereo/MS Stereo To Mono (Change Multisample Type)

This command converts a mono multisample to stereo, or a stereo multisample to mono. If the selected multisample is mono, the dialog box will allow you to execute “MS Mono To Stereo.” If the selected multisample is stereo, the dialog box will allow you to execute “MS Stereo To Mono.”

- ① Select this command to open the following dialog box.



- ② To execute the Change Multisample Type command, press the **OK button**. To cancel, press the **Cancel button**. When you execute this command, the multisample type and sample assignment will change as follows.

MS Mono To Stereo

- The selected multisample will be converted to stereo. The last two characters of the multisample name will be overwritten as -L.
- An identical multisample will be newly created, but with the last two characters of the multisample name overwritten as -R.
- Mono samples assigned to the original multisample will be assigned to both -L and -R multisamples.
- If samples assigned to the original multisample are part of a stereo pair of samples, the -L and -R samples will be assigned to the -L and -R multisamples.

[Stereo]: MS Stereo To Mono

- The selected multisample will be converted to mono. The -L or -R at the end of the multisample name will be deleted.
- Multisamples that are stereo pairs of the selected multisample will be deleted.

0–1I: Sample Mono To Stereo (Change Sample Type)

This command converts a mono sample to stereo. This can be executed when a mono sample is selected.

- ① Select this command to open the following dialog box.

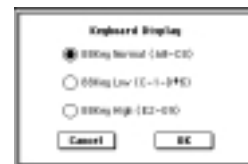


- ② To execute the Change Sample Type command, press the **OK button**. To cancel, press the **Cancel button**. When you execute this command, the sample type will change as follows.
- The selected sample will become a stereo sample. “-L” will be overwritten into the last two characters of the sample name.
 - An identically named sample will be created with “-R” as the last two characters of the sample name. Also, if the selected multisample is mono, it will change to stereo.
 - The last two characters of the multisample name will be overwritten as “-L”.
 - A new multisample will be created with the same name, but whose last two characters are “-R”.
 - The stereo sample that was created will be assigned automatically.

0–1J: Keyboard Display

This command selects the range of the keyboard display. Normally you will select **88Key Normal (A0–C8)**.

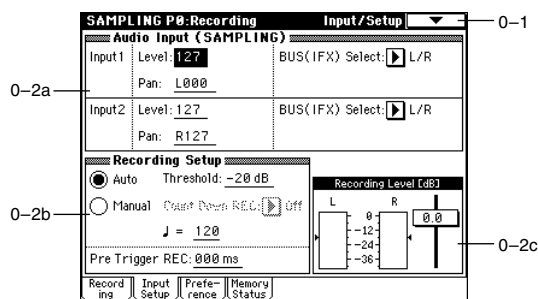
- ① Select this command to open the following dialog box.



- ② Use the **radio buttons** to select the displayed range.
- ③ To execute the Keyboard Display command, press the **OK button**. To cancel, press the **Cancel button**.

0-2: Input/Setup

Here you can make input level, pan, and bus settings for the rear panel AUDIO INPUT 1 and 2. Setup for recording can also be performed here.



0-2a: Audio Input (SAMPLING)

Here you can make adjustments for the input stage of the audio signal received at AUDIO INPUT 1 and 2.

⚠ These settings are valid only in Sampling mode. These settings will also be valid when you move from Sampling mode to Global mode.

In modes other than Sampling mode, settings for Audio Input 1 and 2 are made in “Audio Input (COMBI, PROG, SEQ, S.PLAY)” (Global P0: 0-3a).

Level [000...127]

Specify the level of the signal immediately after the analog audio signal from AUDIO INPUT 1 and 2 is converted into a digital signal. Normally you will set this to 127.

If you hear distortion even after lowering this level, it is possible that the distortion is occurring before the A/D converter. Adjust the [LEVEL] knob or the output level of your external sound source so that the “ADC OVERLOAD!!” indication above the “Recording Level” display does not appear.

Pan [L000...C064...R127]

Set the panning of the analog audio signal from AUDIO INPUT 1 and 2. Normally you will set Input 1 to L000 and Input 2 to R127. This allows you to sample a stereo audio source in stereo (☞ For example settings, refer to p.78 in the *Basic Guide*).

BUS(IFX) Select [L/R, IFX1...5, Off]

Select the bus.

L/R: Select this when you wish to sample the incoming analog audio signal without applying an insert effect. Normally you will select L/R.

IFX1...5: Select one of these when you wish to apply an insert effect to the incoming audio sample as you sample it (☞ For details on using the insert effects, refer to p.148).

Off: The analog audio signal will not be input.

0-2b: Recording Setup

REC Mode [Auto, Manual]

Select the method by which sampling will be started.

Auto: Sampling will begin automatically when the input level exceeds the “Threshold” setting.

- 1 Press the [REC/WRITE] key to enter sampling standby mode.

- 2 Use the “Recording Level [dB]” slider to adjust the sampling level.

⚠ Be careful of changes in the monitoring volume level (☞ “Recording Level [dB]” 0-1d).

- 3 Adjust the “Threshold” setting. The black triangles at both sides of the “Recording Level [dB]” level bar display will indicate the “Threshold” level. Normally, this should be set as low as possible without allowing noise to trigger sampling.
- 4 Press the [START/STOP] key. Sampling will automatically begin when the input level exceeds the “Threshold” setting.
- 5 To stop sampling, press the [START/STOP] key once again. Sampling will end automatically if you continue sampling to the end of the “Sample Time” (0-1c).

Manual: You can manually begin sampling from the sampling standby condition by pressing the [START/STOP] key.

- 1 Perform steps ① and ② above.
- 2 Press the [START/STOP] key, and sampling will begin. (If you use the “Count Down REC” function, sampling will begin after a count-down sounded by the metronome.)
- 3 To stop sampling, perform step ⑤ above.

Threshold [-63dB...0dB]

When performing auto sampling (“REC Mode” **Auto**), this sets the level at which sampling will begin (☞ “REC Mode” **Auto**, step ③).

Count Down REC [Off, 4, 8, 3, 6]

When sampling manually (“REC Mode” **Manual**), this specifies whether there will be a count-down before sampling begins.

Off: Sampling will begin immediately when you press the [START/STOP] key from the recording-standby condition. **4, 8, 3, 6:** When you press the [START/STOP] key from the recording-standby condition, there will be a count for the specified number of beats at the tempo of “♩ (Tempo),” and then sampling will begin. If you set this to 4, sampling will begin on the “0” count of 4-3-2-1-0.

♩ (Tempo) [040...240]

This sets the tempo of the count-down when “Count Down REC” is used.

The tempo specified here will also be used when the LFO or delay time of the insert effect is controlled by the BPM/MIDI SYNC function during sampling (☞ p.216). This can also be set by the [TEMPO] knob.

Pre Trigger REC [000...500ms]

When sampling the sound that occurs before sampling is actually triggered, this setting specifies the time length that will be “pre-sampled.”

When sampling in auto mode (“REC Mode” **Auto**), sampling will begin when the input signal exceeds the specified threshold level “Threshold” (0-2b). However depending on the “Threshold” settings, the early portion of the attack sound may be lost, and in such cases you can use “Pre Trigger REC.”

Also, when sampling manually (“REC Mode” **Manual**) and using “Count Down REC,” you may intend to play your instrument etc. at precisely the downbeat but actually be slightly ahead of the beat. In such cases, you can use Pre Trigger REC to sample without losing the beginning of the note.

⚠ If you increase this value, you will always be sampling more than you need. Normally you should leave this set at 000ms, and set it to a minimal value only when necessary.

ADC OVERLOAD !!

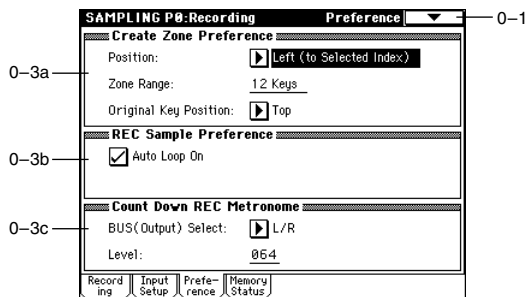
The “ADC OVERLOAD!!” indication will appear if the signal level from AUDIO INPUT 1 and 2 exceeds the maximum level. If this occurs, adjust the [LEVEL] knob or the output level of the external sound source (⚙️“Recording Level [dB]” 0–1d).

0–2c: Recording Level [dB]

[–inf, –72.0... 0.0...+18.0]

⚙️ Link: 0–1d

0–3: Preference



0–3a: Create Zone Preference

These settings determine the initial state of the indexes that are created when you press the **Create** button (0–1b, 3–1c). Each new index will be created according to the settings you make here, but you are free to modify the settings later.

Position [Right, Left]

Specify whether the new index will be created at the right or left of the selected index.

Right (to Selected Index): The new index will be created at the right of the currently selected index.

Left (to Selected Index): The new index will be created at the left of the currently selected index.

Zone Range [1 Key... 127 Keys]

Specify the key range of the zone of the newly created index.

1Key: Each individual note of the keyboard will be an index. The sample of an index will sound at its original key when you play that note. This setting allows you to trigger multiple samples across the keyboard.

2 Keys–127 Keys: The sample will change pitch in semitone steps across the specified number of keys, centered on the original key “OrigKey” (0–1b, 3–1b). If “Constant Pitch” (3–1b) is **checked**, the pitch will not change.

Original Key Position [Bottom, Center, Top]

Specify where the original key will be located in the zone (specified by “Zone Range”) for a newly created index.

Bottom: The lowest key in the zone will be the original key.

Center: The middle key in the zone will be the original key.

Top: The top key in the zone will be the original key.

0–3b: REC Sample Preference

Auto Loop On

Checked: The recorded sample will automatically be played with looping turned on (⚙️“P2: Loop Edit page”).

0–3c: Count Down REC Metronome

BUS(Output) Select (BUS Select) [L/R, 1, 2, 3, 4]

Specify the output destination of the metronome sound played by “Count Down REC” (0–2b).

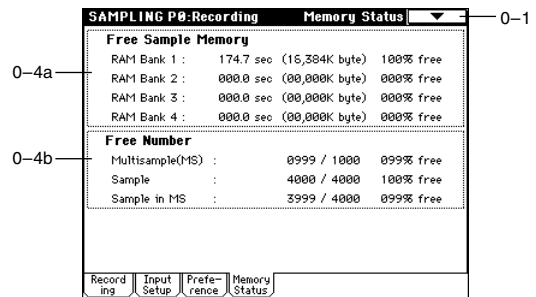
L/R: The metronome will be output from OUTPUT (MAIN) L/Mono, R, and the headphones.

1, 2, 3, 4: The metronome will be output from OUTPUT (INDIVIDUAL) 1, 2, 3, or 4 respectively.

Level [000...127]

Specify the level of the metronome sound played by “Count Down REC.”

0–4: Memory Status



0–4a: Free Sample Memory

This shows the remaining amount of memory (the time available for sampling, the size of the sample files that can be loaded in Disk mode, or the size available for editing) in RAM banks 1, 2, 3, and 4. The amount is shown in seconds, bytes, and a percentage (%). The display will depend on the amount of memory that is installed (⚙️“RAM Bank” 0–1c).

0–4b: Free Number

This shows the maximum number of samples available in Sampling mode for multisamples and samples. The remaining number is also shown as a percentage (%) of the maximum.

Multisample(MS) [0000...0999/1000 000...099%]

Sample [0000...4000/4000 000...100%]

Sample in MS [0000...3999/4000 000...099%]

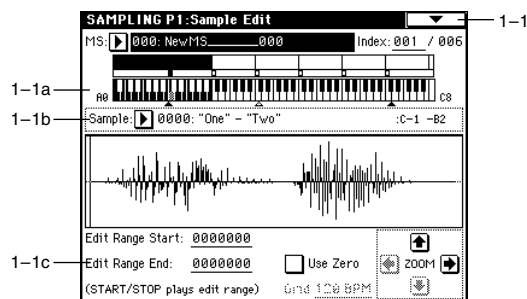
Sampling P1: Sample Edit

Here you can edit the sample data (waveform data) that you sampled or loaded in Disk mode.

Editing operations such as deleting unwanted portions of the waveform, reversing the waveform, or lowering the sampling frequency can be performed in detail while viewing the “sample waveform display.”

note The editing range specified in “Edit Range Start” and “Edit Range End” (1-1c) will be played when you press the [START/STOP] key, allowing you to audition the results (☞ “Keyboard & Index” 0-1a).

1-1: Sample Edit



1-1a: MS (Multisample), Index, Keyboard & Index

MS (Multisample) [000...999]

Select the multisample that contains the sample you wish to edit (☞ Link: 0-1a).

Index [xxx (001...128)/yyy (001...128)]

Select the index of the sample you wish to edit. Your editing will affect the sample of the index that you select here, and the waveform will appear in the “sample waveform display” (☞ Link: 0-1a).

note An index can also be selected by holding down the [ENTER] key and playing a note on the keyboard. The index that includes this note will be selected. The key you played will be the base key, and will be displayed in gray in “Keyboard & Index” (☞ “Keyboard & Index” 0-1a).

Keyboard & Index

(☞ Link: 0-1a)

1-1b: Sample, Range

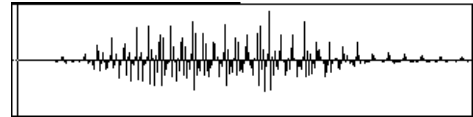
Sample [----: ---No Assign----, 0000...3999]
Range [C-1...B9 — C-1...B9]

This shows the sample number and name for the selected index, and the range. If you modify “Sample,” the sample you specify here will be assigned to this index (☞ Link: 0-1b).

1-1c: Sample waveform display, Edit Range Start, Edit Range End, Use Zero, Grid, ZOOM

Sample waveform display

This displays the waveform of the selected sample. The horizontal axis is the sample address (time axis), and the vertical axis is the sample level.



The thick line above the display border indicates the portion of the entire sample waveform that is displayed. As you zoom-in on the time axis, this will indicate which portion of the entire waveform is currently being viewed. If a stereo multisample or sample is selected, the L channel sample data of the multisample will be displayed in the upper half, and the R channel sample data in the lower half.

Edit Range Start [0000000...]
Edit Range End [0000000...]

This specifies the range (start address and end address) of the sample that will be edited by page menu commands. (This is shown in sample address units.)

The range you specify here will be highlighted in the “sample waveform display.”

note To audition the selected range, press the [START/STOP] key. The sample in the area between “Edit Range Start” and “Edit Range End” will sound at the pitch of the currently selected key (displayed in gray) (☞ “Keyboard & Index” 0-1a).

Use Zero

Checked: When setting “Edit Range Start” and “Edit Range End,” it will be possible to select these only to locations where the waveform level is ± 0 (i.e., where the waveform crosses the center line of the “sample waveform display”). You can use the front panel [VALUE] slider, [VALUE] dial, and [Δ] [∇] keys [0]–[9] to automatically search for zero-cross addresses. By using the numeric keys you can search for the zero-cross address nearest to the value that you input.

Unchecked: “Edit Range Start” and “Edit Range End” can be set in increments of one. This is the normal setting.

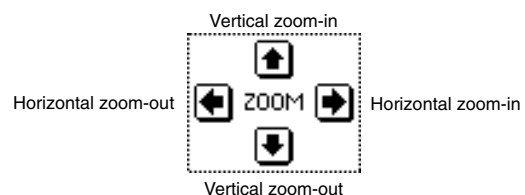
Grid [040 BPM...480 BPM]

(☞ Link: 2-1c)

This has no relation to the setting of the front panel [TEMPO] knob.

ZOOM

These buttons let you zoom-in and zoom-out the “sample waveform display” in the horizontal axis (sample addresses) or vertical axis (sample level).



By zooming-in on the horizontal direction, you can move from the overall display where the waveform is shown as a solid line (1X magnification) to 2X or 4X magnification.

(With 1X magnification, the display resolution of the LCD will be the same as the resolution of the sample addresses. For example if you change the sample address by one, the vertical line in the LCD that indicates the sample address will move in steps of one pixel.) In the vertical axis, you can zoom-in from 1X (full range display) to 512X (or 1024X in the case of stereo display).

Zoom-In/zoom-out will occur starting at the “Edit Range Start” or “Edit Range End” points you specify. (If a different parameter is selected when you zoom-in or -out, the zoom-in/out will be based on the last-selected point. If you re-select the “Edit Range Start” or “Edit Range End” points when the display is zoomed in or out, the display range will be adjusted so as to show the selected point.)

▲ If the zoom ratio is low (1X or less), the “sample waveform display” may differ slightly from the displayed waveform before and after waveform editing, but this does not affect the playback sound. If this occurs, raising the zoom ratio will make the display accurate.

▼ 1-1: Page Menu Command

Before using the page menu commands “Truncate”–“Volume Ramp” to edit the waveform data of a sample, first use “Edit Range Start” and “Edit Range End” to specify the area to be edited. Then select and execute the desired page menu command.

▲ There is no compare function that lets you return the edited result to the state before editing. If you wish to preserve the unedited sample, **uncheck** the “Overwrite”^{*1} item in the dialog box of each page menu command before you execute.

note For stereo samples, the L channel and R channel samples are edited simultaneously. If you wish to edit only the L channel or R channel, select a mono multisample, and select either the L channel or R channel sample for editing.

note If you “Copy” a mono sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a stereo sample, the data will be inserted, mixed, or pasted into both the L and R sides. (The result will be that a stereo sample will be created.)

If you “Copy” a stereo sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a mono sample, the L- and R-side data in the buffer will be mixed to mono, and then inserted, mixed, or pasted. (The result will be that a mono sample will be created.)

You can also use these commands if you wish to monomix a stereo sample and use it as a mono sample. However, be aware that once a sample has been mixed to mono, it is no longer possible to return it to a stereo sample.

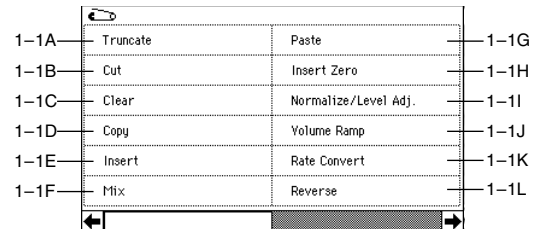
note To edit the “Start” (start address) location at which the sample data (waveform data) will begin playing, the “LoopS” (loop start address), or “End” (end address), use P2: Loop Edit. If the above parameters are located within an area of sample addresses that are deleted or moved by your editing, they will automatically be moved.

*1: About “Overwrite”

When “Overwrite” is **unchecked**: When the command is executed, the edited sample will be saved in a different sample number. The unedited sample will remain without change.

When “Overwrite” is **checked**: When the command is executed, the edited sample will be overwritten onto the original sample (number). The original sample will be modified.

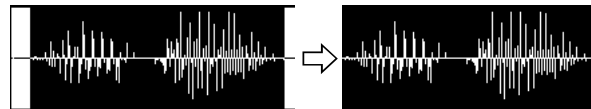
▲ “Loop Start Address” and “End Address” (2-1c) must be located at least eight addresses apart. If as a result of executing “Truncate” (1-1A), “Cut” (1-1B), or “Rate Convert” (1-1K), the “Loop Start Address” and “End Address” would be separated by less than eight addresses, the display will indicate “Sample length is shorter than minimum.” Please set the “Edit Range Start” and “Edit Range End” appropriately.



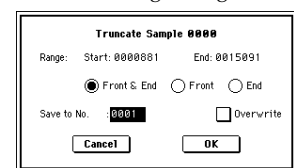
1-1A: Truncate

This command deletes unwanted data that lies beyond the “Edit Range Start” and “Edit Range End.” Use this command when you wish to delete silence at the beginning or end of the waveform data.

note If you wish to delete unneeded (unplayed) sample data after setting the start address, loop start address, and end address, use the “Truncate” page menu command found in P2: Loop Edit.



- Use “Edit Range Start” and “Edit Range End” to specify the editing range.
The portion that will be left by the “Truncate” command can be auditioned by pressing the front panel [START/STOP] key.
- Select this command to open the following dialog box.



- The editing range will be shown in “Range Start” and “End.”
- Use the **radio buttons** to select the portion that will be deleted.
Front & End: The sample data that lies before the “Edit Range Start” and after the “Edit Range End” will be deleted.
Front: The sample data that lies before the “Edit Range Start” will be deleted.
End: The sample data that lies after the “Edit Range End” will be deleted.
- In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ②, this cannot be set.

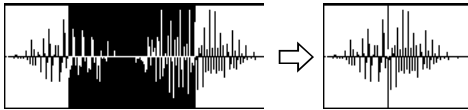
[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ⑦ To execute the Truncate command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

1-1B: Cut

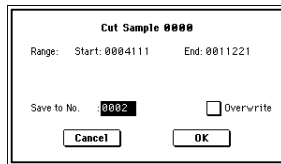
This command deletes the data between the “Edit Range Start” and “Edit Range End.” Sample data located after the deleted portion will be moved forward.



- ① Set “Edit Range Start” and “Edit Range End” to specify the editing range.

note The data that will be deleted by “Cut” can be auditioned by pressing the front panel [START/STOP] key.

- ② Select this command to open the following dialog box.



- ③ The range to be edited is shown by “Range Start” and “End.”
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑤, this cannot be set.

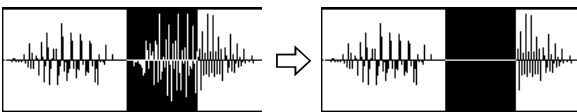
Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ⑥ To execute the Cut command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

1-1C: Clear

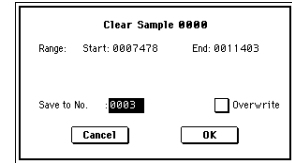
This command converts the data between “Edit Range Start” and “Edit Range End” to zero values. Sample data before and after the edited range will not move.



- ① Use “Edit Range Start” and “Edit Range End” to specify the editing range.

note The data that will be converted to zero values by “Clear” can be auditioned by pressing the front panel [START/STOP] key.

- ② Select this command to open the following dialog box.



- ③ The range to be edited is shown by “Range Start” and “End.”
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑤, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

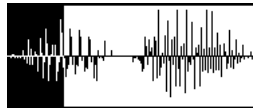
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ⑥ To execute the Clear command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

1-1D: Copy

This command copies the sample data from the area between “Edit Range Start” and “Edit Range End” into the sample data buffer. This data can then be used by the “Insert,” “Mix” or “Paste” commands.

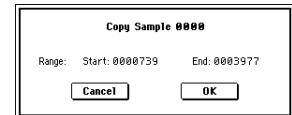
▲ When “Copy” is executed, the data that is loaded into the buffer simply references the data of the original sample. After using “Copy,” do not delete the copy source sample until you “Insert,” “Mix” or “Paste” the copied data.



- ① Use “Edit Range Start” and “Edit Range End” to specify the editing range.

note The data that will be copied can be auditioned by pressing the front panel [START/STOP] key.

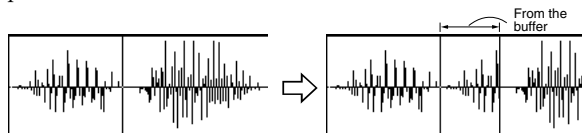
- ② Select this command to open the following dialog box.



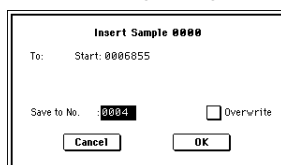
- ③ The range to be copied is shown by “Range Start” and “End.”
- ④ To execute the Copy command, press the **OK button**. To cancel, press the **Cancel button**.

1-1E: Insert

This command inserts the sample data that was copied by the “Copy” command, beginning at the “Edit Range Start” address. The data that had originally been located at that point will be moved backward.



- ① Use “Edit Range Start” to specify the starting address at which the data will be inserted. (The “Edit Range End” setting has no effect.)
- ② Select this command to open the following dialog box.



- ③ “To Start” will indicate the starting address at which the data will be inserted.
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑤, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

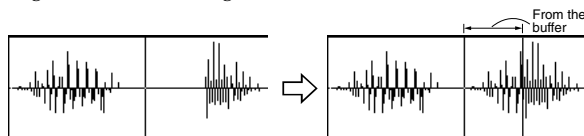
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, check “Overwrite” (see 1-1).
- ⑥ To execute the Insert command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

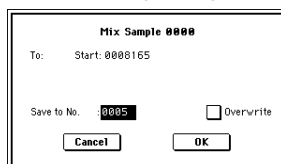
! If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

1-1F: Mix

This command mixes the sample data that was placed in the buffer by “Copy” with the selected sample data. Mixing will begin at the “Edit Range Start” address.



- ① Use “Edit Range Start” to specify the starting address at which the data will be mixed. (The “Edit Range End” setting has no effect.)
- ② Select this command to open the following dialog box.



- ③ “To Start” will indicate the starting address at which the data will be mixed.
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑤, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, check “Overwrite” (see 1-1).

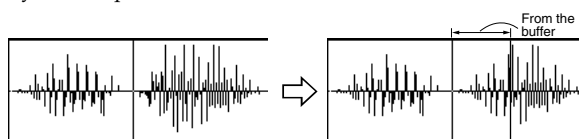
- ⑥ To execute the Mix command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

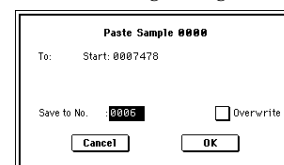
! If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

1-1G: Paste

Beginning at the “Edit Range Start” address, this command places the sample data that was loaded into the buffer by “Copy.” The original data will be deleted, and overwritten by the sample data from the buffer.



- ① Use “Edit Range Start” to specify the starting address at which the data will be pasted. (The “Edit Range End” setting has no effect.)
- ② Select this command to open the following dialog box.



- ③ “To Start” will indicate the starting address at which the data will be pasted.
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑤, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

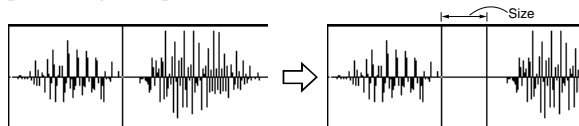
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, check “Overwrite” (see 1-1).
- ⑥ To execute the Paste command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

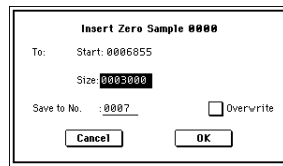
! If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

1-1H: Insert Zero

This command inserts zero-level sample data (silence), beginning at the “Edit Range Start” address. The data that previously occupied that location will be moved backward.



- ① Use “Edit Range Start” to specify the starting address at which the zero-level will be inserted. (The “Edit Range End” setting has no effect.)
- ② Select this command to open the following dialog box.



- ③ “To Start” will indicate the starting address at which the data will be inserted.
- ④ In “Size,” specify the length of the data that will be inserted.
- ⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑥, this cannot be set.

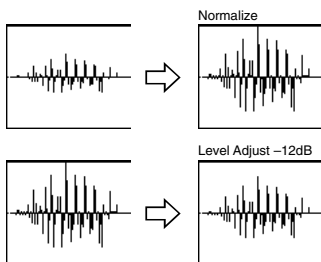
Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☑1-1).
- ⑦ To execute the Insert Zero command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

1-11: Normalize/Level Adj.

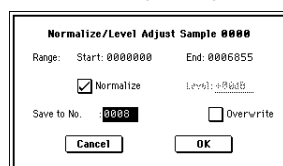
This command uniformly modifies the data values (volume) of the data between the “Edit Range Start” and “Edit Range End.” “Normalize” will amplify the level of the sample data as far as possible without allowing it to clip (distort). If the level of the sampled data is too low, you can execute this command to increase the dynamic range. “Level” allows you to raise or lower the level as desired.



- ① Use “Edit Range Start” and “Edit Range End” to specify the range to be edited.

note The data that will be normalized or level-adjusted can be auditioned by pressing the front panel [START/STOP] key.

- ② Select this command to open the following dialog box.



- ③ The range to be edited is shown by “Range Start” and “End.”

- ④ If you **check** “Normalize” and execute, the data will be normalized. In this case, the “Level” setting will be ignored. If you wish to specify “Level” to modify the level of the sample data, **do not check** “Normalize.”

note Each increase of **+6 dB** will approximately double the height of the waveform shown in the LCD. **+12 dB** will be an increase of approximately 4X, and **+18 dB** will be approximately 8X. Conversely, each decrease of **-6 dB** will halve the level, so that **-6 dB** will be 1/2X and **-12 dB** will be approximately 1/4X. Executing the “Level” command with positive (+) settings may cause the sound to clip (i.e., distort at the point that amplification beyond the maximum level is impossible). Once the sample data has been boosted beyond the clipping point, re-executing this command with negative (-) settings of “Level” will simply lower the overall level of the clipped signal—the waveform will remain distorted. Also, if executing “Level” with negative (-) settings causes any portion of the sample data to reach a zero level, the zero data will not return to its original state even if you re-execute “Level” with positive (+) settings.

- ⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑥, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

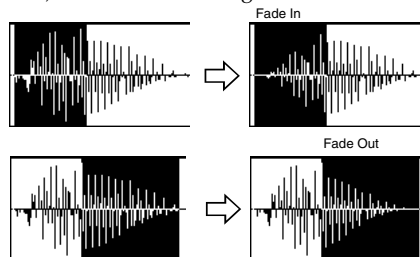
- ⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☑1-1).
- ⑦ To execute the Normalize/Level Adjust command, press the **OK button**. To cancel, press the **Cancel button**.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

⚠ Be aware that if sample data of an extremely low level is normalized, any noise included in the sample will also be amplified.

1-1J: Volume Ramp

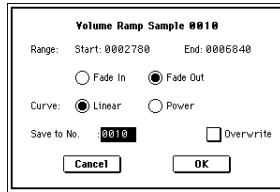
This command modifies the data values (volume) between the “Edit Range Start” and “Edit Range End.” You can make the volume gradually increase (Fade In) or decrease (Fade Out) from the “Edit Range Start” to the “Edit Range End.”



- ① Use “Edit Range Start” and “Edit Range End” to specify the range to be edited.

note The data that will be modified by “Volume Ramp” can be auditioned by pressing the front panel [START/STOP] key.

- ② Select this command to open the following dialog box.



- ③ The range to be edited is shown by “Range Start” and “End.”
- ④ Use the **radio buttons** to select the type of volume ramp.
Fade In: The volume at “Range Start” will be zero, and will gradually increase toward “End.”
Fade Out: The volume will gradually decrease from the “Range Start” volume until it reaches zero at “End.”
- ⑤ In “Curve,” specify the way in which the volume will change.
Linear: The volume will change linearly. For normal fade-in or fade-out, select Linear.
Power: The volume will change non-linearly. When you use “Mix” (1-1F) to combine a faded-in waveform with a different faded-out waveform (i.e., crossfade), using a **Linear** fade-in/out may produce an impression that the volume has dropped in the middle of the curve. In such cases, use **Power** to perform the fade-in/out.
- ⑥ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ⑦, this cannot be set.
- Stereo** For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑦ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ⑧ To execute the Volume Ramp command, press the **OK button**. To cancel, press the **Cancel button**.

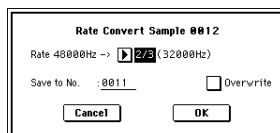
note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

1-1K: Rate Convert

This command lowers the sampling rate (frequency) of the sampled data by 2/3, 1/2, 1/3, 1/4, or 1/6. The sampling frequency of input is fixed at 48 kHz, but you can use this command to create “down-sampling” effects. The sample data is thinned to convert it into sample data of a lower sampling frequency.

The “Rate Convert” command is always executed on all waveform data of the selected sample, regardless of the “Edit Range Start” and “Edit Range End” settings.

- ① Select this command to open the following dialog box.



- ② The sampling rate of the selected sample is shown at the right of “Rate.” At the right of the “->” you can select the desired amount of the sampling rate conversion: 2/3, 1/2, 1/3, 1/4 1/6. The sampling rate following conversion will be displayed in Hz.

- ③ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ④, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ④ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ⑤ To execute the Insert Zero command, press the **OK button**. To cancel, press the **Cancel button**.

⚠ This command cannot be executed on a sample whose sampling rate is 11.025 kHz or less.

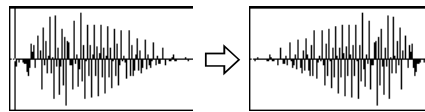
⚠ Stereo samples must have the same sampling rate. Although it is possible to select mono multisamples for -L and -R and convert their sampling rate separately, they can no longer be handled as a stereo sample in this case.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

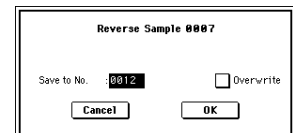
1-1L: Reverse

This command reverses the sample data (i.e., exchanges the beginning and end).

The “Reverse” command is always executed on all waveform data of the selected sample, regardless of the “Edit Range Start” and “Edit Range End” settings.



- ① Select this command to open the following dialog box.



- ② In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite” in ③, this cannot be set.

Stereo For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ③ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite” (☞1-1).
- ④ To execute the Reverse command, press the **OK button**. To cancel, press the **Cancel button**.

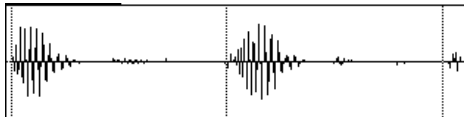
note When you execute this command, all of the sample data will be rewritten to reverse its direction. The P2: Loop Edit also contains a “Reverse” (2-1c) command, which simply reverses the playback direction without affecting the sample data itself.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

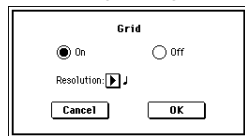
0-1A	Delete Sample	Convert MS To Program	0-1G
0-1B	Copy Sample	MS Note To Stereo	0-1H
0-1C	Rename Sample	Sample Note To Stereo	0-1I
0-1D	Delete MS	Keyboard Display	0-1J
0-1E	Copy MS	Grid	1-1M
0-1F	Rename MS		

1-1M: Grid

This command displays a grid in the “sample waveform display.” When you select On and execute this command, vertical dotted lines will appear in the “sample waveform display” according to the specified resolution and tempo (“Grid” 1-1c, 2-1c). Use the grid when you wish to cut the sample data or determine waveform starting locations based on BPM values or beats. The vertical dotted lines will be shown starting at the “Start” (when Loop is off) or “Loop Start” (when Loop is on) (P2: Loop Edit) addresses, and are calculated according to the playback when the sample is played by the currently selected key (displayed in gray) (☞ “Keyboard & Index” 0-1a).



① Select this command to open the following dialog box.

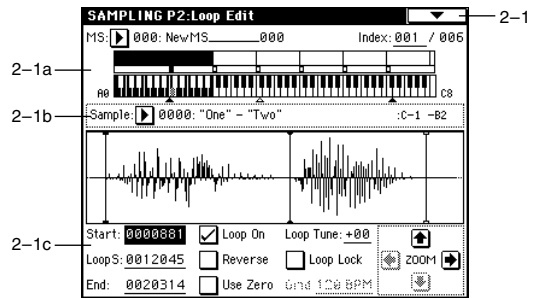


- Use the **On/Off** Radio buttons to switch the grid on or off.
- In “Resolution,” select the desired resolution for the grid. The grid that appears will be determined by this setting and by the “Grid” (1-1c) setting in the page.
- To execute the settings, press the **OK** button. To cancel, press the **Cancel** button.

Sampling P2: Loop Edit

2-1: Loop Edit

Here you can specify the portion of the sample that will be played back, set sample parameters, and edit the sample. Sample parameters that were loaded into internal sampling memory in Disk mode can also be edited in the same way. You can make detailed edits in single-sample steps while watching the sample waveform display.



2-1a: MS (Multisample), Index, Keyboard & Index

MS (Multisample)

[000...999]

Select the multisample whose loop and other sample parameters you wish to edit (☞ Link: 0-1a).

Index

[xxx (001...127)/yyy (001...127)]

Select the index whose loop and other sample parameters you wish to edit. Your edits will apply to the sample of the index selected here, and the waveform will appear in the “sample waveform display” (☞ Link: 0-1a).

You can also select an index by holding down the [ENTER] key and playing a note on the keyboard. The index that includes this note will be selected. The note you played will be the base key, and will be shown in gray in “Keyboard & Index.”

Keyboard & Index

(☞ Link: 0-1a)

2-1b: Sample, Range

Sample

[----: ---No Assign----, 0000...3999]

Range

[C-1...B9 - C-1...B9]

This shows the sample number and name, and the range of the selected index. If you change “Sample,” the sample you specify will be assigned to this index. The sample you select here will appear in the “sample waveform display” (☞ Link: 0-1b).

2-1c: Sample waveform display, Start, LoopS, End, Loop On, Loop Tune, Reverse, Loop Lock, Use Zero, Grid, ZOOM

Sample waveform display

The waveform of the “Sample” is displayed here (☞ 1-1c).

Start (Start Address) [0000000...]


Specify the starting address for sample playback (This value is in units of a sample address).

LoopS (Loop Start Address) [0000000...]

Specify the loop start address for sample playback. This is valid when Loop is On (This value is in units of a sample address) (S.Offset Program P1: 1-2a).

End (End Address) [0000000...]

Specify the ending address for sample playback (This value is in units of a sample address).

 Loop Start Address and End Address must be located at least eight addresses apart. This setting will be applied automatically when you set the addresses.

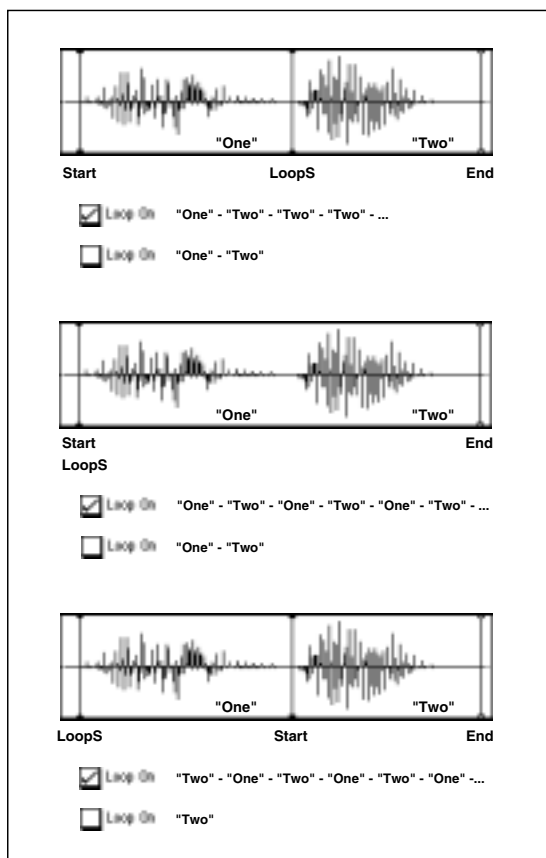
Loop On

Specify whether or not the sample will be looped.

Checked: When played, the sample will continue looping from "LoopS" to "End"; e.g., "Start" → "End" → "LoopS" → "End" → "LoopS" → ...

Unchecked: The sample will playback once from "Start" → "End" (one-shot playback).

If you sample with "Auto Loop On" (0-3b) checked, this item will automatically be checked.



The image shows three examples of waveform looping configurations:

- Example 1:** Waveform with markers Start, LoopS, and End. The loop sequence is "One" - "Two" - "Two" - "Two" - ... (Loop On checked).
- Example 2:** Waveform with markers Start and End. The loop sequence is "One" - "Two" (Loop On unchecked).
- Example 3:** Waveform with markers LoopS, Start, and End. The loop sequence is "Two" - "One" - "Two" - "One" - "Two" - "One" - ... (Loop On checked).

Loop Tune [-99...+99]

When looping is on ("Loop On" is checked), you can adjust the playback pitch of the loop from "LoopS" to "End" over a range of ±99 cents. When you loop data that was sampled from a musical instrument etc., the pitch of the looped portion may sometimes be incorrect. Use this parameter to compensate for such cases.

Reverse

Checked: The sample will be played backward, from "End" (end address) to "LoopS" (loop start address).

Loop Lock

This fixes the length of the loop being edited.

Checked: When the "LoopS" or "End" address is edited, the "End" or "LoopS" will be automatically adjusted so that the distance between "LoopS" and "End" (i.e., the loop length) does not change. This is convenient when you are creating a rhythm loop to match a specific tempo.


Use Zero

Unchecked: "Start," "End" and "LoopS" can be set in steps of one unit. This is the normal setting.

Checked: "Start," "End" and "LoopS" can be set these only to locations where the waveform level is ±0 (i.e., "zero-cross" addresses where the waveform crosses the center line of the "sample waveform display"). You can use the front panel [VALUE] slider, [VALUE] dial, and [Δ] [▽] keys to automatically search for zero-cross addresses. By using the numeric keys you can search for the zero-cross address nearest to the value that you input.

Grid [040 BPM...480 BPM]

This displays vertical dotted lines in the "sample waveform display" to indicate the resolution and tempo. Use this when you wish to cut or edit the sample data based on a BPM value or beat. If you turn the page menu command "Grid" (1-1M) On and execute, a grid will be displayed. The spacing of the grid is determined by the "Resolution" setting of the "Grid" page menu command, relative to the playback pitch of the base key (the key displayed in gray in "Keyboard & Index" 0-1a) at the tempo value you specify here. The grid will begin at the "Start" address (when looping is off) or at the "Loop Start" address (when looping is on).

 This has no connection with the front panel [TEMPO] knob.

ZOOM

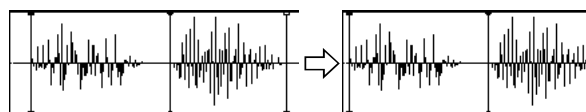
This allows you to zoom-in/out in horizontal and vertical directions of the "sample waveform display" (S1-1c).

▼ 2-1: Page Menu Command

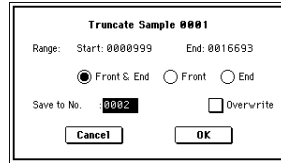
2-1A	Truncate	Rename MS	0-1F
0-1A	Delete Sample	Convert MS To Program	0-1G
0-1B	Copy Sample	MS Mono To Stereo	0-1H
0-1C	Rename Sample	Sample Mono To Stereo	0-1I
0-1D	Delete MS	Keyboard Display	0-1J
0-1E	Copy MS	Grid	1-1M

2-1A: Truncate

This command deletes unwanted data that lies outside of the "Start (Start Address)," "LoopS (Loop Start Address)," and "End (End Address)" (2-1c). After setting the start address, loop start address, and end address of the sample, use this command to delete unwanted sample data.



- 1 Select this command to open the following dialog box.



- 2 "Range Start" and "End" will show the range of data that will be edited.
- 3 Use the radio buttons to select the portion that will be deleted.

Front & End: The sample data that lies before the "Range Start" (start address or loop start address) and after the "Range End" (end address or loop start address) will be deleted.

Front: The sample data that lies before the "Range Start" (start address) will be deleted.

End: The sample data that lies after the "Range End" (end address) will be deleted.

- 4 In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite" in 5, this cannot be set.

Stereo For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

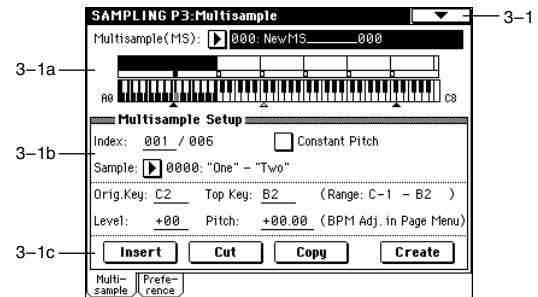
- 5 If you wish to delete the original sample data and overwrite it with the edited sample data, check "Overwrite" (☑️1-1).
- 6 To execute the Truncate command, press the **OK** button. To cancel, press the **Cancel** button.

note Normally you will leave "Save to No." at the default setting, and execute without checking "Overwrite." When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

Sampling P3: Multisample

Here you can make settings for multisamples. You can create indexes for a multisample, and then assign a sample to each index. (These basic settings can also be performed in P0.) In addition, you can delete, copy, or insert an index, and perform detailed editing such as adjusting the level and pitch of the sample for each index.

3-1: Multisample



3-1a: Multisample (MS), Keyboard & Index

Multisample (MS) [000...999]

Select the multisample that you wish to edit (☑️Link: 0-1a).

Keyboard & Index

(☑️Link: 0-1a)

3-1b: Multisample Setup

Index [xxx (001...127)/yyy (001...127)]

Select the index that you wish to edit (☑️Link: 0-1a).

You can also select an index by holding down the [ENTER] key and playing a note on the keyboard. The index that includes this note will be selected. The selected key will be the base key, and will be displayed in gray in "Keyboard & Index."

Constant Pitch

Checked: All notes in the zone of the index will sound at the pitch of the original key. Use this setting when you have sampled a drum sound or a rhythm loop, and want it to always playback at the original pitch.

Unchecked: The pitch will change in semitone steps, based on the original key. Use this setting when you have sampled a musical instrument sound etc. and would like to play it conventionally from the keyboard.

Stereo

This area will indicate "Stereo" if a stereo multisample or sample is selected, or if you sampled with a setting of **Stereo** in "Sample Mode" (0-1c) (☑️Link: 0-1c).

Sample [----: ---No Assign----, 0000...3999]

This shows the number and name of the sample that is assigned to the selected index. You can also select a sample here (☑️Link: 0-1b).

Orig.Key (Original Key) [C-1...G9]

Specify the original key of the sample (☑️Link: 0-1b).

Top Key [C-1...G9]

Specify the highest key in the zone of the index. The zone is defined by this "Top Key" (↔Link: 0-1b).

Range

This shows the range of the zone that is determined by the "Top Key" setting. The selected sample data will playback within this area. Zone settings for an index can also be viewed in "Keyboard & Index" (↔Link: 0-1a).

Level [-99...+99]

Adjust the playback level of the sample. Use this when you need to adjust the level balance between samples within a multisample.

0: Unity level

-: The level will be lowered. At a setting of -99 there will be no sound.

+: The level will be raised.

⚠ Since in Sampling mode the playback unity level will normally be the maximum level, adjustments in the + direction will have no effect. If **Volume (CC#07)** or **Expression (CC#11)** has been assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REAL-TIME CONTROLS knob [1]-[4] and these controllers have been operated, or if these MIDI messages have been received to lower the playback unity level, then adjustments in the + direction will be valid (↔p.7 "Level").

Pitch [-64.00...+63.00]

Adjust the playback pitch of the sample in one-cent steps (↔p.7 "Pitch").

0: The sample will sound at the original pitch when the original key is played.

-: The pitch will be lowered. At a setting of -12.00 the pitch will be one octave lower.

+: The pitch will be raised. At a setting of +12.00 the pitch will be one octave higher.

You can also use "Pitch" to make fine adjustments in the length of a rhythm loop. For example with a setting of +12.00, the playback speed will be doubled, and the loop playback time will be 1/2.

note The "Pitch BPM Adjust" page menu command lets you set the playback time in terms of a BPM value (↔3-1A).

3-1c: Insert, Cut, Copy, Create

Insert

This creates an index. When you press the **Insert button**, a new index will be created according to the "Position" setting (0-2a, 3-2a). At this time, the contents of the index that was cut or copied by "Cut" or "Copy" (i.e., the "Zone Range," "Original Key Position," "Level" and "Pitch") will be assigned at the same time. (The sample will automatically be copied or assigned to a different number.)

⚠ If it is not possible to create a new index when you execute "Create" or "Insert," a dialog box will appear. If this occurs, refer to "Create" (0-1b).

⚠ If you have not yet executed "Cut" or "Copy," such as immediately after power-on, the new index will be created according to the Create Zone Preference settings (0-3a, 3-2a) "Position," "Zone Range," and "Original Key Position."

Cut

This deletes the selected index. At the same time, the contents of the deleted index are copied to the "Insert" buffer.

Copy

This copies the content of the selected index to the "Insert" buffer.

Create

This creates an index. When you press the **Create button**, a new index will be created according to the settings of "Position," "Zone Range," and "Original Key Position" (3-2a, 0-3a) (↔Link: 0-1b).

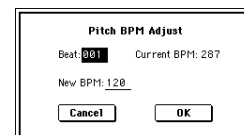
▼ 3-1: Page Menu Command

0-1A	Delete Sample	Convert MS To Program	0-1G
0-1B	Copy Sample	MS Mono To Stereo	0-1H
0-1C	Rename Sample	Sample Mono To Stereo	0-1I
0-1D	Delete MS	Keyboard Display	0-1J
0-1E	Copy MS	Pitch BPM Adjust	3-1A
0-1F	Rename MS		

3-1A: Pitch BPM Adjust

This command sets the "Pitch" (3-1b) of the selected index on the basis of a BPM value. Raising the pitch of sample playback will increase the playback speed. Lowering the pitch will slow down the playback speed. This can be used to match the loop length etc. of the sample to a tempo of the desired BPM value.

① Select this command to open the following dialog box.



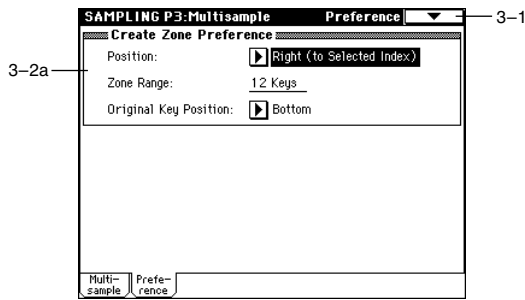
- ② Specify "Beat." This is specified in quarter-note beats.
- ③ "Current BPM" will show the BPM value at the base key (displayed in gray). This BPM value is calculated automatically from the start address to the end address of the sample (if looping is off) or from the loop start address to the end address (if looping is on). For example if the start and end address of the sample are two seconds apart, the original key is specified as the base key, and "Beat" is set to 4, "Current BPM" would be 120. If "Beat" is set to 2, the display would indicate "Current BPM" as 60.

⚠ It is not possible for this display to exceed the range of 40-480.

- ④ In "New BPM," specify the BPM value that will result from the conversion of the "Current BPM" value.
- ⑤ To execute the Pitch BPM Adjust command, press the **OK button**. To cancel, press the **Cancel button**. When you execute this command, the "Pitch" (3-1b) value will be set automatically. For example if you modify a quarter-note 120 BPM sample to 240 BPM, the "Pitch" will be set to +12.00.

⚠ This calculation is performed within the TRITON's limits of precision. Minor discrepancies may occur in the final BPM calculation.

3-2: Preference



3-2a: Create Zone Preference

Here you can specify the default settings for indices that are created by executing “Create” (3-1c, 0-1b). New indexes will be created according to the settings you specify here. You are free to modify the settings of an index later. Also, when you execute “Insert” (3-1c), the “Position” setting specified here will be used (P0-3a).

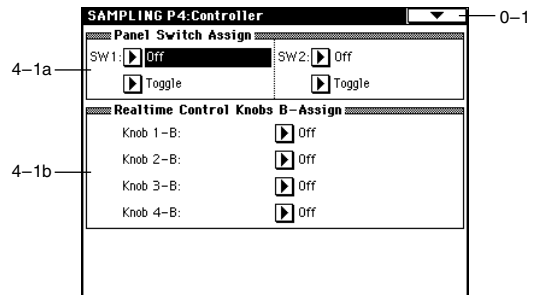
(P0-Link: P0 “Create Zone Preference”)

Sampling P4: Controller Setup

4-1: Controller Setup

Specify the functions that the [SW1] key, [SW2] key, and the B-mode functions of the REALTIME CONTROL knobs [1]–[4] will have in Sampling mode.

⚠ In Sampling mode, it is not possible to use AMS to control program parameters.



4-1a: Panel Switch Assign

Assign the functions of the front panel [SW1] and [SW2] switches (P.217 “SW1, SW2 Assign List”).

SW1 (SW1 Assign)	[Off...After Touch Lock]
SW1 Mode	[Toggle, Momentary]
SW2 (SW2 Assign)	[Off...After Touch Lock]
SW2 Mode	[Toggle, Momentary]

P. “Panel Switch Assign” (Program P1: 1-4a).

4-1b: Realtime Control Knobs B-Assign

Assign the B-mode functions (mainly various types of control change) for the front panel REALTIME CONTROL knobs [1]–[4] (P.218 “Realtime Control Knobs B-Assign List”). The functions you specify here will operate when the front panel REALTIME CONTROL knobs [1]–[4] are operated in B-mode.

Knob 1-B	[Off...MIDI CC#95]
Knob 2-B	[Off...MIDI CC#95]
Knob 3-B	[Off...MIDI CC#95]
Knob 4-B	[Off...MIDI CC#95]

P. “Realtime Control Knobs B-Assign” (Program P1: 1-4b).

These controllers can be used to make realtime changes in effect dynamic modulation functions etc. while you sample.

Example settings

Here’s how you can assign knob [1] (B-mode) to control the “Wet/Dry” balance of the 044: Stereo/Cross Delay effect selected for IFX1, and use knob [2] (B-mode) to control the “Pan” after the IFX in realtime while you sample.

- ① Set “BUS (IFX) Select” (0-2a) to **IFX1**.
- ② Select **044: Stereo/Cross Delay** for “IFX1.”
- ③ Set the IFX1 tab “Wet/Dry” setting to **Dry**, “Src” to **KnobM1[+]**, and “Amt” to **+50**.
- ④ In Realtime Control Knobs B-Assign, set “Knob 1-B” to **Knob Mod.1 (CC#17)**, and set “Knob 2-B” to **Post IFX Pan (CC#08)**.

- ⑤ Press the front panel [REALTIME CONTROLS] key to make the “B” LED light.
- ⑥ Rotate knob [1], [2] and the panning of the external input sound and the delay will change. You can sample the sound while you modify it.

Sampling P8: Insert Effect

Here you can make insert effect settings for use in Sampling mode.

When you set the P0: Recording Input/Setup tab Audio Input (SAMPLING) parameters “Input 1, 2 BUS (IFX) Select” to IFX1, 2, 3, 4, or 5, the external input sound from the rear panel AUDIO INPUT 1 and 2 jacks will be sent to IFX1, 2, 3, 4, or 5 (insert effects 1, 2, 3, 4, 5) respectively. By selecting insert effects and making settings for them in this page, you can apply insert effects to the sound of the external input, and sample the result.

☞ For details on insert effects, refer to p.146 “8. Effect Guide.”

! In Sampling mode, master effects 1 and 2 and the master EQ cannot be used.

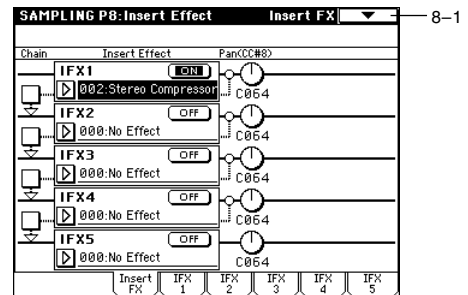
note Insertion effect settings in Sampling mode are not backed up when the power is turned off. If you wish to keep the insertion effect settings, you can use “Copy Insert Effect.”

For example, you can copy the insertion effect settings of Sampling mode to a program or combination in order save them. When you write the program or combination, the settings will be saved in internal memory. In Sampling mode, you can use “Copy Insert Effect” (8-1A) to copy these effect settings from the program or combination back into Sampling mode and use them.

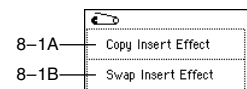
8-1: Insert FX

Here you can select insert effects, switch them on/off, make chain settings, and specify the pan of the sound after passing through the insert effect.

These parameters are the same as in Program mode. ☞ Program mode “8-2: Insert Fx”



▼ 8-1: Page Menu Command



8-1A: Copy Insert Effect

☞ “Program P8: 8-1A: Copy Insert Effect.”

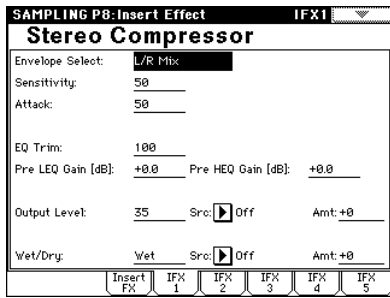
8-1B: Swap Insert Effect

☞ “Program P8: 8-1B: Swap Insert Effect.”

- 8-2: IFX 1
- 8-3: IFX 2
- 8-4: IFX 3
- 8-6: IFX 4
- 8-5: IFX 5

Set the effect parameters for the IFX 1, 2, 3, 4 and 5 effects that you selected in the Insert FX tab (see p.207).

note Effect Dmod (dynamic modulation) is controlled by the global MIDI channel specified in Global Mode P1.



5. Song Play mode

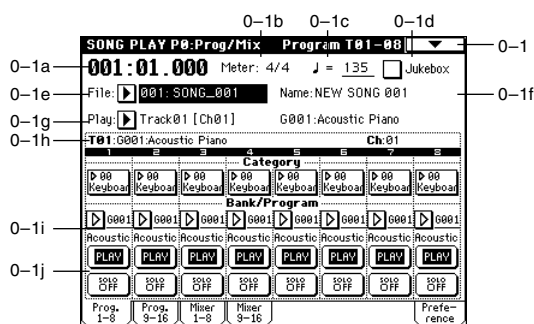
In Song Play mode you can load Standard MIDI Files (SMF) from floppy disk or external SCSI device, and play them directly as they are being loaded. A jukebox function is provided to playback these SMF files in any order you specify. You can also use the arpeggiator or realtime controllers during playback. In Song Play mode you can playback SMF data and make related settings. The TRITON is able to playback SMF format 0 or format 1 data.

Song Play P0: Program/Mix

0-1: Prog. 1-8 (Program T01-08)

0-2: Prog. 9-16 (Program T09-16)

Here you can make settings for SMF playback, and make basic settings such as selecting the program for each track.



0-1a: Location [001:01:000...999:15.191]

This is the current location of the SMF. From the left, this is the measure, beat, and clock. Modifying these values will change the current location.

MIDI When you change the location, a Song Position Pointer message will be transmitted.

0-1b: Meter

This indicates the time signature at the current location of the SMF.

0-1c: ♩ (Tempo) [40...240]

Specify the playback tempo of the SMF. In Song Play mode, this tempo will be used regardless of the "MIDI Clock" setting (Global P1: 1-1a).

0-1d: Jukebox

Checked: SMF files in the jukebox list will be played back in succession. You will also check this when you wish to create a jukebox list. In the Jump menu (displayed when you press the [MENU] key), press the Jukebox button, select the P3: Jukebox, and create the list.

0-1e: File (File select) [000...999]

From a floppy disk, select the SMF that you wish to play back. You can select SMF files from the currently selected directory. If you wish to select from another directory, use the P3: Select Directory to select the directory. When "Jukebox" (0-1d) is checked, you can select SMF files from the jukebox list in the P3: Jukebox. This parameter will not be displayed if there are no SMF files in the directory, or if no SMF files have been registered in the jukebox list.

0-1f: Name

This displays the song name of the selected SMF.

0-1g: Play Track Select [Track01...Track16]

Select the track (channel) that will sound when you play the keyboard. The bank number, program number, and name of the program selected for the play track will be displayed.

MIDI In Song Play mode, MIDI channels 1-16 correspond to tracks 1-16.

0-1h: Selected Track Information

This area displays information on the track (1-16) currently selected for editing.

T (Track) No.: Bank No.: Prog No. and name

This displays the track number, and the bank, number and name of the program selected for that track.

Ch [01...16]

This displays the MIDI channel number of the track.

0-1i: Program T01...08

0-2i: Program T09...16

Category (Category Name) [00...15: name]

The program used by each track can be selected by category. When you press the popup button, the Category/Track Program menu (≡Program P0: Category/Program Select 0-1a) will appear, allowing you to select programs by category. This is convenient when you wish to search for programs in a specific category, or to select a different program from the same category.

Bank/Program [A...F/0...127, G...g(d)/1...128]

Select the program that will be used by the track. When you press the popup button, the Bank/Track Program menu (≡Program P0: 0-1a) will appear, allowing you to select programs by bank. When this edit cell is selected, you can use the front panel [BANK] keys, numeric keys, [VALUE] dial, [VALUE] slider, or [△] [▽] keys to select a program. At this time, the [BANK] key LED's will light to indicate the selected bank.

MIDI When "Status" (1-1a, 2a) is INT or BTH, programs can be selected by receiving MIDI program change messages. Tracks 1-16 will be controlled by MIDI channels 1-16 respectively.

0-1(2)j: PLAY/MUTE, SOLO ON/OFF

PLAY/MUTE

[PLAY, MUTE]

This sets the play/mute status of each track. The setting will alternate each time you press the **PLAY/MUTE** button.

PLAY: The track will play.

MUTE: The track will be muted.

SOLO ON/OFF

[SOLO ON, SOLO OFF]

Switch the Solo function on/off. Only the track set to **SOLO ON** will be heard. All other tracks will be muted.

MIDI If a track muted by the Mute or Solo function has a "Status" (1-1a, 2a) of **EXT** or **BTH**, the MIDI note-on/off messages of that track will not be transmitted. (However, the track selected by "Play Track Select" (0-1g) is an exception.)

▲ If the page menu command "Solo Selected Track" (0-1B) is ON, its solo settings will take priority (when ON). When you press "SOLO ON/OFF" or press a parameter of another track, only that track will be soloed and will sound.

▼ 0-1: Page Menu Command

0-1A	GM Initialize
0-1B	Solo Selected Track
0-1C	Load Template Song
0-1D	Save Template Song
0-1E	Set Location

0-1A: GM Initialize

This command transmits a GM System On message to Song Play mode, resetting all tracks to the GM settings (refer to the table below).

MIDI In Song Play mode when a GM System On message is received from an external device or if the SMF contains a GM System On message, the tone generator will be reset to the GM settings in the same way as when this command is executed (However even in these cases, the parameters of the P9: Master Effect will not be reset).

0-1B: Solo Selected Track

When you select this command and check the menu page, only the selected track will sound and the remaining tracks will be muted (the Solo function). To solo a different track, select one of the parameters of that track (☞Sequencer P0: 0-1B).

MIDI If a track muted by the Mute or Solo function has a "Status" (1-1a, 2a) of **EXT** or **BTH**, the MIDI note-on/off messages of that track will not be transmitted.

0-1C: Load Template Song

This command loads a preset template song (one of sixteen types P00-15) or a user template song (one of sixteen types U00-15) into the song (☞Sequencer P0: 0-1G).

0-1D: Save Template Song

This command saves the programs, the track parameters, and the effect settings etc. as a user template song U00-15 (☞Sequencer P0: 0-1H).

The settings that are saved here can also be loaded in Sequencer mode.

0-1E: Set Location

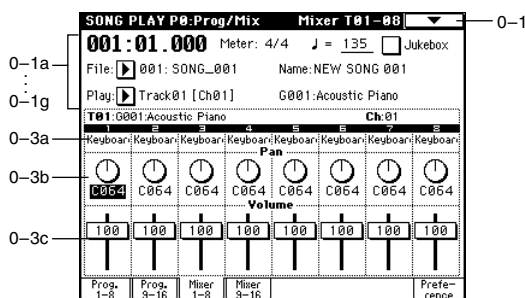
By pressing the [LOCATE] key you can move to the location specified here (☞Sequencer P0: 0-1J).

	Parameter	Track1-9, 11-16	Track10	
P0	Bank/Program	G000:*A.Piano	g(d)000:STANDARD KIT	
	Pan	C064	C064	
	Volume	100	100	
P1	Status	-	-	The setting remains unchanged
	Use Program's Scale	-	-	The setting remains unchanged
P7	Arpeggiator Assign	-	-	The setting remains unchanged
	Other Arpeggiator parameters	-	-	The setting remains unchanged
P8	IFX/Indiv.Out BUS Select	L/R	DKit	
	Send1(MFX1)	0	0	
	Send2(MFX2)	40	40	
	IFX1-5	-	-	The setting remains unchanged
	Pan(CC#8)	-	-	The setting remains unchanged
	BUS Select	-	-	The setting remains unchanged
	Send1	-	-	The setting remains unchanged
	Send2	-	-	The setting remains unchanged
	Other Insert Effect parameters	-	-	The setting remains unchanged
P9	MFX1	-	-	016: Stereo Chorus
	MFX2	-	-	053: Reverb Smooth Hall
	Return1	-	-	127
	Return2	-	-	050
	Other Master Effect and Master EQ parameters	-	-	Default settings

0-3: Mixer 1-8 (Mixer T01-08)

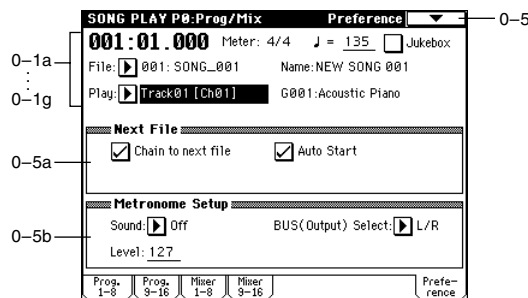
0-4: Mixer 9-16 (Mixer T09-16)

Set the pan and volume for each track (channel).



0-5: Preference

Here you can make settings for playing SMF files consecutively, and make settings for the metronome.



0-3(4)a: Program Category

This area displays part of the category name for the program used by each track.

0-3(4)b: Pan

Pan (Panpot) [RND, L001...C064...R127]

Set the panning for each track (channel) 1-16 (Sequencer P0: 0-3b).

MIDI Tracks whose "Status" (1-1a, 2a) is INT or BTH can receive MIDI control change (CC) #10 to control the panpot. When receiving CC#10, a value of 0 or 1 will be far left, 64 will be center, and 127 will be far right. Tracks 1-16 will be controlled by MIDI channels 1-16 respectively.

0-3(4)c: Volume

Volume [0...127]

Set the volume of each track (channel) 1-16.

MIDI Tracks whose "Status" (1-1a, 2a) is INT or BTH can receive MIDI control change (CC) #7 to control the volume. The actual volume of a track is determined by multiplying the MIDI volume (CC#7) and expression (CC#11) values. Tracks 1-16 will be controlled by MIDI channels 1-16 respectively.

0-5a: Next File

Specify whether or not the next file will be played back in succession when the currently selected SMF finishes playing.

Chain to next file

Checked: When the currently selected file finishes playing, the next file will automatically be selected.

Auto Start

Checked: When the currently selected SMF finishes playing, the next file will automatically begin playing. This is valid when "Chain to next file" is checked.

0-5b: Metronome Setup

Make settings for the metronome.

Sound [On, Off]

On: The metronome will sound during playback. The sound of the metronome will be output to the bus selected by "BUS Select."

BUS (Output) Select (BUS Select) [L/R, L, R, 1, 2, 3, 4, 1/2, 3/4]

Specify the output destination of the metronome sound (Sequencer P0: 0-7b).

Level [000...127]

Set the volume of the metronome.

▼ 0-5: Page Menu Command

Sequencer "▼ 0-1: Page Menu Command."

However, "Solo Selected Track" (0-1B) can not be selected.

Song Play P1: Track

For each track, you can specify the status of the internal tone generator and the scale.

1-1: Status 1-8 (Status/Scale T01-08)

1-2: Status 9-16 (Status/Scale T09-16)



1-1(2)a: Status [INT, Off, BTH, EXT]

Specify whether each track will transmit/receive MIDI data and/or sound the internal tone generator.

INT: When you play the musical data of this track, or operate the TRITON's keyboard or controllers when "Play Track Select" (0-1g) is set to a track whose setting is **INT**, the TRITON's internal tone generator will sound, but MIDI messages will not be transmitted to external devices.

Off: The program will not sound, nor will MIDI messages be transmitted.

BTH: The operations of both **INT** and **EXT** will occur. When you play the musical data of this track, or operate the TRITON's keyboard or controllers when "Play Track Select" (0-1g) is set to a track whose setting is **BTH**, the TRITON's internal tone generator will sound, and MIDI messages will also be transmitted to external devices.

EXT: When you play the musical of this track, or operate the TRITON's keyboard or controllers when "Play Track Select" (0-1g) is set to a track whose setting is **EXT**, MIDI messages will be transmitted to external devices, but the TRITON's internal tone generator will not sound.

A GM System On message will cause settings for a GM reset to be transmitted via MIDI.

Status	Musical data Keyboard and controller operations		Received data	
	Internal tone genera- tor	MIDI OUT	Internal tone genera- tor	MIDI OUT
INT	●	×	●	—
EXT	×	●	×	—
BTH	●	●	●	—

1-1(2)b: Use Program's Scale

For each track you can specify whether or not the scale specified for the program in "Scale" (Program P1: 1-1c) will be used.

Checked: The scale specified by the program will be used.

Unchecked: The scale specified by "Scale" (1-1c, 2c) will be used.

1-1(2)c: Scale

Select the scale that will be used in Song Play mode.

Type [Equal Temperament...User Octave Scale15]

Select the scale type (≡"Type" Program P1: 1-1c).

Key (Scale Key) [C...B]

Select the tonic key of the selected scale (≡"Key" Program P1: 1-1c).

Random [0...7]

As this value is raised, an increasing amount of random deviation will be applied to the pitch at note-on (≡"Random" Program P1: 1-1c).

1-3: MOSS 1-8 (MOSS Setup T01-08)

1-4: MOSS 9-16 (MOSS Setup T09-16)

This page is displayed when the separately sold EXB-MOSS option has been installed. For details refer to the EXB-MOSS owner's manual.

Song Play P2: Controller Setup

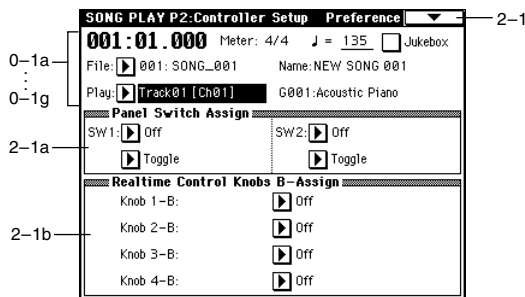
Specify the functions that the [SW1] key, [SW2] key, and the B-mode functions of the REALTIME CONTROL knobs [1]–[4] will have in Song Play mode. The functions you specify can be used when playing the track selected by “Play Track Select.”

MIDI If the track you select in “Play Track Select” has a “Status” (1–1a, 2a) setting of either **BTH** or **EXT**, operating a controller that has been assigned a CC# will cause MIDI control change (CC#) messages to be transmitted on the MIDI channel of that track.

▼ 2–1: Page Menu Command

0–1C	Load Template Song
0–1D	Save Template Song
0–1E	Set Location

2–1: Controller Setup (Preference)



2–1a: Panel Switch Assign

Assign the functions of the front panel [SW1] and [SW2] switches (see p.217 “SW1, SW2 Assign List”). Since the [SW1] and [SW2] functions of the program assigned to each track will not be valid, you can make new settings here.

SW1 **AMSource** [Off, ..., After Touch Lock]
Toggle/Momentary [Toggle, Momentary]
SW2 **AMSource** [Off, ..., After Touch Lock]
Toggle/Momentary [Toggle, Momentary]

☞ “Panel Switch Assign” (Program P1: 1–4a).

2–1b: Realtime Control Knobs B-Assign

Assign the B-mode functions (mainly various types of control change) for the front panel REALTIME CONTROL knobs [1]–[4] (see p.218 “Realtime Control Knobs B-Assign List”). The functions you specify here will operate when the front panel REALTIME CONTROL knobs [1]–[4] are operated in B-mode.

Since the REALTIME CONTROL knobs [1]–[4] B-mode functions of the program assigned to each track will not be valid, you can make new settings here.

Knob 1–B **AMSource** [Off, ..., MIDI CC#95]
Knob 2–B **AMSource** [Off, ..., MIDI CC#95]
Knob 3–B **AMSource** [Off, ..., MIDI CC#95]
Knob 4–B **AMSource** [Off, ..., MIDI CC#95]

☞ “Realtime Control Knobs B-Assign” (Program P1: 1–4b).

Song Play P3: Select Directory/ Jukebox

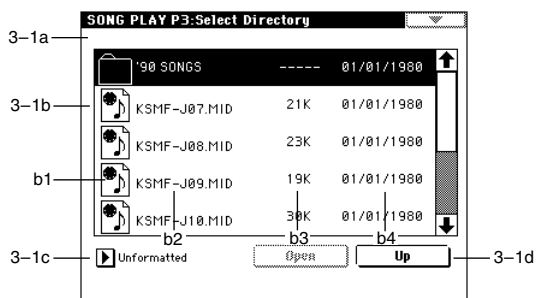
The content that is displayed will depend on the “Juke” (0-1d) setting.

Checked: “3-1: Select Directory” will be displayed.

Unchecked: “3-1: Jukebox” will be displayed.

3-1: Select Directory

From a listing of the contents of a floppy disk inserted into the floppy disk drive, or an external hard disk or other SCSI device connected to the SCSI interface (when the separately sold EXB-SCSI option is installed), select the directory that contains the SMF you wish to play.



3-1a: Current directory

The currently displayed directory selected for operations is called the “current directory.”

The full pathname of the directory will be shown in the LCD screen. A slash “/” is used to delimit levels of the directory hierarchy.

You can use the **Open button** and **Up button** to change the current directory.

3-1b: Directory window

File information for the current directory is shown here. You can select a file or directory in this window.

b1: Files/icons

These indicate SMF and DOS directory files. (For details on icons, refer to Disk mode “Files, directories, and icons” (p.131).)

b2: File name

This is the name of the SMF.

b3: Size

This is the size (number of bytes) of the SMF.

b4: Save date

This is the date (from the left: day, month, year) that was assigned when the SMF was saved.

3-1c: Drive select

Select the device that will be used for playback. The volume label assigned to the media will be displayed. If the media has no volume label, the display will indicate “no label.” If the media is unformatted, the display will indicate “Unformatted.”

When the TRITON is shipped, only floppy disks can be selected here. If the EXB-SCSI option is installed, you can select external SCSI devices that are connected.

3-1d: Open button, Up button

Open button

When you press the **Open button** the directory will be opened, and the current directory will move one level downward in the directory hierarchy.

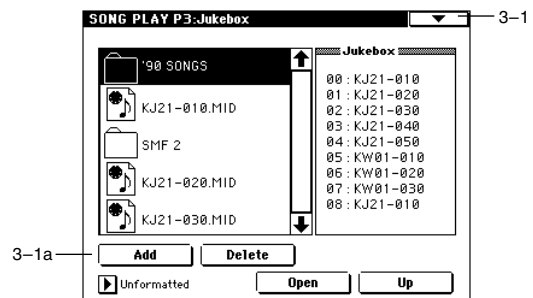
Up button

When you press the **Up button**, the current directory will move one level upward in the directory hierarchy.

This button is available when a directory is selected in the directory window.

3-1: Jukebox

Here you can create a jukebox list to specify the order in which SMF songs will be played. Up to 100 songs can be registered in a jukebox list. Lists can be saved and loaded using page menu commands 3-1B and 3-1A. Before saving to a disk, you must turn off the write protect setting of the disk.



3-1a: Add button, Delete button

Add button

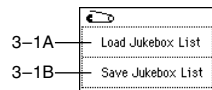
This adds a SMF to the jukebox list.

In the directory window, select the SMF that you wish to add to the jukebox list, and press this button to add the SMF to the list.

Delete button

This deletes an SMF from the jukebox list.

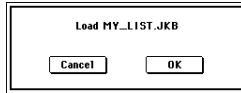
▼ 3-1: Page Menu Command



3-1A: Load Jukebox List

This command loads the jukebox list that you wish to use.

- ① In the directory window, select a jukebox list file (file-name extension .JKB), and then select this command. The following dialog box will appear.

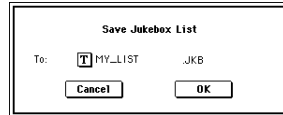


- ② To load the jukebox list, press the **OK** button. To cancel, press the **Cancel** button.

3-1B: Save Jukebox List

This command saves the jukebox list you created as a file.

- ① Create a jukebox list, and then select this command to open the following dialog box.



- ② Press the text edit button to move to the text edit dialog box, and input a filename.
- ③ To save the jukebox list, press the **OK** button. To cancel, press the **Cancel** button. When you press the **OK** button, the jukebox list file will be saved on the media that is selected in drive select.

Song Play P7: Arpeggiator

Here you can make arpeggiator settings for use in Song Play mode. By assigning the arpeggiator(s) to the play track, you can produce arpeggios in synchronization with the SMF data that is being played back.

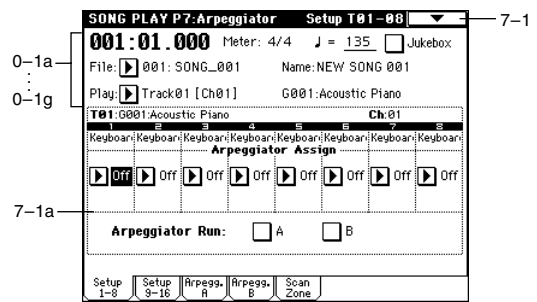
If you assign arpeggiators A and B to two different tracks, you can switch play tracks to switch arpeggiators. While you perform, you can also modify the arpeggio pattern or parameters, and operate the [GATE] and [VELOCITY] knobs.

The arpeggiator can be synchronized to the start of SMF playback.

- Turn on the arpeggiator and press the [START/STOP] key, and the arpeggiator will synchronize with the playback timing of the SMF.
- If you press the [START/STOP] key, and both the SMF playback and the arpeggiator will stop. If you wish to stop only the arpeggiator, turn off the ARPEGGIATOR [ON/OFF] key.

7-1: Setup 1-8 (Setup T01-08)

7-2: Setup 9-16 (Setup T09-16)



7-1(2)a: Arpeggiator Assign, Arpeggiator Run

Arpeggiator Assign [Off, A, B]

When the front panel ARPEGGIATOR [ON/OFF] key is on, the arpeggiator(s) will function according to the "Arpeggiator Run A, B" settings and the settings of each track.

Off: The arpeggiator will not operate.

A: Arpeggio A will operate. In the Arpeggiator A tab you can select the arpeggio pattern and set the parameters.

B: Arpeggio B will operate. In the Arpeggiator B tab you can select the arpeggio pattern and set the parameters.

Select either arpeggiator **A** or **B** for the play track that you will be playing manually along with the SMF playback. If you select an arpeggiator for two or more tracks, the arpeggiator will sound all the tracks to which it is assigned.

As another possibility, you can assign arpeggiator **A** and **B** to two tracks, select one track as the play track to be controlled from the keyboard, and control the other track from an external MIDI device connected to MIDI IN.

The arpeggiator will not be applied to notes played back from an SMF.

MIDI If tracks 1–16 to which arpeggiator A or B are assigned have a track “Status” (1–1a, 2a) of either **INT** or **BTH**, they will be played by note data generated by the arpeggiator regardless of the “Ch” (0–1h) setting of each track. In the case of **BTH** or **EXT**, MIDI note data will be transmitted on the “Ch” of each track. In this case, arpeggiator A or B can be triggered by any MIDI channel specified by the “Ch” of a track 1–16 to which arpeggiator A or B is assigned. For example if arpeggiator A is assigned to tracks 1 and 2, the arpeggiator will be triggered by both MIDI channels 1 and 2.

If (“Local Control On” Global P1: 1–1a) is set to off, the arpeggiator will not be triggered by note data from the keyboard. The arpeggiator will be triggered only by note data from MIDI IN.

Example 1)

Here’s how you can use “Play Track Select” (0–1g) to switch between tracks 1 and 2 to use different arpeggiators for each track, in synchronization with SMF playback.

For tracks 1 and 2, set “Status” (1–1a, 2a) to **INT**. Assign arpeggiator A to track 1, arpeggiator B to track 2, and check “Arpeggiator Run A, B” (7–1a).

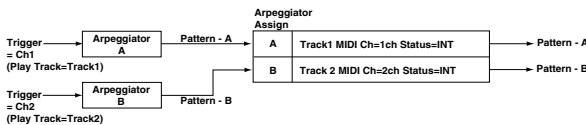
For “Play Track Select,” select **Track01**.

With the front panel **ARPEGGIATOR [ON/OFF]** key turned off, play the keyboard and track 1 will sound.

When you turn on the front panel arpeggiator **[ON/OFF]** key, arpeggiator A will run, and track 1 will sound.

Use “Play Track Select” to select **Track02**.

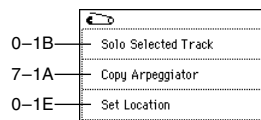
Arpeggiator B will run, and track 2 will sound.



Arpeggiator Run A, B

When the **ARPEGGIATOR [ON/OFF]** key is on, the arpeggiator(s) you check here will operate for the tracks to which they have been assigned. When the arpeggiator key is on, A and B can be turned on/off independently.

▼ 7–1: Page Menu Command



7–1A: Copy Arpeggiator

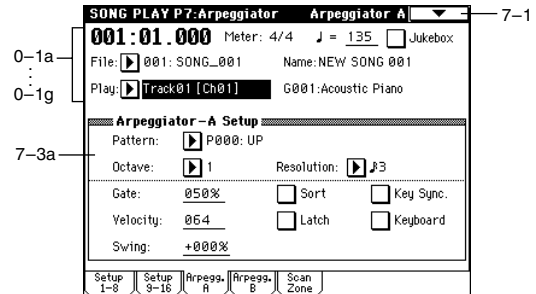
This command copies arpeggiator settings.

“Combination 7–1A: Copy Arpeggiator.”

7–3: Arpegg. A (Arpeggiator A)

7–4: Arpegg. B (Arpeggiator B)

In the Arpegg. A tab you can make settings for arpeggiator A, and in the Arpegg. B tab you can make settings for arpeggiator B. You can also use the “Copy Arpeggiator” page menu command to copy settings from another mode, such as Program mode.



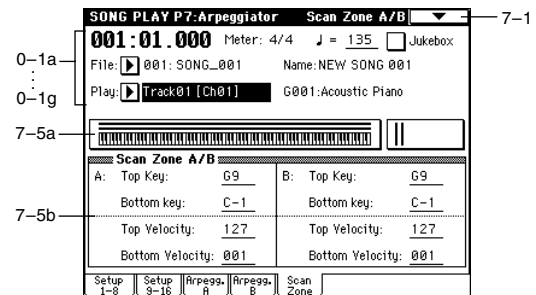
7–3(4)a: Arpeggiator–A(B) Setup

Pattern (Pattern No.)	[P00...P04, U00(A/B)...U231(D)]
Octave	[1, 2, 3, 4]
Resolution	[♯3, ♯, ♯3, ♯, ♯3, ♯]
Gate	[000...100(%) , Step]
Velocity	[001...127, Key, Step]
Swing	[–100...+100(%)]
Sort	
Latch	
Key Sync. (Keyboard Synchronize)	
Keyboard	

These are the arpeggiator parameters for the song (“Program 7–1: Arpeg. Setup (Arpeggiator Setup)”).

7–5: Scan Zone (Scan Zone A/B)

Here you can specify the range of notes and velocities that will control each arpeggiator A and B.



7–5a: Zone Map

This area displays the “Scan Zone” area for each arpeggiator A and B (“Combination “Zone Map” 7–4a).

7-5b: Scan Zone A/B

A:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Specify the range of notes (keys) that will trigger arpeggiator A. "Top Key" is the highest note of the range, and "Bottom Key" is the lowest note.

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of velocities that will trigger arpeggiator A. "Top Velocity" is the highest velocity of the range, and "Bottom Velocity" is the lowest velocity.

B:

Top Key [C-1...G9]

Bottom Key [C-1...G9]

Top Velocity [001...127]

Bottom Velocity [001...127]

Specify the range of notes (keys) and velocities that will trigger arpeggiator B (☞ "A").

note The value of these parameters can also be set by holding down the [ENTER] key and playing a note on the keyboard.

Song Play P8: Insert Effect

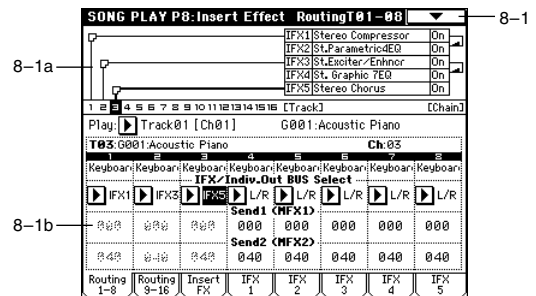
Here you can make insert effect settings. You can also specify the bus for the program used by each track 1-16.

☞ For details on the insert effects, refer to p.146 "8. Effect Guide."

8-1: Routing 1-8 (Routing T01-08)

8-2: Routing 9-16 (Routing T09-16)

Specify the bus to which the program oscillator of each track 1-16 will be sent. You can also set the send amount to the master effect.



8-1a: Routing Map

This displays the settings of the insert effects, showing the routing status, the name of the selected effect, the on/off status, and chaining. Effect type, on/off, and chain settings can be made in the Insert FX tabs.

8-1(2)b: IFX/Indiv.Out BUS Select (BUS Select), Send1 (MFX1), Send2 (MFX2)

IFX/Indiv.Out BUS Select (BUS Select)

[DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specify the bus to which the program oscillator of each track 1-16 will be sent. The status of these settings can also be viewed in "Routing Map" (☞ Combination P8-1: Routing).

☛ With a setting of 1/2 or 3/4, the program of each track 1-16 will be output in stereo from AUDIO OUTPUT (INDIVIDUAL) 1 and 2, or 3 and 4. If the panning of the program oscillator is controlled using CC#10 (pan) or AMS (Alternate Modulation Source) etc., the pan setting will be applied each time note-on occurs. Unlike the case with a setting of L/R when the sound is output from (MAIN) L/MONO and R, the panning of a sounding note will not move in realtime.

If you wish to make realtime changes in the panning of a sounding note and output the result from AUDIO OUTPUT (INDIVIDUAL) 1 and 2, or 3 and 4, set "BUS Select" to IFX1 (or IFX2-IFX5), select 000: No Effect for "IFX1" (or IFX2-IFX5) (8-3), and set the "BUS Select" (8-3) after the signal passes through the effects to either 1/2 or 3/4.

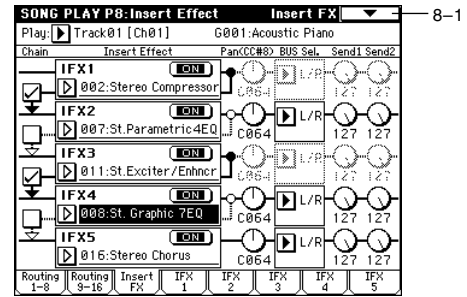
Send1 (MFX1) [000...127]
Send2 (MFX2) [000...127]

Specify the send levels from tracks 1–16 to master effects 1 and 2. This is valid when “BUS Select” (8–1b) is set either to L/R or Off. If IFX 1, 2, 3, 4, or 5 is selected, the send levels to master effects 1 and 2 are set by “Send 1” and “Send 2” (in the Insert FX tab) after the signal passes through IFX1–5. These settings are invalid if “BUS Select” is set to 1, 2, 3, 4, 1/2 or 3/4.

The send 1 and 2 settings you make here will be used when the SMF is played back from the beginning. You can also modify the settings during playback. However if the SMF contains send 1 or 2 data, the settings will change accordingly.

MIDI If “Status” 2–1a) is INT or BTH, MIDI control change (CC) #93 or #91 can be received to control send 1 or 2 and change the setting. Tracks 1–16 will be controlled by this data on MIDI channels 1–16 respectively. The actual send levels are determined by multiplying the value of these settings with the send level settings “Send 1” and “Send 2” (Program P8: 8–1d) of each oscillator of the program used by the track.

MIDI If “Status” (1–1a, 2a) is INT or BTH, MIDI control change (CC) #8, #93, and #91 will control the pan, send 1 and send 2 after the signal passes through the insert effect and will change the setting. This data will control the MIDI channels of IFX1–5 (8–4 – 8–8): IFX1–5 tabs respectively.



▼ 8–1: Page Menu Command

0–1B	Solo Selected Track
8–1A	Copy Insert Effect
8–1B	Swap Insert Effect
8–1C	DrumKit IFX Patch
0–1E	Set Location

8–1A: Copy Insert Effect

☞ “Program P8: 8–1A: Copy Insert Effect.”
 However, the MIDI control channel specified by “Ctrl Ch” in the IFX1–5 tabs will not be copied.

8–1B: Swap Insert Effect

☞ “Program P8: 8–1B: Swap Insert Effect.”
 However, the MIDI control channel specified by “Ctrl Ch” in the IFX1–5 tabs will not be swapped.

8–1C: DrumKit IFX Patch

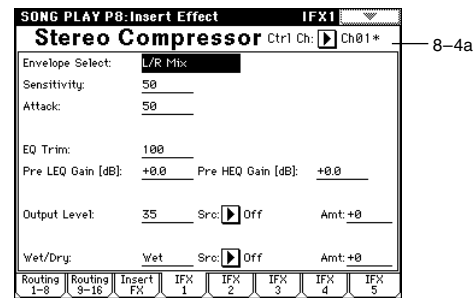
☞ “Combination P8: 8–1C: DrumKit IFX Patch.”

8–3: Insert FX

Here you can select the type of each insert effect, turn it on/off, and make chain settings etc. These parameters are the same as in Program mode. ☞ Program mode “8–2: Insert Fx.”
 However, unlike in Program mode, “Pan (CC#8),” “Send 1 (MFX1)” and “Send 2 (MFX2)” will be controlled on the MIDI channel specified in each of the IFX1–5 tabs. The control changes used are the same as in Program mode. The pan (CC#8) and send 1 and 2 settings you make here are used when you playback from the beginning of the SMF. You can change the settings during playback. However if the SMF contains pan (CC#8) or send 1 or 2 data, the settings will change accordingly.

- 8–4: IFX 1**
- 8–5: IFX 2**
- 8–6: IFX 3**
- 8–7: IFX 4**
- 8–8: IFX 5**

In the Insert FX tabs you can set the parameters for the effects you selected in IFX1–5 (☞ p.155).



8–4a: Ctrl Ch [Ch01...16, AllRouted]

MIDI Specify the MIDI channel that will control effect dynamic modulation (Dmod), pan following the insert effect (CC#8), Send 1 (CC#93), and Send 2 (CC#91).

An asterisk “*” will be shown at the right of the channel number Ch01–16 for each track that is routed through an IFX. If two or more tracks with different MIDI channels are routed, you can select here which of the channels will be used for control.

All Routed: Control will be possible on all of the MIDI channels of the routed tracks. An asterisk “*” will be shown for the Ch of routed tracks (channels).

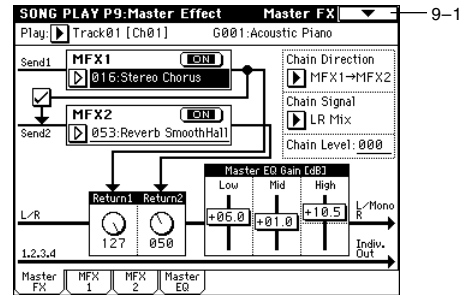
⚡ If the “BUS Select” (8–1b) of a track for which a drum program is selected has been set to **DKit**, the channel of that track will be effective when any of the IFX1–5 tabs has been set to **All Routed**, regardless of the drum kit “BUS Select” (Global P5: 5–2b) settings or the “Drum Kit IFX Patch” page menu command settings.

Song Play P9: Master Effect

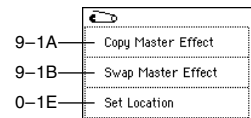
☞ For details on the master effects, refer to p.150 “8. Effect Guide.”

9–1: Master FX

Here you can select the type of each master effect, turn it on/off, and make chain and master EQ settings. These settings are the same as in Program mode. ☞ “Program 9–1: Master FX (Master Effects).”



▼ 9–1: Page Menu Command



9–1A: Copy Master Effect

☞ “Program P9: 9–1A: Copy Master Effect.”
However, the MIDI control channel specified by “Ctrl Ch” in the MFX1 and 2 tabs will not be copied.

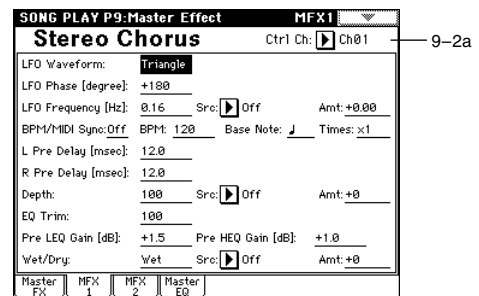
9–1B: Swap Master Effect

☞ “Program P9: 9–1B: Swap Master Effect.”
However, the MIDI control channel specified by “Ctrl Ch” in the MFX1 and 2 tabs will not be swapped.

9–2: MFX1

9–3: MFX2

Here you can set the parameters of the effects selected for MFX 1 and 2 in the Master FX tab (☞ p.155).

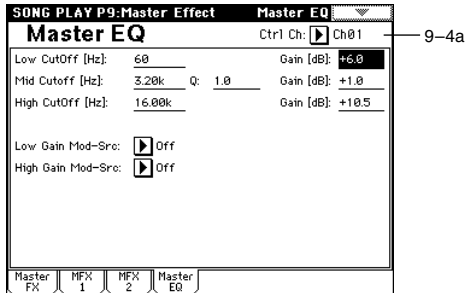


9-2a: Ctrl Ch**[Ch01...16, Gch]**

MIDI Specify the MIDI channel that will control dynamic modulation (Dmod) for the master effects. With a setting of **Gch**, the global MIDI channel "MIDI Channel" (Global P1: 1-1a) will be used for control.

9-4: Master EQ

The master EQ is a three-band stereo EQ. It is located immediately before the L/R bus is sent from the AUDIO OUTPUT (MAIN OUT) L/MONO and R, and is used to apply overall equalization (tonal adjustments) (see p.207).



9-4a: Ctrl Ch**[Ch01...16, Gch]**

MIDI Specify the MIDI channel that will control dynamic modulation (Dmod) for the master EQ. With a setting of **Gch**, the global MIDI channel "MIDI Channel" (Global P1: 1-1a) will be used for control.

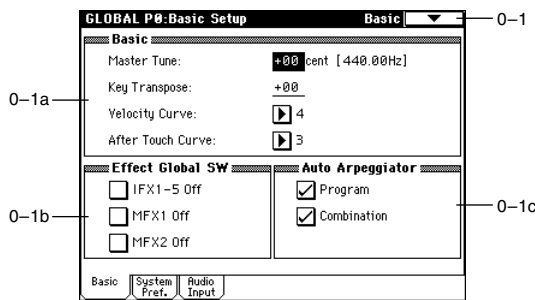
6. Global mode

In Global mode you can make settings that affect the entire instrument, such as master tuning, MIDI, and memory protect. You can also edit user scales, drum kit setups, and user arpeggio patterns.

- ⚠ If you want the settings you make in Global mode to be backed up when the power is turned off, you must write them into memory. To write your settings, use the page menu commands "Write Global Setting," "Write Drum Kits," or "Write Arpeggio Patterns." The front panel [REC/WRITE] key can also be used to access "Update Global Setting," "Update Drum Kits," and "Update Arpeggio Patterns." Simultaneously, the edited content will be written.

Global P0: Basic Setup

0-1: Basic



0-1a: Basic

Master Tune [-50cent (427.47Hz)...+50cent (452.89Hz)]

This adjusts the overall tuning of the entire TRITON in one-cent units (semitone = 100 cents) over a range of ± 50 cents. With a setting of 0, the frequency of A4 will be 440 Hz.

- ⚠ The A4 pitch given here is when **Equal Temperament** is selected as the scale. If a different scale is selected, A4 may not be 440 Hz.

MIDI The Global mode "Master Tune" setting can be controlled by receiving the MIDI universal exclusive message Master Fine Tuning (F0, 7F, nn, 04, 03, vv, mm, F7: nn= MIDI channel, vv/mm=value). This message is received on the global MIDI channel specified by "MIDI channel" (1-1a).

- ⚠ In Program, Combination, Sequencer, and Song Play modes, MIDI RPN fine tuning messages can be received to adjust the tuning of the program, the timbres (in Combination mode), or the tracks (in Sequencer/Song Play modes) relative to the Global mode "Master Tune" setting. In Program mode, MIDI RPN fine tune messages will be received on the global MIDI channel that you specified for "MIDI Channel" (1-1a). In other modes, MIDI RPN fine tune messages will be received on the MIDI channel for each timbre (in Combination mode) or track (in Sequencer/Song Play modes). (Refer to the "Detune" parameter of Combination mode and Sequencer mode.)

Key Transpose [-12...+12]

This adjusts the pitch in semitone steps over a ± 1 octave range.

This setting is applied at the location (**Pre MIDI** or **Post MIDI**) specified by "Convert Position" (1-1a).

Note number transmitted

Transpose	-12	0	+12
TRITON	24...84 (C1...C6)	36...96 (C2...C7)	48...108 (C3...C8)
TRITON pro	16...91 (E0...G6)	28...103 (E1...G7)	40...115 (E2...G8)
TRITON proX	9...96 (A-1...C7)	21...108 (A0...C8)	33...120 (A1...C9)

- MIDI** If the "Convert Position" (1-1a) is **Pre MIDI**, the range of note numbers transmitted from the TRITON will depend on this Key Transpose setting.

The Global mode "Key Transpose" setting can be controlled by receiving the MIDI universal exclusive message Master Coarse Tuning (F0, 7F, nn, 04, 04, vv, mm, F7: nn=MIDI channel, vv/mm=value). This message will be received on the global MIDI channel specified by "MIDI Channel" (1-1a).

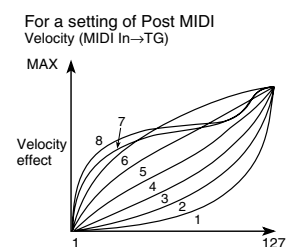
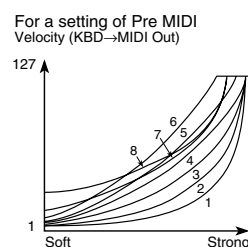
- ⚠ The Global mode "Key Transpose" setting is the basis from which relative adjustments are applied by incoming MIDI RPN Coarse Tune messages to adjust the tuning of a program or timbre (in Combination mode) or track (in Sequencer/Song Play modes). In Program mode, MIDI RPN Coarse Tune messages are received on the global MIDI channel specified by "MIDI Channel" (1-1a), and in other modes they are received on the individual MIDI channels specified for each timbre (Combination mode) or track (Sequencer/Song Play modes).

Velocity (Velocity Curve) [1...8]

This specifies the way in which the volume and/or tone will change in response to variations in keyboard playing dynamics (velocity).

When "Convert Position" (1-1a) is **Pre MIDI**, variations in keyboard playing dynamics will affect the velocity effect and the transmitted velocity data as shown in the left-hand diagram on the following page. Incoming data will automatically use the velocity curve number 4 shown in the right-hand diagram.

With a setting of **Post MIDI**, variations in keyboard playing dynamics and in the velocity of incoming data will create change as shown in the right-hand diagram on the following page. If you are playing the TRITON's tone generator from an external keyboard or sequencer, and the overall sound is too bright or too dark, you can set the "Convert Position" parameter to **Post MIDI** and select the appropriate velocity curve here. For the transmitted data, the velocity curve number 4 shown in the left-hand diagram will automatically be selected.



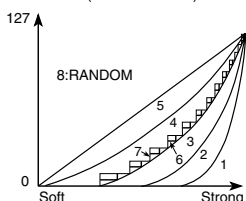
- 1: An effect will be obtained for strongly-played notes
- 2, 3: |
- 4: The normal curve
- 5: |
- 6: An effect will be obtained even if you do not play very strongly
- 7: A certain amount of effect will be obtained even for softly-played notes
- 8: This curve produces the most regular effect. This setting is suitable when you do not need velocity sensitivity, or when you wish to make the notes more consistent. However with this curve, control of softly-played notes will be more difficult, so use the curve that is most appropriate for your playing strength and style, and the effect that you wish to produce.

After Touch (After Touch Curve) [1...8]

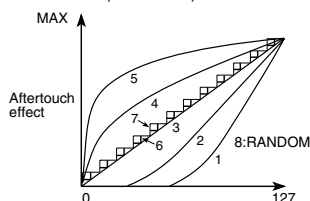
This specifies the way in which the volume and/or tone will change in response to variations in pressure (after touch) applied to the keyboard after playing a note.

When "Convert Position" (1-1a) is **Pre MIDI**, variations in after touch pressure will affect the after touch effect and the transmitted after touch data as shown in the left-hand diagram below. Incoming data will automatically use the after touch curve number 3 shown in the right-hand diagram. With a setting of **Post MIDI**, variations in after touch pressure and in the value of incoming after touch data will create change as shown in the right-hand diagram. For the transmitted data, the after touch curve number 3 shown in the left-hand diagram will automatically be selected.

For a setting of Pre MIDI After Touch (KBD→MIDI Out)



For a setting of Post MIDI After Touch (MIDI In→TG)



- 1: This curve produces change when strong after touch pressure is applied
- 2: |
- 3: The normal curve
- 4: |
- 5: This curve produces change even when light pressure is applied
- 6, 7: These curves produce change in 24 or 12 steps respectively, and are appropriate for when you are recording after touch data on the sequencer and wish to conserve memory. (Set the "Convert Position" to **Pre MIDI**.) Curve number 7 allows change over twelve steps, so when using after touch to modify the pitch, you can set the range of modification to one octave, and use after touch to vary the pitch in semitone steps.
- 8: This is a random curve. Use this when you wish to create special effects, or to use after touch to apply unpredictable modulation.

MIDI When "Convert Position" (1-1a) is **Pre MIDI**, the setting you make here will be applied immediately after the keyboard, meaning that it will affect the data transmitted via MIDI, but will not affect the received data. With a setting of **Post MIDI**, the setting you make here will be applied immediately before the TRITON's internal tone generator, meaning that it will affect the data received via MIDI, but will not affect the transmitted data.

When you use the TRITON's keyboard to play the internal tone generator, the "Convert Position" setting will make no difference.

0-1b: Effect Global Switch

IFX1-5 Off

- Checked:** All insert effects IFX1-5 will be off.
- Unchecked:** The P8: Insert Effect settings for IFX1-5 "On/Off" in Program, Combination, Sequencer, Song Play, and Sampling modes will be valid.

MFX1 Off

- Checked:** MFX1 will be off.
- Unchecked:** The P9: Master Effect setting MFX1 "On/Off" in Program, Combination, Sequencer, and Song Play modes will be valid.

MFX2 Off

- Checked:** MFX2 will be off.
- Unchecked:** The P9: Master Effect setting MFX2 "On/Off" in Program, Combination, Sequencer, and Song Play modes will be valid.

MIDI When IFX1-5 "On/Off," MFX1 "On/Off," or MFX2 "On/Off" settings are switched, control change messages CC#92 (effect control 2), CC#94 (effect control 4), and CC#95 (effect control 5) will be transmitted respectively. The transmitted data will be 0 for off, and 127 for on.

0-1c: Auto Arpeggiator

Program

- Checked:** When a different program is selected, the arpeggiator settings stored in that program will automatically take effect.
- Unchecked:** The state of the arpeggiator will not change when the program is switched. Use this setting when you wish to keep the arpeggiator running while you select different program sounds.

Combination

- Checked:** When a different combination is selected, the arpeggiator settings stored in that combination will automatically take effect.
- Unchecked:** The state of the arpeggiator will not change when the combination is switched. Use this setting when you wish to keep the arpeggiator running while you select different combination sounds.

▼ 0-1: Page Menu Command

0-1A	Write Global Setting
0-1B	Change all bank references
0-1C	Touch Panel Calibration
0-1D	Half Damper Calibration

0-1A: Write Global Setting

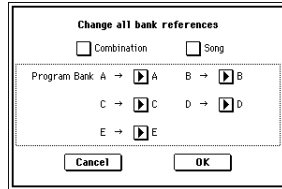
This command writes Global mode settings (except for Drum Kits and User Arpeggio Patterns). Press the **OK button** in the dialog box to execute the Write command. When you press the front panel [REC/WRITE] key, an "Update Global Setting" dialog box will appear. Press the **OK button** to write the settings.

Drum Kits and User Arpeggio Patterns are written using the P5 page menu command “Write Drum Kits” and the P6 page menu command “Write Arpeggio Pattern” respectively.

0-1B: Change all bank references

This command changes all program banks specified for timbres in combinations or tracks of songs.

- 1 Select this command to open the following dialog box.



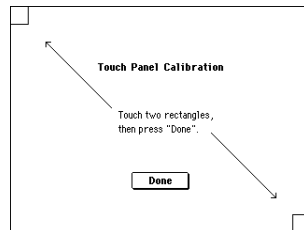
- 2 If you wish to change bank references for combinations, check “Combination.” If you wish to change bank references for songs, check “Song.”
- 3 In “Program Bank,” specify the replacement for each bank.
- 4 To execute the Change All Bank References command, press the **OK button**. To cancel, press the **Cancel button**.

⚠ If you change two or more different banks to the same bank, it will not be possible to use this function to change them back to different banks. Be careful that the change destination banks do not overlap.

0-1C: Touch Panel Calibration

If input via the LCD screen does not work as you expect, or if the edit cell moves to a location other than where you pressed the LCD screen, use this command to adjust the sensitivity of the LCD screen.

- 1 Select this command to open the following dialog box



- 2 If you are unable to select this command from the page menu, hold down the [ENTER] key and press the [2] key to access the command.
- 2 Press the square in the upper left of the LCD. When your touch has been detected correctly the square will be highlighted.
- 3 Press the square in the lower right of the LCD. When your touch has been detected correctly the square will be highlighted.
- 4 Press the **Done button**.
If your touch was not detected correctly, an error message will appear. Please perform the procedure once again.

0-1D:

Half Damper Calibration

If the damper pedal effect does not apply correctly when you are using a half-damper compatible pedal the separately sold DS-1H option, use this command to adjust the sensitivity of the damper pedal.

- 1 Connect a half-damper pedal to the DAMPER jack.

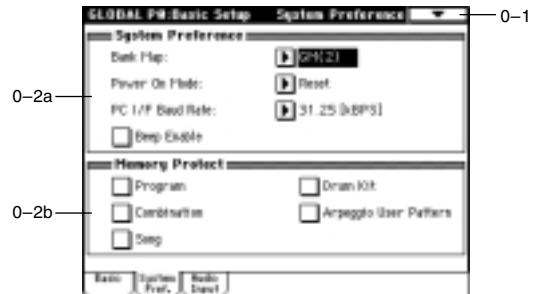
- 2 Select this command to open the following dialog box.



- 3 Press the half-damper pedal, and then release your foot from the pedal.
- 4 Press the **Done button**.
If the adjustment could not be performed correctly, an error message will be displayed. Please perform the procedure once again.

⚠ Since the half-damper pedal is highly sensitive, please use the optional DS-1H. Other pedals may not produce the appropriate effect, or may be impossible to calibrate correctly.

0-2: System Pref. (System Preference)



0-2a: System Preference

Bank Map

[KORG, GM(2)]

Specify the mapping of programs and combinations relative to Bank Select control change messages (CC#0 upper byte and CC#32 lower byte).

The following Bank Select messages will be received (R) and transmitted (T) for Program banks A, B, C, D, E, F (only for the separately sold EXB-MOSS option, G, g(1)–g(9), and g(d), and Combination banks A, B, C, and D.

Bank	KORG	GM(2)
A	00.00 R/T	3F.00 R/T
B	00.01 R/T	3F.01 R/T
C	00.02 R/T	3F.02 R/T
D	00.03 R/T	3F.03 R/T
E	00.04 R/T	3F.04 R/T
F	00.05 R/T	3F.05 R/T
G,	79.00, 79.01–09 R/T	79.00, 79.01–09 R/T
g(1)–g(9)	38.00 R	38.00 R 00.00, 00.01.. (XG)R 00.00, 01.00.. (GS)R
g(d)	78.00 R/T	78.00 R/T
	3E.00 R	3E.00 R
		3F.7F R→MUTE(Korg Mute)

Power On Mode

[Reset, Memorize]

Specify the condition at power-on.

Reset: The TRITON will be in Combination mode P0: Play, and Combination A000 will be selected.

Memorize: The location (mode and page) where you were when the power was last turned off, and the last-selected program or combination number will be selected.

⚠ This function does not memorize the contents of any parameters that were edited. Before turning off the power, be sure to write your data or save it in Disk mode.

PC I/F Baud Rate

[31.25, 38.40[kBPS]]

Select the data transmission rate at which data will be transmitted to a computer or MIDI device connected to the TO HOST connector.

31.25: Select this setting when you have connected an Apple Macintosh.

38.40: Select this setting when you have connected an IBM PC (compatible).

Beep Enable

Checked: A beep will be heard when you press an object in the LCD screen.

0-2b: Memory Protect

Program

This setting protects the internal program memory.

Checked: Internal program memory will be protected, and the following write operations cannot be performed.

Writing a program
Receiving program data via MIDI data dump
Loading program data from disk

Unchecked: Data can be written to internal program memory.

Combination

This setting protects the internal combination memory.

Checked: Internal combination memory will be protected, and the following write operations cannot be performed.

Writing a combination
Receiving combination data via MIDI data dump
Loading combination data from disk

Unchecked: Data can be written to internal combination memory.

Song

This setting protects the internal song memory.

However, when the power is turned off, the song data in song memory will be lost regardless of this setting.

Checked: Internal song memory will be protected, and the following write operations cannot be performed.

Recording to the sequencer
Receiving song data via MIDI data dump
Loading song data from disk

Unchecked: Data can be written to internal song memory.

Drum Kit

This setting protects the internal drum kit memory.

Checked: Internal drum kit memory will be protected, and the following write operations cannot be performed.

Writing a drum kit
Receiving drum kit data via MIDI data dump
Loading drum kit data from disk

Unchecked: Data can be written to internal drum kit memory.

Arpeggio User Pattern

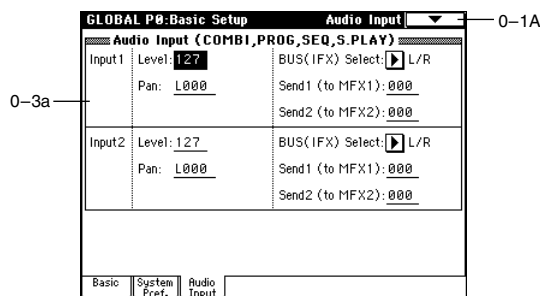
This setting protects the internal arpeggio user pattern memory.

Checked: Internal arpeggio user pattern memory will be protected, and the following write operations cannot be performed.

Writing an arpeggio user pattern
Receiving arpeggio user pattern data via MIDI data dump
Loading arpeggio user pattern data from disk

Unchecked: Data can be written to internal arpeggio user pattern memory.

0-3: Audio Input



0-3a: Audio Input (COMBI, PROG, SEQ, S.PLAY)

These settings specify the level, panning, and destination of the input from the rear panel AUDIO INPUT 1 and 2 jacks. These settings are valid in Combination, Program, Sequencer, and Song Play modes.

Insert effects, master effects, and master EQ can be applied to an audio signal from an external audio source. This allows you to use the TRITON as a two-in six-out effect processor, in conjunction with its internal tone generator. (Effect 093: Vocoder can also be used as a vocoder effect that controls an internal sound from an external mic input.)

⚠ These settings will have no effect in Sampling mode. If you move from Sampling mode to Global mode, the "Audio Input" settings of Sampling mode will be maintained, and it will not be possible to view settings. Please move here from a mode in which external audio signals can be input (Combination, Program, Sequencer, or Song Play mode). In Sampling mode, the rear panel AUDIO INPUT 1 and 2 settings can be made in the same way as here, using the parameters in Sampling P0: Input/Setup tab "Audio Input (SAMPLING)." In Sampling mode, you can record while applying insert effects to the external audio source that is input from AUDIO INPUT 1 and 2. (The master effects and master EQ cannot be used.)

Input1:

Input2:

Level [0...127]

The analog audio signal from AUDIO INPUT 1 and 2 is converted by an AD converter from an analog signal to a digital signal. This parameter sets the signal level immediately after the sound has been converted into a digital signal. Normally you will set this to 127. If the sound is still distorted even after this level is lowered significantly, it is possible that the sound is distorting before the AD converter. Adjust the rear panel [LEVEL] knob or the output level of the external audio source.

Pan [L000...C064...R127]

Set the panning of the signal from AUDIO INPUT 1 and 2. When inputting a stereo audio source, you will normally set Input 1 to L000 and Input 2 to R127 (or, Input 1 to R127 and Input 2 to L000). When inputting a monaural audio source, normally set this to C064.

BUS(IFX/Indiv.) Select
[L/R, IFX1...5, 1, 2, 3, 4, 1/2, 3/4, Off]

In the same way as for the oscillators of a program, this parameter specifies the bus to which the external input of AUDIO INPUT 1 and 2 will be sent (see 8. Effect Guide, Insert Effect "2-4. Audio Input").

Send1 (to MFX1), Send2 (to MFX2) [000...127]

In the same way as for the oscillators of a program, this parameter specifies the send levels from the external input of AUDIO INPUT 1 and 2 to the master effects. If "BUS (IFX) Select" is set so that an insert effect is being applied to the external input, the send levels to the master effects are set after the signal passes through IFX1-5 by "Send 1" and "Send 2" (Program 8-2a, Combination, Sequencer, Song Play). (see 8. Effect Guide, Master Effect "2-4. Audio Input.")

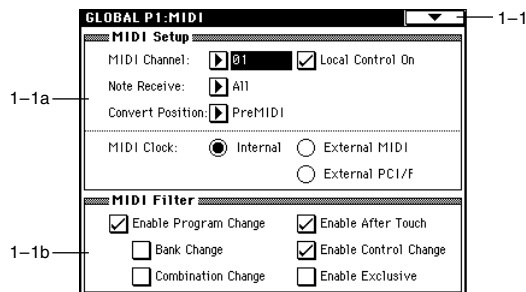
⚠ When the "BUS (IFX/Indiv.) Select" setting is other than Off and the "Level" value is raised, the external input sound will be input to the TRITON. If audio cables are connected to the rear panel AUDIO INPUT 1 and 2 jacks at this time, noise will be input via the AD converters (even if there is no incoming audio signal) into the TRITON, and, depending on your settings, in some cases may be output from the AUDIO OUTPUT L/R, 1, 2, 3, 4 jacks. If you are not using an external audio input source, and are only playing programs, combinations, or songs etc. that use the TRITON's internal sounds, turn "BUS (IFX/Indiv.) Select" Off, or set "Level" to 0.

If audio cables are not connected to the rear panel AUDIO INPUT 1 and 2 jacks, the input data that passes from the AD converter into the TRITON will be forced to zero, so that no noise will be input.

Global P1: MIDI

1-1: MIDI

Here you can make MIDI-related settings that affect the entire TRITON.



1-1a: MIDI Setup

MIDI Channel (Global MIDI Channel) [1...16]

Set the global MIDI channel.

The global MIDI channel is used to transmit and receive musical data in Program mode (P0: Play), to select combinations via MIDI in Combination mode (P0: Play), in all modes to control timbres or effects for which Gch is selected as the channel, and to transmit and receive system exclusive messages.

About MIDI reception

In Program mode (P0: Play), MIDI data is received on the global MIDI channel, but in Combination mode (P0: Play) or Sequencer mode, MIDI data is received on the MIDI channel specified for each timbre or track.

In Combination mode (P0: Play), program changes received on the global MIDI channel will switch the combination.

Use the global MIDI channel to switch IFX 1-5, MFX1 and MFX2 on/off. To control the pan following IFX, sends 1/2, MFX 1/2 and MEQ, use the global MIDI channel in Program or Sampling mode; in Combination, Sequencer, or Song Play mode, use the channel specified separately by "Ctrl Ch" for IFX1-5, MFX1, MFX2, and MEQ. By setting "Ctrl Ch" to Gch, you can control these parameters from the global MIDI channel.

MIDI transmission when the TRITON's keyboard or controllers are operated

In Sequencer, Song Play modes, musical data will be transmitted on the channel specified for the currently selected track (whose "Status" is BTH, EXT, or EX2). However in other modes, data will be transmitted on the global MIDI channel. In Combination mode, data will be transmitted simultaneously on the global MIDI channel and on the MIDI channels of timbres whose "Status" (Combination 0-1f, 2-1a) is set to EXT or EX2.

Local Control On

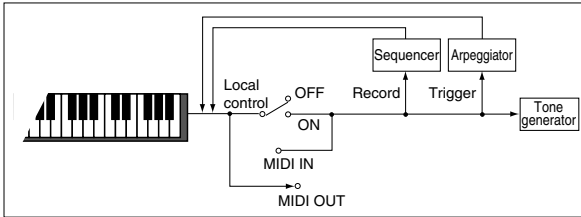
Checked (Local Control On): The TRITON's internal tone generator will be controlled by its own keyboard, joystick, SW1 and SW2, and connected foot pedal. If you are playing the TRITON by itself, leave this setting checked.

Unchecked (Local Control Off): The TRITON's keyboard and joystick etc. will be disconnected from the internal tone generator.

This means that operating the TRITON (playing its keyboard and using the joystick, or playing back the sequencer) will not sound its internal tone generator.

Uncheck this setting if echo-back from an external sequencer causes notes to be sounded in duplicate.

MIDI Even if this setting is unchecked, MIDI transmission and reception will occur normally. Playing the keyboard will cause the corresponding note data to be transmitted, and received note data will sound the TRITON's internal tone generator.



Note Receive (Note Receive Filter) [All, Even, Odd]

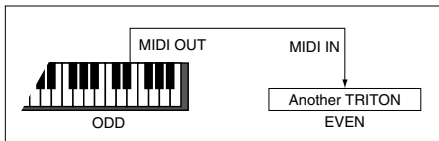
This setting specifies whether even-numbered, odd-numbered, or all note numbers will be sounded when note data is received from the TRITON's keyboard or from an external MIDI device. By connecting the TRITON to another TRITON and setting one instrument to **Even** and the other to **Odd**, you can effectively double the polyphony by dividing the notes between the two instruments.

All: All note numbers will be received. Normally you will leave this set to **All**.

Even: Even-numbered notes (C, D, E, F#, G#, A#) will sound.

Odd: Odd-numbered notes (C#, D#, F, G, A, B) will sound.

MIDI This setting has no effect on the MIDI data that is received.



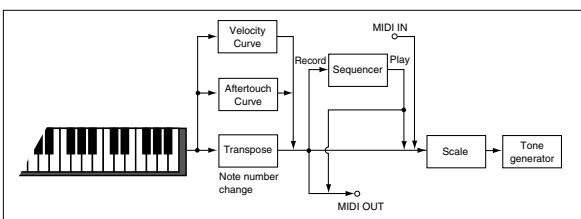
Convert Position [Pre MIDI, Post MIDI]

This setting specifies the location at which the Transpose, Velocity Curve, and After Touch Curve settings will be applied. This setting will affect the MIDI data that is transmitted and received, and the data that is recorded on the internal sequencer.

When using the TRITON's keyboard to play the internal tone generator, the Transpose, Velocity Curve, and After Touch Curve settings will always take effect regardless of this setting.

Pre MIDI: Velocity Curve, After Touch Curve, and Transpose will be applied to the data that is transmitted from the TRITON's keyboard.

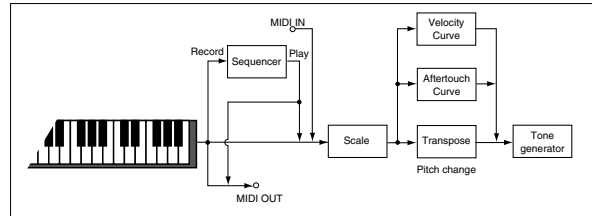
This means that the Velocity Curve, After Touch Curve, and Transpose settings will affect the data that is transmitted from MIDI OUT when the TRITON's keyboard is played, and the data that is recorded on the internal sequencer. MIDI data received from MIDI IN or the data played back by the internal sequencer will not be affected.



Post MIDI: Velocity Curve, After Touch Curve, and Transpose will be applied to data before it enters the tone generator.

This means that the Velocity Curve, After Touch Curve, and Transpose settings will affect the data that is sent to the internal tone generator when you play the TRITON's keyboard, when the internal sequencer is played back, or when data is received from MIDI IN.

This setting will not affect the data that is transmitted from MIDI OUT or recorded on the internal sequencer when you play the TRITON's keyboard or playback the sequencer.



MIDI Clock (MIDI Clock Source) [Internal, External MIDI, External PCI/F]

Set this parameter when you wish to synchronize an external MIDI device (sequencer or rhythm machine etc.) with the TRITON's internal arpeggiator or sequencer.

Internal: The internal arpeggiator and sequencer will synchronize to the TRITON's own internal clock.

Select the **Internal** setting when using the TRITON by itself, or when you want the TRITON to be the **master** (controlling device) so that another connected external MIDI device will synchronize to the MIDI Clock messages transmitted from the TRITON.

External MIDI: The arpeggiator and sequencer of the TRITON will synchronize to MIDI Clock messages transmitted from an external MIDI device connected to the MIDI IN connector.

External PCI/F: The arpeggiator and sequencer of the TRITON will synchronize to MIDI Clock messages transmitted from an external MIDI device connected to the TO HOST connector.

Select either **External MIDI** or **External PCI/F** when using the TRITON as a **slave** (controlled device) that will synchronize to the MIDI Clock messages transmitted from an external MIDI device. The TRITON can respond to MIDI realtime messages (Start, Stop, Continue, Song Select, and Song Position Pointer) from an external sequencer.

▲ In Song Play mode, the TRITON will always synchronize to its own internal clock regardless of this setting.

1-1b: MIDI Filter

Enable Program Change

Checked: Program changes will be transmitted and received.

In Program mode (P0: Play), the program will be switched when a program change message is received on the global MIDI channel specified by "MIDI Channel" (1-1a). When you switch programs, a program change message will be transmitted on the global MIDI channel.

In Combination mode (P0: Play), the combination will be switched when a program change message is received on the global MIDI channel. However, it is possible to set the "Enable Combination Change" parameter so that the combination is not switched. When a program change is received on the channel specified for each timbre by "MIDI Channel" (Combination P2: 2-1a), the program of that timbre will be


switched. However, the program changes for each timbre will be affected by the setting of the "Enable Program Change" parameter (Combination P3: 3-1a). When you switch combinations, a program change message will be transmitted on the global MIDI channel, and also transmitted simultaneously on the channel of timbres whose "Status" (Combination P0: 0-1f) is set to **EXT** or **EX2**. In Sequencer mode, incoming program change messages on a channel that corresponds to a track whose "Status" (Sequencer P2: 2-1a) is set to **INT** or **BTH** will switch programs on that track. When you select a song or playback sequencer data, program changes will be transmitted on the channels of tracks whose "Status" is set to **BTH**, **EXT**, or **EX2**.

Unchecked: Program changes will not be transmitted or received.

Enable Bank Change

Checked: The Bank Select control change message will be transmitted together with program change messages. This is valid when "Enable Program Change" is checked.

Unchecked: Bank Select messages will not be transmitted or received.

 When recording on the internal sequencer, bank select messages will be recorded regardless of this setting. However for playback, this setting will apply.

Enable Combination Change

Checked: When in Combination P0: Play, an incoming program change message on the global MIDI channel set by "MIDI Channel" (1-1a) will switch combinations. This is valid when "Enable Program Change" is checked. An incoming program change on a channel other than the global MIDI channel will switch the program of any timbre that matches that MIDI channel.

Unchecked: An incoming program change message on the global MIDI channel will switch the program of any timbre whose "MIDI Channel" (Combination P2: 2-1a) matches the global MIDI channel. The combination will not be switched. The program changes for each timbre will be affected by the setting of the "Enable Program Change" parameter (Combination P3: 3-1a).

Enable After Touch

Checked: MIDI after touch messages will be transmitted and received.

Unchecked: MIDI after touch messages will neither be transmitted nor received. When recording sounds that do not require the use of after touch, you can uncheck this parameter to save memory. This setting has no effect when you use the internal sequencer to playback sequence data that was recorded with after touch data; i.e., after touch will be transmitted via MIDI. The TRITON's keyboard transmits only channel after touch; it does not transmit polyphonic after touch. However, since the TRITON does support polyphonic after touch as an Alternate Modulation Source (AMS), it can receive polyphonic after touch to control individual notes.

Enable Control Change

Checked: Control change messages will be transmitted and received.

Unchecked: Control change messages will neither be transmitted nor received. This setting has no effect when you use the internal sequencer to playback sequence data that was recorded with control change data; i.e., control changes will be transmitted via MIDI.

Enable Exclusive

Checked: System exclusive data will be transmitted and received. Check this setting when you wish to use a connected computer etc. to edit the TRITON, or vice versa. **Unchecked:** System exclusive data will neither be transmitted nor received. Normally you will leave this unchecked. However, system exclusive data will be transmitted and received while the page menu commands ("Dump Program"-"Dump All") of this page are displayed.

▼ 1-1: Page Menu Command

0-1A	Write Global Setting
1-1A	Dump Program
1-1B	Dump Combination
1-1C	Dump Drum Kit
1-1D	Dump Arpeggio Pattern
1-1E	Dump Global Setting
1-1F	Dump Sequencer
1-1G	Dump All

1-1A: Dump Program

1-1B: Dump Combination

1-1C: Dump Drum Kit

1-1D: Dump Arpeggio Pattern

1-1E: Dump Global Setting

1-1F: Dump Sequencer

1-1G: Dump All

These commands allow the TRITON's data to be transmitted to another connected TRITON, MIDI data filter, or computer in the form of system exclusive data.

Select the desired command (refer to the following table), and a dialog box will appear.

If you selected a command other than "Dump All" (1-1G), select the bank or timbre etc. of the data to be dumped. Then press the **OK** button.

Dump Program	Programs of all banks, programs of the specified bank, one program
Dump Combination	Combinations of all banks, combinations of the specified bank, one combination
Dump Drum Kit	All drum kits, One drum kit
Dump Arpeggio Pattern	All arpeggio patterns, One arpeggio pattern
Dump Global	Global settings (except for the Drum Kits and User Arpeggio Patterns of Global mode)
Dump Sequencer	All sequences
Dump All	All banks of programs + combinations + drum kits + arpeggio patterns + global settings + sequences

Transmission

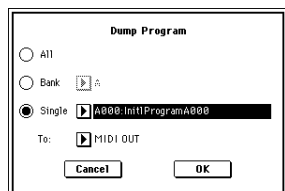
 Do not touch the TRITON's switches or turn off the power while data is being transmitted.

Data dump transmission procedure

- 1 Connect the TRITON to the device that will receive the data dump. If you are using a computer that is able to receive MIDI exclusive messages, connect the serial port of the computer to the TO HOST connector of the TRITON.

If you are using a MIDI data filter etc., connect the TRITON's MIDI OUT connector to the MIDI IN connector of the MIDI data filter (refer to p.111, 112 in the *Basic Guide*).

- ② Select Global P1: MIDI.
- ③ From the page menu commands, select the type of data that you wish to dump. The following illustration shows the dialog box that will appear when "Dump Program" is selected. If you wish to dump all programs, select "All." To dump one bank select "Bank," or to dump one program select "Single."



- ④ In "To," specify the output connector from which the data will be transmitted.
MIDI OUT: the rear panel MIDI OUT connector
PC I/F: the rear panel TO HOST connector
- ⑤ Press the **OK** button to transmit the data. While the data is being transmitted, the display will indicate "Now Transmitting MIDI Data."

The size of the data and the time required for transmission will depend on the type of data.

The following table shows the size of each data dump, and the time required.

Type of data dumped	Data size (kByte)		Time required (Sec)	
	TRITON	EXB-MOSS is installed	TRITON	EXB-MOSS is installed
Data All	922.7–2122.7	991.8–2191.8	295.3–679.25	317.4–701.4
Program All	345.6	414.7	110.6	132.7
Program Bank (A/B/C/D/E)	691.2	---	22.1	---
Program Bank (F)	---	691.2	---	22.1
Program Single (A/B/C/D/E)	0.5	---	0.2	---
Program Single (F)	---	0.5	---	0.2
Combination All	229.4	←	73.4	←
Combination Bank	57.3	←	18.4	←
Combination Single	0.4	←	0.2	←
Drum Kit All	263.2	←	84.2	←
Drum Kit Single	4.1	←	1.3	←
Arpeggio Pattern All	74.2	←	23.8	←
Arpeggio Pattern Single	0.3	←	0.1	←
Global Setting	0.8	←	0.3	←
Sequencer Data	4.0–1204.0	←	3.0–387.0	←

Reception

- ⚠ Do not touch the TRITON's switches or turn off the power while data is being received.
- ⚠ After a data dump is received, the TRITON will require up to 16 seconds to process the data and write it into memory. During this time, the display will indicate "Now writing into internal memory." While this display is shown, you must under no circumstances turn off the power of the TRITON. If the power is turned off during this time, the TRITON may fail to operate correctly when the power is turned on again. If this occurs, hold down the [MENU] key and the [9] key while you turn on the power. However when this is done, the contents of memory will be initialized.

Transmission and reception of MIDI data is also impossible during this time. When receiving multiple data dumps in succession, you must allow an interval between the transmission of each data dump.

Type of data dumped	Processing time for writing into memory
All	Approximately 16 seconds
All Programs	Approximately 8 seconds
All Combinations	Approximately 4 seconds
All Drum Kits	Approximately 8 seconds
All Arpeggio Patterns	Approximately 4 seconds
Global Setting	Approximately 4 seconds
Sequencer	Approximately 1 second

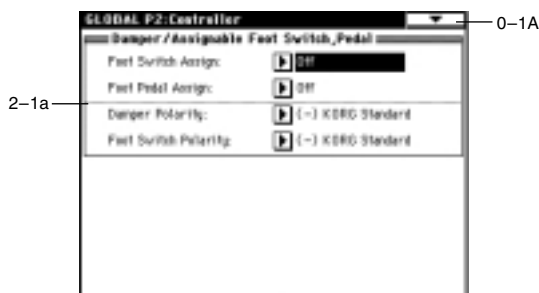
- ⚠ When you save data dumps from the TRITON to a MIDI data filer, do not save multiple data dumps together. If two or more data dumps are saved together, the TRITON will not have enough time to write the first data dump before the next data dump is received, and it will not be possible to receive all of the data.
- ⚠ While the TRITON is writing the data into memory, transmission of Active Sensing (FEh) messages from the MIDI OUT connector and TO HOST connector will stop.

Data dump reception procedure

- ① Connect the TRITON and the device that will receive the data dump.
 If you are using a computer that is able to transmit MIDI exclusive messages, connect the serial port of the computer to the TO HOST connector of the TRITON.
 If you are using a MIDI data filer, connect the MIDI OUT connector of the data filer to the MIDI IN connector of the TRITON (refer to p.111, 112 in the *Basic Guide*).
- ② Set the MIDI channel of the MIDI device to match the global MIDI channel "MIDI Channel" (1-1a) of the TRITON. If you want the TRITON to receive data that was previously transmitted to a MIDI device, you must set the global MIDI channel of the TRITON to the same global MIDI channel that was used when the data was transmitted.
 To set the MIDI channel of the transmitting device, refer to the owner's manual for that device. The global MIDI channel of the TRITON is set by "MIDI Channel."
- ③ Either check "Enable Exclusive" (1-1b), or display one of the page menu commands of this page. When one of these page menu commands is displayed, data dumps can be received regardless of the "Enable Exclusive" (1-1b) setting.
- ④ Transmit the data from the other device. For the procedure, refer to the owner's manual for the device you are using.

Global P2: Controller

2-1: Controller



2-1a: Damper/Assignable Foot Switch, Pedal

Foot Switch Assign [Off...Cue Repeat Control]

Select the function that will be controlled by a pedal switch (PS-1 option [sold separately]) connected to the rear panel ASSIGNABLE SWITCH jack (see “Foot Switch Assign List”).

Foot Pedal Assign [Off...MFX Send 2(CC#91)]

Select the function that will be controlled by a foot volume pedal (XVP-10 or EXP-2 option [sold separately]) connected to the rear panel ASSIGNABLE PEDAL jack (see “Foot Pedal Assign List”).

Damper Polarity [-, +]

Set this to match the polarity of the damper pedal connected to the rear panel DAMPER jack.

If a Korg DS-1H (sold separately) damper pedal is connected, the pedal switch polarity will be (↓), so select “-” for this setting. If you have connected a damper pedal with a positive (↑) polarity, select “+” for this setting. (↓ is open-type, ↑ is closed-type.) If the polarity does not match, operating the damper pedal will not produce the correct result. If no damper pedal is connected, set this to “-.”

Foot Switch Polarity [-, +]

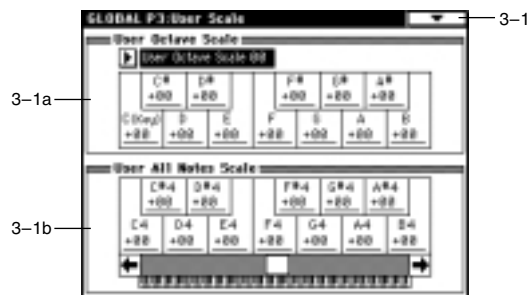
Set this to match the polarity of the pedal switch connected to the rear panel ASSIGNABLE SWITCH jack.

If a Korg PS-1 (sold separately) pedal switch is connected, the pedal switch polarity will be (↓), so select “-” for this setting. If you have connected a pedal switch with a positive (↑) polarity, select “+” for this setting. (↓ is open-type, ↑ is closed-type.) If the polarity does not match, operating the pedal switch will not produce the correct result. If no pedal switch is connected, set this to “-.”

Global P3: User Scale

3-1: User Scale

Here you can create sixteen User Octave Scales and one User All Notes Scale. The user scales you create here can be selected in the Program P1: Program Basic tab, the Combination/Sequencer P2: Other tab, or the Song Play P1: Status/Scale tab.



⚠ If you wish to keep an edited user scale after the power is turned off, be sure to write (save) your settings.

This data is written by the “Write Global Setting” page menu command. Alternatively, you can press the front panel [REC/WRITE] key to access the Write Global Setting dialog box, and press the **OK** button to write the edited data.

3-1a: User Octave Scale

User Octave Scale Type [User Octave Scale 00...15]

Tune [-99...+99]

Make pitch settings for each note in the octave.

When you adjust the pitch of each note in the octave (C–B) in one-cent steps, your settings will be applied to all octaves. This adjustment is relative to equal temperament.

A setting of **-99** lowers the pitch approximately a semitone below normal pitch.

A setting of **+99** raises the pitch approximately a semitone above normal pitch.

3-1b: User All Notes Scale

Tune [-99...+99]

Make independent pitch settings for each of the 128 notes. Use the horizontal scroll bar to move to the desired location of the keyboard, and adjust the pitch of each of the 128 notes (C-1 – G9) in one-cent steps. This adjustment is relative to equal temperament.

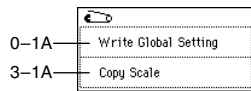
A setting of **-99** lowers the pitch approximately a semitone below normal pitch.

A setting of **+99** raises the pitch approximately a semitone above normal pitch.

By executing the “3-1A: Copy Scale” page menu command, you can copy the settings of the preset Stretch scale.

note The note can also be selected by holding down the [ENTER] key and playing a note on the keyboard.

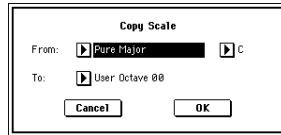
▼ 3-1: Page Menu Command



3-1A: Copy Scale

This command copies data from a preset scale or between user scales. For details on the preset scales, refer to “Type” (Program P1: 1-1c).

- 1 Select this command to open the following dialog box.



- 2 In “From,” select the copy source scale. In the pull-down menu beside it, select the **Key**. The **Key** selection will be valid only if **Pure Major** or **Pure Minor** is selected. **Stretch** can be copied when the destination “To” is the **User All Notes Scale**.
- 3 In “To,” selects the copy destination scale.
- 4 To execute the Copy Scale command, press the **OK button**. To cancel, press the **Cancel button**.

Global P4: Category Name

4-1: Program Cat.

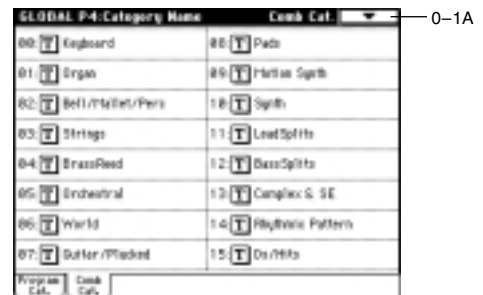
4-2: Comb Cat.

Here you can assign names to program and combination categories. When you select the text edit button for a category name, a dialog box will appear so that you can rename the category. Up to sixteen characters can be input. Sixteen categories can be named.

A category name you edit here can be selected when you write a program or combination.

In Program, Combination, Sequencer, or Song Play modes, you can select programs by category in the (category) popup menu. In Combination mode, you can select programs or combinations from the (category) popup menu.

With the factory settings, the categories are named for types of musical instrument.




- ⚠ If you want the edited user categories to be backed up when the power is turned off, you must write them into memory. Select the “Write Global Setting” page menu command to access the Write Global Setting dialog box, or press the [REC/WRITE] key to display the Update Global settings dialog box and press the **OK button** to write the edited settings.


Global P5: Drum Kit


Here you can create a drum kit by assigning a drum instrument (drum sample) to each key.


A drum kit you edit here can be selected in Program mode P1: Edit Basic “Drum Kit” (when “Oscillator Mode” is **Drums**) as an oscillator, and processed through the filter, amp and effects in the same way as a “multisample” (when “Oscillator Mode” is **Single** or **Double**).


When you wish to edit a drum kit, enter Program mode, select a program that uses a drum kit (i.e., whose “Oscillator Mode” is **Drums**), and then move to this page. A program that uses a drum kit will already have filter, amp, and effect settings etc. suitable for drum sounds. (Programs in the separate *Voice Name List* that use a drum kit are indicated by a )

Even if a program with an “Oscillator Mode” of **Single** or **Double** is selected in Program mode, the program will sound using its own filter and amp settings etc. Effects will sound according to the settings of the program you selected. You must set “Octave” (Program P1: 1-2a) to **+0[8]**. With any setting other than **+0[8]**, the key locations and drum sounds will not correspond correctly.

 If “Enable Exclusive” (2-1a) is checked, the drum kit can be edited using exclusive data.

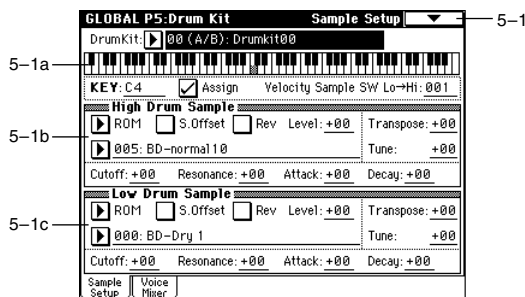
 When a drum kit is edited, all programs that use that drum kit will be affected.

 If you want the edited drum kit settings to be backed up after you turn off the power, you must write them into memory. Select the “Write Drum Kits” page menu command to access the Write Drum Kits dialog box, or press the front panel [REC/WRITE] key to access the Update Drum Kits dialog box, and press the **OK** button to write the edited settings.

 For details on creating a drum kit, refer to p.90 in the *Basic Guide*.

5-1: Sample Setup

Here you can select a drum kit, assign High and Low drum samples to each key, and set parameters for the High and Low drum samples.



5-1a: Drum Kit, KeySelect, Assign, Velocity Sample SW

Drum Kit [00 (A/B)...63 (User)]

Select the drum kit that you wish to edit.

If you wish to modify the drum kit name, use the “Rename Drum Kit” page menu command.

00 (A/B)...15 (A/B)	Preset drum kits
16 (C)...31 (C)	(for user drum kits, EXB-PCM series drum kits)
32 (D)...47 (D)	(for user drum kits, EXB-PCM series drum kits)
48 (User)...63 (User)	(for user drum kits)

KEY (Key Select) [C-1...G9]

Select the key to assign a drum sample (and its settings).

You can also select a key by holding down the [ENTER] key and playing a note on the keyboard.

The key assigned here will be the subject of all parameters in the Sample Setup tab “Velocity Sample SW Lo→Hi,” High Drumsample, Low Drumsample, Voice/mixer tab Voice Assign Mode, and Mixer.


Two drum samples, High and Low, can be assigned to each key, and you can switch between them by velocity as you play.

Assign

Checked: The drum samples you assigned for “High Drumsample” and “Low Drumsample” will sound. Normally you will check this parameter.

Unchecked: The selected drumsamples will be invalid, and the drum samples of the key to the right will sound. At this time, the pitch will be a semitone lower than the pitch of the key to the right. Uncheck this parameter when you wish to play a drumsample at differing pitches.

Velocity Sample SW Lo→Hi [001...127]

Specify the velocity value at which you will switch from the “Low Drumsample” to the “High Drumsample.” Velocities above this value will sound the “High Drumsample,” and velocities below this value will sound the “Low Drumsample.” If you do not wish to use velocity switching, set this to **001** and specify only the “High Drumsample” ( “Velocity M.Sample SW Lo→Hi” Program P1: 1-2c).

5-1b: High Drumsample


Bank [ROM, RAM, EXB*, EXB*]

Specify the bank of the High Drumsample.

ROM: Select preset Drumsamples. In “Drumsample Select,” you can choose from **00: BD-Dry 1 – 412: Amp Noise**. (Refer to the separate *Voice Name List*.)

RAM: Select samples that you created in Sampling mode or loaded in Disk mode. Select the RAM bank when you want to use this sample data to create a drum kit.

EXB*: Drum samples from a separately sold EXB-PCM series option board can be selected. This can be selected only if an option board containing drum samples is installed. “*” will indicate the type of installed option.

 If a drum kit that uses a drum sample from a separately sold EXB-PCM series board is selected, but the necessary drum sample is not available because the corresponding EXB-PCM (expansion board) is not installed, the “Bank” field will indicate **ROM**. In this case, that drum sample will not sound. By re-selecting the drum sample bank, you can make it sound.

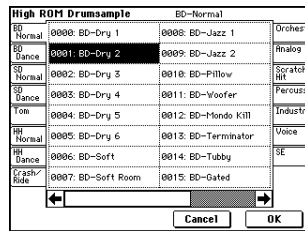
The EXB* display will depend on the type of option board.

High Drumsample Select [000...3999: Name]

Select the High Drumsample. The sample selected here will be sounded by velocities above the “Velocity Sample SW Lo→Hi” value. (☞For details on each drum sample, refer to the separate *Voice Name List*.)

Category/ROM Drumsample Select menu:

When ROM has been selected for “Bank,” you can press the popup button to open the “Category/ROM Drumsample Select” menu. (If a different bank is selected, the usual popup menu will appear.)



All drum samples will be displayed, grouped into 15 categories. Use the tabs at left and right to select a category, and the drum samples in the selected category will be displayed.

It is not possible to edit the category names of drum samples, or to re-assign the category.

S.Offset (Start Offset)

Checked: The sample waveform will start playback from a location later than the beginning of the drum sample waveform. If the bank is ROM or EXB*, the location of the Start Offset is pre-determined for each drum sample. This sample is not valid for drum samples which have no Start Offset. However when a RAM bank is selected, this will depend on the selected drum sample. If you select a drum sample that includes one of the following types of sample, checking this item will cause playback to start from the Loop Start Address.

- A sample that was recorded (sampled) in Sampling mode
- A sample whose Loop Start Address was edited in Sampling mode after the sample was loaded in Disk mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Disk mode

Unchecked: Playback will start from the beginning of the drum sample waveform.

Rev (Reverse)

Checked: The drum sample waveform will playback in “one-shot” reverse. If the bank is ROM or EXB*, the location at which the reverse playback will start and end is pre-determined for each drum sample.

If the drum sample is already preset for reverse playback or reverse loop playback, checking this setting will not change its playback direction. Such samples are indicated by Ⓞ in the Drumsample List of the separate *Voice Name List*. In the case of a drum sample from the RAM bank, the sample will play (in reverse) from “End” (Sampling P2: 2-1c) to “Start.”

This parameter will not change the playback direction of a sample for which “Reverse” (Sampling P2: 2-1c) is checked.

Level [-99...+99]

Specify the volume.

Keys for which a value of +99 is specified will sound at a volume twice as high as the amp level of the program which uses that drum kit. Keys for which a value of 0 is specified will sound at the volume of the amp level of the program which uses that drum kit.

Keys for which a value of -99 is specified will not sound.

Transpose [-64...+63]

Adjust the pitch in semitone steps. +12 is one octave up, and -12 is one octave down.

Tune [-99...+99]

Adjust the pitch in one-cent steps.

Cutoff (Filter-Cutoff) [-64...+63]

Adjust the cutoff frequency of the filter. The cutoff frequency for each key is determined by adding this value to the filter “Frequency (Cutoff Frequency)” (3-1b, 3-5) of the program that uses this drum kit.

Resonance (Filter-Resonance) [-64...+63]

Adjust the filter resonance. The filter resonance for each key is determined by adding this value to the filter “Resonance” (3-1b, 3-5) of the program that uses this drum kit. (When the “Filter Type” (Program P3: 3-1a) is **Low Pass & High Pass**, there will be no resonance effect.)

Attack (Amp-Attack) [-64...+63]

Adjust the attack time of the volume (Amplifier). The attack time for each key is determined by adding this value to the amp EG Attack Time of the program that uses this drum kit.

Decay (Amp-Decay) [-64...+63]

Adjust the decay time of the volume (Amplifier). The decay time for each key is determined by adding this value to the amp EG Decay Time of the program that uses this drum kit.

5-1c: Low Drumsample

Bank [ROM, RAM, EXB*, EXB*]

Specify the bank of the Low Drumsample (☞“Bank” 5-1b).

Low Drumsample Select [0000...3999: Name]

Select the Low Drumsample. This will be sounded by velocities lower than the value set for “Velocity Sample SW Lo→Hi” (5-1a). (☞For details on each drum sample, refer to the separate *Voice Name List*.)

Select drumsamples from the Category/Drumsample Select menu (☞“High Drumsample Select” 5-1b).

S.Offset (Start Offset)

Rev (Reverse)

Level [-99...+99]

Transpose [-64...+63]

Tune [-99...+99]

Cutoff (Filter-Cutoff) [-64...+63]

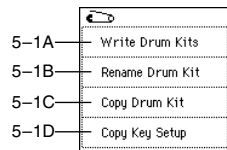
Resonance (Filter-Resonance) [-64...+63]

Attack (Amp-Attack) [-64...+63]

Decay (Amp-Decay) [-64...+63]

☞ “5-1b: High Drumsample.”

▼ 5-1: Page Menu Command



5-1A: Write Drum Kits

This command writes all drum kits 00 (A/B)–63 (User). To write the data, press the **OK** button in the dialog box. Alternatively, press the front panel [REC/WRITE] key to access the “Update Drum Kits” dialog box, and press the **OK** button to write the data.

▲ Drum kits 16(C)–31(C) and 32(D)–47(D) are provided as drum kits for some optional EXB-PCM series boards (sold separately).

5-1B: Rename Drum Kit

This command renames the selected drum kit. You can input a name of up to sixteen characters.

5-1C: Copy Drum Kit

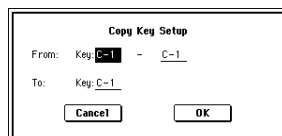
This command copies the settings of another drum kit to the currently-edited drum kit. Drum kits 64–72 (GM) cannot be edited, but you may copy them to another drum kit and then edit them. Select the copy source drum kit in “From,” and press the **OK** button to execute.

▲ Be aware that when you execute the “Copy Drum Kit” command, all settings of the currently selected drum kit will be overwritten. If you do not wish to overwrite the current settings, check the Memory Protect “Drum Kit” setting (0-2b).

5-1D: Copy Key Setup

This command copies the settings of an individual key to another key. You can also copy settings from two or more contiguous keys at once.

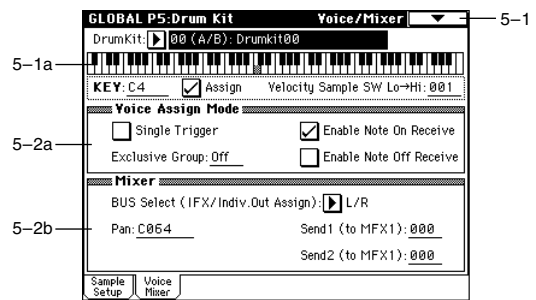
- 1 Select this command to open the following dialog box.



- 2 In “From Key,” select the range of keys that you wish to copy.
- 3 In “To Key,” select the copy destination key. If you selected two or more keys in “From Key,” their settings will be copied to the keys starting at “To Key” and continuing upward.
- 4 To execute the Copy Key Setup command, press the **OK** button. To cancel, press the **Cancel** button.

5-2: Voice/Mixer

For each key of a drum kit, you can set voice assign, pan, and effect routing etc.



5-2a: Voice Assign Mode

Single Trigger

Checked: Even when the same key (note) is played repeatedly, the previous note will be halted before the new note is begun, so that the notes will not overlap. Normally you will leave this unchecked.

Exclusive Group (Exclusive Assign) [Off, 001...127]

001–127: This allows you to group keys to which a drum sample is assigned. Keys to which the same group number is assigned will be treated as a single group, and will be played monophonically with last-note priority. For example you might assign closed and open hi-hat sounds to the same group so that two or more hi-hat sounds can not sound simultaneously.

Off: Keys will not be grouped. Normally you will set this **Off**.

Enable Note On Receive

Checked: Note-on messages will be received. Normally you will check this, but you can uncheck it if you do not want specific notes to sound.

Enable Note Off Receive

Checked: Note-off messages will be received. Normally you will uncheck this. This parameter is valid when “Hold” (Program P1: 1-1b) is checked (**Hold On**). In the case of a drum program, you will normally select **Hold On**. In this case if “Enable Note Off” is checked, note-off messages will be received, and the sound will stop (the release segment of the EG will begin) when the key is released.

5-2b: Mixer

▲ Drum kits will sound using the settings of the program that is selected in Program mode. These settings are valid when you have checked “Use DKit Setting” (Program P4: 4-1b) or “Use DKit Setting” (Program P8: 8-1b). Be aware that while editing a drum kit, the edited results will not be reflected unless these settings have been made.

BUS Select (IFX/Indiv.Out Assign) (Bus Select) [L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

For each key, specify the bus to which the sound will be sent. For example you might send Snare sounds to **IFX1** and Kick sounds to **IFX2** to apply separate insert effects, and send the remaining sounds to **L/R** without applying insert effects.

Pan [Random, L001...C064...R127]

Specify the panning for each key. With a setting of **Random**, the drum sample will be panned randomly at each note-on.

Send1 (to MFX1) [000...127]

Send2 (to MFX2) [000...127]

For each key, specify the send levels to master effects 1 and 2. These settings are valid when “BUS Select” (5–2b) is set to **L/R** or **Off**.

If “BUS Select” is set to **IFX1–5**, the send level to master effects 1 and 2 will be determined by the Program, Combination, Sequencer, or Song Play mode P8: Insert FX tab parameters “Send 1” and “Send 2” which are located after the sound passes through IFX1, 2, 3, 4, or 5.

Global P6: User Arpeggio

Here you can create user arpeggio patterns.

In this page, the TRITON will sound as it did in the mode you were in before entering Global mode.

If you moved here from Program mode: Your editing will apply to the arpeggio pattern that is selected by the program. Even if you moved from a program in which the arpeggiator is turned off, it can be turned on by the front panel ARPEGGIATOR [ON/OFF] key.

If you moved here from Combination mode: Your editing will apply to the arpeggio pattern that is selected by the combination. Even if you moved from a combination in which the arpeggiator is turned off, it can be turned on by the front panel ARPEGGIATOR [ON/OFF] key.

However, it is not possible to turn on an arpeggiator for which the “Arpeggiator Run” (Combination P0: 0–3a, P7: 7–1c) parameter **A** or **B** is not checked. Also, if the arpeggiator is not assigned to a timbre by “Arpeggiator Assign” (Combination P7: 7–1b), the arpeggiator will not run.

If you moved here from Sequencer or Song Play mode: Your editing will apply to the arpeggio pattern specified for the selected song.

Even if you moved here from settings in which the arpeggiator was turned off, you can use the front panel ARPEGGIATOR [ON/OFF] key to turn it on. However, it is not possible to turn on an arpeggiator for which the “Arpeggiator Run” (P7: 7–1a, 2a) parameter **A** or **B** is not checked. Also, the arpeggiator will not operate if it has not been assigned to a timbre in “Arpeggiator Assign” (P7: 7–1a, 2a).

In each of the above cases, you can modify the settings of the arpeggio pattern even if the arpeggiator is not turned on. When editing a pattern, it is a good idea to turn on the arpeggiator and make sure that it is the pattern that you wish to edit.

⚠ **If you moved here from Sampling mode:** The arpeggiator will not turn on, nor will it be possible to edit the arpeggio pattern.

⚠ If you want the edited user arpeggio pattern settings to be backed up even when the power is turned off, you must write them into memory. Select the “Write Arpeggio Pattern” page menu command to access the Write Arpeggio Pattern dialog box. Alternatively, press the front panel [REC/WRITE] key to access the “Update Arpeggio Patterns” dialog box. Then press the **OK button** to write the edited data.

📖 For details on creating an arpeggio pattern, refer to p.100 in the *Basic Guide*.

6–1: Pattern Setup



6-1a: Arpeggio Select, , Pattern, Length, Octave, Resolution, Sort, Latch, Key Sync., Keyboard

Arpeggio Select [A, B]

If you moved from Combination, Sequencer, or Song Play modes to edit an arpeggio pattern, you can select whether to edit the arpeggio pattern of arpeggiator **A** or **B**. Your editing will apply to the pattern of the selected arpeggiator. If you moved from Program mode, it will not be possible to select **B**.

(Tempo) [040...240, EXT]

Specify the tempo.

You can also adjust the tempo by using the front panel ARPEGGIATOR [TEMPO] knob. If "MIDI Clock" (1-1a) is External MIDI or External PCI/F, the display will indicate EXT, and the arpeggiator will synchronize to MIDI Clock messages from an external MIDI device.

Pattern [P00...P04, ..., U000(A/B)...U231(D)]

Select the pattern that you wish to edit.

Length (Pattern Length) [01...48]

Specify the length of the pattern. After the note value specified by "Resolution" occurs for the number of times specified here, the pattern will return to the beginning. This parameter is not valid for preset patterns P00-04.

Octave [1, 2, 3, 4]

Resolution [, , , , , ,



Sort

Latch

Key Sync. (Keyboard Synchronize)


Keyboard

Program P7 "7-1: Arpeg. Setup."

 "Pattern," "" (Tempo)," "Octave," "Resolution," "Sort," "Latch," "Key Sync.," and "Keyboard" are parameters that can be set in Program, Combination, Song, and Song Play modes, but you can also set them here.

If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them. These parameters cannot be written by the "Write Arpeggio Patterns" command in this page.

6-1b: Arpeggio Pattern Setup

 These parameters are not valid for preset patterns P00-P04.

Arpeggio Tone Mode [Normal, Fixed Note]

Specify the Tone mode (the "●" and "○" displayed in 6-2: Pattern Edit) for the arpeggio pattern.

Normal: This is the normal arpeggiator type. The Tone pitches will be developed as an arpeggio and played according to the pitch of each note that is pressed.

Fixed Note: Specify the note number for each Tone. The note numbers from the keyboard will have no effect in determining the pitch of each Tone. Instead, the note numbers specified for each Tone will determine the pitches that are played as the arpeggio. Note numbers from the keyboard will control only the timing at which the arpeggiator is triggered. This is ideal when using a drum pattern etc. as an arpeggio pattern.

Arpeggio Type [As Played...Up&Down]

Specify the correspondence between the arpeggio notes specified from the keyboard and the Tone at each step.

As Played: If there are more Tones in a step than arpeggio notes specified (notes played on the keyboard), those steps will not sound.

As Played (Fill): If there are more Tones in a step than arpeggio notes specified (notes played on the keyboard), the last arpeggio note (the last-played note if "Sort" is Off, or the highest note if "Sort" is On) will sound for those steps.

Running Up: If there are more Tones in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return to the first note (the first-pressed note if "Sort" is Off, or the lowest note if "Sort" is On) and sound it.

Up&Down: If there are more Tones in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return in reverse direction from the last arpeggio note back toward the first.

Example

If you set "Length" to 04, "Step No." 01 to Tone0, "Step No." 02 to Tone1, "Step No." 03 to Tone2, "Step No." 04 to Tone3, and simultaneously play three notes to produce an arpeggio, the following results will be produced depending on the "Arpeggio Type."

As Played: 0 → 1 → 2 → rest → 0 → 1 → 2 → rest → 0 ...

As Played (Fill): 0 → 1 → 2 → 2 → 0 → 1 → 2 → 2 → 0 ...

Running Up: 0 → 1 → 2 → 0 → 0 → 1 → 2 → 0 → 0 ...

Up&Down: 0 → 1 → 2 → 1 → 0 → 1 → 2 → 1 → 0 ...

Octave Motion [Up, Down, Both, Parallel]

Specify the operation when "Octave" is set to 2-4 octaves.

Up: Notes will repeatedly ascend within the specified range of octaves.

Down: Notes will repeatedly descend within the specified number of octaves.

Both: Notes will repeatedly ascend and descend within the specified number of octaves.

Parallel: The notes of the specified octaves will sound simultaneously.

Fixed Note Mode [Trigger As Played, Trigger All Tones]

When the "Arpeggio Tone Mode" is Fixed Note, specify the condition that will trigger the Tones.

Trigger As Played: The Tones will be triggered according to the number of keys pressed.

Trigger All Tones: Pressing a single key will trigger all Tones.

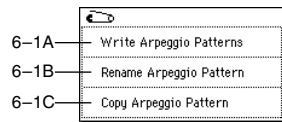
Example

We will use a "Arpeggio Tone Mode" Fixed Note pattern on drums. Tone 1 is assigned a note number that will sound a kick, Tone 2 a snare, and Tone 3 a hi-hat.

With a setting of Trigger As Played, pressing one key will sound only Tone 1 (kick). Pressing two keys will sound Tone 1 (kick) and Tone 2 (snare). Pressing three keys will sound all three Tones 1-3 (kick, snare, hi-hat). If the "Velocity" of each Tone is set to Key, each Tone will be sounded at the velocity with which each key was played.

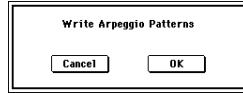
With a setting of Trigger All Tones, playing one key is sufficient to sound all three; Tone 1 (kick), Tone 2 (snare), and Tone 3 (hi-hat). If the "Velocity" of each Tone is set to Key, the Tones will be sounded at the corresponding velocity each time a key is pressed.

▼ 6-1: Page Menu Command



6-1A: Write Arpeggio Patterns

This command writes all user arpeggio patterns U00 (A/B)–U231 (D).



Press the **OK** button in the dialog box to write the data. Alternatively, you can press the front panel [REC/WRITE] key to open the “Update Arpeggio Patterns” dialog box. In the same way, press the **OK** button to write the data.

▲ “Pattern,” “Tempo,” “Octave,” “Resolution,” “Sort,” “Latch,” “Key Sync,” and “Keyboard” are parameters that are set in Program, Combination, Song, and Song Play modes. The Write operation executed here does not save these parameters.

If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them.

▲ Patterns U200(C)–U215(C) and U216(D)–U231(D) are provided as preset patterns for certain EXB-PCM series option boards (sold separately).

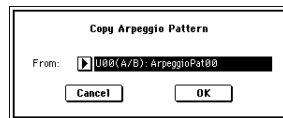
6-1B: Rename Arpeggio Pattern

This command renames the selected user arpeggio pattern. Up to sixteen characters can be input. Preset patterns P00–P04 cannot be selected.



6-1C: Copy Arpeggio Pattern

This command copies the settings of another user arpeggio pattern to the currently selected arpeggio pattern. It is not possible to copy from a preset arpeggio pattern P00–P04.

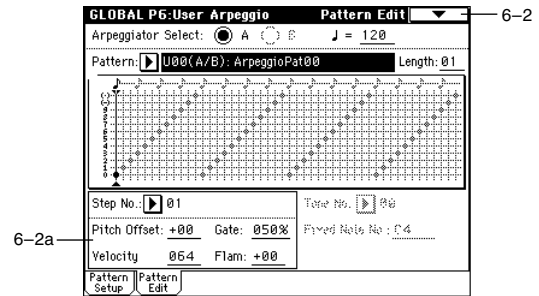


6-2: Pattern Edit

Here you can input **Tones 0–11**. **Tones** correspond to a maximum of 12 notes

Tones correspond to the (up to) 12 notes that are simultaneously pressed on the keyboard at each of the (up to) 48 steps. If “Sort” (6-1a) is **checked**, the notes that were pressed will correspond in ascending order of pitch to **Tones 0, 1**, etc. If “Sort” (6-1a) is **not checked**, the notes that were pressed will correspond in the order in which they were pressed to **Tones 0, 1**, etc.

▲ These parameters are not valid for preset patterns P00–P04.



6-2a: Step No., Pitch Offset, Gate, Velocity, Flam, Tone No., Fixed Note No.

Step No. (Step Number) [01...48]

Select the **Tone** that you wish to edit. When the “Step No.” is selected, use the numeric keys to input the **Tones**. Numeric keys [0]–[9] correspond to **Tones 0–9**, [–] corresponds to **Tone 10**, and [./10’s HOLD] to **Tone 11**. Each time you press a key, the **Tone** will be set or reset.

When “Arpeggio Tone Mode” (6-1a) is **Normal**, the display will indicate “●.” When set to **Fixed Note**, the display will indicate “○.”

If you wish to delete all **Tones** of a step, use the “Delete” page menu command. To insert a blank step, use the “Insert” page menu command.

Pitch Offset [–48...+48]

For each step, the pitch corresponding to the **Tone** can be raised or lowered in semitone steps. This lets you make settings for the same tone in each step to create a melody, or to make settings for two or more tones in each step to play parallel chords.

Gate [Off, 001...100%, Legato]

Off: That step will not sound even if **Tones** have been specified.

Legato: Notes will continue sounding until the same **Tone** is sounded next, or until the pattern returns to the beginning. At this time, the display will change to “□” or “■.”

This setting is valid when the Program, Combination, Song, or Song Play mode parameter “Gate” (Program P7: 7-1b, Combination P7: 7-2b, 7-3, Sequencer/Song Play P7: 7-3a, 7-4) is set to **Step**. When making this setting, make sure that “Gate” is set to **Step** in the mode from which you arrived here.

Velocity [001...127, Key]

Key: The **Tone** of the step will sound with the velocity at which the key was played.

001–127: The specified velocity value will always be used. This setting is valid when the Program, Combination, Song, or Song Play mode parameter “Velocity” (Program P7: 7-1b,

Combination P7: 7-2b, 7-3, Sequencer/Song Play P7: 7-3a, 7-4) is set to Step.
When making this setting, make sure that "Velocity" is set to Step in the mode from which you arrived here.

Flam [-99...+99]

Specify how the note timing will be skewed when two or more **Tones** are specified in the same step.

00: All Tones will sound simultaneously.
+01–+99: The timing of the notes will be skewed in the order of the Tone number. (When "Sort" is **ON**, from low note to high note. When "Sort" is **OFF**, in the order in which keys were pressed.)

-01–-99: The timing of the notes will be skewed in the opposite direction as "+."
To simulate chords strummed on a guitar, it is effective to set "+" values for odd-numbered steps and "-" values for even-numbered steps.

This setting is not valid for preset patterns P00–P04.

Tone No. (Tone Number) [01...12]

This is valid when "Arpeggio Tone Mode" (6-1a) is set to **Fixed Note**. This selects the Tone.

Fixed Note No. (Fixed Note Number) [C-1...G9]

Specify the note number for the selected **Tone**. You can also input this value by holding down the [ENTER] key and pressing a note on the keyboard.

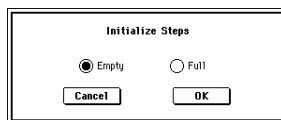
▼ **6-2: Page Menu Command**

6-1A	Write Arpeggio Pattern	Copy Step	6-2B
6-1B	Rename Arpeggio Pattern	Delete Step	6-2C
6-1C	Copy Arpeggio Pattern	Insert Step	6-2D
6-2A	Initialize Steps	Rotate Step	6-2E

6-2A: Initialize Steps

This command initializes the step parameters ("Tone," "Pitch Offset," "Gate," "Velocity," "Flam") of the arpeggio pattern.

- ① Select this command to open the following dialog box.

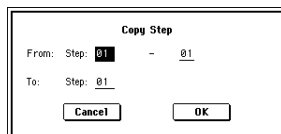


- ② **Empty** will initialize all tones to a blank state. **Full** will initialize all tones to a full state.
- ③ To execute the Initialize Steps operation, press the **OK button**. To cancel, press the **Cancel button**.

6-2B: Copy Step

This command copies the settings of a specific step. The settings of two or more adjacent steps can also be copied together.

- ① Select this command to open the following dialog box.



- ② In "From Step," select the range of steps that you wish to copy.

- ③ In "To Step," select the copy destination step. If you selected two or more adjacent steps in "From Step," the steps will be copied to the specified destination step and the steps above it.
- ④ To execute the Copy Step operation, press the **OK button**. To cancel, press the **Cancel button**.

6-2C: Delete Step

This command deletes the step parameters ("Tone," "Pitch Offset," "Gate," "Velocity," "Flam") of the currently selected step number. Subsequent steps will move one column toward the left.



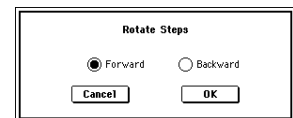
6-2D: Insert Step

This command inserts an empty step into the currently selected step number. Subsequent steps will be moved one step to the right.



6-2E: Rotate Step


This command rotates the step settings. For example, suppose there is a pattern of "Length" 4. Executing "**Forward**" would rewrite the settings of Step 1 to 2, Step 2 → 3, Step 3 → 4, and Step 4 → 1. Executing "**Backward**" would rewrite the settings of Step 1 to 4, Step 2 → 1, Step 3 → 2, and Step 4 → 3.





7. Disk mode

In this mode you can save and load internal memory data to and from a floppy disk or a connected external SCSI device (if the separately sold EXB-SCSI option is installed). You can also make various settings related to saving and loading. The TRITON can use MS-DOS format 3.5 inch 2HD or 2DD floppy disks. After a floppy disk has been formatted on the TRITON, a 2HD disk will have a capacity of 1.44 MB (18 sectors/track), and a 2DD disk will have a capacity of 720 KB (9 sectors/track). When the EXB-SCSI option is installed, up to 4 GB can be formatted on an external SCSI device.

 The TRITON cannot format media with a format of other than 512 bytes/block (such as 640 MB MO disks etc.).

For details on connecting external SCSI devices and setting the ID, refer to the EXB-SCSI owner's manual.

ISO9660 format is supported. ISO9660 level 1 CD-ROM discs can be read.

Files, directories, and icons


The TRITON manages data on disks and other media in a hierarchical manner, using files and directories. The contents of a file (whether it is a file or a directory) are indicated not only by the name but also graphically by an icon. Files and directories have differently shaped icons.

On the TRITON, files and directories that can be recognized by MS-DOS (i.e., read by an MS-DOS computer) are referred to as DOS files and DOS directories.

Various types of DOS files are distinguished by the extension that is added to the filename.

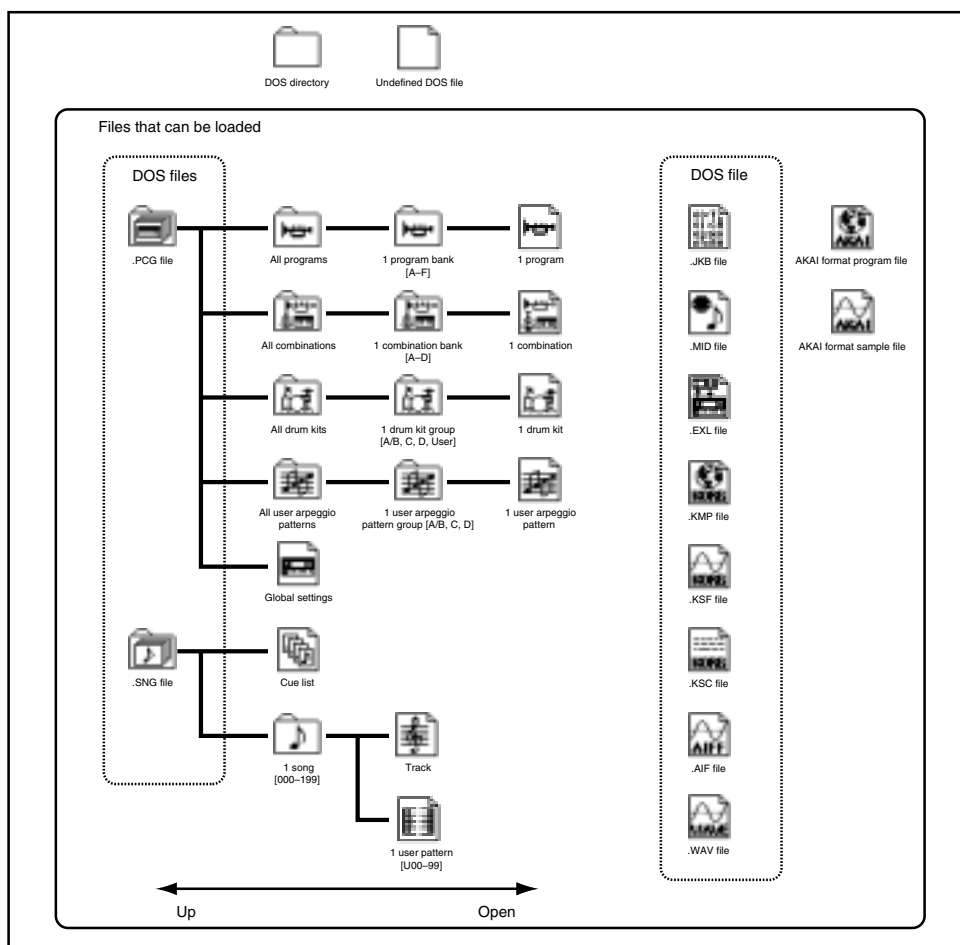
DOS files with an extension other than the following extensions will be considered to be Standard MIDI Files.

Extension	Type
.PCG	Program, combination, drum kit, user arpeggio pattern, global settings (TRITON format)
.SNG	Song, cue list (TRITON format)
.JKB	Jukebox list (TRITON format)
.MID	Standard MIDI File (SMF)
.EXL	MIDI exclusive data
.KMP	Korg Multisample Parameter file (Korg format)
.KSF	Korg Sample File (Korg format)
.KSC	Korg Script File (Korg format)
.AIF	AIFF file
.WAV	WAVE file

 .JKB files cannot be loaded or saved in Disk mode – only in Song Play mode.

When data is saved on the TRITON, one of these filename extensions will be added automatically, according to the type of data (except for .AIF and .WAV). If these filename extensions are modified on a computer, the file will be treated as an undefined file when it is reloaded back into the TRITON, and will be handled as a Standard MIDI File.

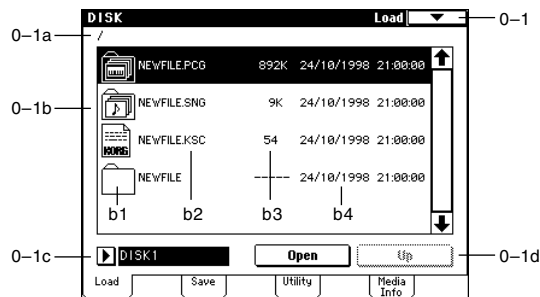
Files handled by the TRITON have the following structure. Since .PCG and .SNG files can be opened to divide their contents, they are displayed as directory icons.



0-1: Load

Here you can load a selected file or directory into internal memory.

Use the **Open button** and **Up button** to select the desired file or directory. Then use the "Load selected" (0-1C) page menu command to select and load the data.



0-1a: Current directory

The directory currently selected for processing is referred to as the "current directory."

The LCD screen will show the full path name of the directory. A slash "/" character is used as the delimiter between directory levels. To change the current directory, use the "Open" button and "Up" button (0-1d).

0-1b: Directory window

Directory window

File information for the current directory is shown here. You can select a file or directory in this window.

b1: File/icon

The icon indicates the type of file. For details on icons, see p.131.

b2: File name

This is the name of the file (DOS file). If the page menu command "Translation" (0-1B) is turned on, the DOS filename of a .KMP (Korg multisample parameter) file or .KSF (Korg sample) file that is loaded will be replaced in the display by the multisample name or sample name that you specified in Sampling mode.

b3: Size

This is the size of the file (in bytes).

Save date and time

This shows the date and time when the file was saved. From the left, this is shown as day, month, year, hours, minutes and seconds.

However since the TRITON does not contain an internal calendar or clock, you must use "Set Date/Time" (0-3E) to set the date and time before saving the file.

0-1c: Drive select

Select the device (floppy disk or hard disk etc.) that will be used for loading and saving.

The volume label assigned to the media will be displayed. For media that has no volume label, the display will indicate "no label." For unformatted media, the display will indicate "Unformatted."

If the EXB-SCSI option is not installed, only the floppy disk can be selected.

0-1d: Open button, Up button

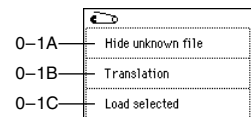
Open button

When you press the **Open button**, the directory will open, and the current directory will move one level downward. This can be used when a directory has been selected in the directory window.

Up button

When you press the **Up button**, the directory will move one level upward.

▼ 0-1: Page Menu Command



0-1A: Hide unknown files (check command)

Checked: Undefined files will not be displayed in the directory window. However, this is valid only if the current directory is a DOS directory.

0-1B: Translation (check command)

Checked: The multisample names and sample names used in Sampling mode will be displayed instead of the DOS file-names, a .KMP (Korg Multisample Parameter) and .KSF (Korg Sample File).

0-1C: Load selected

This command loads the file or directory that was selected in the "directory window" (0-1b).

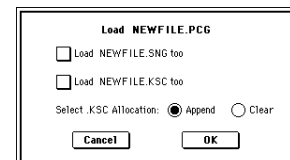
The dialog box that appears when you select this command will differ depending on the file from which you are loading data.

1) Load .PCG:

selected icon



All data in the .PCG file will be loaded.



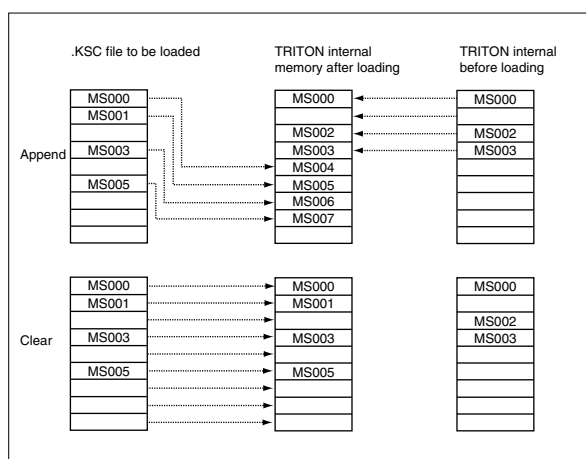
① If the current directory contains a .SNG file or .KSC file of the identical name, "Load *****.SNG too" and "Load *****.KSC too" check boxes will allow you to select this data if desired.

- If you **check** "Load *****.SNG too," the .SNG file of the same name as the .PCG file will also be loaded.
 - If you **check** "Load *****.KSC too," the .KSC file of the same name as the .PCG file will also be loaded.
- ② "Select .KSC Allocation" is valid if "Load *****.KSC too" has been checked. You can specify how the multisamples and samples in the .KSC file will be loaded. **Append:** Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory (i.e., by having been sampled or loaded). At this time, only the valid multisamples or samples will be loaded, and they will be organized in numerical order. (See diagram on the next page.)

At the same time, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples.

Clear: All multisamples and samples currently in memory will be erased, and the multisamples and samples will be loaded in the same configuration in which they were saved. (See diagram below.)

If memory already contains multisamples or samples that you wish to keep, and you wish to load additional multisamples or samples from disk, select **Append**. If the power has just been turned on, or you want to reproduce the state that was saved, select **Clear**.



- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

2) Load Programs:

selected icon 

All program data from a .PCG file will be loaded.

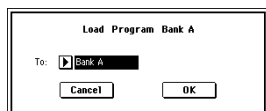


- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.


3) Load Program Bank [A-F]:

selected icon 

All program data of the selected bank will be loaded into the bank you specify.



- In "To," select the loading destination bank.

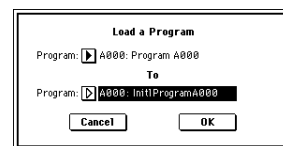
 Bank F program data can be loaded only into bank F. If you select bank A-E, it will not be possible to select bank F in "To."

- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.


4) Load a Program:

selected icon 

Data for the selected program will be loaded into the program number you specify.



- If you wish to load a program other than the one already selected, use "Program" to select the program that you wish to load.
- In "To Program," select the bank and A000 into which the data will be loaded. When you press the popup button, the "Bank/Program Select" window (see Program P0: 0-1a) will appear.

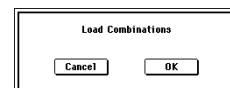
 Data for one bank F program can be loaded only into bank F. Banks A-E will not be displayed.

- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

5) Load Combinations:

selected icon 

All combinations in the .PCG file will be loaded.



- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

6) Load Combination Bank [A-D]:

selected icon 

All combinations in the selected bank will be loaded into the bank you specify.

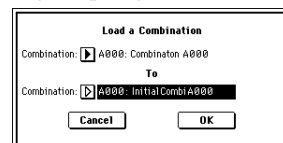


- In "To," specify the loading destination bank.
- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

7) Load a Combination:

selected icon 

The combination you select will be loaded into the loading destination combination number you specify.

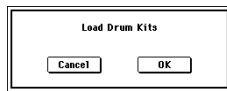


- If you wish to load a combination other than the one already selected, use "Combination" to select the combination that you wish to load.
- In "To Combination," select the bank and combination into which the data will be loaded. When you press the popup button, the "Bank/Combination Select" window (see Combination P0: 0-1a) will appear.
- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

8) Load Drum Kits:

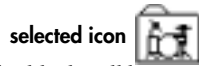


All drum kits in the .PCG file will be loaded.

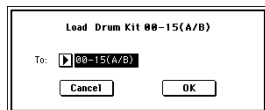


- 1 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

9) Load Drum Kit [00-15(A/B),16-31(C),32-47(D),48-63(User)]:



All drum kit data of the selected drum kit block will be loaded into the drum kit block you specify as the loading destination.



- 1 In "To," select the drum kit block into which the data will be loaded.
- 2 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

10) Load a Drum Kit:



The selected drum kit will be loaded into the drum kit number you specify as the loading destination.

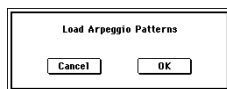


- 1 If you wish to load a drum kit other than the one already selected, use "Drum Kit" to re-select the drum kit you wish to load.
- 2 In "To Drum Kit," select the loading destination drum kit.
- 3 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

11) Load Arpeggio Patterns:



All user arpeggio pattern data in the .PCG file will be loaded.

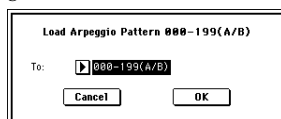


- 1 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

12) Load Arpeggio Pattern [000-199(A/B), 200-215(C), 216-231(D)]:



All user arpeggio pattern data in the selected user arpeggio pattern block will be loaded into the user arpeggio pattern block you specify as the loading destination.



- 1 In "To," select the loading destination user arpeggio pattern block.

- 2 If you select user arpeggio pattern block 000-199 (A/B) as the destination for loading either 200-215 (C) or 216-231 (D), user arpeggio patterns 000-015 will be loaded. If you select either 200-215 (C) or 216-231 (D) as the loading destination for 000-199 (A/B), the data will be loaded into user arpeggio patterns 000-015.

- 2 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

13) Load an Arpeggio Pattern:



The selected user arpeggio pattern data will be loaded into the user arpeggio pattern number that you specify as the loading destination.



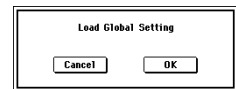
- 1 If you wish to load an user arpeggio pattern other than the currently selected one, use "Arp Pattern" to re-select the user arpeggio pattern that you wish to load.
- 2 In "To Arp Pattern," specify the loading destination user arpeggio pattern.
- 3 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

14) Load Global Setting:



Global setting data in the .PCG file will be loaded.

- 2 This includes Global mode parameters other than drum kits and user arpeggio patterns. Memory protect settings will not be loaded.

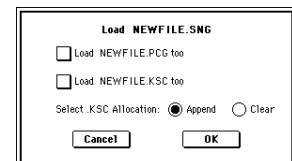


- 1 To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

15) Load .SNG:



All data in the .SNG file will be loaded.



- 1 If the current directory contains a .PCG file or .KSC file of the identical name, "Load *****.PCG too" and "Load *****.KSC too" check boxes will allow you to select this data if desired.
 - If you check "Load *****.PCG too," the .PCG file of the same name as the .SNG file will also be loaded.
 - If you check "Load *****.KSC too," the .KSC file of the same name as the .SNG file will also be loaded.
- 2 "Select.KSC Allocation" is valid if "Load *****.KSC too" has been checked. You can specify how the multi-samples and samples in the .KSC file will be loaded. **Append:** Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory (i.e., by having been sampled or loaded). At this time, only the valid multisamples or samples will be loaded, and they will be

organized in numerical order. (Refer to the diagram for 0–1C: Load .PCG)
 If “Load *****.PCG too” and “Load *****.KSC too” are checked when you load the data, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples.

Clear: All multisamples and samples currently in memory will be erased, and the multisamples and samples will be loaded in the same configuration in which they were saved.

If memory already contains multisamples or samples that you wish to keep, and you wish to load additional multisamples or samples from disk, select **Append**. If the power has just been turned on, or you want to reproduce the state that was saved, select **Clear**.

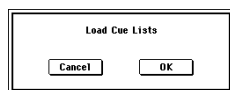
- ③ To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

16) Load Cue Lists:

selected icon



The cue list data in the .SNG file will be loaded.



- ① To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

17) Load a Song:

selected icon



Data for the selected song will be loaded into the song number you specified as the load destination.



- ① If you wish to load a song other than the selected song, use “Song” to re-select the song to be loaded.
- ② In “To Song,” select the loading destination song.
- ③ To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

18) Load Tracks:

selected icon



The event data of all tracks in the selected song will be loaded into the song you specify as the loading destination. However, it is not possible to specify an uncreated song as the loading destination.



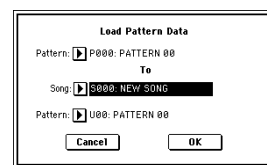
- ① In “Song,” specify the loading destination song.
- ② To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

19) Load Pattern Data:

selected icon



The selected user pattern will be loaded into a user pattern of the selected loading destination song. However, it is not possible to specify an uncreated song as the loading destination.



- ① If you wish to load a user pattern other than the one already selected, use “Pattern” to re-select the user pattern that you wish to load.
- ② In “To Song” and “Pattern,” select the loading destination song and user pattern.
- ③ To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

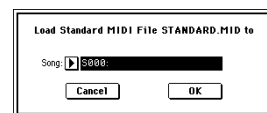
20) Load Standard MIDI File:

selected icon



The selected Standard MIDI File will be loaded into the song number you select as the loading destination.

If you have selected an undefined file, it will be considered to be a Standard MIDI File, and will be loaded into the song you specify as the loading destination.



- ① In “Song,” select the loading destination song.
- ② To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

⚠ The program bank and program numbers loaded into the song will follow the “Bank Map (Global P0: 0–2a) setting. If “Bank Map” is **KORG**, bank A will be selected for bank select 00.00 (MSB.LSB). If “Bank Map” is **GM(2)**, bank G will be selected.

21) Load and Transmit MIDI Exclusive Data:

selected icon



All data in the .EXL file will be loaded, and transmitted from MIDI OUT or TO HOST.




- ① In “To,” specify the output connector from which the data will be transmitted.
MIDI OUT: the rear panel MIDI OUT connector
PC I/F: the rear panel TO HOST connector
- ② If the .EXL file contains two or more exclusive data items, use “Transmit Interval Time” to specify the time interval that will be inserted between each item of exclusive data. If you are transmitting the data to another TRITON, the required time interval will depend on the type of data. After transmitting all .PCG data, you must allow an interval of approximately 16 seconds. For details refer to the Global mode section on Dump (≡ Global P1–1: Page Menu Command). For other MIDI devices, refer to their owner’s manual.
- ③ To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

Loading sample data

The paragraphs 22) Load .KSC, 23) Load .KMP, and 24) Load .KSF which follow explain how Korg format PCM data files are loaded into the sample data RAM of the TRITON.

About the sample data RAM

The TRITON is shipped from the factory with 16 Mbytes of sample data RAM. (One 16 Mbyte SIMM is installed in a 72 pin SIMM slot.) By installing SIMM modules in both of the 72 pin slots, you can expand the sample data RAM to a maximum of 64 Mbytes (two 32 Mbyte SIMM's).

 It is not possible to load an individual sample that is larger than 16 Mbytes.

Limitations on the maximum number that can be loaded

- Multisamples: up to 1,000
- Samples: up to 4,000
- Samples used by multisamples: up to 4,000

About Korg format PCM data files

KSC files:



Files with a filename extension of KSC (Korg Script) contain the names of .KMP and .KSF files.

When a .KSC file is loaded, the .KMP and .KSF files whose names it contains will also be loaded. This is a convenient way to load multiple multisamples and samples at once. When saving, a .KSC file and a directory with the same name as the .KSC file will be created. The .KMP files and .KSF files listed in the .KSC file will be saved in this directory.

KMP files:



Files with a filename extension of KMP (Korg Multisample Parameter) contain the parameters which make up a single multisample. These parameters also include the filename of the .KSF files that are used by that multisample, so when a .KMP file is loaded, the necessary .KSF files will also be loaded at the same time.

When saving, a .KMP file and a directory with the same name will be created, and the .KSF files used by the multisample will be saved in this directory.

KSF files:




Files with a filename extension of KSF (Korg Sample File) contain the parameters and waveform data which make up a single sample. A .KSF file can be used as one of the samples used by a multisample. A .KSF file can also be selected and used as a drum sample for a drum kit.

22) Load .KSC:

 selected icon

The .KMP files and .KSF files listed in the .KSC file will be loaded as multisamples and samples respectively.



 The .KMP files and .KSF files listed in the .KSC file are saved in a directory of the same name that is created automatically at the same time as the .KSC file.

① If the current directory contains a .PCG file or .SNG file of the same filename, you will be able to select the "Load *****.PCG too" and/or "Load *****.SNG too" checkboxes.

- If you check "Load *****.PCG too," the .PCG file of the same name as the .KSC file will also be loaded.
- If you check "Load *****.SNG too," the .SNG file of the same name as the .KSC file will also be loaded.

② "Select .KSC Allocation" allows you to specify how the multisamples and samples in the .KSC file will be loaded.

Append: Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory (i.e., by having been sampled or loaded). At this time, only the valid multisamples or samples will be loaded, and they will be organized numerical order (refer to the diagram for 0-1C: Load .PCG).

If "Load *****.PCG too" is checked when you load the data, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples. **Clear:** All multisamples and samples currently in memory will be erased, and the multisamples and samples will be loaded in the same configuration in which they were saved (refer to the diagram for 0-1C: Load .PCG).


If memory already contains multisamples or samples that you wish to keep, and you wish to load additional multisamples or samples from disk, select **Append**.

If the power has just been turned on, or you want to reproduce the state that was saved, select **Clear**.

③ To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory by having been sampled or loaded. Only valid multisamples or samples will be loaded (Append load).

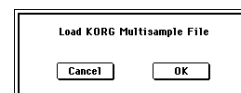
If the .KSF files used by the .KMP file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found,..." (p.138) to load the required .KSF files.


 Since PCM memory overflow checking is performed when loading each .KSF file, an overflow may occur during the loading process.

23) Load .KMP:

 selected icon

The selected .KMP file will be loaded as a multisample. The .KSF files used by the .KMP will also be loaded as samples.



 The .KSF files used by the .KMP file will be saved in an identically-named directory that is created automatically when the .KMP file is created.

① To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.

Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory by having been sampled or

loaded. Only valid multisamples or samples will be loaded (Append load).
 If the .KSF files used by the .KMP file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found,..." (p.138) to load the required .KSF files.

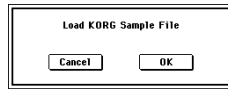
- Since PCM memory overflow checking is performed when loading each .KSF file, an overflow may occur during the loading process.

24) Load .KSF:

selected icon



The selected .KSF file will be loaded as a sample.



- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.
 The sample will be loaded after the last multisample or sample that currently exists in the TRITON's memory by having been sampled or loaded (Append load).

Loading AIFF files and WAVE files

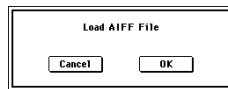
The TRITON can load AIFF format or WAVE format files, which are formats used to save audio data on personal computers etc. The loaded data can be used as a sample. When data that has been loaded is saved to a storage media, it will be saved as a Korg format .KSF file.

25) Load .AIF:

selected icon



The selected AIFF file will be loaded as a sample.



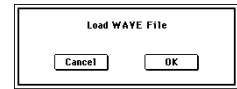
- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.
 The sample will be loaded after the last multisample or sample that currently exists in the TRITON's memory by having been sampled or loaded (Append load). If the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file.
- Files with an extension of other than .AIF cannot be recognized as .AIFF files. In this case, use the Utility tab page menu command "Rename" (0-3A) to change the last four characters of the filename to ".AIF"
- If the data that is loaded as a sample contains a loop point, you can set "S.Offset" (Program P1: 1-2a) on the TRITON so that the sound will begin from the loop point.
- If data whose sample size is 8 bits or less is loaded, it will be converted into 16 bit data inside the TRITON. This will mean that the amount of internal memory consumed will be approximately twice as large as the file size. The increase in size resulting from this conversion may mean that it is impossible to save that data on a floppy disk.

26) Load .WAV:

selected icon



The selected WAVE file will be loaded as a sample.



- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.
 The sample will be loaded after the last multisample or sample that currently exists in the TRITON's memory by having been sampled or loaded (Append load). If the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file.
- Files with an extension of other than .WAV cannot be recognized as .WAVE files. In this case, use the Utility tab page menu command "Rename" (0-3A) to change the last four characters of the filename to ".WAV"
- If the data that is loaded as a sample contains a loop point, you can set "S.Offset" (Program P1: 1-2a) on the TRITON so that the sound will begin from the loop point.
- If data whose sample size is 8 bits or less is loaded, it will be converted into 16 bit data inside the TRITON. This will mean that the amount of internal memory consumed will be approximately twice as large as the file size. The increase in size resulting from this conversion may mean that it is impossible to save that data on a floppy disk.

Loading AKAI S1000/S3000 format Sample files and Program files

The TRITON can load AKAI S1000/S3000 format Sample files and Program files. The loaded Sample or Program file data can be used as a sample or multisample respectively. When the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file or .KMP file respectively.

27) Load AKAI Sample File:

selected icon



The selected Sample will be loaded as a sample.

- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**.
 The sample will be loaded after the last multisample or sample that currently exists in the TRITON's memory by having been sampled or loaded (Append load). If the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file.
- If the data that is loaded as a sample contains a loop point, you can set "S.Offset" (Program P1: 1-2a) on the TRITON so that the sound will begin from the loop point.

Sample files

Parameter	AKAI S1000/S3000 format	TRITON series format after loading
Loop points	Multiple settings possible	Of the multiple loop points, the settings for the first HOLD loop are used. If there is no HOLD loop, use the longest loop
Loop length	Settable with resolution of less than one sample	Resolution of less than one sample is ignored

28) Load AKAI Program File:

selected icon



The selected Program file will be loaded as a multisample. When the loaded data is saved to storage media, a Program file will be saved as a .KMP file, and a Sample file will be saved as a .KSF file.

- To load the data, press the **OK button**. To cancel without loading, press the **Cancel button**. Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory by having been sampled or loaded. Only valid Program files or Samples files will be loaded (Append load). If the Sample files used by the Program file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found,..." to load the required Sample files.

Since PCM memory overflow checking is performed when loading each .KSF file, an overflow may occur during the loading process.

About Program files

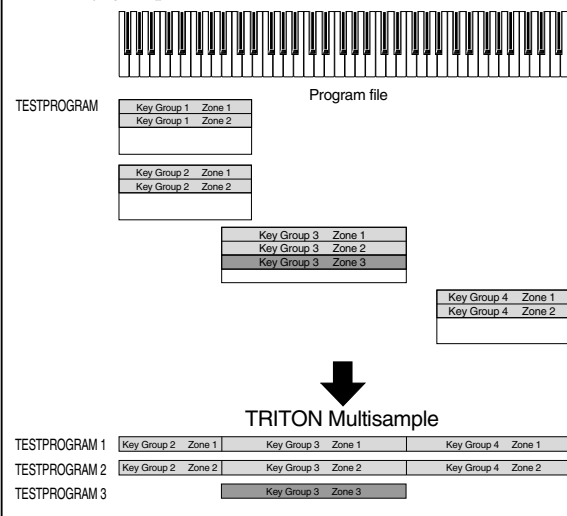
The TRITON will load only the key-map related parameters from the Program file.

AKAI format uses the concept of "key groups." For each key zone, up to four samples can be assigned, and these four can be switched or crossfaded by velocity. Key zones can also be crossfaded.

On the TRITON, in contrast, there is one sample for each key zone, and you can use up to four multisamples to create a key map in the order of the velocity of each key group. It is not possible to crossfade key zones.

Example)

An AKAI format Program file "TESTPROGRAM" consists of four key groups, and each key group consists of up to three velocity zones. Key groups 1 and 2 are a layer whose low range is the same. When this is loaded into the TRITON, three multisamples will be created, collected by velocity zone, and the numerals 1, 2, and 3 will be appended to each multisample name. At this time, the top key will be determined by the bottom key of the sample that is assigned at the right, and if the bottom key is the same (key groups 1 and 2 in the diagram), the higher-numbered key group will be used.



If the file to load cannot be found, or when loading a file that was saved in parts

When loading PCM data, the following dialog box will appear if the required file cannot be found in the current directory or a lower directory.

- If when loading a .KSC file, a .KMP file used by it cannot be found
- If when loading a .KMP file, a .KSF file cannot be found
- If when loading an S1000/S3000 format Program file, a Sample file cannot be found.
- If loading a .KSF file that was larger than the media capacity and was therefore saved on multiple media, when the first media has been loaded and the second disk etc. needs to be specified.



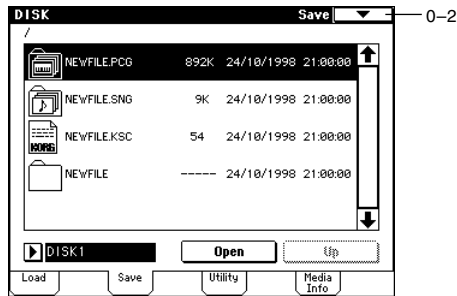
- Exchange disks as necessary, and move to the directory that contains the file shown in "Where is."
- Press the **Select button** to resume loading. If you press the **Cancel button**, loading will be halted. If you press the **Skip button**, the specified files will be skipped, and the next file will be loaded.

Except for special cases in which the disk containing the specified file has been damaged or is unavailable, press the **Select button** to continue loading.

0-2: Save

Here you can save various data from internal memory to media such as disk. Use the **Open** button and **Up** button to move to the desired directory (i.e., change the current directory), and then select the desired page menu command. When you execute a Save operation, the data will be saved in the same level of the disk hierarchy as the files that are displayed.

The date and time with which the saved file is stamped is specified by "Set Date/Time" (0-3E).



▼ 0-2: Page Menu Command

0-1A	Hide unknown file	Save to Std MIDI File	0-2F
0-1B	Translation	Save Exclusive	0-2G
0-2A	Save All		
0-2B	Save PCG & SEQ		
0-2C	Save PCG		
0-2D	Save SEQ		
0-2E	Save Sampling Data		

When saving .KSC, .KMP, or .KSF files and the data does not fit on a single piece of media (disk etc.), the following dialog box will appear, allowing you to select the next piece of media. See "Select next medium" (0-2H).

When saving combinations with "Save All," "Save PCG & SNG," or "Save PCG," you should also try to save the programs used by each timbre (and the drum kits used by the programs) and the user arpeggio patterns at the same time.

Similarly when saving programs, you should also save the drum kit used by the program and the user arpeggio pattern at the same time.

If multisamples or samples created in Sampling mode are used in a program or drum kit, we recommend that you save the data as "Save All."

Also when using "Save PCG" or "Save Sampling Data" to save an individual program, drum kit, or multisample or sample created in Sampling mode, we recommend that you save the data in the same directory with the same filename.

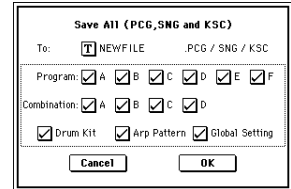
When using "Load PCG" to load a .PCG file, the .KSC file of the same name will be loaded at the same time so that the correct multisamples/samples with which the program or drum kit was saved will correspond correctly.

0-2A: Save All (PCG, SNG and KSC)

This command saves all programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, songs and cues lists as a .SNG file, and multisamples and samples created in Sampling mode as a .KSC file to the specified media.

This command is valid only when the current directory is a DOS directory.

- 1 Select this command to open the following dialog box.

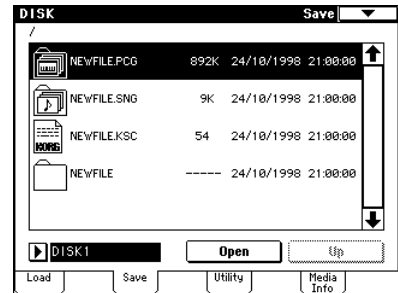


- 2 Use the text edit button to move to the text input dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG, NEWFILE.SNG, and NEWFILE.KSC will be saved to the media.

- 3 Check the check boxes for the types of data that you wish to save. Programs and combinations can also be saved in units of banks.

- 4 To save the data, press the **OK** button. To cancel without saving, press the **Cancel** button.

When you execute this command, the files shown below will be created in the current directory. In addition to the .PCG, .SNG, and .KSC files that are created with the filename you specify, one directory will be created. The files listed in NEWFILE.KSC will be saved in this directory.

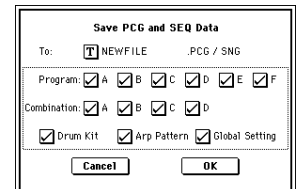


0-2B: Save PCG & SEQ

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, and saves songs and cue lists to a .SNG file on the specified media.

This command is valid only when the current directory is a DOS directory.

- 1 Select this command to open the following dialog box.



- 2 Use the text edit button to move to the text input dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG and NEWFILE.SNG will be saved to the media.

- 3 Press the check boxes for the types of data that you wish to save. Programs and combinations can also be saved in units of banks.

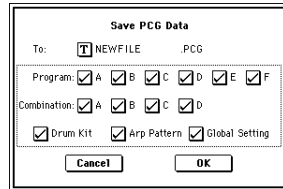
- ④ To save the data, press the **OK button**. To cancel without saving, press the **Cancel button**.

0-2C: Save PCG

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file.

This command is valid only when the current directory is a DOS directory.

- ① Select this command to open the following dialog box.



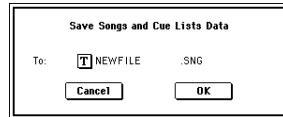
- ② Use the text edit button to move to the text input dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, a file named NEWFILE.PCG will be saved to the media.
- ③ Press the check boxes for the types of data that you wish to save. Programs and combinations can also be saved in units of banks.
- ④ To save the data, press the **OK button**. To cancel without saving, press the **Cancel button**.

0-2D: Save SEQ (Songs and Cue Lists)

This command saves all songs and cue lists from internal memory as a .SNG file.

This command is valid only when the current directory is a DOS directory.

- ① Select this command to open the following dialog box.



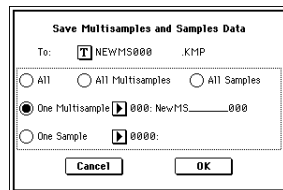
- ② Use the text edit button to move to the text input dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, a file named NEWFILE.SNG will be saved to the media.
- ③ To save the data, press the **OK button**. To cancel without saving, press the **Cancel button**.

0-2E: Save Sampling Data (Multisamples and Samples)

By executing this command, multisample and sample data that was recorded or edited in Sampling mode or loaded in Disk mode can be saved from internal sampling RAM to media as Korg format .KMP files or .KSF files (and the .KSC file that manages these files).

This command is valid only when the current directory is a DOS directory.

- ① Select this command to open the following dialog box.



- ② Specify the data that you wish to save. Use the following five radio buttons to make your selection. (All data is saved in Korg format.)
- ③ To save the data, press the **OK button**. To cancel without saving, press the **Cancel button**.

- ⚡ If the page menu command "Translation" (0-1B) is turned on, the names of .KMP files and .KSF files you save will be displayed as the multisample name or sample name. This is convenient when you are searching for the desired files on disk.

All: All multisamples and samples from the TRITON's internal memory will be saved as .KMP files and .KSF files.

Simultaneously, a .KSC file and a directory to contain these files will also be created and saved. The filename that you assigned using the text edit button will be the name of the .KSC file and the name of the directory.

All Multisamples: All multisamples and samples (i.e., samples used by the multisamples) will be saved as .KMP files and .KSF files. Simultaneously, a .KSC file and a directory to contain these files will also be created and saved. The filename that you assigned using the text edit button will be the name of the .KSC file and the name of the directory.

All Samples: All samples will be saved as .KSF files. Simultaneously, a .KSC and directory to contain these files will also be created and saved. The filename that you assigned using the text edit button will be the name of the .KSC file and the name of the directory.

One Multisample: The selected multisample will be saved as a .KMP file. Simultaneously, a directory will also be created, and the samples used by the multisample will be saved in that directory.

The filename that you assigned using the text edit button will be the name of the .KMP file and the name of the directory. By default, this name will consist of the first five characters (uppercase) of the sixteen-character multisample name + the multisample number.

[Examples]

000: NewMS_0000_000 → NEWMS000.KMP

001: 108bpmDrLoop00 → 108BP001.KMP

One Sample: The selected sample will be saved as a .KSF file.

The filename that you assigned using the text edit button will be used as the name of the .KSF file. By default, this name will consist of the first four characters (uppercase) of the sixteen-character sample name + the sample number.

[Examples]

0000: NewSample_0000 → NEWS0000.KSF

0001: C#3-EGuitar → C#3-0001.KSF

0-2F: Save to Std MIDI File (Save Song as Standard MIDI File)

This command saves the selected song from internal memory to storage media as a .MID file (Standard MIDI File).

This command is valid only when the current directory is a DOS directory.

- ① Select this command to open the following dialog box.



- ② In "Song," so the song that you wish to save.
- ③ Use the text edit button to access the text input dialog box, and specify the filename. By default, the first eight characters (uppercase) of the song name will be assigned.
- ④ Use the radio buttons to specify the format.
- Format 0** will save sixteen tracks of MIDI data together in a single track.
- Format 1** will save each track individually.

- To save the data, press the **OK button**. To cancel, press the **Cancel button**.

The song data you save here can be played back on a device that supports Standard MIDI Files. However if you intend to playback the data on the TRITON, we recommend that you use "Save SEQ" to save the data, since this will allow a higher degree of reproducibility.

0-2G: Save Exclusive (Receive and Save MIDI Exclusive Data)

This command receives exclusive data, accumulates it in the unused portion of internal memory, and saves the data to media as an .EXL file.

This command is valid only when the current directory is a DOS directory.

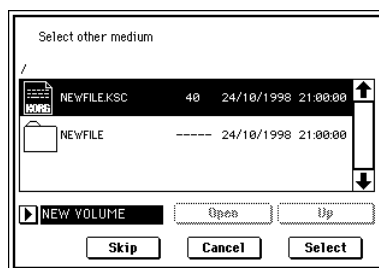
- When you select this command, the TRITON will wait for exclusive data to be received. The following dialog box will appear.



- Transmit the exclusive data that you wish to save to the TRITON. While the data is being received, the display will indicate "Status=RECEIVING MIDI DATA." When reception ends, the size of the received data and the size of the remaining free area will be rewritten. The display will change to "Status=AWAITING MIDI DATA," and you can continue transmitting exclusive data to the TRITON. During reception, the **Cancel button** and the **OK button** cannot be pressed.
- Press the text edit button to access the text input dialog box, and specify the filename.
- To save the data, press the **OK button**. To cancel without saving, press the **Cancel button**.

0-2H: Select other medium

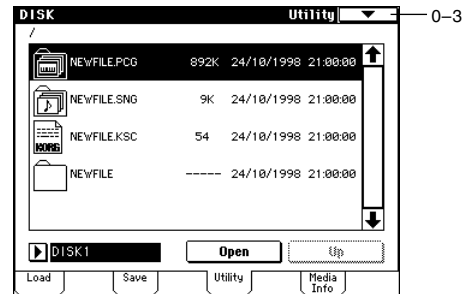
- When saving a .KSC, .KMP, or .KSF file and the data does not fit on a single floppy disk (or other medium), the following dialog box will appear, asking you to select the next piece of media.



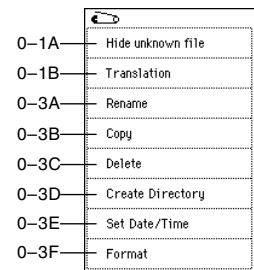
- Remove the floppy disk from the disk drive, and insert the next floppy disk. If you wish to specify a different SCSI device, use "Drive Select" (0-1c) to select it (if the EXB-SCSI option is installed).
- Press the **Select button**, saving will resume.
- If at this point you press the **Cancel button**, the save operation will be terminated. If you press the **Skip button**, the specified file will be skipped, and the next file will be saved (ref p.138 "If the file to load cannot be found,...").

0-3: Utility

Here you can rename, copy, or delete the selected disk or file, create a new directory, and set the date and time. After selecting a disk or file, select the desired page menu command.



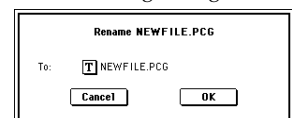
▼ 0-3: Page Menu Command



0-3A: Rename

This command renames the selected file or directory. This command is valid only when a DOS file or a DOS directory is selected.

- Select this command to open the following dialog box.

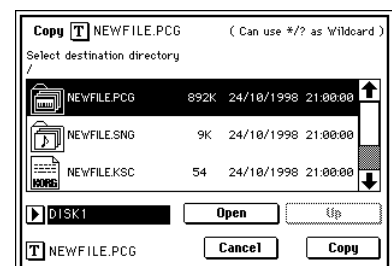


- Press the text edit button to access the text input dialog box, and modify the name.
- To rename the file or directory, press the **OK button**. To cancel, press the **Cancel button**.

0-3B: Copy

This command copies the selected file or directory. This command is valid only when a DOS file or a DOS directory is selected.

- Select this command to open the following dialog box.



- "Copy" will show the name of the selected file or directory. If you wish to change the file or directory that will be copied, use the text edit button to move to the text input

dialog box, and specify the filename that you wish to copy.
 (Can use */? as Wildcard): When you use the text edit button to access the text input dialog box and specify the name of the file or directory to be copied, you can use "*" and "?" characters as wildcards. For example, if in the above example you specify **PRELOAD1.*** (instead of **PRELOAD1.PCG**), all filenames of PRELOAD1. with any filename extension will be copied at the same time: i.e., PRELOAD1.PCG, PRELOAD1.SNG, PRELOAD1.KSC, ...

Example)

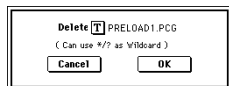
PRELOAD1.* : PRELOAD1.PCG, PRELOAD1.SNG, PRELOAD1.KSC, ...
 PRELOAD?.PCG : PRELOAD1.PCG, PRELOAD2.PCG, PRELOAD2.PCG, ...

- ⚡ When wildcards are used, only files will be subject to copying. Directories will not be copied.
- ③ Use the **Open button** and **Up button** to select the copy destination directory. If you wish to specify a different SCSI device, use "Drive Select" (0-1c) to select it (if the EXB-SCSI option has been installed).
- ④ If you wish to copy the file or directory with a different name, use the text edit button (in the lower line) to access the text input dialog box, and specify the name with which the file or directory will be copied. If you are using wildcards to simultaneously copy multiple files, it is not possible to modify the filename.
- ⑤ To copy the data, press the **OK button**. To cancel without copying, press the **Cancel button**.
- ⚡ If the drive that you selected in "Drive Select" is removable media (floppy disk, MO disc, removable hard disk etc.), it is not possible to copy to different media on the same drive.

0-3C: Delete

This command deletes the selected file or directory. If a directory is selected, it can be deleted only if no files exist within that directory. This command is valid only if a DOS file or directory is selected.

- ① Select this command to open the following dialog box.



- ② "Delete" will indicate the name of the selected file or directory. If you wish to change the file or directory that is to be deleted, use the text edit button to access the text input dialog box, and specify the name of the file or directory that you wish to delete.
 (Can use */? as Wildcard) : When you use the text edit button to access the text input dialog box and specify the name of the file to be deleted, you can use the "*" or "?" characters as wildcards. This allows you to simultaneously delete multiple files with identical filenames and different extensions, or files whose names are partially identical (e.g. "Copy" 0-3B).

- ⚡ When wildcards are used, only files will be subject to deletion. Directories will not be deleted.
- ③ To delete the selected file or directory, press the **OK button**. To cancel without deleting, press the **Cancel button**.

0-3D: Create Directory

This command creates a new directory within the current directory.

- ① Select this command to open the following dialog box.



- ② Use the text edit button to access the text input dialog box, and specify the name of the new directory.
- ③ To create the directory, press the **OK button**. To cancel without creating the directory, press the **Cancel button**.

0-3E: Set Date/Time

This command sets the date and time that will be used to time-stamp files that are saved.

- ① Select this command to open the following dialog box.



- ② Set each parameter.
 "Year" 1980-2079
 "Month" 1-12
 "Day" 1-31
 "Hour" 0-23
 "Minute" 0-59
 "Second" 0-59 (only even-numbered second values will be assigned to a file)
- ③ To set the date and time, press the **OK button**. To cancel, press the **Cancel button**.

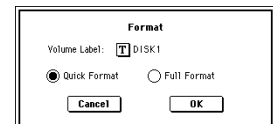
0-3F: Format

This command formats the selected media, such as a floppy disk or external SCSI device (if the EXB-SCSI option has been installed). The volume label (a name for the entire disk) you specify will be assigned to the disk. The volume label you assign here will be displayed in "Drive Select" (0-1c). The volume label can be a maximum of eleven characters.

- ⚡ When you format, all data saved on that media will be erased. Be sure to double-check before you format.

- ⚡ After formatting, it is not possible to press the [Compare] key to return to the previous state.

- ① To format a floppy disk, insert the floppy disk to be formatted into the floppy disk drive.
- ② In "Drive Select" (0-1c), select the media that you wish to format. (If no external SCSI device is connected via the EXB-SCSI option, ignore this step.)
- ③ Select this command to open the following dialog box.




- ④ In "Volume Label," use the text edit button to access the text input dialog box, and specify the volume label.

- ⚡ The previously-specified volume label will be displayed. If no volume label had been specified for the disk, or if a non-DOS disk was inserted, this will indicate "NEW VOLUME."

- ⑤ **Quick Format:** Select this if the media has already been physically formatted. Since only the system area of the media need be formatted, this will require less time.
Full Format: Select this when formatting media that has not been physically formatted. You should also select this type of formatting if writing errors occur frequently with this media.

note It is not necessary to perform a **Full Format** on SCSI media that has been physically formatted at 512 bytes/block. Perform the **Quick Format** for such media.

 Only 512 bytes/block media can be formatted.

- ⑥ To format the media, press the **OK button**. To cancel without formatting, press the **Cancel button**. After a floppy disk has been formatted by the TRITON, a 2HD floppy will hold 1.44 MB (18 sectors/track), and a 2DD floppy will hold 720 KB (9 sectors/track). A maximum of 4 GB can be formatted on an external SCSI device connected via the EXB-SCSI (sold separately).

0-4: Media Info (Media Information)

This displays information on the media that is selected by "Drive Select" (0-1c).

DISK		Media Information
Volume Label:	DISK1	
SCSI ID:	-	
Device Type:	Floppy Device	
Product ID:	Internal DD/HD	
Format Type:	DOS	
Total Size:	1.4M	
Free Size:	517K	
Write Protect:	Off	
Supports Removable:	Yes	

Load Save Utility Media Info

Volume Label:

The volume label of the media.

SCSI ID:

The specified SCSI ID. If the TRITON's internal floppy disk drive is selected, "-" will be displayed.

Device Type:

The type of media.

Product ID:

The vendor ID, product, and product version, etc.

Format Type:

The type of format. If not formatted, this will indicate "Unformatted."

Total Size:

The capacity of the media (in bytes).

Free Size:

The free capacity of the media (in bytes).

Write Protect:

The write protect status of the media. This will indicate "On" if protected, or "Off" if not protected.

Supports Removable:

This will indicate "Yes" if the media of the selected device can be removed (e.g., floppy disk, MO disc, removable hard disk). If the media is fixed, this will be "No."



8. Effect Guide

Overview

The effects section of the TRITON consists of five-channel **Insert Effects**, two-channel **Master Effects**, a single-channel **Master EQ** (stereo, three-band EQ), and a **Mixer section** that controls the effect routings. You can select any of 102 digital Insert Effects or 89 digital Master Effects, as listed below:

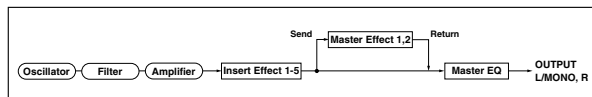
Classification of 102 effects

000–015	Filters and dynamics effect, such as EQ and compression
016–031	Pitch modulation and phase modulation effects, such as chorus and phaser
032–040	Other modulation and pitch-shifting effects, such as rotary speaker and pitch shifter
041–051	Early reflection and delay effects
052–057	Reverb effects
058–089	Mono effects and mono chain effects, in which two mono effects are internally connected in series
090–102	Double-size effects

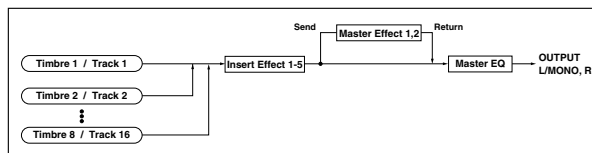
Select the desired effects **000–089** from IFX 1, 2, 3, 4, and 5, and MFX 1 and 2. Effects **090–102** are double-size effects and use twice the area, compared to other effects. They are selected in IFX 2, 3, and 4.

1. Effects in each mode

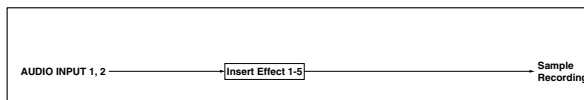
In **Program mode**, you can process sounds using **Insert Effects**. This is something like processing an oscillator (OSC) output sound using a filter and an amplifier. Then, you can apply a modulation and reverb effect or other **Master Effect** to the processed sound to add ambience and space. Finally, before the sound is output from the OUTPUT (MAIN) L/MONO, and R connectors, you can fine-tune the tonal quality using the stereo, three-band **Master EQ**. You can adjust these settings for each Program individually.



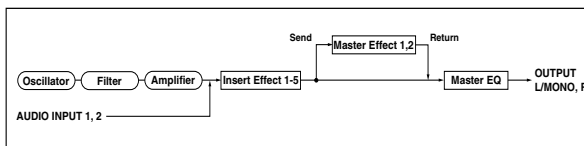
In **Combination mode**, **Sequencer mode**, and **Song Play mode**, you may process Program sounds for each timbre and track using the **Insert Effects**, add ambience and space to the entire sound using the **Master Effects**, and adjust the overall tonal quality using the **Master EQ**. You can make these settings for each Combination in Combination mode, for each Song in Sequencer mode, and for each mode in Song Play mode individually.



Sampling mode enables you to sample sound by applying the **Insert Effects** to the incoming signals at AUDIO INPUTS 1 and 2. To do so, use the “Audio Input” (Sampling P0: 0–2a) parameters. The settings here are effective only in Sampling mode.



The external input from AUDIO INPUT 1 and 2 is also valid in **modes** other than Sampling mode. In Program, Combination, Sequencer, and Song Play modes, the **insertion effects**, **master effects**, and **master EQ** can be used. Settings for the external input from AUDIO INPUT 1/2 are made in “Audio Input (COMBI, PROG, SEQ, S.PLAY)” (Global P0: 0–3a). In these modes, the TRITON can function as a 2-in 6-out effect processor for the external input signal from AUDIO INPUT 1 and 2, or you can use the external audio signal in conjunction with the sounds of the internal tone generator. (**093: Vocoder** can be used as a vocoder effect in which an external mic input is used to control the sounds of the TRITON.)



When you apply effects to the external audio signal from AUDIO INPUT 1 and 2, oscillation may be heard depending on the effect type and the parameter settings. If this occurs, adjust the input level, output level, and effect parameters. In particular, please exercise caution when using high-gain effects.

2. Dynamic modulation (Dmod)

Dynamic modulation is a function that enables you to control and change in real-time certain parameters^{*1} of the TRITON that govern the intensity of the effects during performance via the TRITON’s controllers and incoming MIDI messages.

You can also control the effect parameters using the BPM/MIDI Sync function^{*2}. Using this function enables you to synchronize the LFO speed of modulation effects or the delay time of delay effects with the tempo of the arpeggiator or sequencer.


For more information, refer to “Dynamic Modulation Source (Dmod)” (p.214).

^{*1} These effect parameters are marked with **D^{mod}** (p.155~).

^{*2} The effect parameters marked with **Sync** support this function (p.160~).

3. Effect I/O

To achieve the best tonal quality, signals sent to the Master Effects should be output at the maximum level without clipping. Also, use the “Wet/Dry” parameter for the Insert Effects and the “Output Level” or “Return 1, 2” parameter for the Master Effects to adjust the effect output level.

 The TRITON does not have an input level meter to detect the effect input level. If the input level is too low, the S/N ratio may decrease. On the other hand, if the input level is too high, clipping may occur.

The following table shows the parameters related to the level settings:

Program mode

Input	OSC1/2 High, Low Level	(P1)
	Filter1/2 Trim	(P3)
	Amp1/2 Level	(P4)
	Send1/2	(P8)
	Effect Trim parameter *1	(P8, P9)
Output	Effect Wet/Dry parameter	(P8, P9)
	Return1, 2	(P9)

Combination mode

Input	Volume	(P0, P1)
	Send1/2	(P8)
	Effect Trim parameter *1	(P8, P9)
Output	Effect Wet/Dry parameter	(P8, P9)
	Return1, 2	(P9)

Sequencer mode

Input	Volume	(P0)
	Send1/2	(P8)
	Effect Trim parameter *1	(P8, P9)
Output	Effect Wet/Dry parameter	(P8, P9)
	Return1, 2	(P9)

Song Play mode

Input	Volume	(P0)
	Send1/2	(P8)
	Effect Trim parameter *1	(P8, P9)
Output	Effect Wet/Dry parameter	(P8, P9)
	Return1, 2	(P9)

Sampling mode

Input	AUDIO INPUT LEVEL on the rear panel	
	Level	(P0)
	Effect Trim parameter *1	(P8)
Output	Effect Wet/Dry parameter	(P8)

Global mode *2

Input	AUDIO INPUT LEVEL on the rear panel	
	Level	(P0)
	Send1/2	(P0)

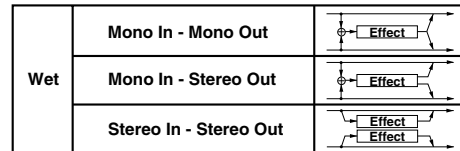
*1 Some effects may not have these parameters.

*2 Use this parameter to set the Audio Input Level in all modes other than Sampling mode.

Insert Effects (IFX 1, 2, 3, 4, 5)

1. In/Out


Insert Effects (IFX 1, 2, 3, 4, 5) have a **stereo input** and a **stereo output**. If you select **Dry** (no effect) for the “Wet/Dry” parameter, the stereo input signal will be output in stereo without being processed by the effect. If you select **Wet** (effect applied), the processed signal will be output in one of the following ways:



If you select **000: No Effect**, stereo input signals are output in stereo without being processed.

The possible routing of stereo inputs and outputs is indicated in the upper left corner of the block diagram.

Pressing the “On/Off” switch of IFX 1–5 in the P8: “InsertFX” tabs in each mode will toggle between **ON** and **OFF**. When **OFF** is selected, the effect will be bypassed, and the stereo input signal will be output in stereo without being processed.

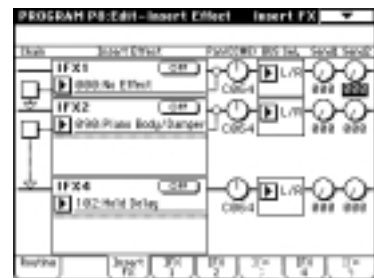
 The TRITON can also turn IFX1–5 off by receiving MIDI control change message CC#92. Value 0 will turn them off, and value 1–127 will turn them on. You can also use “Effect Global SW” (Global P0: 0–1b) to turn IFX1–5 on and off. This MIDI control is performed on MIDI Global Channel “MIDI Channel” (Global P1: 1–1a).

Double-size effects

Double-size effects 090–102 use twice the area of what other effects use.

You can select them for **Insert Effects IFX2, IFX3, and IFX4**. Note that if you select a double-size effect for IFX2, you cannot use IFX3. In the same way, if you select a double-size effect for IFX3 or IFX4, you cannot use IFX4 or IFX5 respectively.

Selecting double-size effects for IFX2 and IFX4



Selecting a double-size effect for IFX3



2. Routing

You can use up to five channels (IFX 1, 2, 3, 4, and 5) for the **Insert Effects** in any mode.

2-1. Program mode

Use **"BUS Select"** (Program P8: 8-1c) to set the destination bus of the oscillator output.

L/R: The signal is not sent to the Insert Effects. Instead, it is sent to AUDIO OUTPUT (MAIN) L/MONO and R after the Master EQ.

IFX1-5: The signal is sent to Insert Effects IFX 1, 2, 3, 4, 5.

1, 2, 3, 4, 1/2, 3/4: The signal is sent to AUDIO OUTPUT (INDIVIDUAL) 1, 2, 3, 4 (see p.153 "Individual Outputs"). The signal is not sent to the Insert Effects, Master Effects, and or Master EQ.

Off: The signal is not sent to AUDIO OUTPUT (MAIN L/MONO, R, (INDIVIDUAL) 1, 2, 3, or 4. (After the Master Effects, the signal is output to AUDIO OUTPUT (MAIN).) Select this option if you connect the Insert Effects with the Master Effects in series, with the send level specified by "Send1 (MFX1)" and "Send2 (MFX2)."

Use **"Send1 (to MFX1)"** and **"Send2 (to MFX2)"** (Program P8: 8-1d) to specify the send level for the Master Effects. This setting is effective if "BUS Select" is set to **L/R** or **Off**. If "BUS Select" (Program P8: 8-1c) is set to **IFX1-5**, use "Send1" and "Send2" (Program P8: 8-2a) to specify the send level of the post-IFX signal (see "3. Mixer").

MIDI Send1 responds to MIDI Control Change CC#93, and Send2 responds to MIDI Control Change CC#91. At this time, the actual send level uses the value of the Send 1 and 2 settings for Oscillators 1 and 2, multiplied by the Send 1 and 2 values received via MIDI.

If you are connecting the Insert Effects in series, check the "Chain" box (Program P8: 8-2a). If you check the box that is located between IFX1 and IFX2, the output signal from IFX1 is sent to IFX2. When the Insert Effects are connected in series, the values of the "Pan (CC#8)," "BUS Select," "Send1," and "Send2" parameters for the post-IFX signal will be used (see "3. Mixer").

The following figure shows an example of Oscillators 1 and 2 outputs being sent to IFX1. Check the "Chain" box to connect IFX1, 2, 3, 4, and 5 in series in this order. The "Pan (CC#8)," "BUS Select," "Send1," and "Send2" parameters for the post-IFX5 signal will be used.



— Settings for drum programs —

If you have selected **"Drums"** for "Oscillator Mode" (Program P1: 1-1a) of a Program, the **"USE DKit Setting"** box (Program P8: 8-1b) becomes available. If you **check this box**, **"BUS Select"** (Global P5: 5-2b) for each key of the selected DrumKit becomes effective.

For example, you can send a snare sound to IFX1 to apply the Gate effect, a kick sound to IFX2 to apply EQ, and other sounds to AUDIO OUTPUT (MAIN) L/MONO and R without applying any Insert Effects. If you **de-select the box**, all drum instrument outputs are sent to the bus specified by "BUS Select" (Program P8: 8-1c). You may apply any Insert Effects to all drum instruments, regardless of the DrumKit settings.

2-2. Combination, Sequencer, and Song Play modes

Use **"BUS Select"** (P8: "Routing" tab in each mode) for timbres (Combination) and tracks (Sequencer, Song Play) to select an Insert Effect to apply to the corresponding timbres and tracks. You can route multiple timbres and tracks to a single Insert Effect.

As with Program mode, select **L/R**, **IFX1-5**, **1-4**, **1/2**, **3/4**, or **Off** for each timbre and track.

"Send1 (MFX1)" and **"Send2 (MFX2)"** become available if "BUS Select" has been set to **L/R** or **Off**.

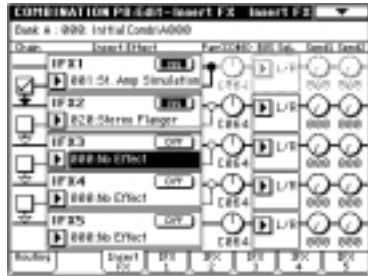
If **IFX1-5** is selected, use "Send1" and "Send2" for the post-IFX signal (see "3. Mixer").

MIDI Send1 responds to MIDI Control Change CC#93, and Send2 responds to MIDI Control Change CC#91. At this time, the actual send level uses the value of the Send 1 and 2 settings for Oscillators 1 and 2 of the Programs (selected for the timbres and tracks), multiplied by the Send 1 and 2 values received via MIDI (see p.151 "Send Level").

The following figure shows an example of Combination mode. The Timbre 1 output is sent to **IFX1** and the Timbre 2 output is sent to **IFX2** according to the "BUS Select" setting. Other timbres are sent to **L/R**. The output signal passes through the Master EQ, then goes to AUDIO OUTPUT (MAIN) L/MONO and R. It is not routed to the Insert Effects.



In the following example, the “Chain” box between IFX1 and IFX2 is checked so that the IFX1 output is sent to IFX2. “IFX1: 001: St. Amp Simulation” and “IFX2: 020: Stereo Flanger” are inserted to Timbre 1. “IFX2: 020: Stereo Flanger” is inserted to Timbre 2. The figure above (“Routing” tabs) shows these settings. (In this example, IFX 3, 4, and 5 are not being used.)



— Settings for drum Programs —

If a drum Program (“OSC Mode” **DrumKit**) is selected for timbres in **Combination mode** and for tracks in **Sequencer mode** and **Song Play mode**, you can select “DKit” for “BUS Select.” If you select “DKit,” the “BUS Select” (Global P5: 5–2b) settings for each key become effective, and each drum instrument sound will be routed to the corresponding buses (e.g.: the snare sound is sent to IFX1, kick sound to IFX2, and other sounds to L/MON and R). If you select anything other than **DKit**, you may apply any Insert Effects to all drum instruments, regardless of the DrumKit settings.

If you have selected “DKit” for “BUS Select,” you can select “DrumKit IFX Patch” from the page menu. This option allows you to change the routing of the Insert Effects temporarily by changing “BUS Select” for each key. For example, assume that the DrumKit key assignment is set so that a snare sound is routed to IFX1 and a kick sound is routed to IFX2. In this case, if you wish to assign IFX 1 and 2 to the Programs used by other timbres and tracks, you can view the routing so that these DrumKit sounds are routed to IFX3 and IFX4 respectively. This type of patching is available only with the keys for which “BUS Select” is set to **IFX1–5**. You can check the settings with the Routing map. After you set “DrumKit IFX Patch,” press the **[OK]** button to confirm the setting. If you wish to restore the original DrumKit setting, set IFX1 to IFX1, IFX2 to IFX2, IFX3 to IFX3, IFX4 to IFX4, and IFX5 to IFX5.

In the following example, Drum Program is assigned to Timbre 1, and normal Programs are assigned to Timbres 2 and 3. “BUS Select” is set to **DKit** for Timbre 1, **IFX1** for Timbre 2, and **IFX2** for Timbre 3. With Timbre 1, the “BUS Select” (Global P5: 5–2b) for DrumKit setting becomes effective.



For example, assume that the snare sound is routed to IFX1, and the kick sound is routed to IFX2, and you wish to use an effect for a drum Program that is different from the effects for timbres 2 and 3. In this case, use “DrumKit IFX Patch.” Select “DrumKit IFX Patch” from the page menu to temporarily change the setting for the DrumKit from IFX1 to IFX3, and IFX2 to IFX4. When you confirm the setting, the snare sound will be routed to IFX3 and the kick sound will be routed to IFX4.

DrumKit IFX Patch dialog



After setting the parameters



2–3. Sampling mode

You can sample sound while applying the Insert Effects to the signal input from AUDIO INPUTs 1 and 2. Use “BUS (IFX) Select” (Sampling P0: 0–2a) to set Inputs 1/2, and the buses by selecting from **L/R, IFX1–5**, and **Off**. You cannot select **1, 2, 3, 4, 1/2**, or **3/4** (output to OUTPUTs 1, 2, 3, 4).

In the following example, input signals at Inputs 1 and 2 are routed to **IFX1**. The Insert effect parameters are set in “P8: Insert Effect” and the Insert effects are applied to the input signals for sampling.



2-4. Audio Input

In Program, Combination, Sequencer, and Song Play modes, you can apply the Insert Effects, Master Effects and Master EQ to the signals input from AUDIO INPUTS 1 and 2. These signals are routed to the TRITON's effects, according to the "Audio Input (COMBI, PROG, SEQ, S.PLAY)" (Global P0:0-3a) setting.



Use "BUS Select" (Global P0: 0-3a) to set Inputs 1/2 buses by selecting from L/R, IFX1-5, 1-4, 1/2, 3/4, and Off.

"Send1 (to MFX1)" and "Send2 (to MFX2)" become effective only when "BUS Select" (Global P0: 0-3a) is set to L/R or Off. If IFX1-5 is selected, use "Send1" and "Send2" for the post-IFX signal (≡"3. Mixer").

This setting is ignored in Sampling mode. Refer to "2-3. Sampling Mode" for information on the Sampling mode settings.

Use "P8: Insert Effect" in Program, Combination, Song, or Song Play mode to set up the Insert Effects. You can apply 2-in/6-out effects to the incoming signal from Inputs 1 and 2. You may also combine these signals with the internal sound. For example, in Program mode or Combination mode, you can route the incoming signal from AUDIO INPUTS 1 and 2 and the oscillator sound to "Insert Effect 093: Vocoder" in order to set up a vocoder effect in which the internal sound is controlled by the mic inputs (≡p.201 "093: Vocoder").

3. Mixer

Use "Pan (CC#8)," "BUS Select," "Send1," and "Send2" of the P8: "Insert FX" tab for the post-IFX signal in all modes to set the pan/bus and the send level to the Master Effects MFX1 and MFX2. If you have checked the "Chain" box to connect the Insert Effects in series, these parameters for the post-IFX (last Insert Effect in the chain) signal become effective.

You cannot use the Master Effects or route signals to INDIVIDUAL 1, 2, 3, and 4. You can set only the pan setting for the post-IFX signals.



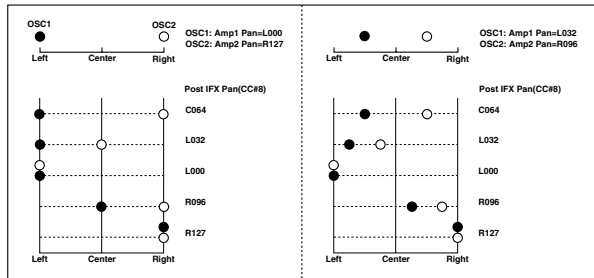
3-1. Pan (CC#8)

This parameter enables you to set the pan of the post-IFX signal.

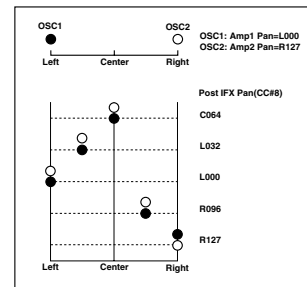
If you are using the **stereo-in/stereo-out** Insert Effects (≡"In/Out"), set this parameter to "C064" to enable the "Pan" settings for the oscillators (Program P4: 4-1b, 4-4), timbres (Combination P0: 0-2b, P1: 1-1c), tracks (Sequencer P0: 0-3b, 0-4b, Song Play P0: 0-3b, 0-4b), and audio inputs (Sampling P0: 0-2a, Global P0: 0-3a).

If you are using **mono-in/stereo-out** or **mono-in/mono-out** Insert Effects (≡"In/Out"), the "Pan" settings for the oscillators, timbres, tracks and audio inputs are ignored, and they are set to Center. Use the "Pan (CC#8)" parameter (P8: "Insert FX" tab) to set the pan. "L000" is hard left, and "R127" is hard right.

Insert Effect = Stereo In - Stereo Out



Insert Effect = Mono In - Stereo Out
Mono In - Mono Out



You can control these parameters via MIDI Control Change CC#8.

3-2. BUS Sel. (BUS Select)

This parameter enables you to specify the destination bus for the post-IFX signals. "L/R" is a common setting to send signals to the Master EQ before they are routed to the OUTPUT (MAIN) L/MONO and R outputs.

Select 1, 2, 3, 4, 1/2, or 3/4 to route the signals to OUTPUT (INDIVIDUAL) 1, 2, 3, or 4 (≡"Individual Output"). Select "Off" so that no signals will be output to L/MONO, R, 1, 2, 3, or 4. In this case, the signals are routed from the Master Effects to AUDIO OUTPUT (MAIN). This setting is used when you are connecting the Insert Effects with the Master Effects in series using "Send1" and Send2."

3-3. Send1, Send2

These parameters enable you to set the send level of the signals routed to Master Effects MFX1 and MFX2. These settings are effective only when "BUS Select" is set to L/R or Off.

If you are not using any Insert Effects, use "Send1" and "Send2" of the P8: "Routing" tab in Program, Combination, Sequencer, and Song play modes to set the Master Effect send level (Use the Global P0: Audio Input tab to set the send level for the audio inputs).

MIDI “Send1” responds to MIDI Control Change CC#93 and “Send2” responds to MIDI Control Change CC#91.

Master Effects (MFX1, 2)

4. Controlling the Insert Effects via MIDI

Using the Dynamic Modulation (Dmod) function enables you to control all effect parameters in real-time during performance from the controllers of the TRITON or a connected MIDI sequencer. You can also control the **Pan (CC#8)**, “Send1,” and “Send2” parameters in the same way.

4-1. Program mode and Sampling mode

You can control the parameters on MIDI Global channel (MIDI Channel” (Global P1: 1-1a).

4-2. Combination mode

Use “Ctrl Ch” parameters of the “IFX1-5” tabs to set up the control channels for IFX1, 2, 3, 4, and 5. Select an appropriate option from **Ch01-16**, **Gch**, and **All Routed**.

Ch01-16: Select this option if you wish to control the parameters for each Insert Effect on different channels. The “*” mark appears on the right of the number of the channel routed to the corresponding Insert Effects.

Gch: Select this option if you wish to control the parameters on MIDI Global channel “MIDI Channel” (Global P1: 1-1a). This is a common setting.

All Routed: Select this option to control the parameters on the channels (channels 1-16 that have a “*” mark) for the timbres that are routed to the corresponding Insert Effects.

4-3. Sequencer mode and Song Play mode

Use “Ctrl Ch” parameters of the “IFX1-5” tabs to set up the control channels for IFX1, 2, 3, 4, and 5. Select an appropriate option from **Ch01-16** and **All Routed**.

Ch01-16: Select this option if you wish to control the parameters for each Insert Effect on different channels. The “*” mark appears on the right of the number of the channel routed to the corresponding Insert effects. This option is suitable if multiple tracks on different MIDI channels are sent to the Insert Effects and you wish to control the parameters using one of the tracks.

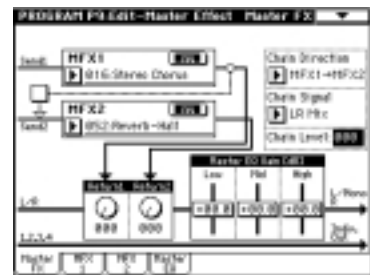
All Routed: Select this option to control the parameters on the channels (channels 1-16 that have a “*” mark) for the tracks that are routed to the corresponding Insert Effects. “All Routed” is a typical option. If you wish to control the parameters on a channel, select one from **Ch01-16**.

1. In/Out

The I/Os of **Master Effects MFX1** and **MFX2** are **mono-in/stereo-out**. “Send1” and “Send2” determine the send level to the Master Effects (“Routing” and “Mixer”). Stereo signals will be combined to a mono signal automatically and sent to the effects.

The Master Effects do not output any **Dry** signals (signals that are not processed by the effects). Therefore, they output only **Wet** (signals that are processed by the effects) signals (set via the “Wet/Dry” of the “MFX1” and “MFX2” tabs).

The output signals from the Master Effects are routed to the L/R bus with the output level specified by “Return1” and “Return2.” These output signals are mixed with the output signals from the bus specified by “BUS Select” (P8: “Routing” tab in each mode) L/R, or with the output signals from the bus specified by “BUS Select” (“Insert FX” tab in each mode) L/R, then routed to the Master EQ.



Selecting “000: No Effect” will mute the output. The processed signal will be output in one of the following ways, according to the type of effects 001-089.

Wet	Mono In - Mono Out	
	Mono In - Stereo Out	
	Stereo In - Stereo Out	

The possible routing of effect signal inputs and outputs is indicated in the upper left corner of the block diagram.

Pressing the “On/Off” switch for MFX1 and 2 of the P9: “MasterFx” tab in each mode will toggle between **ON** and **OFF**. When **OFF** is selected, the output signals will be muted.

MIDI The TRITON can also turn MFX 1 and 2 off by receiving MIDI control change message CC#94 and CC#95 respectively. Value 0 will turn them off, and value 1-127 will turn them on. You can also use “Effect Global SW” (Global P0: 0-1b) to turn MFX1 and 2 on and off. This MIDI control is performed on MIDI Global Channel “MIDI Channel” (Global P1: 1-1a).

Double-size effects

You cannot select double-size effects for **Master Effects MFX1** and **MFX2**.

2. Routing

You can use up to two channels (MFX1 and 2) for the Master Effects in any mode other than in Sampling mode. (You cannot use the Master Effects in Sampling mode.) If you are not using any Insert Effects in any mode, the Master Effects send levels are determined by the “Send1 (MFX1)” and “Send2 (MFX2)” parameters specified independently for the oscillators (Program), timbres (Combination), tracks (Sequencer and Song Play), and audio inputs (Global). For example, you can apply substantial reverberation to a piano sound assigned to the timbre and tracks, a small amount of reverberation to the strings sound, and no reverberation to the bass sound. If you are using the Insert Effects, set the “Send1” and “Send2” parameters for the post-IFX signals.

2-1. Program mode

Use the “Send1 (to MFX1)” and “Send2 (to MFX2)” parameters of the P8: “Routing” tab, or the “Send1” and “Send2” parameters of the P8: “Insert FX” tab for the post-IFX1–5 signals, to set the Master Effect send level.

If you have set “BUS Select” to L/R or Off, “Send1 (MFX1)” and “Send2 (MFX2)” of the “Routing” tab are effective.

These parameters can be set for oscillators 1 and 2 individually.

If you have set “BUS Select” to IFX1–5, “Send1” and “Send2” of the “Insert FX” tab for the post-IFX1–5 signals are effective. If you are using the Insert Effects in chain (series), the “Send1” and “Send2” parameters for the post-IFX (last IFX) are effective.

If you have set “BUS Select” to 1, 2, 3, 4, 1/2, or 3/4, the oscillator signals are output directly to OUTPUT (Individual Out) 1, 2, 3, or 4 (≡ “Individual Output”). In this case the Send 1 and Send 2 settings are ignored, and the Master Effects will not be applied.



MIDI Send1 responds to MIDI Control Change CC#93 and Send2 responds to MIDI Control Change CC#91 on MIDI Global channel “MIDI Channel” (Global P1: 1–1a). At this time, the actual send level uses the value of the Send 1 and 2 settings for Oscillators 1 and 2, multiplied by the Send 1 and 2 values received via MIDI.

If you have selected “Drums” for “Oscillator Mode” (Program P1: 1–1a) of a Program, the “USE DKit Setting” box (Program P8: 8–1b) becomes available.

If you **check this box**, Send1 and Send2 levels for each key of the selected DrumKit become effective. If “BUS Select” (Global P5: 5–2b) is set to L/R or Off for a drum instrument key, “Send1 (to MFX1)” and “Send2(toMFX2)” (Global P5: 5–2b) become effective. If “BUS Select” is set to IFX1–5, “Send1” and “Send2” (Program P8: 8–2a) become effective. If you **remove the check**, “Send1 (MFX1)” and “Send2 (MFX2)” (Program P8: 8–1d) of the P8: “Routing” tab or “Send1” and “Send2” (Program P8: 8–2a) of the P8: “Insert FX” tab for the post-IFX1–5 signals become effective.

2-2. Combination, Sequencer, and Song Play modes

Use “Send1 (MFX1)” and “Send2 (MFX2)” (P8: “Routing” tab) for timbres (Combination) and tracks (Sequencer, Song Play) to set the Send1 and 2 levels for each timbre and track. As with Program mode, if “BUS Select” is set to L/R or Off, “Send1 (MFX1)” and Send2 (MFX2)” become effective. At this time, the actual levels use these Send1 and 2 level values, multiplied by the send level values of oscillators 1 and 2 (“Oscillator Mode” is set to “Double”) of the Program P8: “Routing” tab.

– Send level –

For example, if a Program’s “OSC1 Send1” is set to 127, “Send2” set to 064, “OSC2 Send1” set to 064, “Send2” set to 127, a Combination’s “Send1” set to 064, and “Send2” set to 127, the actual send levels of the combination are calculated as follows:

$$\begin{aligned} \text{OSC1 Send1} &= 127 (100\%) * 064 (50\%) = 064 (50\%) \\ \text{OSC1 Send2} &= 064 (50\%) * 127 (100\%) = 064 (50\%) \\ \text{OSC2 Send1} &= 064 (50\%) * 064 (50\%) = 032 (25\%) \\ \text{OSC2 Send2} &= 127 (100\%) * 127 (100\%) = 127 (100\%) \end{aligned}$$

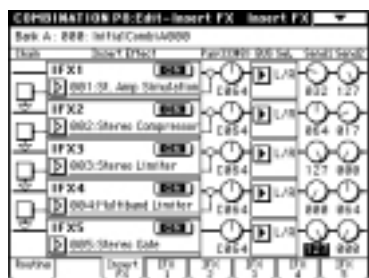
If IFX1–5 is selected for “BUS Select”, use the “Send1” and “Send2” parameters for the post-IFX signals.

If 1, 2, 3, 4, 1/2, or 3/4 is selected instead, these Send1 and 2 settings are ignored and the Master Effect is not applied.

MIDI Send1 responds to MIDI Control Change CC#93, and Send2 responds to MIDI Control Change CC#91. If “Send1 (MFX1)” and Send2 (MFX2)” for each timbre/track are effective, the parameter will be controlled on the MIDI channels set for the corresponding timbres and tracks. If the “Send1” and “Send2” parameters for the post-IFX1–5 signals are effective, they can be controlled on the MIDI channels assigned to IFX1–5.

The following examples are in Combination mode. In the upper figure, “BUS Select” is set so that Timbre 1 is routed to IFX1, Timbre 2 to IFX2, Timbre 3 to IFX3, Timbre 4 to IFX4, Timbres 5 and 6 to IFX5, and Timbres 7 and 8 to L/R. In this case, use “Send1” and “Send2” for the post-IFX1(001: St. Amp Simulation) signal to set the send level of the Timbre 1 routed to the Master Effect. (In this example they are set to 032 and 127.) In the same way, use “Send1” and “Send2” for the post-IFX2, 3, and 4 signals to set the send levels of Timbres 2, 3, and 4, and use the “Send1” and “Send2” parameters for the post-IFX5 signal to set the send levels of Timbres 5 and 6. For Timbres 7 and 8, the settings of “Send1 (MFX1)”

and “Send2 (MFX2)” will be effective. (At this time, the actual send levels use these Send 1 and 2 values multiplied by the Send1 and 2 settings for Program oscillators 1 and 2.)



If drum Programs are selected for timbres in Combination mode and for tracks in Sequencer mode and Song Play mode, you can select “DKit” for “BUS Select.” If you select “DKit,” the “BUS Select” (Global P5: 5–2b) settings for each key become effective, and each drum instrument sound will be routed to the corresponding buses. At this time, the actual send levels use these Send 1 and 2 values, multiplied by the Send1 and 2 settings for each DrumKit key. (Use the “Send1” and “Send2” parameters for the post-IFX1–5 signal to set the send levels for the DrumKit keys for which the “BUS Select” parameters are set to IFX1–5.) If “BUS Select” is set to L/R or Off, the actual send levels use the Send 1 and 2 values set here, multiplied by the send levels set for “OSC1 Send1 (to MFX1)” and “Send2 (to MFX2)” (Program P8: 8–1d) of the Program P8: “Routing” tab. If “BUS Select” is set to IFX1–5, use “Send1” and “Send2” for the post-IFX signal. If “BUS Select” is set to 1, 2, 3, 4, 1/2, or 3/4, the Send 1 and 2 settings will be ignored.

2–3. Sampling Mode

You cannot use the Master Effects and Master EQ in Sampling mode.

2–4. Audio Input

In Program, Combination, Sequencer and Song Play modes, you can apply the Insert Effects, Master Effects and Master EQ to the signals input from AUDIO INPUTs 1 and 2. These signals are routed to the TRITON’s effects, according to the “Audio Input (COMBI, PROG, SEQ, S.PLAY)” (Global P0: 0–3a) setting.

Set the send level of the Input 1 and 2 signals routed to the Master Effects, using “Send 1 (to MFX1)” and “Send 2 (to MFX2)” (Global P0: 0–3a). These settings become effective only when “BUS Select” is set to L/R or Off. If IFX1–5 is selected, use the “Send1” and “Send2” parameters (P8: “3. Mixer”). If 1, 2, 3, 4, 1/2, or 3/4 is selected, the Send 1 and Send 2 settings are ignored.

 These settings are ignored in Sampling mode.

Use P9: Master Effect in Program, Combination, Song, and Song Play modes to set the Master Effects and Master EQ.

3. Mixer

The send levels determine the input levels of oscillators (Program), timbres (Combination), tracks (Use the Global P0: Audio Input tab in all modes), and audio inputs (sampling) that are routed to the Master Effects. The P9: “Master FX” tabs in all modes enable you to set the output levels and Master EQ gain values, and connect the Master Effects in series (chain).

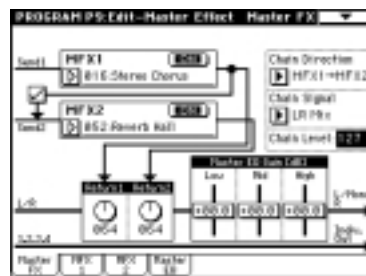
3–1. Return 1, Return 2

These parameters determine the level of signals output from MFX1 and MFX2. A value on the left side of the “Wet/Dry” parameter of a target effect for MFX 1 and 2 is used as the output level (25% with the “Wet/Dry” parameter setting of 25:75, 100% with the **Wet** setting, and 0% with the **Dry** setting). The signals with the “Return1” and “Return2” settings are multiplied by these output levels, and sent to the L/R bus, then mixed with the output signals for which “BUS Select” is set to L/R or for which “BUS Select” of the “Insert FX” tab is set to L/R. For example, with MFX1 “Wet/Dry” set to 50:50 (50%) and “Return1” set to 64 (50%), the resultant effect level will be 25%. The effect level is maximum (100%) when “Wet/Dry” is set to “Wet” and “Return1” is set to 127.

3–2. Chain check box

Press this box to chain MFX1 and MFX2 to each other.

The following figure indicates that the output from “MFX1:016: Stereo Chorus” is added to “MFX2: 052: Reverb Hall” input.



3–3. Chain Direction

If you have checked the “Chain” box, you can set the direction of the connection here. You can also visually confirm the direction on the LCD.

3–4. Chain Signal

This parameter enables you to select signals routed between MFX1 and 2. If the chain direction (order) is from MFX1 to MFX2, selecting **LR Mix** will cause the stereo L/R outputs from MFX1 to be mixed and input to MFX2. This setting is useful when you wish to serially connect delays that are panned to L and R (e.g., “043: L/C/R Delay”). Selecting **L Only** or **R Only** will cause only one channel of stereo outputs from MFX1 to be input to MFX2. This setting is suitable for a chain connection of a reverb effect and a modulation effect such as 016: Stereo Chorus.

3-5. Chain Level

This parameter determines the level of signals routed from one MFX to the other MFX in a chain connection.

3-6. Master EQ Gain [dB]

These parameters are used to set the gain of the Low, Mid, and High stereo three-band EQ that is located right before AUDIO OUTPUT (MAIN) L/Mono and R. Low and High EQs are of the shelving type, and Mid EQ is a band type equalizer. These slider settings are linked with the Low, Mid, and High "Gain [dB]" parameters of the "MasterEQ" tab. Use this "MasterEQ" tab to set the center frequency, band width (for Mid), and dynamic modulation of the EQ bands.

4. Controlling the Master Effects via MIDI

You can use the Dynamic Modulation (Dmod) function to control all Master Effects parameters in real-time from the TRITON's controllers or from an external MIDI sequencer.

In **Program mode**, the parameters are controlled on MIDI Global channel "MIDI Channel" (Global P1: 1-1a).

In **Combination mode, Sequencer mode, and Song Play mode**, you can set the control channels for MFX1 and MFX2 using the "Ctrl Ch" parameters of the "MFX1-2" tabs. Select the desired option from **Ch01-16**, and **Gch**.

Ch01-16: Select this option if you wish to control the parameters for each Master Effect on different channels.

Gch: Select this option if you wish to control the parameters on MIDI Global channel "MIDI Channel" (Global P1: 1-1a). This is the normal setting.

Master EQ

The Master EQ (stereo, three-band EQ) is located right before AUDIO OUTPUT (MAIN) L/MONO, R. Low and High EQs are of the shelving type, and Mid EQ is a peaking type equalizer. You can control the Low Gain and High Gain parameters using the Dynamic Modulation function. The Master EQ is applied to the signal input from the L/R bus. For more information on the parameters, see p.207.

Individual Outputs

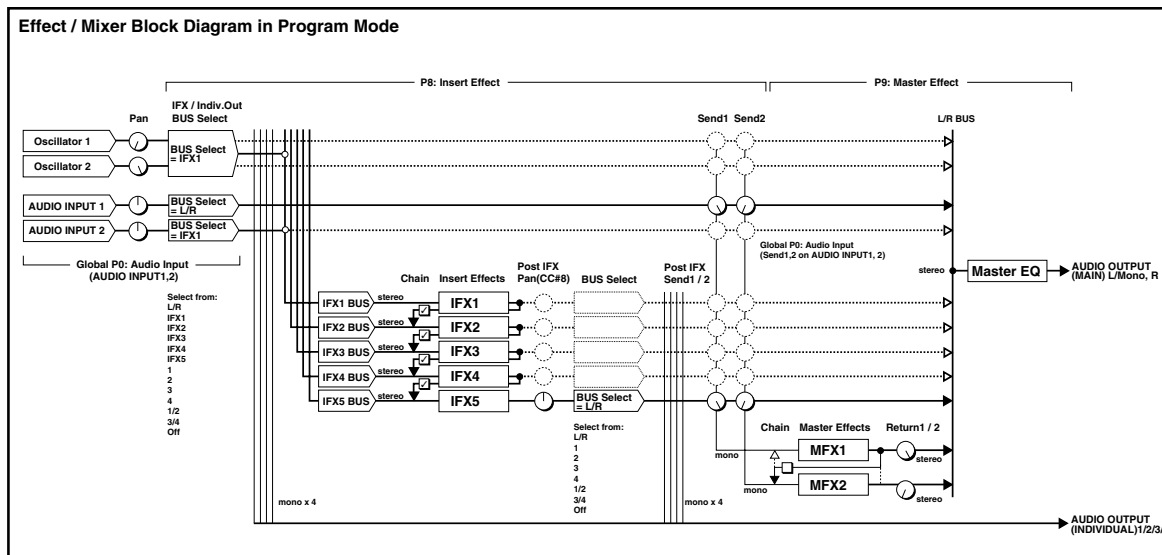
The TRITON is equipped with four individual AUDIO OUTPUTS (INDIVIDUALS). You can route the oscillator (Program), timbre (Combination), and track (Sequencer) output or the post-IFX signals to these four individual outputs.

Use "BUS Select" of the P8: "Routing" tab in Program, Combination, Sequencer, or Song Play mode to route the oscillators (Program), timbres (Combination), or tracks (Sequencer, Song Play) to AUDIO OUTPUTS (INDIVIDUAL). If you are using the Insert Effects, use "BUS Select" of the P8: "Insert FX" tab to route the post-IFX signals.

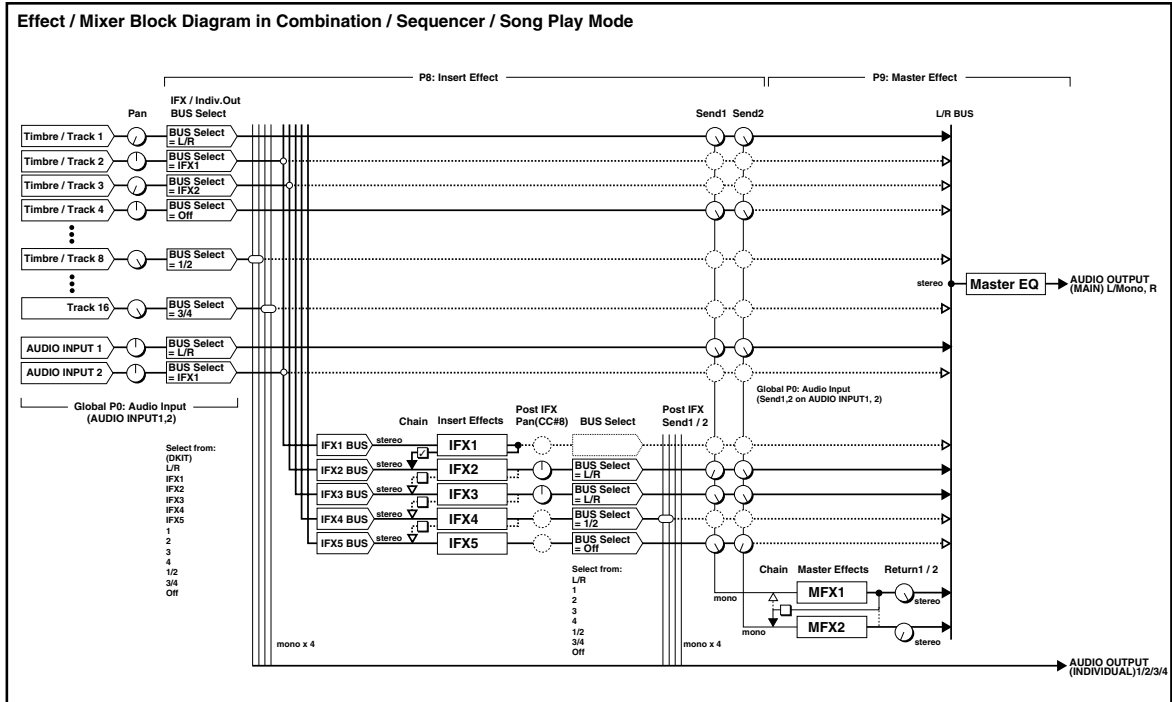
1, 2, 3, 4: Monaural signals are routed to AUDIO OUTPUTS (INDIVIDUAL).

1/2, 3/4: Stereo signals are routed to AUDIO OUTPUTS (INDIVIDUAL). Use AUDIO OUTPUTS (INDIVIDUAL) 1/2 in stereo for 1/2, and use AUDIO OUTPUTS (INDIVIDUAL) 3/4 in stereo for 3/4.

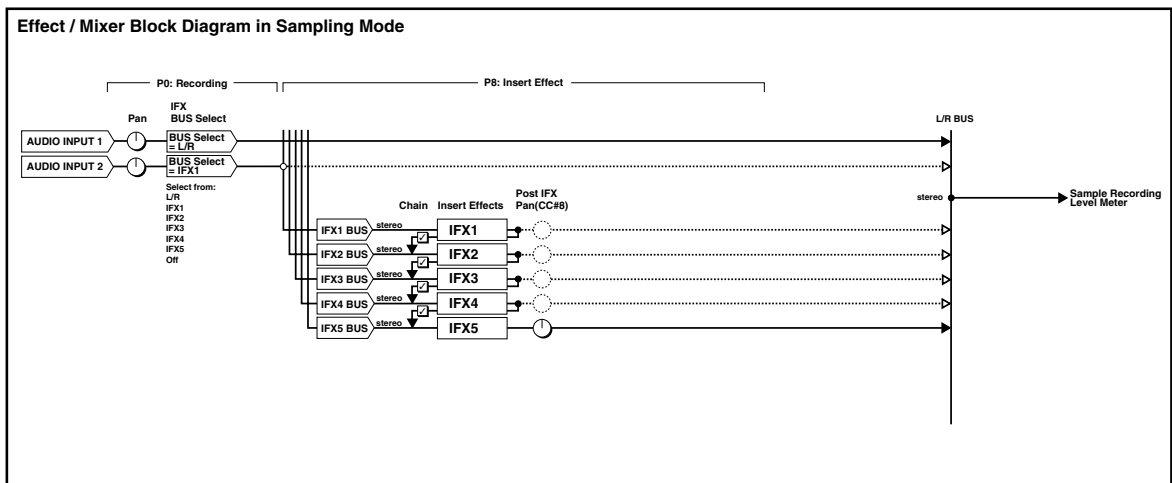
Program mode



Combination mode, Sequencer mode, Song Play mode



Sampling mode



Filter/Dynamic

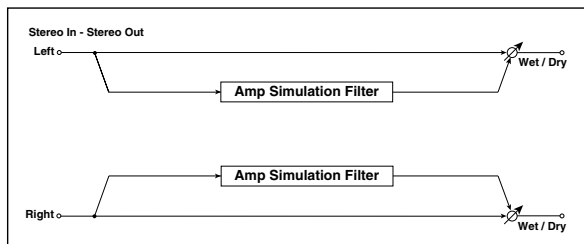
Filter and dynamics control effects

000: No Effect

Select this option when you do not use any effects. The Insert Effect section outputs unprocessed signals and the Master Effect section mutes the output.

001: St. Amp Simulation (Stereo Amp Simulation)

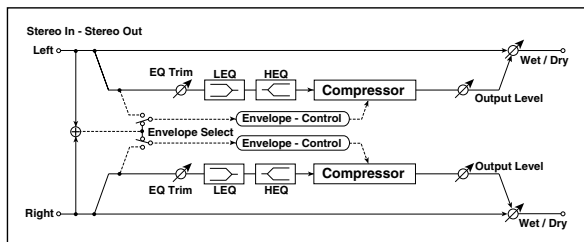
This effect simulates the frequency response characteristics of guitar amplifiers. It is also effective for organ and drum sounds.



a	Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
b	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

002: Stereo Compressor

This effect compresses the input signal to regulate the level and give a “punchy” effect. It is useful for guitar, piano, and drum sounds. This is a stereo compressor. You can link left and right channels, or use each channel separately.



a	Envelope Select Determines whether the left and right channels are linked or used separately	L/R Mix, L/R Individually E ^{3S}
b	Sensitivity Sets the sensitivity	1...100 E ^{3S}
c	Attack Sets the attack level	1...100 E ^{3S}
d	EQ Trim Sets the EQ input level	0...100

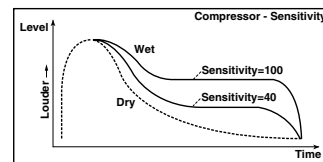
e	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB
f	Output Level Sets the output level of the compressor	0...100 E ^{3S} , D ^{mod}
	Src Selects the modulation source for the compressor output level	Off...Tempo
	Amt Sets the modulation amount of the compressor output level	-100...+100
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Envelope Select

This parameter selects whether the left and right channels are linked to control both signals simultaneously, or whether each channel is controlled independently.

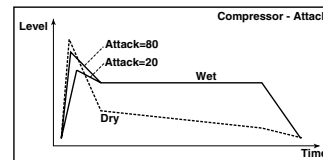
b: Sensitivity, f: Output Level

The “Sensitivity” parameter sets the sensitivity of the compressor. If this parameter is set to a higher value, lower level sounds will be boosted. With a higher Sensitivity, the overall volume level is higher. To adjust the final volume level, use the “Output Level” parameter.



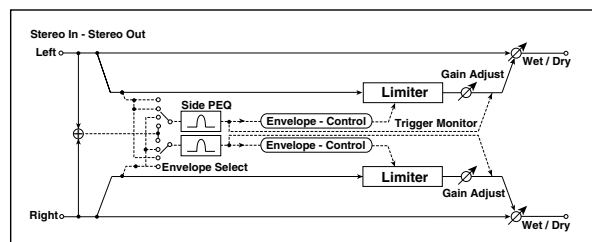
c: Attack

This parameter controls the attack level.



003: Stereo Limiter

The Limiter regulates the input signal level. It is similar to the Compressor, except that the Limiter compresses only signals that exceed the specified level to lower unnecessary peak signals. The Limiter applies a peaking-type EQ to the trigger signal (which controls the degree of the Limiter effect), allowing you to set any band width to be covered. This effect is a stereo limiter. You can link left and right channels, or use each channel individually.



a	Envelope Select Selects from linking both channels, controlling only from left channel, only from the right channel, or controlling each channel individually	L/R Mix, L Only, R Only, L/R Individually
b	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
c	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB
d	Attack Sets the attack time	1...100
	Release Sets the release time	1...100
e	Gain Adjust [dB] Sets the output gain	-Inf, -38...+24dB
	Src Selects the modulation source for the output gain	Off...Tempo
	Amt Sets the modulation amount of the output gain	-63...+63
f	Side PEQ Insert Toggles between on/off of the trigger signal's EQ	Off, On
	Trigger Monitor Switches between effect output monitor and trigger signal monitor	Off, On
g	Side PEQ Cutoff [Hz] Sets the EQ center frequency for the trigger signal	20...12.00kHz
	Q Sets the EQ bandwidth for the trigger signal	0.5...10.0
	Gain [dB] Sets the EQ gain for the trigger signal	-18.0...+18.0dB
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Envelope Select

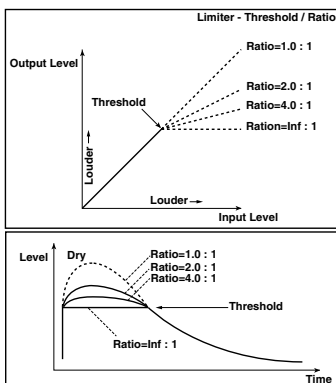
When **L/R Mix** is selected for this parameter, the left and right channels are linked to control the Limiter using the mixed signal. If **L Only** (or **R Only**) is selected, the left and right channels are linked, and the Limiter is controlled via only the left (or right) channel.

With **L/R individually**, the left and right channels control the Limiter individually.

b: Ratio, c: Threshold [dB], e: Gain Adjust [dB]

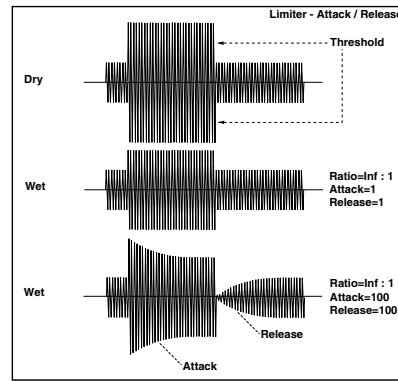
This parameter sets the signal compression "Ratio". Compression is applied only when the signal level exceeds the "Threshold" value.

Adjust the output level using the "Gain Adjust" parameter, since compression causes the entire level to be reduced.



d: Attack, d: Release

These parameters set the attack time and release time. A higher attack time will cause the compression to be applied more slowly.



f: Side PEQ Insert, g: Side PEQ Cutoff [Hz], g: Q, g: Gain [dB]

These parameters are used to set the EQ applied to the trigger signal.

The Limiter determines whether the compression is applied or not, based on the post-EQ trigger signal. Setting the equalizer allows you to set the Limiter to respond to any frequency band.

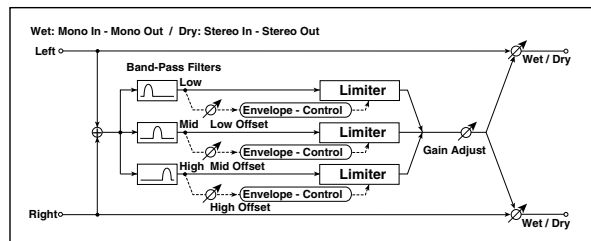
f: Trigger Monitor

Setting this parameter **On** will cause the trigger signal to be output, instead of the effect sound. Use this parameter to check the trigger signal with EQ applied.

Usually, set this to **Off**.

004: Multiband Limiter

This effect applies the Limiter to the low range, mid range, and high range of the input signal. You can control dynamics for each range to adjust the sound pressure of the low range, mid range, and high range in a different way from the EQ.



a	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
b	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB
c	Attack Sets the attack time	1...100
d	Release Sets the release time	1...100
e	Low Offset [dB] Gain of the low-range trigger signal	-40...0dB
f	Mid Offset [dB] Gain of the mid-range trigger signal	-40...0dB
g	High Offset [dB] Gain of the high-range trigger signal	-40...0dB
h	Gain Adjust [dB] Sets the output gain	-Inf, -38...+24dB
	Src Selects the modulation source for the output gain	Off...Tempo
	Amt Sets the modulation amount of the output gain	-63...+63

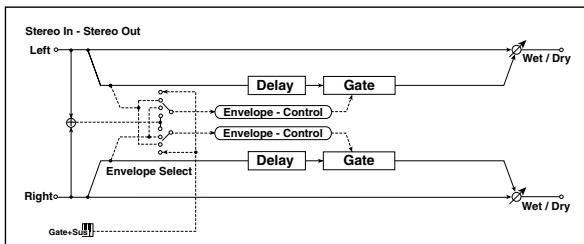
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	D^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

e: Low Offset [dB], f: Mid Offset [dB], g: High Offset [dB]

These parameters set the gain of the trigger signal. For example, if you do not want to apply compression to the high range, reduce the "High Offset" value down below the "Threshold" level. In this way, the high range limiter will not respond, and compression will not be applied.

005: Stereo Gate

This effect mutes the input signal if its level is lower than the specified level. It also reverses the on and off operation of the gate, and uses Note On and Off messages to turn the gate on and off.



a	Envelope Select Selects from Control via the modulation source, mixing the left and right signals, Only left, and Only right	D-mod, L/R Mix, L Only, R Only	E^{3P} , D^{mod}
	Src Selects the modulation source that controls the gate when Envelope Select = D-mod	Off...Gate2+Dmpr	
b	Polarity Switches between non-reversed and reversed Gate on/off	+ -	E^{3P}
c	Threshold Sets the level to which the Gate is applied	0...100	E^{3P}
d	Attack Sets the attack time	1...100	E^{3P}
	Release Sets the release time	1...100	E^{3P}
e	Delay Time [msec] Sets the delay time of the gate input	0...100msec	E^{3P}
f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	D^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

a: Envelope Select, a: Src

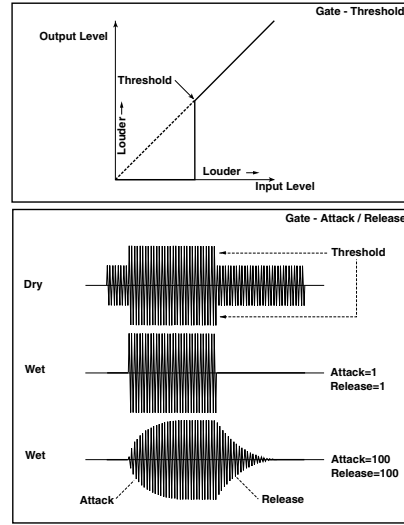
The "Envelope Select" parameter selects whether the gate on/off is triggered by the level of the input signal, or controlled directly by the modulation source. The Src parameter specifies the modulation source, selected from **Off** to **Gate2+Dmpr**. With "Envelope Select" = **L/R Mix**, the left and right channel signal mixture will trigger the gate on/off. When **L Only** or **R Only** is selected, the gate is controlled by either of the channel signals.

b: Polarity

This parameter reverses the Gate on/off operation. With a **negative** value, the gate is closed when the input signal level exceeds the Threshold. The gate operation controlled by the modulation source is also reversed.

c: Threshold, d: Attack, d: Release

This parameter sets the signal level below which Gate is applied when "Envelope Select" is set to **L/R Mix**, **L Only**, or **R Only**. The Attack and Release parameters set the Gate attack time and release time.

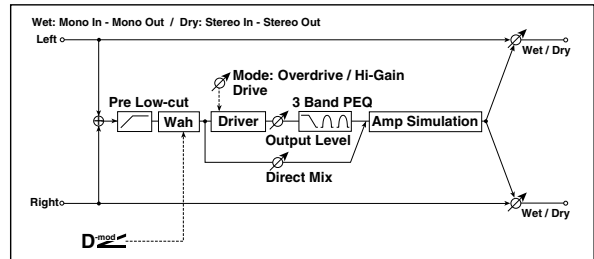


e: Delay Time

This parameter sets the delay time of the Gate input. If the sound has a very fast attack, increase the delay time so that the signal has input after the Gate is opened. This will preserve the attack part of the sound.

006: OD/Hi.Gain Wah (Overdrive/Hi.Gain Wah)

This distortion effect utilizes an Overdrive mode and a Hi-Gain mode. Controlling the wah effect, the 3-band EQ, and the amp simulation will allow you to create versatile distortion sounds. This effect is suitable for guitar and organ sounds.



a	Wah Switches Wah on/off	Off, On	E^{3P} , D^{mod}
	Src Selects the modulation source that switches the Wah on and off	Off...Tempo	
	Sw Selects the switching mode for the modulation source that switches the Wah on and off	Toggle, Moment	E^{3P}
b	Wah Sweep Range Sets the range of Wah	-10...+10	E^{3P} , D^{mod}
	Wah Sweep Src Selects the modulation source that controls the Wah	Off...Tempo	E^{3P}
c	Drive Mode Switches between overdrive and hi-gain distortion	Overdrive, Hi-Gain	

Effect

d	Drive Sets the degree of distortion	1...100 E ³
	Pre Low-cut Sets the low range cut amount of the distortion input	0...10 E ³
e	Output Level Sets the output level	0...50 E ³ , D ^{mod}
	Src Selects the modulation source for the output level	Off...Tempo
	Amt Sets the modulation amount of the output level	-50...+50
f	Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.0kHz
	Gain [dB] Sets the gain of Low EQ	-18...+18dB
g	Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 E ³
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
h	Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 E ³
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
i	Direct Mix Sets the amount of the dry sound mixed to the distortion	0...50
	Speaker Simulation Switches the speaker simulation on/off	Off, On
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Wah

The Wah parameter switches the wah effect on/off.

a: Sw

This parameter sets how the wah effect is switched on and off via the modulation source.

When "Sw" = **Moment**, the wah effect is usually turned off. It is turned on only when you press the pedal or operate the joystick.

MIDI When a value for the modulation source is less than 64, "off" speed is selected, and when the value is 64 or higher, "on" is selected.

When "Sw" = **Toggle**, the wah effect is switched between on and off each time you press the pedal or operate the joystick.

MIDI The switch will be turned on/off each time the value of the modulation source exceeds 64.

b: Wah Sweep Range, b: Wah Sweep Src

This parameter sets the sweep range of the wah center frequency. A negative value will reverse the direction of sweep. The wah center frequency can be controlled by the modulation source specified in the "Wah Sweep Src" parameter.

d: Drive, e: Output Level

The degree of distortion is determined by the level of input signal and the setting of "Drive". Raising the "Drive" setting will cause the entire volume level to increase. Use the "Output Level" parameter to adjust the volume level. The "Output Level" parameter uses the signal level input to the 3-Band EQ. If clipping occurs at the 3-Band EQ, adjust the "Output Level" parameter.

d: Pre Low-cut

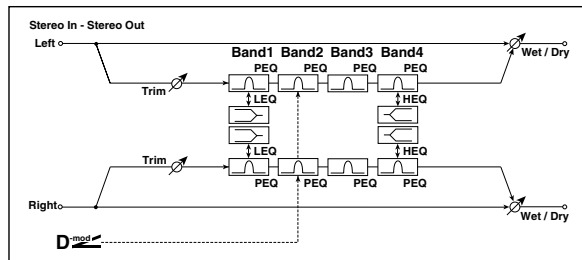
Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

g: Q, h: Q

These parameters set the bandwidth of each equalizer. The higher the value, the narrower the band becomes.

007: St. Parametric 4EQ (Stereo Parametric 4-Band EQ)

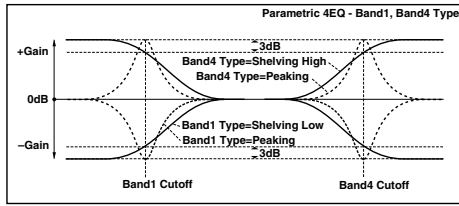
This is a stereo 4-band parametric equalizer. You can select peaking type or shelving type for Band 1 and 4. The gain of Band 2 can be controlled by dynamic modulation.



a	Trim Sets the input level	0...100
b	Band1 Type Selects the type of Band 1	Peaking, Shelving-Low E ³
c	Band4 Type Selects the type of Band 4	Peaking, Shelving-High E ³
d	Band2 Dynamic Gain Src Selects the modulation source of the Band 2 gain	Off...Tempo E ³
	Amt [dB] Sets the modulation amount of Band 2 gain	-18...+18dB E ³
e	Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 E ³ Fx:006
	Gain [dB] Sets the gain of Band 1	-18.0...+18.0dB E ³ , D ^{mod}
f	Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...10.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 E ³ Fx:006
	Gain [dB] Sets the gain of Band 2	-18.0...+18.0dB E ³ , D ^{mod}
g	Band3 Cutoff [Hz] Sets the center frequency of Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 E ³ Fx:006
	Gain [dB] Sets the gain of Band 3	-18.0...+18.0dB
h	Band4 Cutoff [Hz] Sets the center frequency of Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 E ³ Fx:006
	Gain [dB] Sets the gain of Band 4	-18.0...+18.0dB
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

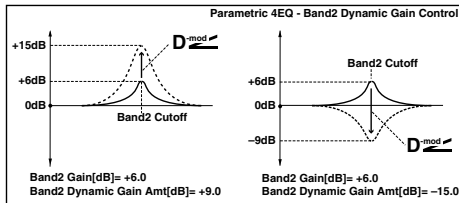
b: Band1 Type, c: Band4 Type

Selects a filter type for Band 1 and 4.



d: Band2 Dynamic Gain Src, d: Amt [dB], f: Gain [dB]

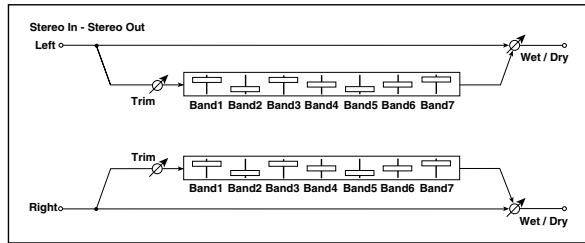
You can control the gain of Band 2 using the modulation source.



008: St. Graphic 7EQ

(Stereo Graphic 7 Band EQ)

This is a stereo 7-band graphic equalizer. The bar graph of the gain setting for each band gives you a clear, visual idea of frequency responses. You can select a center frequency setting for each band from twelve types, according to the sound.



a	Type 1:Wide 1, 2:Wide 2, 3:Wide 3, 4:Half Wide 1, 5:Half Wide 2, 6:Half Wide 3, 7:Low, 8:Wide Low, 9:Mid, 10:Wide Mid, 11:High, 12:Wide High Selects a combination of center frequencies for each band	ES
b	Trim Sets the input level	0...100
c	Band1 [dB] Sets the gain of Band 1	-18.0...+18.0dB
d	Band2 [dB] Sets the gain of Band 2	-18.0...+18.0dB
e	Band3 [dB] Sets the gain of Band 3	-18.0...+18.0dB
f	Band4 [dB] Sets the gain of Band 4	-18.0...+18.0dB
g	Band5 [dB] Sets the gain of Band 5	-18.0...+18.0dB
h	Band6 [dB] Sets the gain of Band 6	-18.0...+18.0dB
i	Band7 [dB] Sets the gain of Band 7	-18.0...+18.0dB
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Type

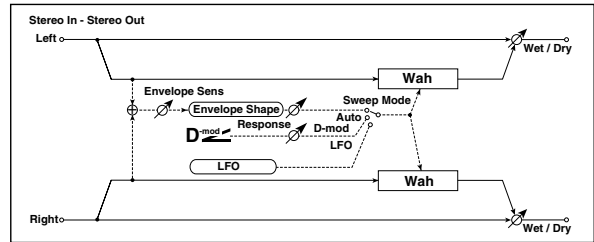
This parameter selects a combination of center frequencies for each band. Each center frequency is shown on the right edge of the LCD.

You can configure a 21-Band Graphic EQ ranging from 80Hz to 18kHz if you route three Graphic 7Band EQ effects in series, with a setting of 7:Low, 9:Mid, and 11:High for each EQ.

009: St. Wah/Auto Wah

(Stereo Wah/Auto Wah)

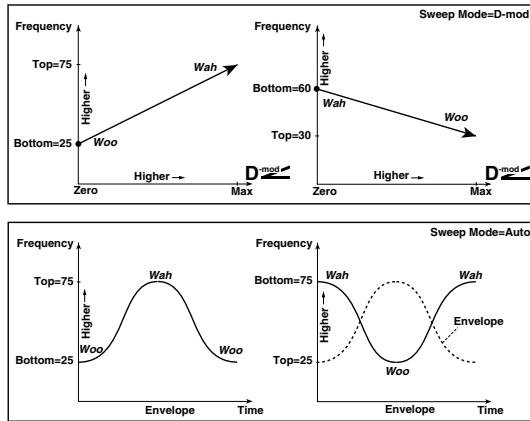
This stereo wah effect allows you to create sounds from vintage wah pedal simulation to auto-wah simulation, and much broader range settings.



a	Frequency Bottom Sets the lower limit of the wah center frequency	0...100 ES
	Frequency Top Sets the upper limit of the wah center frequency	0...100 ES
b	Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO ES, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
	Response Sets the response speed when Sweep Mode = Auto or D-mod	0...100
c	Envelope Sens (Envelope Sensitivity) Sets the sensitivity of auto-wah	0...100 ES
	Envelope Shape Sets the sweep curve of auto-wah	-100...+100 ES
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz ES, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ES, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ES
	Base Note Selects the type of notes that specify the LFO speed	ES
	Times Sets the number of notes that specify the LFO speed	x1...x16 ES
f	Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the Wah Low Pass Filter on and off	Off, On
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Frequency Bottom, a: Frequency Top

The sweep width and direction of the wah filter are determined by the “Frequency Top” and “Frequency Bottom” settings.



b: Sweep Mode

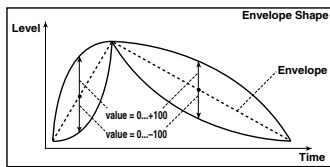
This parameter changes the wah control mode. Setting “Sweep Mode” to **Auto** will select an auto-wah that sweeps according to envelope changes in the input signal level. Auto-wah is frequently used for funk guitar parts and clav sounds. When “Sweep Mode” is set to **D-mod**, you can control the filter directly via the modulation source in the same way as a wah pedal. When “Sweep Mode” is set to **LFO**, the effect uses LFO to sweep in cycle.

c: Envelope Sens (Envelope Sensitivity)

This parameter sets the sensitivity of auto-wah. Increase the value if the input signal is too low to sweep. Reduce the value if the input signal is so high that the filter is stopped temporarily.

c: Envelope Shape

This parameter determines the sweep curve for auto-wah.



d: LFO Frequency [Hz], e: BPM/MIDI Sync

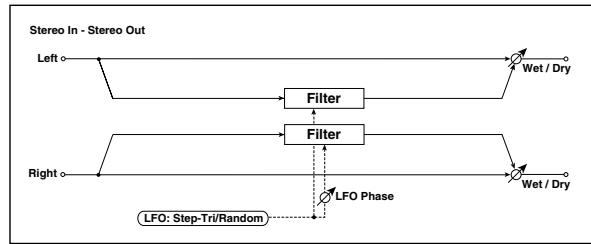
When “BPM/MIDI Sync”=Off, the LFO speed uses the LFO Frequency parameter setting. When “BPM/MIDI Sync”=On, the LFO speed follows the “BPM”, “Base Note”, and “Times” settings.

e: BPM, e: Base Note, e: Times

One cycle of LFO sweep is obtained by multiplying the length of a note (♩, ♪, etc.) (selected for “Base Note”, in relation to the tempo specified in (“BPM”, or the MIDI Clock tempo if “BPM” is set to MIDI) by the number specified in the Times parameter.

010: St. Random Filter (Stereo Random Filter)

This stereo band pass filter uses a step-shape waveform and random LFO for modulation. You can create a special effect from filter oscillation.

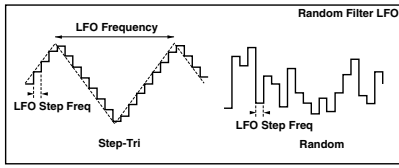


a	LFO Waveform Selects LFO Waveform	Step-Tri, Random ☑
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 ☑
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz ☑, D-mod
	Src Selects the modulation source used for both LFO speed and step speed	Off...Tempo
d	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz ☑, D-mod
e	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On ☑ Fx:009, Sync
f	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 ☑ Fx:009, ☑
	Base Note Selects the type of notes that specify the LFO speed	☑ Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 ☑ Fx:009
g	Step Base Note Selects the type of notes to specify the LFO step speed	☑, Sync
	Times Sets the number of notes to specify the LFO step speed	x1...x32 ☑
h	Manual Sets the filter center frequency	0...100
i	Depth Sets the modulation depth of filter center frequency	0...100
	Src Selects the modulation source of filter modulation	Off...Tempo
	Amt Sets the modulation amount of filter modulation	-100...+100
j	Resonance Sets the resonance amount	0...100
	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet ☑, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: LFO Waveform, c: LFO Frequency [Hz], d: LFO Step Freq (Frequency) [Hz]

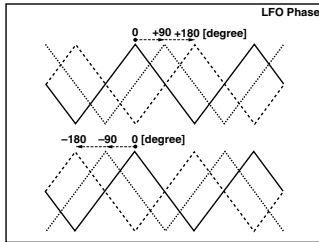
When “LFO Waveform” is set to **Step-Tri**, LFO is a step-shape, triangle waveform. The “LFO Frequency” parameter sets the original triangle waveform speed. Changing the “LFO Step Freq” parameter enables you to adjust the width of the steps.

When "LFO Waveform" is set to **Random**, the "LFO Step Freq" parameter uses a random LFO cycle.



b: LFO Phase [degree]

Offsetting the left and right phases alters how modulation is applied to the left and right channels, creating a swelling affect.



e: BPM, f: Step Base Note, f: Times

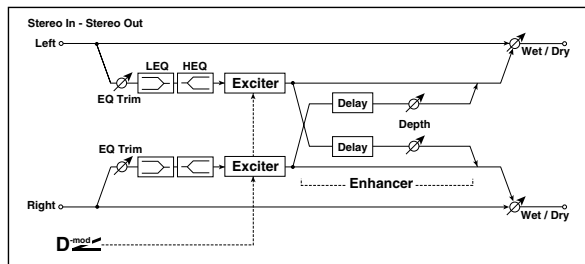
The width of an LFO step, or a cycle of random LFO, is obtained by multiplying the length of a note (♩, ♪, ♫, ♮) (selected for "Step Base Note", in relation to the tempo specified in "BPM," or the MIDI Clock tempo if "BPM" is set to MIDI) by the number specified in the "Times" parameter.

j: Wet/Dry

The effect sound's phase will be reversed when you set this parameter in the range of values from **-Wet** to **-1:99**.

011: St. Exciter/Enhncr (Stereo Exciter/Enhancer)

This effect is a combination of the Exciter, which adds a punch to the sound and the Enhancer, which adds spread and presence.



a	Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 E ³ D ^{mod}
	Src Selects the modulation source of the Exciter intensity	Off...Tempo
	Amt Sets the modulation amount of the Exciter intensity	-100...+100
b	Emphatic Point Sets the frequency to be emphasized	0...70 E ³ D ^{mod}
	Src Selects the modulation source of the frequency to be emphasized	Off...Tempo
	Amt Sets the amount of modulation of the frequency to be emphasized	-70...+70
c	Enhancer Dly L (Enhancer Delay L) [msec] Sets the delay time for the Enhancer left channel	0.0...50.0msec E ³
d	Enhancer Dly R (Enhancer Delay R) [msec] Sets the delay time for the Enhancer right channel	0.0...50.0msec E ³

e	Enhancer Depth Sets the determines to what degree the Enhancer effect is applied	0...100 D ^{mod}
	Src Selects the modulation source of the Enhancer width	Off...Tempo
	Amt Sets the modulation amount of the Enhancer width	-100...+100
f	EQ Trim Sets the 2-band EQ input level	0...100
g	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Exciter Blend

This parameter sets the depth (intensity) of the Exciter effect. Positive values give a frequency pattern (to be emphasized) different from negative values.

b: Emphatic Point

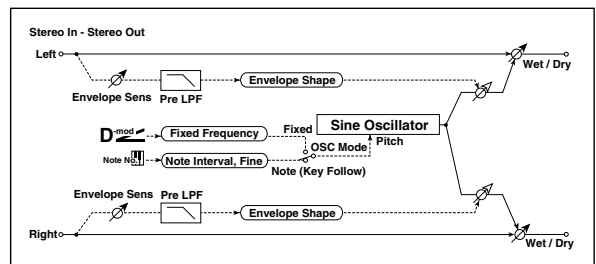
This parameter sets the frequency to be emphasized. Higher values will emphasize lower frequencies.

c: Enhancer Dly L [msec], d: Enhancer Dly R [msec]

These parameters set the delay time for the Enhancer left and right channel. Specifying a slightly different delay time for the left and right channel will add a stereo image, depth, and width to the sound.

012: St. Sub Oscillator (Stereo Sub Oscillator)

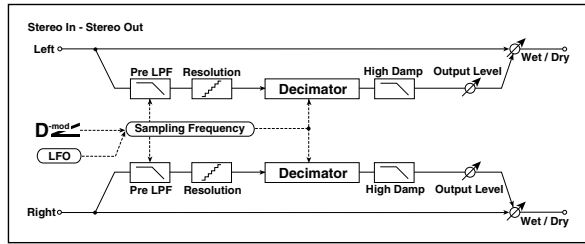
This effect adds very low frequencies to the input signal. It is very useful when simulating a roaring drum sound or emphasizing powerful low range. This effect is different from the equalizer in that you can add very low range harmonics. You can also adjust the oscillator frequency to match a particular note number, for use as an octaver.



a	OSC Mode Determines whether the oscillator frequency follows the note number or whether it is fixed	Note (Key Follow), Fixed E ³
b	Note Interval Sets the pitch difference from the note number when OSC Mode=Note (Key Follow)	-48...0 E ³
	Note Fine Fine adjustment of the oscillator frequency	-100...+100 E ³

014: Stereo Decimator

This effect creates a rough sound like a cheap sampler by lowering the sampling frequency and data bit length. You can also simulate noise unique to a sampler (aliasing).



a	Pre LPF Selects whether the harmonic noise caused by a decrease in sampling frequency is generated or not	Off, On ☑
	High Damp [%] Sets the ratio of cut of the high range	0...100%
b	Sampling Freq (Sampling Frequency) [Hz] Sets the sampling frequency	1.00k...48.00kHz D-mod
	Src Selects the modulation source of the sampling frequency	Off...Tempo
	Amt Sets the modulation amount of the sampling frequency	-48.00k...+48.00kHz
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	Depth Sets the depth of the sampling frequency LFO modulation	0...100 D-mod
	Src Selects the LFO modulation source of the sampling frequency	Off...Tempo
	Amt Sets the LFO modulation amount of the sampling frequency	-100...+100
e	Resolution Sets the data bit length	4...24 ☑
f	Output Level Sets the output level	0...100 ☑, D-mod
	Src Selects the modulation source for the output level	Off...Tempo
	Amt Sets the modulation amount of the output level	-100...+100
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Pre LPF

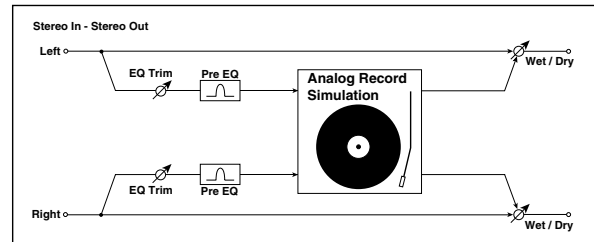
If a sampler with a very low sampling frequency receives very high-pitched sound that could not be heard during playback, it could generate pitch noise that is unrelated to the original sound. Set "Pre LPF" to ON to prevent this noise from being generated. If you set the "Sampling Freq" to about 3kHz and set "Pre LPF" to OFF, you can create a sound like a ring modulator.

e: Resolution, f: Output Level

If you set a smaller value for the "Resolution" parameter, the sound may be distorted. The volume level may also be changed. Use "Output Level" to adjust the level.

015: St. Analog Record (Stereo Analog Record)

This effect simulates the noise caused by scratches and dust on analog records. It also reproduces some of the modulation caused by a warped turntable.



a	Speed [RPM] Sets the r.p.m. of a record	33 1/3, 45, 78
b	Flutter Sets the modulation depth	0...100 ☑
c	Noise Density Sets the noise density	0...100
	Noise Tone Sets the noise tone	0...100
d	Noise Level Sets the noise level	0...100 D-mod
	Src Selects the modulation source for the noise level	Off...Tempo
	Amt Sets the modulation amount of the noise level	-100...+100
e	Click Level Sets the click noise level	0...100 ☑, D-mod
	Src Selects the modulation source for the click noise level	Off...Tempo
	Amt Sets the modulation amount of the click noise level	-100...+100
f	EQ Trim Sets the EQ input level	0...100
g	Pre EQ Cutoff [Hz] Sets the EQ center frequency	300...10.00kHz ☑
	Q Sets the EQ band width	0.5...10.0
	Gain [dB] Sets the EQ gain	-18.0...+18.0dB
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

b: Flutter

This parameter enables you to set the depth of the modulation caused by a warped turntable.

e: Click Level

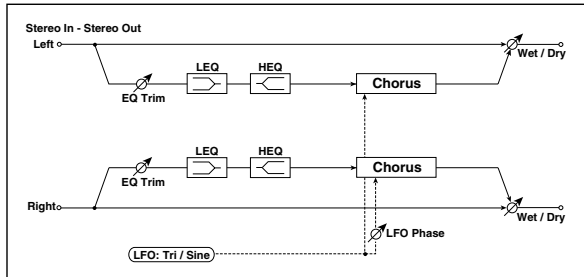
This parameter enables you to set the level of the click noise that occurs once every rotation of the turntable. This simulation reproduces record noise, and the noise generated after the music on a vinyl record finishes.

Pitch/Phase Mod.

Pitch/phase modulation effects

016: Stereo Chorus

This effect adds thickness and warmth to the sound by modulating the delay time of the input signal. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



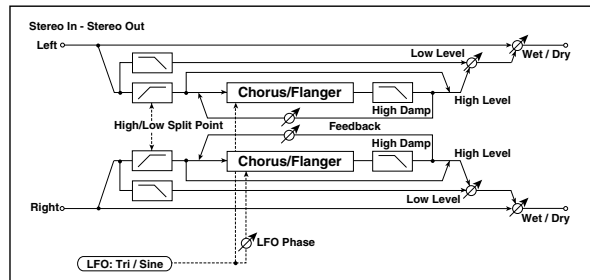
a	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	L Pre Delay [msec] Sets the delay time for the left channel	0.0...50.0msec Fx:
f	R Pre Delay [msec] Sets the delay time for the right channel	0.0...50.0msec Fx:
g	Depth Sets the depth of LFO modulation	0...100 D-mod
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
h	EQ Trim Sets the EQ input level	0...100
i	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB
j	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

e: L Pre Delay [msec], f: R Pre Delay [msec]

Setting the left and right delay time individually allows you to control the stereo image.

017: St. Harmonic Chorus (Stereo Harmonic Chorus)

This effect applies chorus only to higher frequencies. This can be used to apply a chorus effect to a bass sound without making the sound thinner. You can also use this chorus block with feedback as a flanger.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	Pre Delay [msec] Sets the delay time from the original sound	0.0...50.0msec Fx:
f	Depth Sets the depth of LFO modulation	0...100 D-mod
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
g	High/Low Split Point Sets the frequency split point between the low and high range	1...100 Fx:
h	Feedback Sets the feed back amount of the chorus block	-100...+100 Fx:
	High Damp [%] Sets the high range damping amount of the chorus block	0...100%
i	Low Level Sets the low range output level	0...100
	High Level Sets the high range (chorus) output level	0...100
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

g: High/Low Split Point

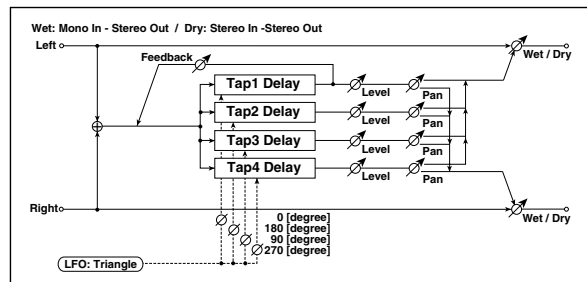
This parameter sets the frequency that splits the high and low range. Only the high range will be sent to the chorus block.

h: Feedback

Sets the feedback amount of the chorus block. Increasing the feedback will allow you to use the effect as a flanger.

018: Multitap Cho/Delay (Multitap Chorus/Delay)

This effect has four chorus blocks with a different LFO phase. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also fix some of the chorus blocks to combine the chorus and delay effects.

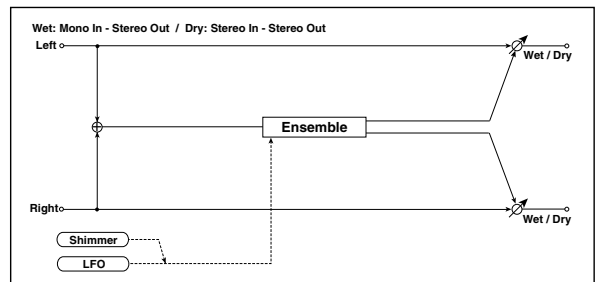


a	LFO Frequency [Hz] Sets the LFO speed	0.02...13.00Hz
	Feedback	-100...+100 D^{mod}
b	Tap1(000) [msec] Sets the Tap1 (LFO phase=0 degrees) delay time	0...570msec
	Depth Sets the Tap1 chorus depth	0...30
	Level Sets the Tap1 output level	0...30
	Pan Sets the Tap1 stereo image	L6...L1, C, R1...R6
c	Tap2(180) [msec] Sets the Tap2 (LFO phase=180 degrees) delay time	0...570msec
	Depth Sets the Tap2 chorus depth	0...30
	Level Sets the Tap2 output level	0...30
	Pan Sets the Tap2 stereo image	L6...L1, C, R1...R6
d	Tap3(090) [msec] Sets the Tap3 (LFO phase=90 degrees) delay time	0...570msec
	Depth Sets the Tap3 chorus depth	0...30
	Level Sets the Tap3 output level	0...30
	Pan Sets the Tap3 stereo image	L6...L1, C, R1...R6
e	Tap4(270) [msec] Sets the Tap4 (LFO phase=270 degrees) delay time	0...570msec
	Depth Sets the Tap4 chorus depth	0...30
	Level Sets the Tap4 output level	0...30
	Pan Sets the Tap4 stereo image	L6...L1, C, R1...R6

f	Tap1 Feedback Sets the Tap1 feedback amount	-100...+100 D^{mod}
	Src Selects the modulation source of Tap1 feedback amount and effect balance	Off...Tempo
	Amt Sets the Tap1 feedback amount and modulation amount	-100...+100
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	Amt Sets the modulation amount of the effect balance	-100...+100

019: Ensemble

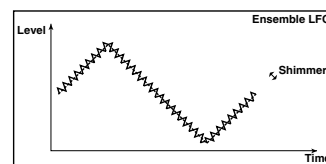
This Ensemble effect has three chorus blocks that use LFO to create subtle shimmering, and gives three dimensional depth and spread to the sound, because the signal is output from the left, right, and center.



a	Speed Sets the LFO speed	1...100 D^{mod}
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-100...+100
b	Depth Sets the depth of LFO modulation	0...100 D^{mod}
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
c	Shimmer Sets the amount of shimmering of the LFO waveform	0...100 E^{3D}
d	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

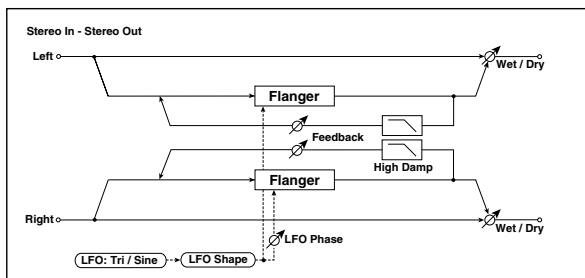
c: Shimmer

This parameter sets the amount of shimmering of the LFO waveform. Increasing this value adds more shimmering, making the chorus effect more complex and richer.



020: Stereo Flanger

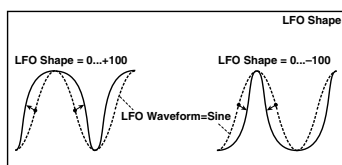
This effect gives a significant swell and movement of pitch to the sound. It is more effective when applied to a sound with a lot of harmonics. This is a stereo flanger. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	Delay Time [msec] Sets the delay time from the original sound	0.0...50.0msec
b	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, ASync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
f	Depth Sets the depth of LFO modulation	0...100
g	Feedback Sets the feedback amount	-100...+100 Fx
	High Damp [%] Sets the feedback damping amount in the high range	0...100% Fx
h	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

b: LFO Shape

Changing the LFO waveform shape controls the peak sweep of flanging effects.



g: Feedback, h: Wet/Dry

The peak shape of the positive and negative “Feedback” value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound if you set a positive value for

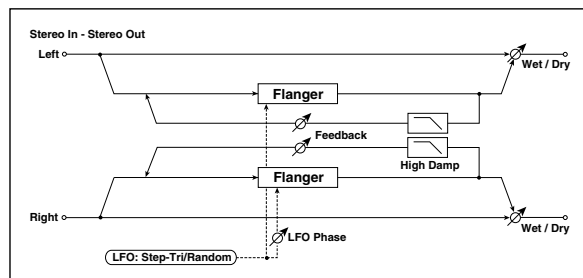
both “Feedback” and “Wet/Dry”, and if you set a negative value for both “Feedback” and “Wet/Dry”.

g: High Damp [%]

This parameter sets the amount of damping of the feedback in the high range. Increasing the value will cut high-range harmonics.

021: St. Random Flanger (Stereo Random Flanger)

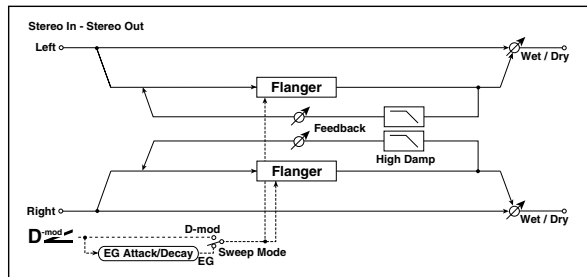
The stereo effect uses a step-shape waveform and random LFO for modulation, creating a unique flanging effect.



a	Delay Time [msec] Sets the delay time from the original sound	0.0...50.0msec
b	LFO Waveform Selects LFO Waveform	Step-Tri, Random Fx:010
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:010, D-mod
	Src Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz Fx:010, D-mod
	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, ASync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
f	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
	Step Base Note Selects the type of notes to specify the LFO step speed	Fx:010, ASync
g	Times Sets the number of notes to specify the LFO step speed	x1...x32 Fx:010
	Depth Sets the depth of LFO modulation	0...100
i	Feedback Sets the feedback amount	-100...+100 Fx:020
	High Damp [%] Sets the feedback damping amount in the high range	0...100% Fx:020
j	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 020, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

022: St. Env. Flanger (Stereo Envelope Flanger)

This Flanger uses an envelope generator for modulation. You will obtain the same pattern of flanging each time you play. You can also control the Flanger directly using the modulation source.



a	L Dly Bottom [msec] (L Delay Bottom) Sets the lower limit of the delay time on the left channel	0.0...50.0msec F ³ Fx:009
	L Dly Top [msec] (L Delay Top) Sets the upper limit of the delay time on the left channel	0.0...50.0msec F ³ Fx:009
b	R Dly Bottom [msec] (R Delay Bottom) Sets the lower limit of the delay time on the right channel	0.0...50.0msec F ³ Fx:009
	R Dly Top [msec] (R Delay Top) Sets the upper limit of the delay time on the right channel	0.0...50.0msec F ³ Fx:009
c	Sweep Mode Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, D-mod F ³ , D ^{mod}
	Src Selects the modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the flanger to sweep (when D-mod is selected for Sweep Mode)	Off...Tempo F ³
	EG Attack Sets the EG attack speed	1...100 F ³
d	EG Decay Sets the EG decay speed	1...100 F ³
	Feedback Sets the feedback amount	-100...+100 F ³ Fx:020
f	High Damp [%] Sets the feedback damping amount in the high range	0...100% F ³ Fx:020
g	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet F ³ 010, 020, D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

c: Sweep Mode, c: Src

This parameter switches the flanger control mode. With "Sweep Mode" = EG, the flanger will sweep using the envelope generator. This envelope generator is included in the envelope flanger, and not related to the Pitch EG, Filter EG, or Amp EG.

The "Src" parameter selects the source that starts the envelope generator. If you select, for example, **Gate**, the envelope generator will start when the note-on message is received.

When "Sweep Mode" = **D-mod**, the modulation source can control the flanger directly. Select the modulation source using the "Src" parameter.

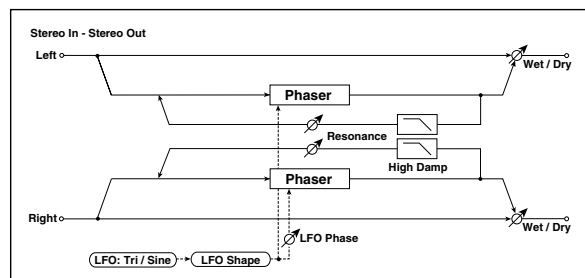
MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

d: EG Attack, d: EG Decay

Attack and Decay speed are the only adjustable parameters on this EG.

023: Stereo Phaser

This effect creates a swell by shifting the phase. It is very effective on electric piano sounds. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 F ³ Fx:020
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 F ³ Fx:010
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz F ³ Fx:009, D ^{mod}
c	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On F ³ Fx:009, S ^{ync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 F ³ Fx:009
	Base Note Selects the type of notes that specify the LFO speed	 F ³ Fx:009
e	Times Sets the number of notes that specify the LFO speed	x1...x16 F ³ Fx:009
	Manual Sets the frequency to which the effect is applied	0...100
f	Depth Sets the depth of LFO modulation	0...100 D ^{mod}
	Src Selects the modulation source for the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
g	Resonance Sets the resonance amount	-100...+100 F ³
	High Damp [%] Sets the resonance damping amount in the high range	0...100% F ³
h	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet F ³ Fx:010, D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

g: Resonance, h: Wet/Dry

The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound, if you set a positive value for both "Resonance" and "Wet/Dry", and if you set a negative value for both "Resonance" and "Wet/Dry".

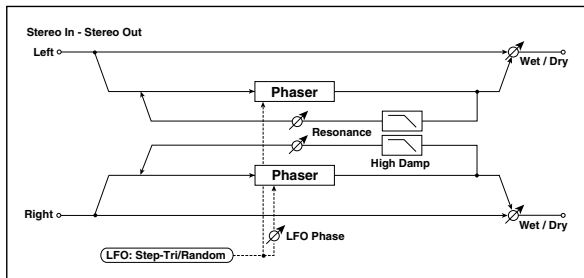
g: High Damp [%]

This parameter sets the amount of damping of the resonance in the high range. Increasing the value will cut high-range harmonics.

024: St. Random Phaser

(Stereo Random Phaser)

This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.

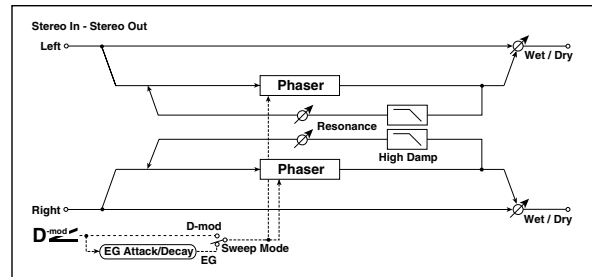


a	LFO Waveform Selects LFO Waveform	Step-Tri, Step-Sin, Random Fx:010
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:010, D-mod
	Src Selects the modulation source commonly used for LFO speed and step speed	Off...Tempo
d	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed	0.05...50.00Hz Fx:010, D-mod
e	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
f	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
g	Step Base Note Selects the type of notes to specify the LFO step speed	Fx:010, Sync
	Times Sets the number of notes to specify the LFO step speed	x1...x32 Fx:010
g	Manual Sets the frequency to which the effect is applied	0...100
h	Depth Sets the depth of LFO modulation	0...100
i	Resonance Sets the resonance amount	-100...+100 Fx:023
	High Damp [%] Sets the resonance damping amount in the high range	0...100% Fx:023
j	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 023, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

025: St. Env. Phaser

(Stereo Envelope Phaser)

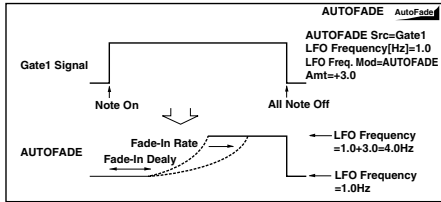
This stereo phaser uses an envelope generator for modulation. You will obtain the same pattern of phasing each time you play. You can also control the Phaser directly using the modulation source.



a	L Manu Bottom (L Manual Bottom) Sets the lower limit of the frequency range for the effect on the left channel	0...100 Fx:009
	L Manu Top (L Manual Top) Sets the upper limit of the frequency range for the effect on the left channel	0...100 Fx:009
b	R Manu Bottom (R Manual Bottom) Sets the lower limit of the frequency range for the effect on the right channel	0...100 Fx:009
	R Manu Top (R Manual Top) Sets the upper limit of the frequency range for the effect on the right channel	0...100 Fx:009
c	Sweep Mode Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, D-mod Fx:022, D-mod
	Src Selects the modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the flanger to sweep (when D-mod is selected for Sweep Mode)	Off...Tempo
d	EG Attack Sets the EG attack speed	1...100 Fx:022
	EG Decay Sets the EG decay speed	1...100 Fx:022
e	Resonance Sets the resonance amount	-100...+100 Fx:023
f	High Damp [%] Sets the resonance damping amount in the high range	0...100% Fx:023
g	Wet/Dry Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 023, D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

“AUTOFADE Src”=Gate1, “LFO Frequency [Hz]”=1.0
 “LFO Frequency Mod”=AUTOFADE, “Amt”=3.0

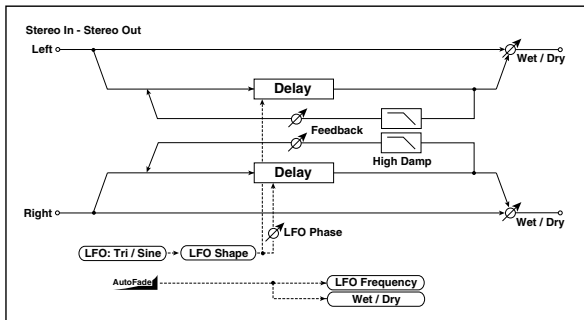
MIDI The effect is off when a value for the dynamic modulation source specified for the “AUTOFADE Src” parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.



028: St. Auto Fade Mod.

(Stereo Auto Fade Modulation)

This stereo chorus/flanger effect enables you to control the LFO speed and effect balance using auto fade, and you can spread the sound by offsetting the phase of the left and right LFOs from each other.

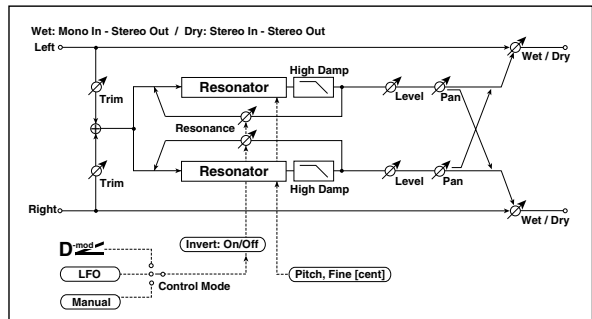


a	AUTOFADE Src	Off...Tempo
	Selects the modulation source that starts AutoFade	
	Rate	1...100
b	Fade-In Dly (Fade-In Delay) [msec]	00...2000msec
	Sets the fade-in delay time	
c	LFO Waveform	Triangle, Sine
	Selects LFO Waveform	
d	LFO Shape	-100...+100
	Determines how much the LFO waveform is changed	
e	LFO Phase [degree]	-180...+180
	Sets the LFO phase difference between the left and right	
f	LFO Frequency Mod	D-mod, AUTOFADE
	Switches between D-mod and AUTOFADE for the LFO frequency modulation	
	LFO Frequency [Hz]	0.02...20.00Hz
g	Src	Off...Tempo
	Selects the modulation source of LFO speed	
	Amt	-20.00...+20.00Hz
h	L Delay Time [msec]	0.0...500.0msec
	Sets the left channel delay time	
i	R Delay Time [msec]	0.0...500.0msec
	Sets the right channel delay time	
j	Depth	0...200
	Sets the depth of LFO modulation	

h	Feedback	-100...+100
	Sets the feedback amount	
i	High Damp [%]	0...100%
	Sets the feedback damping amount in the high range	
j	Wet/Dry Mod	D-mod, AUTOFADE
	Switches between D-mod and AUTOFADE for the effect balance modulation	
k	Wet/Dry	-Wet...-1:99, Dry, 1:99...Wet
	Sets the balance between the effect and dry sounds	
	Src	Off...Tempo
l	Selects the modulation source of the effect balance	
	Amt	-100...+100
Sets the modulation amount of the effect balance		

029: 2Voice Resonator

This effect resonates the input signal at a specified pitch. You can set the pitch, output level, and pan settings for two resonators individually. You can control the resonance intensity via an LFO.



a	Control Mode	Manual, LFO, D-mod
	Switches the controls of resonance intensity	
b	LFO/D-mod Invert	Off, On
	Reverses the Voice 1 and 2 control when LFO/D-mod is selected	
c	LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
d	D-mod Src	Off...Tempo
	Selects the modulation source that controls resonance intensity	
e	Mod. Depth	-100...+100
	Sets the amount of resonance intensity control via LFO/D-mod	
f	Trim	0...100
	Sets the input level at the resonator	
g	Voice1: Pitch	C0...B8
	Sets the voice1 Pitch for resonance	
h	Fine [cent]	-50...+50
	Fine-adjusts the voice 1 pitch for resonance	
i	Voice1: Resonance	-100...+100
	Sets the intensity of resonance when Control Mode = Manual	
j	High Damp [%]	0...100%
	Sets the damping amount of resonant sound in the high range	
k	Voice1: Level	0...100
	Sets the Voice1 output level	
l	Pan	L6...R6
	Sets the Voice1 stereo image	
m	Voice2: Pitch	C0...B8
	Sets the Voice2 Pitch for resonance	
n	Fine [cent]	-50...+50
	Fine-adjusts the voice 2 pitch for resonance	
o	Voice2: Resonance	-100...+100
	Sets the intensity of resonance when Control Mode = Manual	
p	High Damp [%]	0...100%
	Sets the damping amount of resonant sound in the high range	

i	Voice2: Level Sets the Voice2 output level	0...100
	Pan Sets the Voice2 stereo image	L6...R6
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Control Mode, e: Voice1: Resonance, h: Voice2: Resonance

This parameter determines the resonance intensity. When "Control Mode" = **Manual**, the "Resonance" parameter sets the intensity of resonance. If the "Resonance" parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave lower.

When "Control Mode" = **LFO**, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

When "Control Mode" = **D-mod**, the resonance is controlled by the dynamic modulation source. If **JS X** or **Ribbon** is assigned as the modulation source, the pitch an octave higher and lower can be controlled, similar to when LFO is selected for Control Mode.

a: LFO/D-mod Invert

When "Control Mode" = **LFO** or **D-mod**, the controlled phase of either Voice 1 or 2 will be reversed. When the resonance pitch is set for Voice 1 (Resonance has a positive value), Voice 2 will resonate at a pitch an octave below (Resonance has a negative value).

d: Voice1: Pitch, d: Fine [cent], g: Voice2: Pitch, g: Fine [cent]

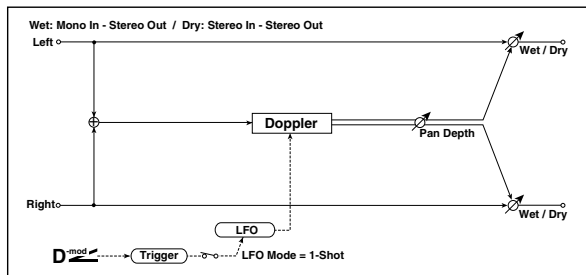
The Pitch parameter specifies the pitch of resonance by note name. The "Fine" parameter allows for fine adjustment in steps of cents.

e: High Damp [%], h: High Damp [%]

This parameter sets the damping amount of resonant sound in the high range. Lower values will make a metallic sound with a higher range of harmonics.

030: Doppler

This effect simulates the "Doppler effect" of a moving sound with a changing pitch, similar to the siren of an passing ambulance. Mixing the effect sound with the dry sound will create a unique chorus effect.



a	LFO Mode Switches LFO operation mode	Loop, 1-Shot E ³ , D ^{mod}
	Src When LFO Mode is set to 1-Shot, this modulation source triggers the LFO	Off...Tempo E ³
b	LFO Sync Switches between LFO reset on and off when LFO Mode is set to Loop	Off, On E ³

c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz E ³ Fx:009, D ^{mod}
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On E ³ Fx:009, S ^{ync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 E ³ Fx:009
	Base Note Selects the type of notes that specify the LFO speed	E ³ , Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 E ³ Fx:009
e	Pitch Depth Sets the pitch variation of the moving sound	0...100 E ³ , D ^{mod}
	Src Selects the modulation source of pitch variation	Off...Tempo
	Amt Sets the modulation amount of pitch variation	-100...+100
f	Pan Depth Sets the panning of the moving sound	-100...+100 E ³ , D ^{mod}
	Src Selects the modulation source of panning	Off...Tempo
	Amt Sets the modulation amount of panning	-100...+100
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: LFO Mode, a: Src, b: LFO Sync

The "LFO Mode" parameter switches LFO operation mode. When **Loop** is selected, the Doppler effect will be created repeatedly. If "LFO Sync" is set to **On**, the LFO will be reset when the modulation source specified with the "Src" parameter is turned on. When "LFO Mode" is set to **1-Shot**, the Doppler effect is created only once when the modulation source specified in the "Src" field is turned on. At this time if you do not set the "Src" parameter, the Doppler effect will not be created, and no effect sound will be output.

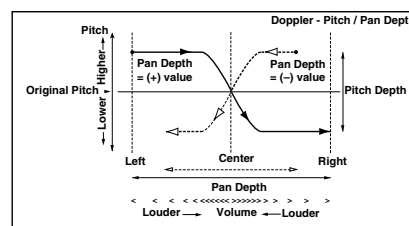
MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Doppler effect is triggered when the value changes from 63 or smaller to 64 or higher.

e: Pitch Depth

With the Doppler effect, the pitch is raised when the sound approaches, and the pitch is lowered when the sound goes away. This parameter sets this pitch variation.

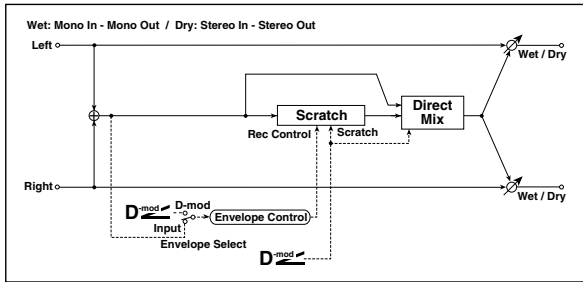
f: Pan Depth

This parameter sets the width of the stereo image of the effect sound. With larger values, the sound seems to come and go from much further away. With positive values, the sound moves from left to right; with negative values, the sound moves from right to left.



031: Scratch

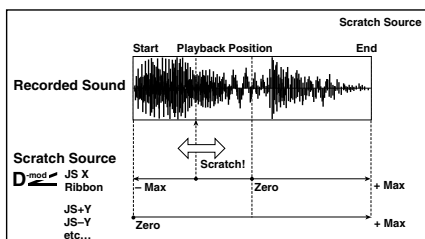
This effect is applied by recording the input signal and moving the modulation source. It simulates the sound of scratches you can make using a turntable.



a	Scratch Source Selects the modulation source for simulation control	Off...Tempo [Icon], [D-mod]
b	Response Sets the speed of the response to the Scratch Source	0...100 [Icon]
c	Envelope Select Selects whether the start and end of recording is controlled via the modulation source or the input signal level	D-mod, Input [Icon], [D-mod]
	Src Selects the modulation source that controls recording when Envelope Select is set to D-mod	Off...Tempo [Icon]
d	Threshold Sets the recording start level when Envelope Select is set to Input	0...100 [Icon]
e	Response Sets the speed of the response to the end of recording	0...100 [Icon]
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade [Icon]
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet [D-mod]
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Scratch Source, b: Response

The Scratch Source parameter enables you to select the modulation source that controls simulation. The value of the modulation source corresponds to the playback position. The Response parameter enables you to set the speed of the response to the modulation source.



c: Envelope Select, c: Src, d: Threshold

When "Envelope Select" is set to **D-mod**, the input signal will be recorded only when the modulation source value is 64 or higher. When "Envelope Select" is set to **Input**, the input signal will be recorded only when its level is over the Threshold value. The maximum recording time is 1365msec. If this is exceeded, the recorded data will start being erased from the top.

e: Response

This parameter enables you to set the speed of the response to the end of recording. Set a smaller value when you are recording a phrase or rhythm pattern, and set a higher value if you are recording only one note.

f: Direct Mix

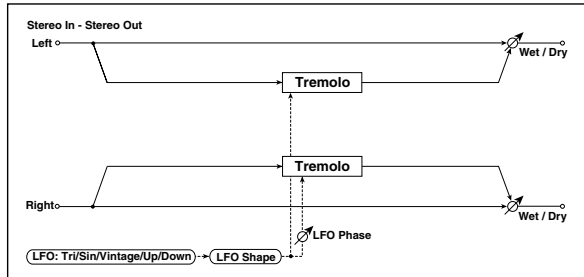
With **Always On**, a dry sound is usually output. With **Always Off**, dry sounds are not output. With **Cross Fade**, a dry sound is usually output, and it is muted only when scratching. Set Wet/Dry to **Wet** to use this parameter effectively.

Mod./P.Shift

Other modulation and pitch shift effects

032: Stereo Tremolo

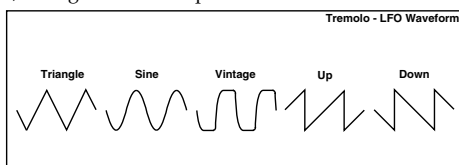
This effect modulates the volume level of the input signal. The effect is stereo, and offsetting the LFO of the left and right phases from each other produces a tremolo effect between left and right.



a	LFO Waveform	Triangle, Sine, Vintage, Up, Down
	Selects LFO Waveform	
b	LFO Phase [degree]	-180...+180
	Sets the LFO phase difference between the left and right	
c	LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
	Src	Off...Tempo
	Selects the modulation source of LFO speed	
d	Amt	-20.00...+20.00Hz
	Sets the modulation amount of LFO speed	
	BPM/MIDI Sync	Off, On
	Switches between using the frequency of the LFO speed and using the tempo and notes	
e	BPM	MIDI, 40...240
	Selects MIDI Clock and assigns tempo	
	Base Note	
	Selects the type of notes that specify the LFO speed	
f	Times	x1...x16
	Sets the number of notes that specify the LFO speed	
	Depth	0...100
	Sets the depth of LFO modulation	
g	Src	Off...Tempo
	Selects the modulation source of the depth of modulation	
	Amt	-100...+100
	Sets the modulation amount of the depth of modulation	
h	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	
	Src	Off...Tempo
	Selects the modulation source of the effect balance	
i	Amt	-100...+100
	Sets the modulation amount of the effect balance	

a:LFO Waveform

This parameter selects the LFO waveform. **Vintage** wave simulates the characteristics of the tremolo created on a guitar amplifier. Combining this effect with the Amp Simulation will make a realistic, vintage tremolo amplifier sound.



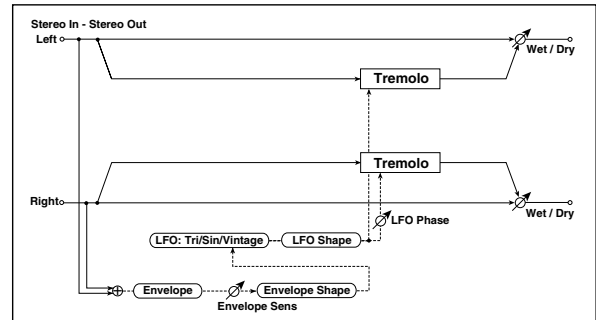
b: LFO Phase [degree]

This parameter determines the difference between the left and right LFO phases. A higher value will simulate the auto-pan effect in which the sound is panned between left and right.

033: St. Env. Tremolo

(Stereo Envelope Tremolo)

This effect uses the input signal level to modulate a stereo tremolo. You can simulate a tremolo effect that becomes deeper as it fades out while the level gets lower.



a	Envelope Sens (Envelope Sensitivity)	0...100
	Sets the envelope sensitivity of the input signal	
b	Envelope Shape	-100...+100
	Sets the envelope curve shape of the input signal	
c	LFO Waveform	Triangle, Sine, Vintage
	Selects LFO Waveform	
	LFO Shape	-100...+100
	Determines how much the LFO waveform is changed	
d	LFO Phase [degree]	-180...+180
	Sets the LFO phase difference between the left and right	
e	LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
	Envelope Amount [Hz]	-20.00...+20.00Hz
	Sets the changes of the LFO speed according to the input signal level	
f	Depth	0...100
	Sets the depth of LFO modulation	
g	Envelope Amount	-100...+100
	Sets the changes of the modulation depth according to the input signal level	
	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	
h	Src	Off...Tempo
	Selects the modulation source of the effect balance	
i	Amt	-100...+100
	Sets the modulation amount of the effect balance	

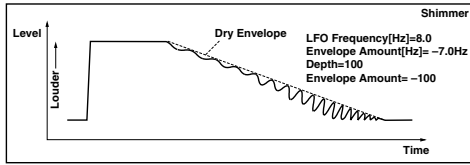
d: LFO Frequency [Hz], d: Envelope Amount [Hz], e: Depth, e: Envelope Amount

These parameters set the modulation via an envelope (input signal level).

The "LFO speed" is obtained by adding the "LFO Frequency" value to the "Envelope Amount" value multiplied by the input signal. The LFO modulation depth is obtained by adding the Depth value to the "Envelope Amount" value multiplied by the input signal level.

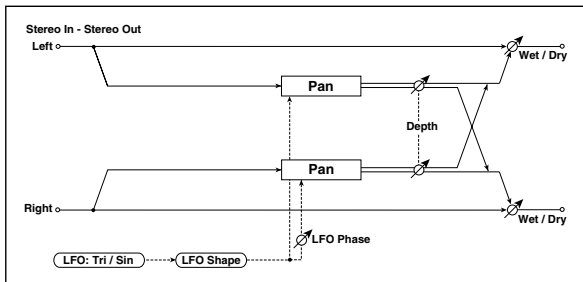
- The following example indicates that the "Depth" is 0 with an LFO Frequency of 1.0Hz and the maximum input, and that the "Depth" is 100 with a Frequency of 8.0Hz with zero input.
"LFO Frequency [Hz]"=8.0, "Envelope Amount [Hz]"=-7.0

“Depth”=100, “Envelope Amount”=-100



034: Stereo Auto Pan

This Auto Pan effect pans sound between left and right. It is stereo, and shifting the left and right LFO phases from each other will simulate the sound of the left and right channels crossing over each other by turns, or chasing each other.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D ^{mod}
c	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S ^{sync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	MIDI, 40...240 Fx:009
e	Depth Sets the depth of LFO modulation	0...100 D ^{mod}
	Src Selects the modulation source of the depth of modulation	Off...Tempo
	Amt Sets the modulation amount of the depth of modulation	-100...+100
f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: LFO Shape

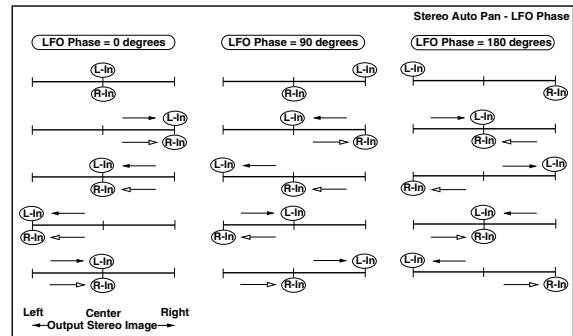
You can change the panning curve by modifying the LFO waveform.

b: LFO Phase

This parameter determines the difference in the left and right LFO phases. When you change the value gradually from 0, the sound

from the left and right channels will chase each other around. If you set the parameter to +180 or -180, the sound from each channel will cross over each other.

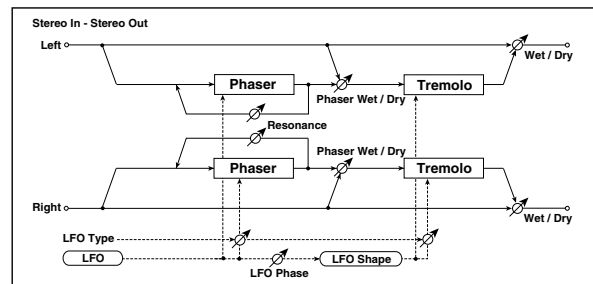
You need to input different sounds to each channel in order for this parameter to be effective.



035: St. Phaser + Trml

(Stereo Phaser + Tremolo)

This effect has a stereo phaser and tremolo LFOs linked together. Swelling phaser modulation and tremolo effects synchronize with each other, creating a soothing modulation effect. It is suitable for electric piano type sounds.



a	Type: Selects the type of the tremolo and phaser LFOs	Phs - Trml...Phs LR - Trml LR Fx:009
	LFO Phase [degree] Sets the phase difference between the tremolo and phaser LFOs	-180...+180 Fx:009
b	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D ^{mod}
	Src Selects the modulation source of LFO speed	Off...Tempo
c	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S ^{sync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
d	Base Note Selects the type of notes that specify the LFO speed	MIDI, 40...240 Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	Phaser Manual Sets the phaser frequency range	0...100
	Resonance Sets the phaser resonance amount	-100...+100

e	Phaser Depth	0...100	D^{mod}
	Src	Off...Tempo	
	Amt	-100...+100	
f	Phaser Wet/Dry	-Wet...-2:99, Dry, 2:99...Wet	E^{wet} , D^{mod}
g	Tremolo Shape	-100...+100	E^{fx} Fx:020
h	Tremolo Depth	0...100	D^{mod}
	Src	Off...Tempo	
	Amt	-100...+100	
i	Wet/Dry	Dry, 1:99...99:1, Wet	E^{wet} , D^{mod}
	Src	Off...Tempo	
	Amt	-100...+100	

a: Type, a: LFO Phase [degree]

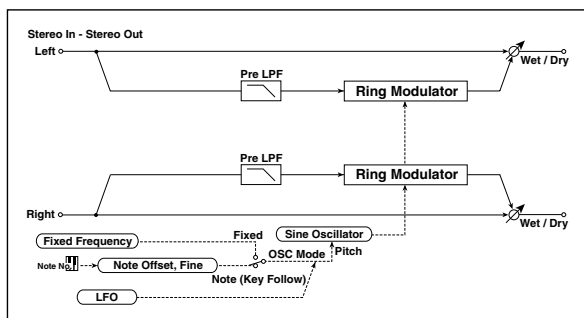
Select the type of phaser LFO and tremolo LFO for the “Type” parameter. How the effect sound moves or rotates depends on the type of LFO. Selecting “LFO Phase” enables you to offset the timing of the phaser peak and control a subtle movement and rotation of the sound.

f: Phaser Wet/Dry, i: Wet/Dry

The “Phaser Wet/Dry” parameter sets the balance between the phaser output and the dry sound. The “Wet/Dry” parameter sets the balance between the final phaser and tremolo output level and the dry sound.

036: St. Ring Modulator (Stereo Ring Modulator)

This effect creates a metallic sound by applying the oscillators to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Matching the oscillator frequency with a note number will produce a ring modulation effect in specific key ranges.



a	Pre LPF	0...100	E^{fx}
b	OSC Mode	Fixed, Note (Key Follow)	E^{fx}

c	Fixed Frequency [Hz]	0...12.00kHz	E^{fx} , D^{mod}
	Src	Off...Tempo	
	Amt	-12.00...+12.00kHz	
d	Note Offset	-48...+48	E^{fx}
	Note Fine	-100...+100	E^{fx}
e	LFO Frequency [Hz]	0.02...20.00Hz	E^{fx} Fx:009, D^{mod}
	Src	Off...Tempo	
	Amt	-20.00...+20.00Hz	
f	BPM/MIDI Sync	Off, On	E^{fx} Fx:009, S^{sync}
	BPM	MIDI, 40...240	E^{fx} Fx:009
	Base Note		E^{fx} Fx:009
	Times	x1...x16	E^{fx} Fx:009
g	LFO Depth	0...100	D^{mod}
	Src	Off...Tempo	
	Amt	-100...+100	
h	Wet/Dry	Dry, 1:99...99:1, Wet	E^{wet} , D^{mod}
	Src	Off...Tempo	
	Amt	-100...+100	

a: Pre LPF

This parameter enables you to set the damping amount of the high range sound input to the ring modulator. If the input sound contains lots of harmonics, the effect may sound dirty. In this case, cut a certain amount of high range.

b: OSC Mode

This parameter determines whether or not the oscillator frequency follows the note number.

c: Fixed Frequency [Hz]

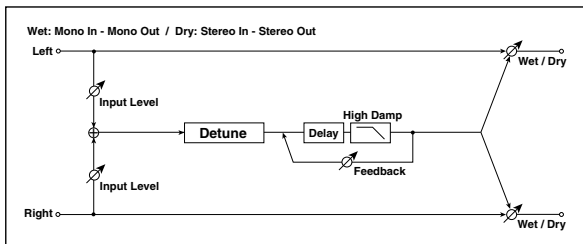
This parameter sets the oscillator frequency when “OSC Mode” is set to Fixed.

d: Note Offset, d: Note Fine

These parameters for the oscillator are used when “OSC Mode” is set to Note (Key Follow). The “Note Offset” sets the pitch difference from the original note in semitone steps. The “Note Fine” parameter fine-adjusts the pitch in cent steps. Matching the oscillator frequency with the note number produces a ring modulation effect in the correct key.

037: Detune

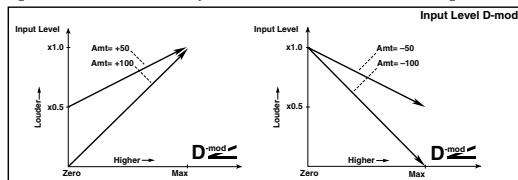
Using this effect, you can obtain a detune effect that offsets the pitch of the effect sound slightly from the pitch of the input signal. Compared to the chorus effect, a more natural sound thickness will be created.



a	Pitch Shift [cent] Sets the pitch difference from the input signal	-100...+100cent	
	Src Selects the modulation source of the pitch shift	Off...Tempo	
	Amt Sets the modulation amount of the pitch shift	-100...+100cent	
b	Delay Time [msec] Sets the delay time	0...1000msec	
	Feedback Sets the feedback amount	-100...+100	
c	High Damp [%] Sets the damping amount in the high range	0...100%	
	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100	
d	Src Selects the modulation source for the input level	Off...Tempo	
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	Src Selects the modulation source of the effect balance	Off...Tempo	
e	Amt Sets the modulation amount of the effect balance	-100...+100	

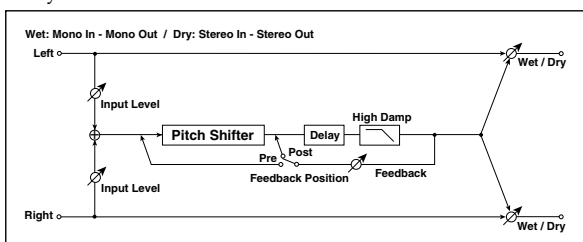
d: Input Level Dmod [%], d: Src

This parameter sets the dynamic modulation of the input level.



038: Pitch Shifter

This effect changes the pitch of the input signal. You can select from three types: Fast (quick response), Medium, and Slow (preserves tonal quality). You can also create an effect in which the pitch is gradually raised (or dropped) using the delay with feedback.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast	
b	Pitch Shift [1/2tone] Sets the pitch shift amount by steps of a semitone	-24...+24	
	Src Selects the modulation source of pitch shift amount	Off...Tempo	
	Amt Sets the modulation amount of pitch shift amount	-24...+24	
c	Fine [cent] Sets the pitch shift amount by steps of a cent	-100...+100cent	
	Amt Sets the modulation amount of pitch shift amount	-100...+100cent	
d	Delay Time [msec] Sets the delay time	0...1000msec	
e	Feedback Position Switches the feedback connection.	Pre, Post	
f	Feedback Sets the feedback amount	-100...+100	
	High Damp [%] Sets the damping amount in the high range	0...100%	
g	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100	
	Src Selects the modulation source for the input level	Off...Tempo	
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

a: Mode

This parameter switches the pitch shifter operating mode. With **Slow**, tonal quality will not be changed too much. With **Fast**, the effect becomes a Pitch Shifter that has a quick response, but may change the tone. **Medium** is in between these two. If you do not need to set too much pitch shift amount, set this parameter to **Slow**. If you wish to change the pitch significantly, use **Fast**.

b: Pitch Shift [1/2tone], b: Src, b: Amt, c: Fine [cent], c: Amt

The amount of pitch shift will use the value of the "Pitch Shift" plus the "Fine" value. The amount of modulation will use the c: Amt value plus d: "Amt."

Modulation Source is used both for "Pitch Shift" and "Fine."

e: Feedback Position, f: Feedback

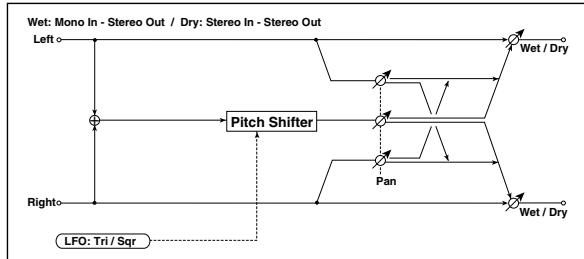
When "Feedback Position" is set to **Pre**, the pitch shifter output is again input to the pitch shifter. Therefore, if you specify a higher value for the Feedback parameter, the pitch will be raised (or lowered) more and more each time feedback is repeated.

If "Feedback Position" is set to **Post**, the feedback signal will not pass through the pitch shifter again. Even if you specify a higher value for the Feedback parameter, the pitch-shifted sound will be repeated at the same pitch.

039: Pitch Shift Mod.

(Pitch Shift Modulation)

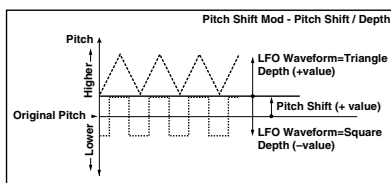
This effect modulates the detuned pitch shift amount using an LFO, adding a clear spread and width to the sound by panning the effect sound and dry sound to the left and right. This is especially effective when the effect sound and dry sound output from stereo speakers are mixed.



a	Pitch Shift [cent]	-100...+100cent
	Sets the pitch difference from the input signal	
b	LFO Waveform	Triangle, Square
	Selects LFO Waveform	
c	LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
	Src	Off...Tempo
	Selects the modulation source of LFO speed	
d	Amt	-20.00...+20.00Hz
	Sets the modulation amount of LFO speed	
	BPM/MIDI Sync	Off, On
	Switches between using the frequency of the LFO speed and using the tempo and notes	
	BPM	MIDI, 40...240
e	Selects MIDI Clock and assigns tempo	
	Base Note	
	Selects the type of notes that specify the LFO speed	
	Times	x1...x16
	Sets the number of notes that specify the LFO speed	
f	Depth	-100...+100
	Sets the LFO modulation depth for pitch shift amount	
	Src	Off...Tempo
g	Selects the modulation source of the depth of modulation	
	Amt	-100...+100
	Sets the modulation amount of the depth of modulation	
h	Pan	L, 1:99...99:1, R
	Sets the panning effect sound and dry sound separately	
	Wet/Dry	Dry, 1:99...99:1, Wet
i	Sets the balance between the effect and dry sounds	
	Src	Off...Tempo
	Selects the modulation source of the effect balance	
j	Sets the modulation amount of the effect balance	

a: Pitch Shift [cent], e: Depth

These parameters set the amount of pitch shift and amount of modulation by means of the LFO.

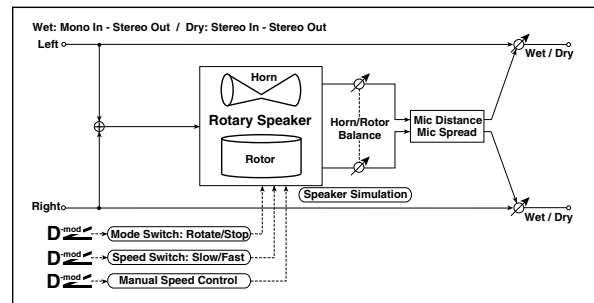


f: Pan, g: Wet/Dry

The Pan parameter pans the effect sound and dry sound to the left and right. With L, the effect sound is panned left, and the dry sound is panned right. With a Wet/Dry = Wet setting, the effect and dry sound will be output in a proportion of 1:1.

040: Rotary Speaker

This effect simulates a rotary speaker, and obtains a more realistic sound by simulating the rotor in the low range and the horn in the high range separately. The effect also simulates the stereo microphone settings.



a	Mode Switch	Rotate, Stop
	Switches between speaker rotation and stop	
b	Src	Off...Tempo
	Selects the modulation source that toggles between rotation and stop	
c	Sw	Toggle, Moment
	Selects switching mode of the modulation source that toggles between rotation and stop	
d	Speed Switch	Slow, Fast
	Switches the speaker rotation speed between slow and fast	
e	Src	Off...Tempo
	Selects the modulation source that toggles between slow and fast	
f	Sw	Toggle, Moment
	Selects switching mode of the modulation source that toggles between slow and fast	
g	Manual Speed Ctrl (Manual Speed Control)	Off...Tempo
	Selects the modulation source in case the rotation speed is changed directly	
h	Horn Acceleration	0...100
	How quickly the horn rotation speed in the high range is switched	
i	Horn Ratio	Stop, 0.50...2.00
	Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	
j	Rotor Acceleration	0...100
	Determines how quickly the rotor rotation speed in the low range is switched	
k	Rotor Ratio	Stop, 0.50...2.00
	Adjusts the (low-range side) rotor rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	
l	Horn/Rotor Balance	Rotor, 1...99, Horn
	Sets the level balance between the high-range horn and low-range rotor	
m	Mic Distance	0...100
	Sets the distance between the microphone and rotary speaker	
n	Mic Spread	0...100
	Sets the angle of left and right microphones	
o	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	
	Src	Off...Tempo
p	Selects the modulation source of the effect balance	
	Amt	-100...+100
Sets the modulation amount of the effect balance		

a: Sw

This parameter sets how the modulation source switches between rotation and stop.

When "Sw" = **Toggle**, the speaker rotates or stops alternately each time you press the pedal or operate the joystick.

MIDI Each time the value for the modulation source exceeds 64, the speaker rotates or stops alternately.

When "Sw" = **Moment**, the speaker is rotating. It stops only when you press the pedal or operate the joystick.

MIDI Rotation will occur when the value of the modulation source is less than 64, and will stop when the value is 64 or greater.

b: Sw

This parameter sets how the rotation speed (slow and fast) is switched via the modulation source.

When "Sw" = **Toggle**, the speed is switched between slow and fast each time you press the pedal or operate the joystick.

MIDI Slow/fast will alternate each time the value of the modulation source exceeds 64.

When "Sw" = **Moment**, the speed is usually slow. It becomes fast only when you press the pedal or operate the joystick.

MIDI When a value for the modulation source is less than 64, "slow" speed is selected, and when the value is 64 or higher, "fast" is selected.

c: Manual Speed Ctrl

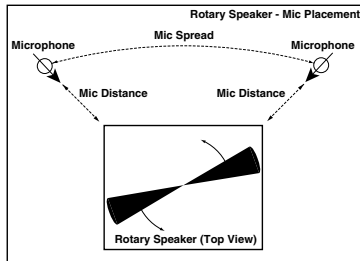
If you wish to control the speaker rotation speed manually, not switching between Slow and Fast, select the modulation source in the "Manual Speed Ctrl" field. If manual control is not necessary, set this field to **Off**.

d: Horn Acceleration, e: Rotor Acceleration

On a real rotary speaker, the rotation speed is accelerated or decelerated gradually after you switch the speed. The "Horn Acceleration" parameter sets the speed at which the rotation is accelerated or decelerated.

g: Mic Distance, g: Mic Spread

This is a simulation of stereo microphone settings.

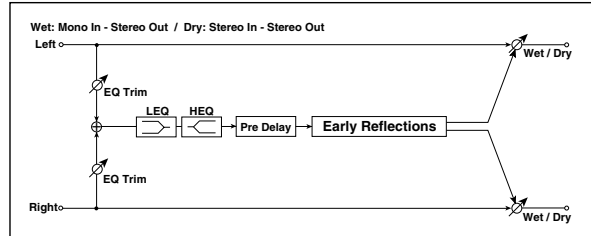


ER/Delay

Early reflection and delay effects

041: Early Reflections

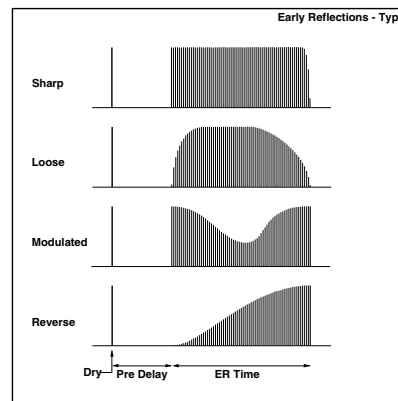
This effect is only the early reflection part of a reverberation sound, and adds presence to the sound. You can select one of the four decay curves.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse	
b	ER Time [msec] Sets the time length of early reflection	10...800msec	
c	Pre Delay [msec] Sets the time taken from the original sound to the first early reflection	0...200msec	
d	EQ Trim Sets the input level of EQ applied to the effect sound	0...100	
e	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB	
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB	
f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

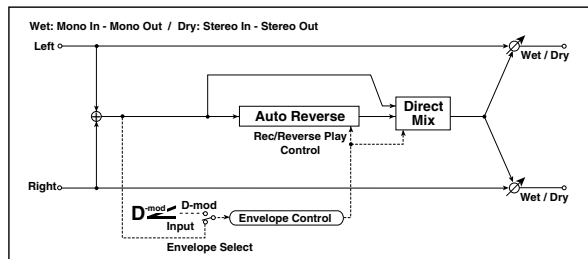
a: Type

This parameter selects the decay curve for the early reflection.



042: Auto Reverse

This effect records the input signal and automatically plays it in reverse (the effect is similar to a tape reverse sound).



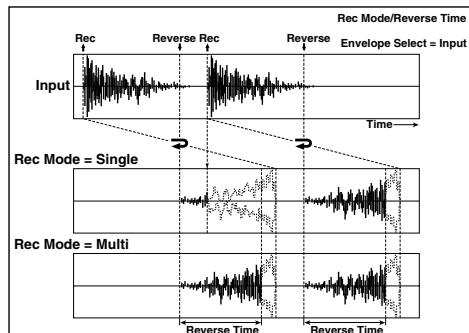
a	Rec Mode Sets the recording mode	Single, Multi ES
b	Reverse Time [msec] Sets the maximum duration of the reverse playback	20...1320msec ES
c	Envelope Select Selects whether the start and end of recording is controlled via the modulation source or the input signal level	D-mod, Input ES, D-mod
	Src Selects the modulation source that controls recording when Envelope Select is set to D-mod	Off...Tempo ES
d	Threshold Sets the recording start level when Envelope Select is set to Input	0...100 ES
e	Response Sets the speed of the response to the end of recording	0...100 ES Fx:031
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade ES Fx:031
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Rec Mode, b: Reverse Time

When "Rec Mode" is set to **Single**, you can set up to 1320msec for "Reverse Time." If recording starts during the reverse playback, the playback will be interrupted.

When "Rec Mode" is set to **Multi**, you can make another recording during the reverse playback. However, the maximum Reverse Time is limited to 660msec.

If you wish to record a phrase or rhythm pattern, set "Rec Mode" to **Single**. If you record only one note, set "Rec Mode" to **Multi**. The "Reverse Time" parameter specifies the maximum duration of the reverse playback. The part in excess of this limit will not be played in reverse. If you wish to add short pieces of the reverse playback of single notes, make the "Reverse Time" shorter.



c: Envelope Select, c: Src, d: Threshold

These parameters select the source to control the start and end of recording.

When "Envelope Select" is set to **D-mod**, the input signal will be

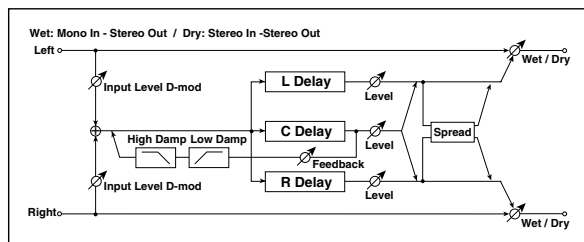
recorded only when the value of the modulation source selected by the Src parameter is 64 or higher.

When "Envelope Select" is set to **Input**, the input signal will be recorded only when its level exceeds the Threshold level.

When recording is completed, reverse playback starts immediately.

043: L/C/R Delay

This multitap delay outputs three Tap signals to the left, right, and center respectively. You can also adjust the left and right spread of the delay sound.



a	L Delay Time [msec] Sets the delay time of TapL	0...1360msec
	Level Sets the output level of TapL	0...50
b	C Delay Time [msec] Sets the delay time of TapC	0...1360msec
	Level Sets the output level of TapC	0...50
c	R Delay Time [msec] Sets the delay time of TapR	0...1360msec
	Level Sets the output level of TapR	0...50
d	Feedback (C Delay) Sets the feedback amount of TapC	-100...+100 D-mod
	Src Selects the modulation source of the TapC feedback amount	Off...Tempo
	Amt Sets the modulation amount of the TapC feedback amount	-100...+100
e	High Damp [%] Sets the damping amount in the high range	0...100% ES
	Low Damp [%] Sets the damping amount in the low range	0...100% ES
f	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 ES Fx:037, D-mod
	Src Selects the modulation source for the input level	Off...Tempo ES Fx:037
g	Spread Sets the width of the stereo image of the effect sound	0...50 ES
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

e: High Damp [%], e: Low Damp [%]

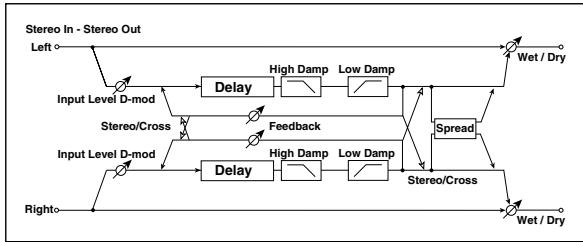
These parameters set the damping amount of high range and low range. The tone of the delayed sound becomes darker and lighter as it feeds back.

g: Spread

This parameter sets the pan width of the effect sound. The stereo image is widest with a value of 50, and the effect sound of both channels is output from the center with a value of 0.

044: Stereo/Cross Delay

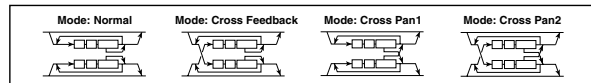
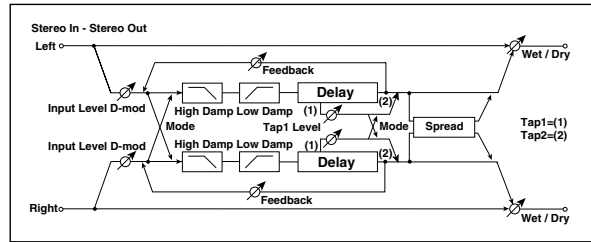
This is a stereo delay, and can be used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.



a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay Time [msec] Sets the delay time for the left channel	0.0...680.0msec
c	R Delay Time [msec] Sets the delay time for the right channel	0.0...680.0msec
d	L Feedback Sets the feedback amount for the left channel	-100...+100
	Src Selects the modulation source of feedback amount	Off...Tempo
	Amt L Sets the modulation amount of the left channel feedback	-100...+100
e	R Feedback Sets the feedback amount for the right channel	-100...+100
	Amt R Sets the modulation amount of the right channel feedback	-100...+100
f	High Damp [%] Sets the damping amount in the high range	0...100%
g	Low Damp [%] Sets the damping amount in the low range	0...100%
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100
	Src Selects the modulation source for the input level	Off...Tempo
i	Spread Sets the width of the stereo image of the effect sound	-50...+50
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

045: St. Multitap Delay (Stereo Multitap Delay)

The left and right Multitap Delays have two taps respectively. Changing the routing of feedback and tap output allows you to create various patterns of complex effect sounds.



a	Mode Switches the left and right delay routing	Normal, Cross Feedback, Cross Pan1, Cross Pan2
b	Tap1 Time [msec] Sets the Tap1 delay time	0.0...680.0msec
c	Tap2 Time [msec] Sets the Tap2 delay time	0.0...680.0msec
d	Tap1 Level Sets the Tap1 output level	0...100
e	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
	Src Selects the modulation source of the Tap2 feedback amount	Off...Tempo
	Amt Sets the modulation amount of the Tap2 feedback amount	-100...+100
f	High Damp [%] Sets the damping amount in the high range	0...100%
g	Low Damp [%] Sets the damping amount in the low range	0...100%
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100
	Src Selects the modulation source for the input level	Off...Tempo
i	Spread Sets the width of the stereo image of the effect sound	-100...+100
	Src Selects the modulation source of the effect sound's stereo image width	Off...Tempo
	Amt Sets the modulation amount of the effect sound's stereo image width	-100...+100
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Mode

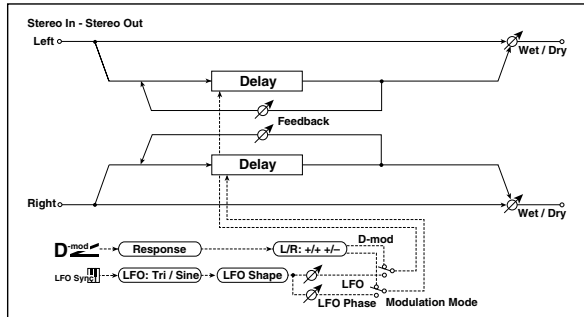
You can change how the left and right delay signals are panned by modifying the routing of the left and right delay as shown in the figure above. You need to input different sounds to each channel in order for this parameter to be effective.

d: Tap1 Level

This parameter sets the output level of Tap1. Setting a different level from Tap2 will add a unique touch to a monotonous delay and feedback.

046: St. Modulation Delay (Stereo Modulation Delay)

This stereo delay uses an LFO to sweep the delay time. The pitch also varies. You will obtain a delay sound with swell and shimmering. You can also control the delay time using a modulation source.



a	Modulation Mode Switches between LFO modulation control and modulation source control	LFO, D-mod
b	D-mod Modulation Reversed L/R control by modulation source	L/R: +/+, L/R: +/- E3, D-mod
	Src Selects the modulation source that controls delay time	Off...Tempo
c	Response Sets the rate of response to the modulation source	0...30
	LFO Waveform Selects LFO Waveform	Triangle, Sine
d	LFO Shape Determines how much the LFO waveform is changed	-100...+100 E3, Fx:020
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
e	LFO Sync Switches LFO reset off/on	Off, On E3, D-mod
	Src Selects the modulation source that resets the LFO	Off...Tempo
f	L LFO Phase [degree] Sets the phase obtained when the left LFO is reset	-180...+180 E3
	R LFO Phase [degree] Sets the phase obtained when the right LFO is reset	-180...+180 E3
g	L Depth Sets the depth of the left LFO modulation	0...200
	R Depth Sets the depth of the right LFO modulation	0...200
h	L Delay Time [msec] Sets the left delay time	0.0...500.0
	R Delay Time [msec] Sets the right delay time	0.0...500.0
i	L Feedback Sets the feedback amount of left delay	-100...+100
	R Feedback Sets the feedback amount of right delay	-100...+100
j	Wet/Dry Sets the balance between the effect and dry sounds E3 Fx:010, D-mod	-Wet...-1:99, Dry, 1:99...Wet
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

b: D-mod Modulation

When the modulation source is used for control, this parameter reverses the left and right modulation direction.

e: LFO Sync, e: Src,
f: L LFO Phase [degree], f: R LFO Phase [degree]

The LFO can be reset via a modulation source.

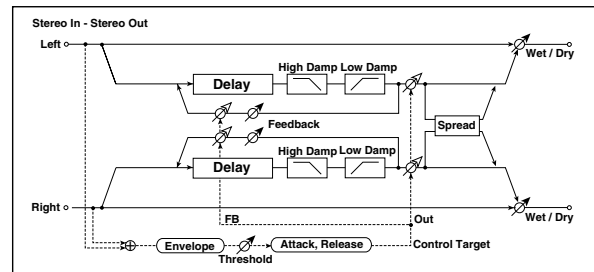
The "Src" parameter sets the modulation source that resets the LFO. For example, you can assign Gate as a modulation source so that the sweep always starts from the specified point.

"L LFO Phase" and "R LFO Phase" set the phase obtained when the left and right LFOs are reset. In this way, you can create changes in pitch sweep for the left and right channels individually.

MIDI The effect is off when a value of the modulation source specified in the "Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher. The LFO is triggered and reset to the "L LFO Phase" and "R LFO Phase" settings when the value changes from 63 or smaller to 64 or higher.

047: St. Dynamic Delay (Stereo Dynamic Delay)

This stereo delay controls the level of delay according to the input signal level. You can use this as a ducking delay that applies delay to the sound only when you play keys at a high velocity or only when the volume level is low.



a	Control Target Selects from no control, output, and feedback	None, Out, FB E3
	Polarity Reverses level control	+, - E3
b	Threshold Sets the level to which the effect is applied	0...100 E3
	Offset Sets the offset of level control	0...100 E3
c	Attack Sets the attack time of level control	1...100 E3
d	Release Sets the release time of level control	1...100 E3
e	L Delay Time [msec] Sets the delay time for the left channel	0.0...680.0msec
f	R Delay Time [msec] Sets the delay time for the right channel	0.0...680.0msec
g	Feedback Sets the feedback amount	-100...+100
h	High Damp [%] Sets the damping amount in the high range E3 Fx:043	0...100%
	Low Damp [%] Sets the damping amount in the low range E3 Fx:043	0...100%
i	Spread Sets the width of the stereo image of the effect sound E3 Fx:043	-100...+100
j	Wet/Dry Sets the balance between the effect and dry sounds D-mod	Dry, 1:99...99:1, Wet
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Control Target

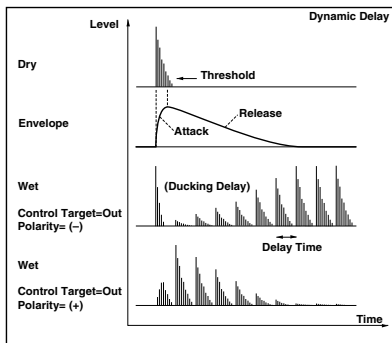
This parameter selects no level control, delay output control (effect balance), or feedback amount control.

a: Polarity, b: Threshold, b: Offset, c: Attack, d: Release

The "Offset" parameter specifies the value for the "Control Target" parameter (that is set to None), expressed as the ratio relative to the parameter value (the "Wet/Dry" value with "Control Target"=Out, or the "Feedback" value with "Control Target"=FB).

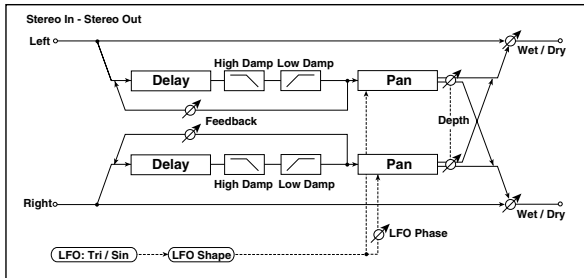
When "Polarity" is **positive**, the "Control Target" value is obtained by multiplying the parameter value by the "Offset" value (if the input level is below the threshold), or equals the parameter value if the input level exceeds the threshold. When "Polarity" is **negative**, Control Target value equals the parameter value if the input level is below the threshold, or is obtained by multiplying the parameter value by the "Offset" value if the level exceeds the threshold.

The "Attack" and "Release" parameters specify attack time and release time of delay level control.



048: St. Auto Panning Dly
(Stereo Auto Panning Delay)

This stereo delay effect pans the delay sound left and right using the LFO.

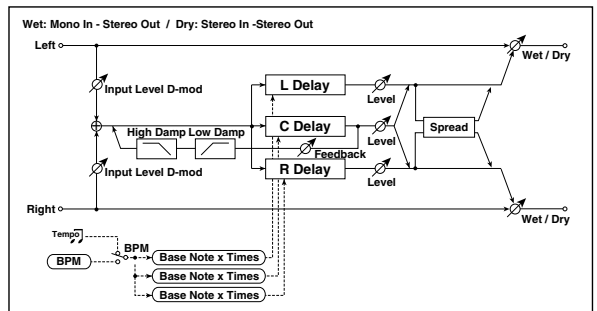


a	L Delay Time [msec]	0.0...680.0msec
	Sets the delay time for the left channel	
b	R Delay Time [msec]	0.0...680.0msec
	Sets the delay time for the right channel	
c	High Damp [%]	0...100% Fx:043
	Low Damp [%]	0...100% Fx:043
d	LFO Waveform	Triangle, Sine
	LFO Shape	-100...+100 Fx:020
e	LFO Phase [degree]	-180...+180 Fx:034

f	Panning Frequency [Hz]	0.02...20.00Hz
g	Panning Depth	0...100
	Sets the panning width	
	Src	Off...Tempo
h	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	
	Src	Off...Tempo
i	Amt	-100...+100
	Sets the modulation amount of the panning width	
j	Amt	-100...+100
	Sets the modulation amount of the effect balance	

049: L/C/R BPM Delay

The L/C/R delay enables you to match the delay time with the song tempo. You can also synchronize the delay time with the arpeggiator or sequencer. If you program the tempo before performance, you can achieve a delay effect that synchronizes with the song in real-time. Delay time is set by notes.



a	BPM	MIDI, 40...240
	Selects MIDI Clock and assigns tempo	
b	L Delay Base Note	
	Selects the type of notes to specify the delay time for TapL	
c	C Delay Base Note	
	Selects the type of notes to specify the delay time for TapC	
d	R Delay Base Note	
	Selects the type of notes to specify the delay time for TapR	
e	Feedback (C Delay)	-100...+100
	Sets the feedback amount of TapC	
f	Src	Off...Tempo
	Sets the modulation source for the TapC feedback	
g	Amt	-100...+100
	Sets the modulation amount of the TapC feedback	

e	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% Fx:043
f	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 Fx:037, D ^{mod}
	Src Selects the modulation source for the input level	Off...Tempo Fx:037
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: BPM, b: Rhythm Pattern

With the tempo specified by the “BPM” parameter (or the MIDI Clock tempo if “BPM” is set to **MIDI**), the length of one beat equals the feedback delay time, and the interval between taps becomes equal. Selecting a rhythm pattern will automatically turn the tap outputs on and off. When “BPM” is set to **MIDI**, the lower limit of the “BPM” is **44**.

Reverb

Reverb effects

These effects simulate the ambience of reverberation in concert halls.

052: Reverb Hall

This hall-type reverb simulates the reverberation of mid-size concert halls or ensemble halls.

053: Reverb SmoothHall

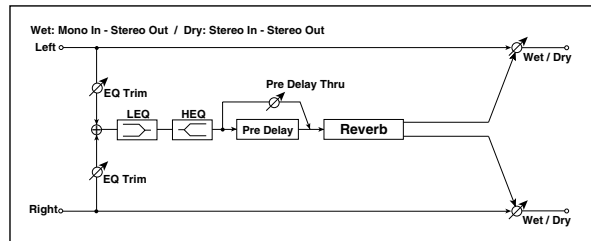
This hall-type reverb simulates the reverberation of larger halls and stadiums, and creates a smooth release.

054: Reverb Wet Plate

This plate reverb simulates warm (dense) reverberation.

055: Reverb Dry Plate

This plate reverb simulates dry (light) reverberation.

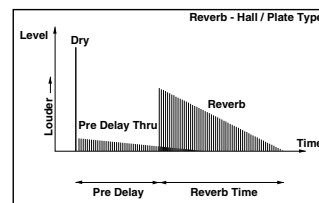


a	Reverb Time [sec] Sets the reverberation time	0.1...10.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	Pre Delay [msec] Sets the delay time from the dry sound	0...200msec Fx
	Pre Delay Thru [%] Sets the mix ratio of non-delay sound	0...100% Fx
c	EQ Trim Sets the EQ input level	0...100
d	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

b: Pre Delay [msec], b: Pre Delay Thru [%]

The “Pre Delay” sets the delay time to the reverb input, allowing you to control spaciousness.

Using the “Pre Delay Thru” parameter, you can mix the dry sound without delay, emphasizing the attack of the sound.

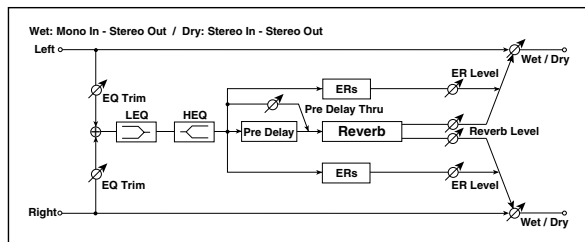


056: Reverb Room

This room-type reverb emphasizes the early reflections that make the sound tighter. Changing the balance between the early reflections and reverb sound allows you to simulate nuances, such as the type of walls of a room.

057: Reverb BrightRoom

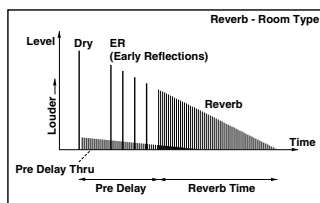
This room-type reverb emphasizes the early reflections that make the sound brighter. See 056: Reverb Room.



a	Reverb Time [sec] Sets the reverberation time	0.1...3.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	Pre Delay [msec] Sets the delay time from the dry sound	0...200msec Fx:052
	Pre Delay Thru [%] Sets the mix ratio of non-delay sound	0...100% Fx:052
c	ER Level Sets the level of early reflections	0...100 Fx:052
d	Reverb Level Sets the reverberation level	0...100 Fx:052
e	EQ Trim Sets the EQ input level	0...100
	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
f	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
g	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

c: ER Level, d: Reverb Level

These parameters set the early reflection level and reverb level. Changing these parameter values allows you to simulate the type of walls in the room. That is, a larger "ER Level" simulates a hard wall, and a larger "Reverb Level" simulates a soft wall.



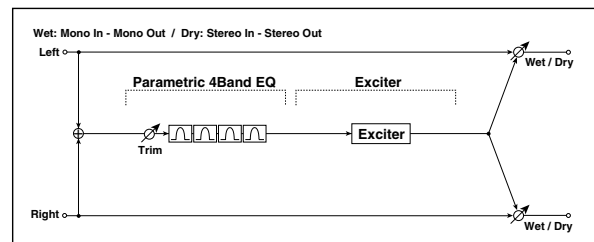
Mono – Mono Chain

Effects that combine two mono effects connected in series

058: P4EQ – Exciter

(Parametric 4-Band EQ – Exciter)

This effect combines a mono-type four-band parametric equalizer and an exciter.

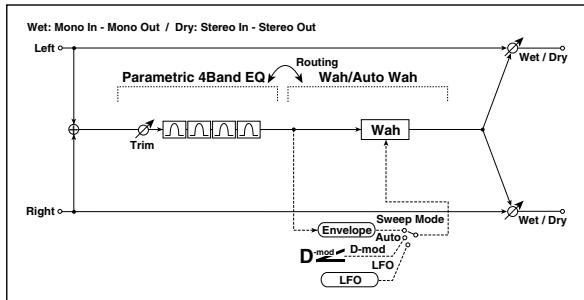


a	[E] Trim Sets the parametric EQ input level	0...100
	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
b	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
c	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
d	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
e	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
g	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
h	Amt Sets the modulation amount of the effect balance	-100...+100

059: P4EQ – Wah

(Parametric 4-Band EQ – Wah/Auto Wah)

This effect combines a mono-type four-band parametric equalizer and a wah. You can change the order of the connection.

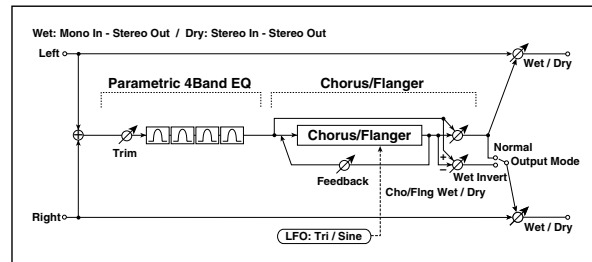


a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
g	[W] Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO Fx:009, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
h	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	Resonance Sets the resonance amount	0...100
	LPF Switches the wah low pass filter on and off	Off, On
i	Routing Changes the order of the parametric equalizer and wah connection	PEQ → WAH, WAH → PEQ
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

060: P4EQ – Cho/Flng

(Parametric 4-Band EQ – Chorus/Flanger)

This effect combines a mono-type four-band parametric equalizer and a chorus/flanger.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
g	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
h	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
i	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

i: Output Mode

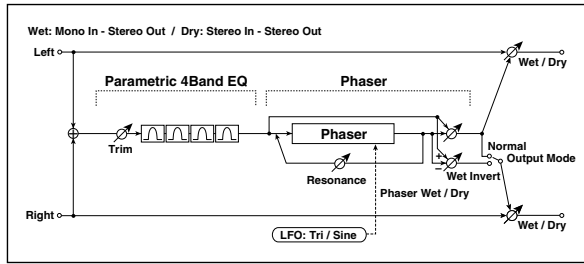
When **Wet Invert** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

061: P4EQ – Phaser

(Parametric 4-Band EQ – Phaser)

This effect combines a mono-type four-band parametric equalizer and a phaser.

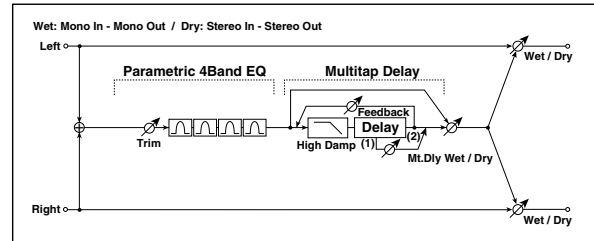


a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[P] Manual Sets the frequency to which the effect is applied	0...100
h	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
i	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:060
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

062: P4EQ – Mt. Delay

(Parametric 4-Band EQ – Multitap Delay)

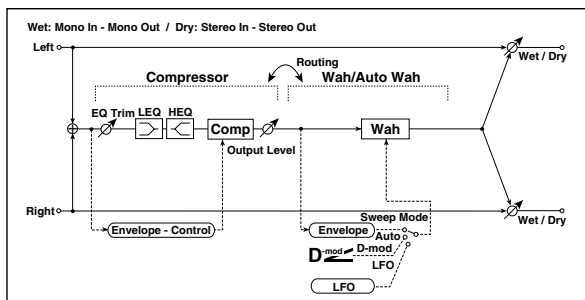
This effect combines a mono-type four-band parametric equalizer and a multitap delay.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
g	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback Sets the Tap2 feedback amount	-100...+100
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 2:98...98:2, Wet
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

063: Comp – Wah (Compressor – Wah/Auto Wah)

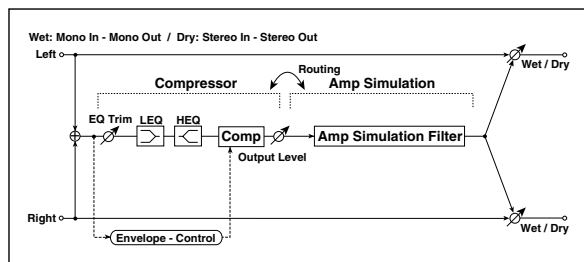
This effect combines a mono-type compressor and a wah. You can change the order of the connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Sets the attack level	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Sets the EQ input level	0...100
d	[C] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
f	[W] Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO Fx:009, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
g	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
h	[W] Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the wah low pass filter on and off	Off, On
i	Routing Switches the order of the compressor and wah connection	CMP → WAH, WAH → CMP
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

064: Comp – Amp Sim (Compressor – Amp Simulation)

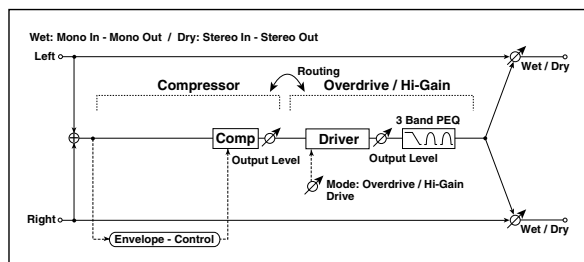
This effect combines a mono-type compressor and an amp simulation. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Sets the attack level	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Sets the EQ input level	0...100
d	[C] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[A] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
f	Routing Switches the order of the compressor and amp simulation connection	CMP → AMP, AMP → CMP
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
g	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

065: Comp – OD/HiGain (Compressor – Overdrive/HiGain)

This effect combines a mono-type compressor and an overdrive/high-gain distortion. You can change the order of the effect connection.

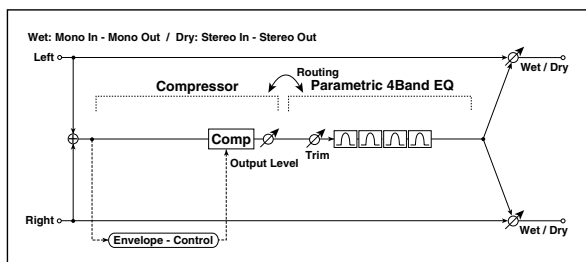


a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Sets the attack level	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002

c	[O] Drive Mode	Overdrive, Hi-Gain
	Switches between overdrive and high-gain distortion	
d	Drive	1...100
	Sets the degree of distortion F _x :006	
e	[O] Output Level	0...50
	Sets the overdrive output level F _x :006, D _{mod}	
	Src	Off...Tempo
f	Src	Off...Tempo
	Selects the modulation source for the overdrive output level	
	Amt	-50...+50
g	[O] Low Cutoff [Hz]	20...1.00kHz
	Sets the center frequency for Low EQ (shelving type)	
	Gain [dB]	-18...+18dB
h	[O] Mid1 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 1 F _x :006	
i	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 1	
	[O] Mid2 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Mid/High EQ 2 (peaking type)	
j	Q	0.5...10.0
	Sets the band width of Mid/High EQ 2 F _x :006	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 2	
k	Routing	CMP → OD, OD → CMP
	Switches the order of the compressor and overdrive connection	
l	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds D _{mod}	
	Src	Off...Tempo
	Selects the modulation source of the effect balance	
m	Amt	-100...+100
	Sets the modulation amount of the effect balance	

066: Comp – Param4EQ (Compressor – Parametric 4-Band EQ)

This effect combines a mono-type compressor and a four-band parametric equalizer. You can change the order of the effect connection.

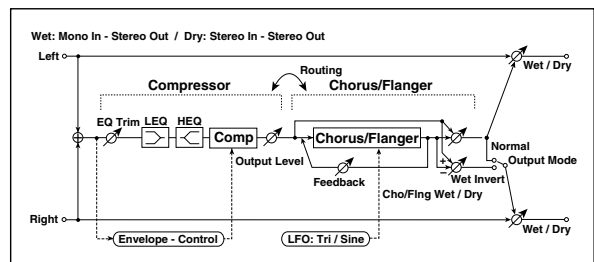


a	[C] Sensitivity	1...100
	Sets the sensitivity F _x :002	
b	[C] Attack	1...100
	Sets the attack level F _x :002	
	Output Level	0...100
c	[E] Trim	0...100
	Sets the parametric EQ input level	
d	[E] Band1 Cutoff [Hz]	20...1.00kHz
	Sets the center frequency of Band 1	
	Q	0.5...10.0
	Sets the bandwidth of Band 1 F _x :006	
e	Gain [dB]	-18...+18dB
	Sets the gain of Band 1	

e	[E] Band2 Cutoff [Hz]	50...5.00kHz
	Sets the center frequency of Band 2	
f	Q	0.5...10.0
	Sets the bandwidth of Band 2 F _x :006	
g	Gain [dB]	-18...+18dB
	Sets the gain of Band 2	
h	[E] Band3 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Band 3	
	Q	0.5...10.0
	Sets the bandwidth of Band 3 F _x :006	
i	Gain [dB]	-18...+18dB
	Sets the gain of Band 3	
j	[E] Band4 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Band 4	
	Q	0.5...10.0
	Sets the bandwidth of Band 4 F _x :006	
k	Gain [dB]	-18...+18dB
	Sets the gain of Band 4	
l	Routing	CMP → PEQ, PEQ → CMP
	Switches the order of the compressor and parametric EQ connection	
m	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds D _{mod}	
	Src	Off...Tempo
	Selects the modulation source of the effect balance	
n	Amt	-100...+100
	Sets the modulation amount of the effect balance	

067: Comp – Cho/Flng (Compressor – Chorus/Flanger)

This effect combines a mono-type compressor and a chorus/flanger. You can change the order of the effect connection.



a	[C] Sensitivity	1...100
	Sets the sensitivity F _x :002	
b	[C] Attack	1...100
	Sets the attack level F _x :002	
	Output Level	0...100
c	[C] EQ Trim	0...100
	Sets the EQ input level	
d	[C] Pre LEQ Gain [dB]	-15...+15dB
	Sets the gain of Low EQ	
e	[C] Pre HEQ Gain [dB]	-15...+15dB
	Sets the gain of High EQ	
f	[F] Delay Time [msec]	0.0...50.0msec
	Sets the delay time	
g	[F] LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
	LFO Waveform	Triangle, Sine
h	[F] LFO Waveform	Triangle, Sine
	Selects LFO Waveform	
i	[F] Depth	0...100
	Sets the depth of LFO modulation	
	Feedback	-100...+100
j	Sets the feedback amount F _x :020	

h	[F] Cho/Fing Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:010, 020
i	Routing Switches the order of the compressor and chorus/flanger connection	CMP → FLNG, FLNG → CMP Fx:010, 020
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod Fx:010, 020
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

h: Output Mode, i: Routing

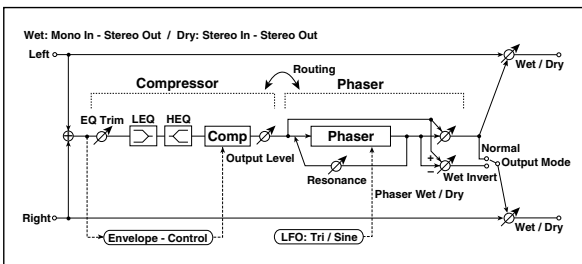
When **Wet Invert** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

When "Routing" is set to **FLNG→CMP**, "Output Mode" will be set to **Normal**.

068: Comp – Phaser
(Compressor – Phaser)

This effect combines a mono-type compressor and a phaser. You can change the order of the effect connection.

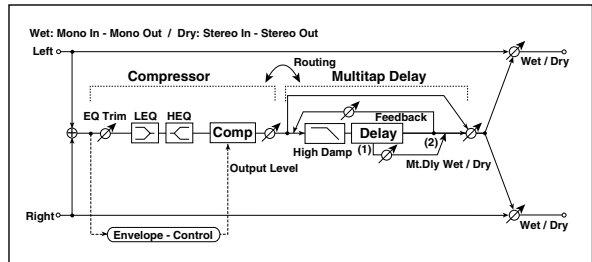


a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
	[C] Attack Sets the attack level	1...100 Fx:002
b	Output Level Sets the compressor output level	0...100 Fx:002
	[C] EQ Trim Sets the EQ input level	0...100
d	[C] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
f	[P] Manual Sets the frequency to which the effect is applied	0...100
g	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
h	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:010, 023

i	Routing Switches the order of the compressor and phaser connection	CMP→PHS, PHS→CMP Fx:067
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod Fx:067
j	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

069: Comp – Mt. Delay
(Compressor – Multitap Delay)

This effect combines a mono-type compressor and a multitap delay. You can change the order of the effect connection.

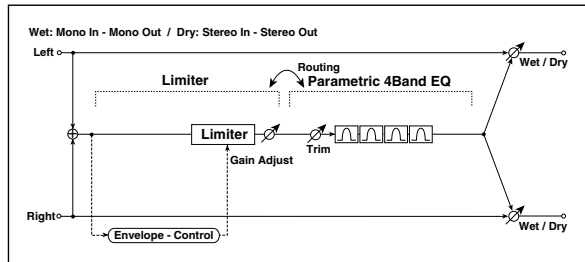


a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
	[C] Attack Sets the attack level	1...100 Fx:002
b	Output Level Sets the compressor output level	0...100 Fx:002
	[C] EQ Trim Sets the EQ input level	0...100
d	[C] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
f	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback Sets the Tap2 feedback amount	-100...+100
g	[D] High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
i	Routing Switches the order of the compressor and multitap delay connection	CMP→DLY, DLY→CMP
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod Fx:067
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

070: Limiter – P4EQ

(Limiter – Parametric 4-Band EQ)

This effect combines a mono-type limiter and a four-band parametric equalizer. You can change the order of the effect connection.

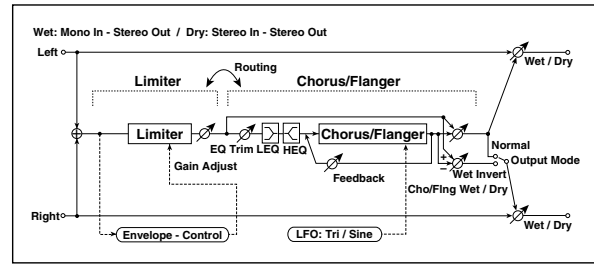


a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1	Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB	Fx:003
b	[L] Attack Sets the attack time	1...100	Fx:003
	Release Sets the release time	1...100	Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB	Fx:003
d	[E] Trim Sets the parametric EQ input level	0...100	
e	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz	
	Q Sets the bandwidth of Band 1	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB	
f	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz	
	Q Sets the bandwidth of Band 2	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB	
g	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz	
	Q Sets the bandwidth of Band 3	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB	
h	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz	
	Q Sets the bandwidth of Band 4	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB	
i	Routing Switches the order of the limiter and parametric EQ connection	LMT→PEQ, PEQ→LMT	
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

071: Limiter – Cho/Flng

(Limiter – Chorus/Flanger)

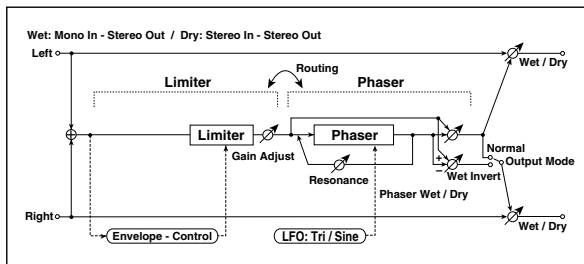
This effect combines a mono-type limiter and a chorus/flanger. You can change the order of the effect connection.



a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1	Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB	Fx:003
b	[L] Attack Sets the attack time	1...100	Fx:003
	Release Sets the release time	1...100	Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB	Fx:003
d	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz	
	LFO Waveform Selects LFO Waveform	Triangle, Sine	
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec	
	Depth Sets the depth of LFO modulation	0...100	
	Feedback Sets the feedback amount	-100...+100	Fx:020
f	[F] EQ Trim Sets the EQ input level	0...100	
	[F] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB	
g	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB	
	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet	Fx:010, 020
h	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert	Fx:067
	Routing Switches the order of the limiter and chorus/flanger connection	LMT→FLNG, FLNG→LMT	Fx:067
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

072: Limiter – Phaser

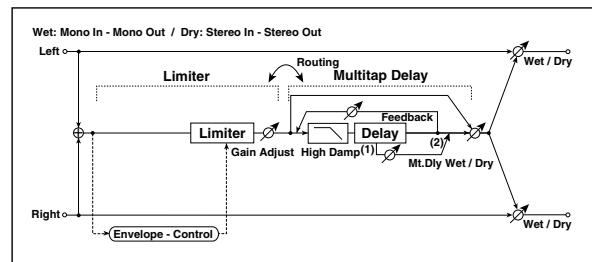
This effect combines a mono-type limiter and a phaser. You can change the order of the effect connection.



a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
e	[P] Manual Sets the frequency to which the effect is applied	0...100
f	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
g	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:067
h	Routing Switches the order of the limiter and phaser connection	LMT→PHS, PHS→LMT Fx:067
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

073: Limiter – Mt. Delay (Limiter – Multitap Delay)

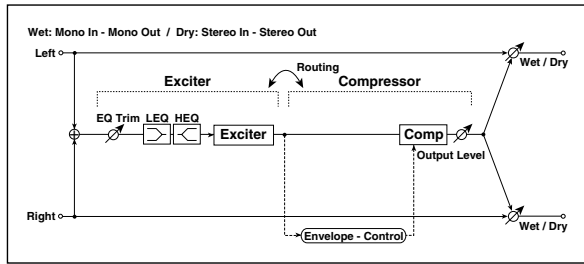
This effect combines a mono-type limiter and a multitap delay. You can change the order of the effect connection.



a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
e	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
f	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
g	Routing Switches the order of the limiter and multitap delay connection	LMT→DLY, DLY→LMT
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

074: Exciter – Comp (Exciter – Compressor)

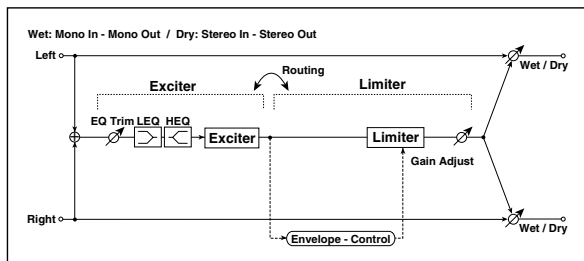
This effect combines a mono-type exciter and a compressor. You can change the order of the effect connection.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Sets the EQ input level	0...100
d	[X] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
f	[C] Attack Sets the attack level	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
g	Routing Switches the order of the exciter and compressor connection	XCT→CMP, CMP→XCT
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

075: Exciter – Limiter

This effect combines a mono-type exciter and a limiter. You can change the order of the effect connection.

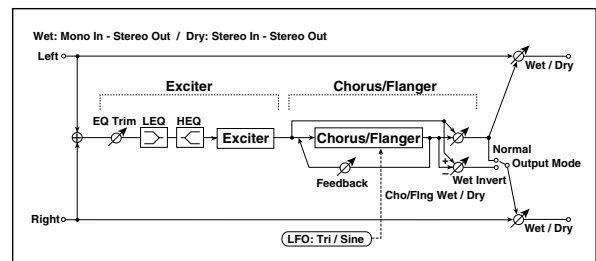


a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Sets the EQ input level	0...100
d	[X] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003

f	[L] Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
	[L] Attack Sets the attack time	1...100 Fx:003
g	Release Sets the release time	1...100 Fx:003
	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
i	Routing Switches the order of the exciter and limiter connection	XCT→LMT, LMT→XCT
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

076: Exciter – Cho/Flng (Exciter – Chorus/Flanger)

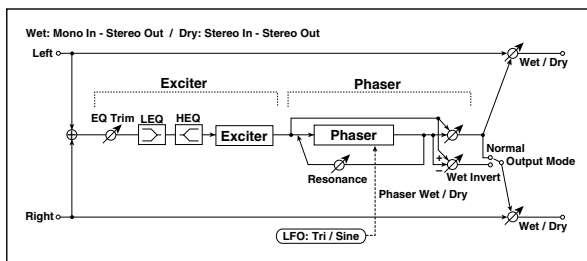
This effect combines a mono-type limiter and a chorus/flanger.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Sets the EQ input level	0...100
d	[X] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
f	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
h	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:060
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

077: Exciter – Phaser

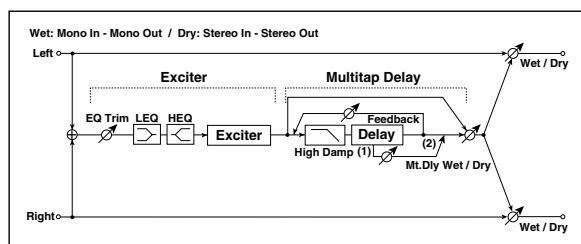
This effect combines a mono-type limiter and a phaser.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Sets the EQ input level	0...100
d	[X] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
f	[P] Manual Sets the frequency to which the effect is applied	0...100
g	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
h	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:060
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

078: Exciter – Mt. Delay (Exciter – Multitap Delay)

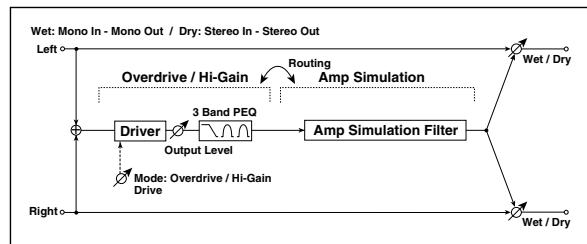
This effect combines a mono-type exciter and a multitap delay.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Sets the EQ input level	0...100
d	[X] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
f	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
g	[D] High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

079: OD/HG – Amp Sim (Overdrive/Hi.Gain – Amp Simulation)

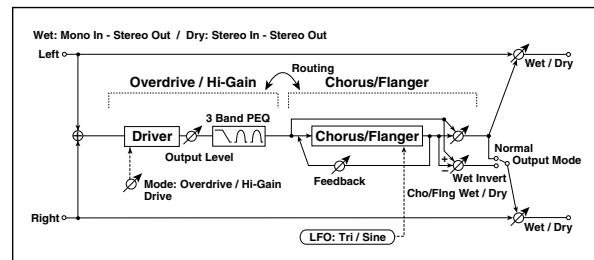
This effect combines a mono-type overdrive/high-gain distortion and an amp simulation. You can change the order of the effect connection.



a	[O] Drive Mode	Overdrive, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion <small>Fx:006</small>	
c	[O] Output Level	0...50
	Sets the overdrive output level <small>Fx:006, D^{mod}</small>	
	Src	Off...Tempo
d	Amt	-50...+50
	Sets the modulation amount of the overdrive output level	
	[O] Low Cutoff [Hz]	20...1.00kHz
e	Sets the center frequency for Low EQ (shelving type)	
	Gain [dB]	-18...+18dB
	Sets the gain of Low EQ	
f	[O] Mid1 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
g	Sets the band width of Mid/High EQ 1 <small>Fx:006</small>	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 1	
h	[O] Mid2 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Mid/High EQ 2 (peaking type)	
	Q	0.5...10.0
i	Sets the band width of Mid/High EQ 2 <small>Fx:006</small>	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 2	
j	[A] Amplifier Type	SS, EL84, 6L6
	Selects the type of guitar amplifier	
k	Routing	OD→AMP, AMP→OD
	Switches the order of the overdrive and amp simulation connection	
l	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds <small>D^{mod}</small>	
	Src	Off...Tempo
	Amt	-100...+100
Sets the modulation amount of the effect balance		

080: OD/HG – Cho/Flng (Overdrive/Hi.Gain – Chorus/Flanger)

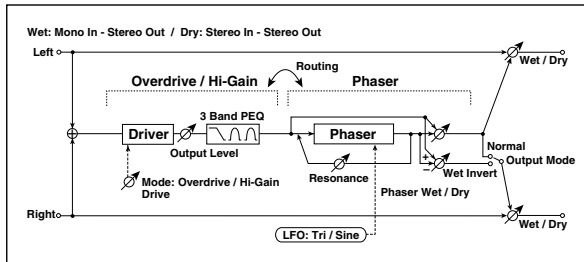
This effect combines a mono-type overdrive/high-gain distortion and a chorus/flanger. You can change the order of the effect connection.



a	[O] Drive Mode	Overdrive, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion <small>Fx:006</small>	
c	[O] Output Level	0...50
	Sets the overdrive output level <small>Fx:006, D^{mod}</small>	
	Src	Off...Tempo
d	Amt	-50...+50
	Sets the modulation amount of the overdrive output level	
	[O] Low Cutoff [Hz]	20...1.00kHz
e	Sets the center frequency for Low EQ (shelving type)	
	Gain [dB]	-18...+18dB
	Sets the gain of Low EQ	
f	[O] Mid1 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
g	Sets the band width of Mid/High EQ 1 <small>Fx:006</small>	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 1	
h	[O] Mid2 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Mid/High EQ 2 (peaking type)	
	Q	0.5...10.0
i	Sets the band width of Mid/High EQ 2 <small>Fx:006</small>	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 2	
j	[F] LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
k	LFO Waveform	Triangle, Sine
	Selects LFO Waveform	
	[F] Delay Time [msec]	0.0...50.0msec
l	Sets the delay time	
	Depth	0...100
	Sets the depth of LFO modulation	
	Feedback	-100...+100
Sets the feedback amount <small>Fx:020</small>		
m	[F] Cho/Flng Wet/Dry	-Wet...-2:98, Dry, 2:98...Wet
	Sets the effect balance of the chorus/flanger <small>Fx:010, 020</small>	
n	Output Mode	Normal, Wet Invert
	Selects the output mode for the chorus/flanger <small>Fx:067</small>	
o	Routing	OD → FLNG, FLNG → OD
	Switches the order of the overdrive and chorus/flanger connection <small>Fx:067</small>	
p	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds <small>D^{mod}</small>	
	Src	Off...Tempo
	Amt	-100...+100
Sets the modulation amount of the effect balance		

081: OD/HG – Phaser (Overdrive/Hi.Gain – Phaser)

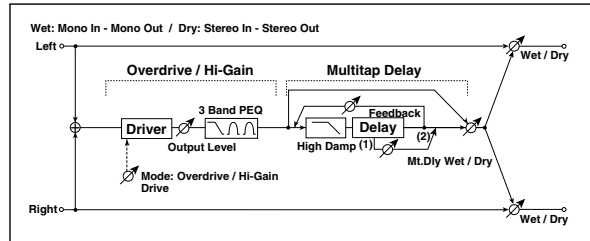
This effect combines a mono-type overdrive/high-gain distortion and a phaser. You can change the order of the effect connection.



a	[O] Drive Mode	Overdrive, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion Fx:006	
c	[O] Output Level	0...50
	Sets the overdrive output level Fx:006, 	
	Src	Off...Tempo
d	Amt	-50...+50
	Sets the modulation amount of the overdrive output level	
	[O] Low Cutoff [Hz]	20...1.00kHz
e	Sets the center frequency for Low EQ (shelving type)	
	Gain [dB]	-18...+18dB
	Sets the gain of Low EQ	
f	[O] Mid1 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 1 Fx:006	
g	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 1	
	[O] Mid2 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Mid/High EQ 2 (peaking type)	
h	Q	0.5...10.0
	Sets the band width of Mid/High EQ 2 Fx:006	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 2	
i	[P] LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	
	LFO Waveform	Triangle, Sine
j	[P] Manual	0...100
	Sets the frequency to which the effect is applied	
	Depth	0...100
k	Sets the depth of LFO modulation	
	Resonance	-100...+100
	Sets the resonance amount Fx:023	
l	[P] Phaser Wet/Dry	-Wet...-2:98, Dry, 2:98...Wet
	Sets the phaser effect balance Fx:010, 023	
m	Output Mode	Normal, Wet Invert
	Selects the phaser output mode Fx:067	
n	Routing	OD → PHS, PHS → OD
	Switches the order of the overdrive and phaser connection Fx:067	
o	Wet/Dry	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds 	
	Src	Off...Tempo
p	Selects the modulation source of the effect balance	
	Amt	-100...+100
Sets the modulation amount of the effect balance		

082: OD/HG – Mt. Delay (Overdrive/Hi.Gain – Multitap Delay)

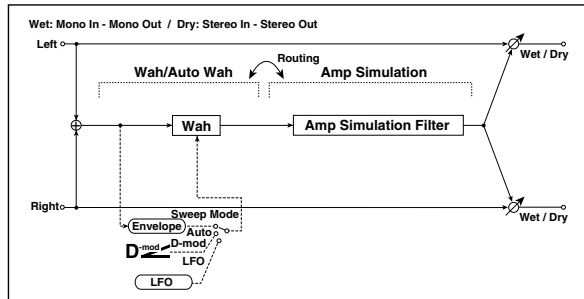
This effect combines a mono-type overdrive/high-gain distortion and a multitap delay.



a	[O] Drive Mode	Overdrive, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion Fx:006	
c	[O] Output Level	0...50
	Sets the overdrive output level Fx:006, 	
	Src	Off...Tempo
d	Amt	-50...+50
	Sets the modulation amount of the overdrive output level	
	[O] Low Cutoff [Hz]	20...1.00kHz
e	Sets the center frequency for Low EQ (shelving type)	
	Gain [dB]	-18...+18dB
	Sets the gain of Low EQ	
f	[O] Mid1 Cutoff [Hz]	300...10.00kHz
	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 1 Fx:006	
g	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 1	
	[O] Mid2 Cutoff [Hz]	500...20.00kHz
	Sets the center frequency for Mid/High EQ 2 (peaking type)	
h	Q	0.5...10.0
	Sets the band width of Mid/High EQ 2 Fx:006	
	Gain [dB]	-18...+18dB
	Sets the gain of Mid/High EQ 2	
i	[D] Tap1 Time [msec]	0...680msec
	Sets the Tap1 delay time	
j	Tap1 Level	0...100
	Sets the Tap1 output level Fx:045	
k	[D] Tap2 Time [msec]	0...680msec
	Sets the Tap2 delay time	
l	Feedback	-100...+100
	Sets the Tap2 feedback amount	
m	[D] Mt.Delay Wet/Dry	Dry, 2:98...98:2, Wet
	Sets the multitap delay effect balance	
n	High Damp [%]	0...100%
	Sets the damping amount in the high range Fx:043	
	Wet/Dry	Dry, 1:99...99:1, Wet
o	Sets the balance between the effect and dry sounds 	
	Src	Off...Tempo
	Amt	-100...+100
Sets the modulation amount of the effect balance		

083: Wah – Amp Sim (Wah/Auto Wah – Amp Simulation)

This effect combines a mono-type wah and an amp simulation. You can change the order of the effect connection.



a	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
b	[W] Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO Fx:009, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
c	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
d	[W] Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the wah low pass filter on and off	Off, On
e	[A] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
f	Routing Switches the order of the wah and amp simulation connection	WAH → AMP, AMP → WAH
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

084: Decimator – Amp (Decimator – Amp Simulation)

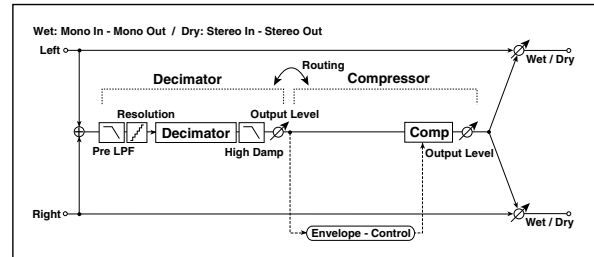
This effect combines a mono-type decimator and an amp simulation. You can change the order of the effect connection.

a	[D] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
	High Damp [%] Sets the ratio of high-range damping	0...100%
b	[D] Sampling Freq [Hz] (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
	Resolution Sets the data bit length	4...24 Fx:014
c	[D] Output Level Sets the decimator output level	0...100 Fx:014
d	[A] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
e	Routing Switches the order of the wah and amp simulation connection	DECI→AMP, AMP→DECI

f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

085: Decimator – Comp (Decimator – Compressor)

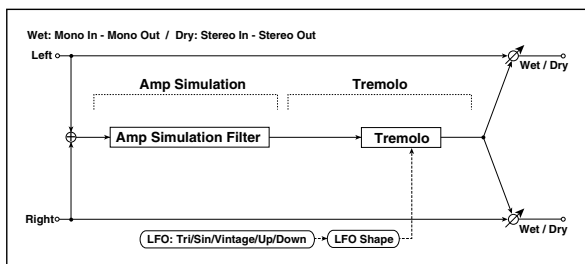
This effect combines a mono-type decimator and a compressor. You can change the order of the effect connection.



a	[D] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
	High Damp [%] Sets the ratio of high-range damping	0...100%
b	[D] Sampling Freq [Hz] (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
	Resolution Sets the data bit length	4...24 Fx:014
c	[D] Output Level Sets the decimator output level	0...100 Fx:014
d	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
	[C] Attack Sets the attack level	1...100 Fx:002
e	Output Level Sets the compressor output level	0...100 Fx:002
	Routing Switches the order of the decimator and compressor connection	DECI→CMP, CMP→DECI
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

086: Amp Sim – Tremolo (Amp Simulation – Tremolo)

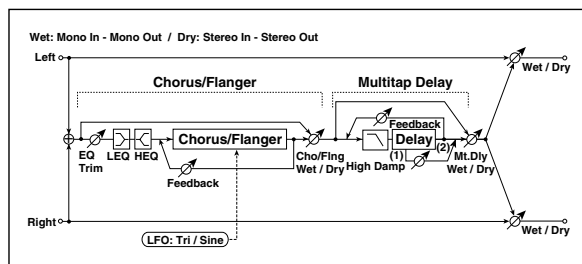
This effect combines a mono-type amp simulation and a tremolo.



a	[A] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
b	[T] LFO Waveform Selects LFO Waveform	Triangle, Sine, Vintage, Up, Down Fx:032
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
c	[T] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
d	[T] Depth Sets the depth of LFO modulation	0...100
e	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

087: Cho/Fng – Mt. Dly (Chorus/Flanger – Multitap Delay)

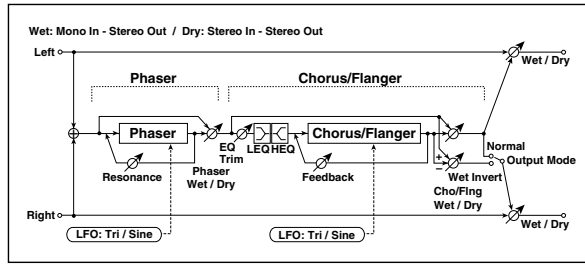
This effect combines a mono-type chorus/flanger and a multitap delay.



a	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
b	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
c	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
d	[F] EQ Trim Sets the EQ input level	0...100
e	[F] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
f	[F] Cho/Fng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
g	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
h	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
i	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

088: Phaser – Cho/Flng (Phaser – Chorus/Flanger)

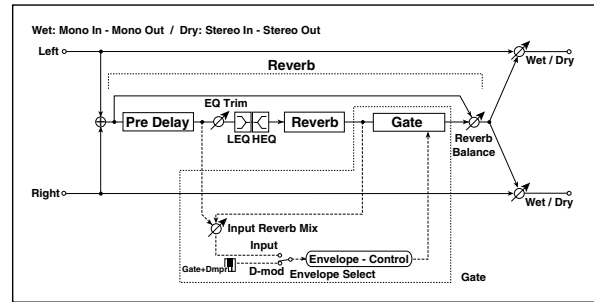
This effect combines a mono-type phaser and a chorus/flanger.



a	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	[P] Manual Sets the frequency to which the effect is applied	0...100
	Depth Sets the depth of LFO modulation	0...100
c	Resonance Sets the resonance amount	-100...+100 Fx:023
	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
d	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
	Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
f	[F] EQ Trim Sets the EQ input level	0...100
g	[F] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
h	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:060
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

089: Reverb – Gate

This effect combines a mono-type reverb and a gate.



a	[R] Reverb Time [sec] Sets the reverberation time	0.1...10.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	[R] Pre Delay [msec] Sets the delay time of the reverb sound and gate control signal	0...200msec
c	[R] EQ Trim Sets the EQ input level	0...100
d	[R] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
e	[R] Reverb Balance Sets the reverb effect balance	Dry, 1:99...99:1, Wet
f	[G] Envelope Select Switches between modulation source control and input signal control	D-mod, Input Fx:005
	Src Selects the modulation source that controls the gate when Envelope Select is set to D-mod	Off...Gate2+Dmpr Fx:005
g	[G] Input Reverb Mix Sets the balance between the dry and reverb sounds of the gate control signal.	Dry, 1:99...99:1, Wet Fx:005
	Threshold Sets the gate threshold level	0...100 Fx:005
h	[G] Polarity Switches between non-invert and invert of the gate on/off state	+, - Fx:005
i	[G] Attack Sets the attack time	1...100 Fx:005
	Release Sets the release time	1...100 Fx:005
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

f: Envelope Select, f: Src, g: Input Reverb Mix, g: Threshold

The “Envelope Select” parameter enables you to select whether turning the gate on and off is triggered by the input signal level or controlled directly by the modulation source. You can select from **Off** to **Gate2+Dmpr** for the Src parameter to specify the modulation source.

When “Envelope Select” is set to **Input**, the gate is controlled by the level of signals that are the combination of the dry sound and the reverb sound. When the signal level exceeds the threshold, the gate opens and the reverb sound is output.

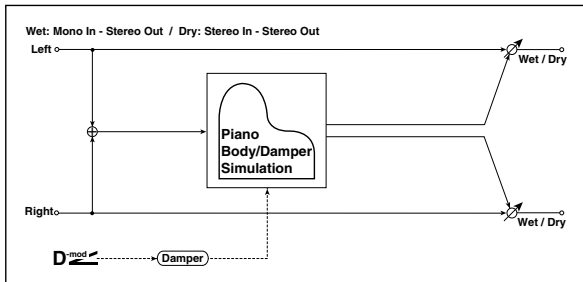
Normally, set “Input Reverb Mix” to **Dry** (the gate is controlled only by the dry sound). If you wish to extend the gate time, set the “Input Reverb Mix” value higher and adjust the “Threshold” value.

Double Size

Double-size effects
(Available for Insert Effects IFX2, 3, and 4)

090: Piano Body/Damper (Piano Body/Damper Simulation)

This effect simulates the resonance of the piano sound board caused by the string vibration, and also simulates the resonance of other strings that are not being played when you press the damper pedal. It will create a very realistic sound when applied to acoustic piano sounds.



a	Sound Board Depth Sets the intensity of resonance of the sound board	0...100 FX
b	Damper Depth Sets the intensity of the string resonance created when the damper pedal is pressed	0...100 FX, D-mod
	Src Selects the modulation source of damper effect	Off...Tempo FX
c	Tone Sets tonal quality of effect sound	1...100 FX
d	Mid Shape Sets the mid range of tonal quality	0...36 FX
e	Tune Fine tuning	-50...+50 FX
f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Sound Board Depth

This parameter sets the intensity of resonance of the piano sound board.

b: Damper Depth, b: Src

This parameter sets the resonance intensity of the other strings created when the damper pedal is pressed. The "Src" parameter selects the modulation source from which the damper effect is applied. Usually, select **Damper #64 Pdl** (Damper pedal).

MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

c: Tone, d: Mid Shape

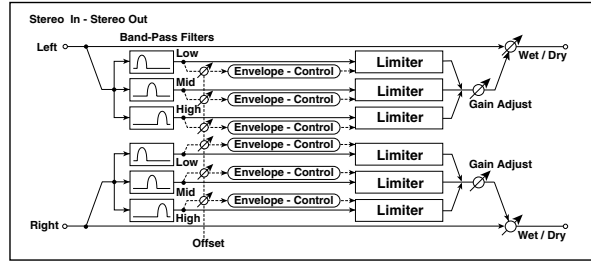
These parameters control the tonal quality of the effect sound.

e: Tune

Since this effect simulates the resonance of the strings, the sound varies depending on the pitch. If you have changed tuning using the Global P0 "Master Tune" (0-1a), adjust this parameter value.

091: St. Mltband Limiter (Stereo Multiband Limiter)

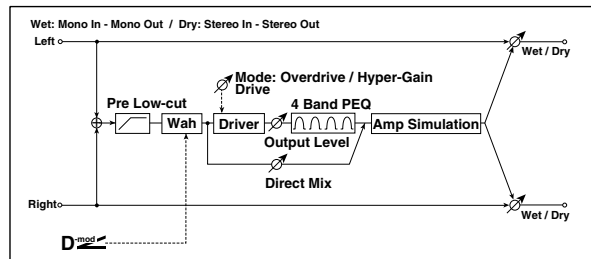
This is a stereo multiband limiter.



a	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 FX:003
b	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB FX:003
c	Attack Sets the attack time	1...100 FX:003
d	Release Sets the release time	1...100 FX:003
e	Low Offset [dB] Sets the low range gain of trigger signal	-40...0dB FX:004
f	Mid Offset [dB] Sets the mid range gain of trigger signal	-40...0dB FX:004
g	High Offset [dB] Sets the high range gain of trigger signal	-40...0dB FX:004
h	Gain Adjust [dB] Sets the output gain	-Inf, -38...+24dB FX:003, D-mod
	Src Selects the modulation source for the output gain	Off...Tempo
i	Amt Sets the modulation amount of the output gain	-63...+63
	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
j	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

092: OD/HyperGain Wah (Overdrive/Hyper Gain Wah)

This distortion effect has two modes: overdrive and hyper-gain that produces a strong distortion. A higher high-gain setting is required for this effect relative to a normal-size effect.

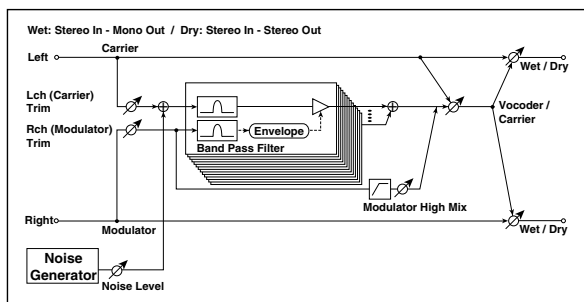


a	Wah Switches Wah on/off	Off, On FX:006, D-mod
	Src Selects the modulation source that switches the Wah on and off	Off...Tempo FX:006
	Sw Selects the switching mode for the modulation source that switches the Wah on and off	Toggle, Moment FX:006

b	Wah Sweep Range Sets the range of Wah	-10...+10 Fx:006, D ^{mod}
	Wah Sweep Src Selects the modulation source that controls the Wah	Off...Tempo
c	Drive Mode Switching between overdrive and hyper-gain mode	Overdrive, Hyper-Gain
d	Drive Sets the degree of distortion	1...120 Fx:006
	Pre Low-cut Sets the low range cut amount of the distortion input	0...10 Fx:006
e	Output Level Sets the output level	0...50 Fx:006, D ^{mod}
	Src Selects the modulation source for the output level	Off...Tempo
	Amt Sets the modulation amount of the output level	-50...+50
f	Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	Gain [dB] Sets the gain of Low EQ	-18...+18dB
g	Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
h	Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
i	Direct Mix Amount of the dry sound mixed to the distortion	0...50
	Speaker Simulation Speaker simulation on/off	Off, On
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

093: Vocoder

This effect applies the character of the right channel signal (Modulator) to the left channel signal input (Carrier). A common use of this effect is to produce the sound of various instruments by inputting a voice to the Modulator via a microphone. A special effect is also achieved by using rhythm or effect sounds. Strings or distortion guitar sounds with a lot of harmonics are suitable as a Carrier.



a	L (Carrier) Trim Sets the input level of left channel (Carrier)	0...100
---	--	---------

b	R (Modulator) Trim Sets the input level of right channel (Modulator)	0...100
c	Formant Shift Sets the height of the frequency for the vocoder effect	-2...+2 Fx
d	Response Sets the speed of the response to the modulator input	0...100
e	Noise Level Sets the noise mix level to the Carrier	0...100 Fx, D ^{mod}
	Src Selects the modulation source for the noise mix level	Off...Tempo
	Amt Sets the modulation amount for the noise mix level	-100...+100
f	Modulator High Mix Sets the high-range output level of the modulator	0...100 Fx
g	Low Gain [dB] Sets the low-range output level of the vocoder	-12...+12
	High Gain [dB] Sets the high-range output level of the vocoder	-12...+12
h	Vocoder/Carrier Sets the balance between the vocoder output and the Carrier	Carrier, 1:99...99:1, Vocoder Fx, D ^{mod}
	Src Selects the modulation source for the balance between the vocoder output and the carrier	Off...Tempo
	Amt Sets the modulation amount of the balance between the vocoder output and the carrier	-100...+100
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet Fx, D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

c: Formant Shift

By offsetting the Carrier filter, you can adjust the height of the frequency range to which the vocoder effect is applied. The tonal quality will change significantly.

e: Noise Level

This parameter enables you to mix white noise with the Carrier.

f: Modulator High Mix

This parameter sets the high-range output level of the right channel sound (Modulator). If the modulator is a human voice, it will make the words more clear.

The "Vocoder/Carrier" parameter sets the balance between the vocoder sound and the left channel sound (Carrier). The "Wet/Dry" parameter sets the balance between the effect and dry sound.

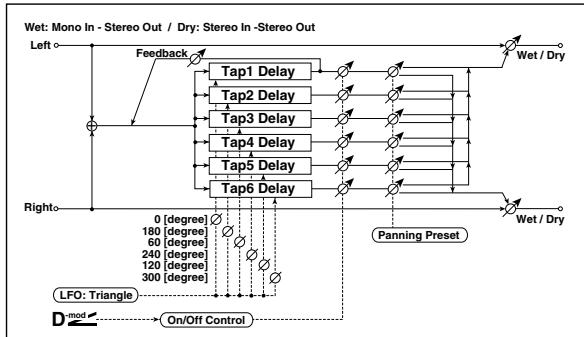
If you wish to change the intensity of the vocoder effect, select **Wet** for "Wet/Dry", and adjust the balance using the "Vocoder/Carrier" parameter.

Using a voice from a microphone as a modulator (Vocoder is selected for IFX2 in Program mode)

- Set "Pan" (Program P4: 4-1b) to L000 for Amp1 Level/Pan so that the Carrier sound will be input only to the left channel. When Oscillator Mode (Program P1: 1-1a) is set to **Double**, set Pan for Amp2 Level/Pan to L000.
- To set up the input, use the "Audio Input" parameter (Global P0: 0-3a). Connect a microphone to AUDIO INPUT1 or INPUT 2 connector, and set the [LEVEL] switch to MIC. While talking into the microphone, adjust the [LEVEL] knob so that the level is high enough, but the sound will not be distorted. For the Audio Input parameters for the microphone, set Pan to R127 and BUS (IFX/Indiv.) Select to IFX2. Now the voice from the microphone is input to the modulator channel. You can create the sound of a "talking" instrument when you talk into the microphone while playing.

094: Multitap Cho/Delay (Multitap Chorus/Delay)

This effect has six chorus blocks with different LFO phases. You can produce a complex stereo image by setting a different delay time and depth for each block. You can control the delay output level via a modulation source.



a	LFO Frequency [Hz] Sets the LFO speed	0.02...13.00Hz
b	Tap1(000) [msec] Sets the Tap1 (LFO phase=0 degrees) delay time	0...570msec
	Depth Sets the Tap1 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap1 output	<div style="text-align: right;"> </div>
c	Tap2(180) [msec] Sets the Tap2 (LFO phase=180 degrees) delay time	0...570msec
	Depth Sets the Tap2 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap2 output	<div style="text-align: right;"> </div>
d	Tap3(060) [msec] Sets the Tap3 (LFO phase=60 degrees) delay time	0...570msec
	Depth Sets the Tap3 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap3 output	<div style="text-align: right;"> </div>
e	Tap4(240) [msec] Sets the Tap4 (LFO phase=240 degrees) delay time	0...570msec
	Depth Sets the Tap4 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap4 output	<div style="text-align: right;"> </div>
f	Tap5(120) [msec] Sets the Tap5 (LFO phase=120 degrees) delay time	0...570msec
	Depth Sets the Tap5 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap5 output	<div style="text-align: right;"> </div>
g	Tap6(300) [msec] Sets the Tap6 (LFO phase=300 degrees) delay time	0...570msec
	Depth Sets the Tap6 chorus depth	0...30
	Status Always On, Always Off, On→Off(dm), Off→On(dm) Selects on, off, or modulation source for the control of Tap6 output	<div style="text-align: right;"> </div>
h	Panning Preset Specifies the stereo image of each Tap	1, 2, 3, 4 <div style="text-align: right;"> </div>

i	Tap1 Feedback Sets the Tap1 feedback amount	-100...+100 <div style="text-align: right;"> </div>
	Src Selects the modulation source for the Tap output level, feedback amount, and effect balance	Off...Tempo <div style="text-align: right;"> </div>
	Amt Sets the modulation amount of Tap1 feedback amount	-100...+100 <div style="text-align: right;"> </div>
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet <div style="text-align: right;"> </div>
	Amt Sets the modulation amount of the effect balance	-100...+100 <div style="text-align: right;"> </div>

b: Status, c: Status, d: Status, e: Status, f: Status, g: Status

These parameters set the output status of each Tap.

Always On: Output is always on. (No modulation)

Always Off: Output is always off. (No modulation)

On→Off (dm): Output level is switched from on to off depending on the modulation source.

Off→On (dm): Output level is switched from off to on depending on the modulation source.

Combining these parameters, you can change from 4-phase chorus to two-tap delay by crossfading them gradually via the modulation source during a performance.

h: Panning Preset

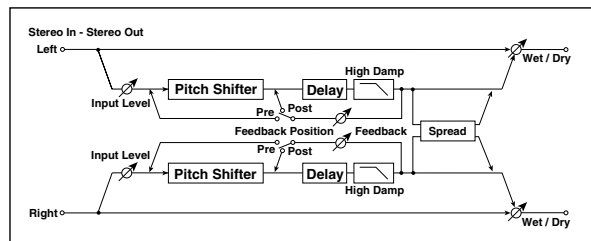
This parameter selects combinations of stereo images of the tap outputs.

i: Src, i: Amt, l: Amt

Tap output level, feedback amount and effect balance are controlled simultaneously via a modulation source.

095: St. Pitch Shifter (Stereo Pitch Shifter)

This is a stereo pitch shifter. The pitch shift amount for the left and right channels can be reversed from each other.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast <div style="text-align: right;"> </div>
b	L/R Pitch Determines whether or not the L/R pitch shift amount is inverted	Normal, Up/Down <div style="text-align: right;"> </div>
c	Pitch Shift [1/2tone] Sets the pitch shift amount in steps of a semitone	-24...+24 <div style="text-align: right;"> </div>
	Src Selects the modulation source of pitch shift amount	Off...Tempo <div style="text-align: right;"> </div>
	Amt Sets the modulation amount of pitch shift amount	-24...+24 <div style="text-align: right;"> </div>
d	Fine [cent] Sets the pitch shift amount in steps of one cent	-100...+100cent <div style="text-align: right;"> </div>
	Amt Sets the modulation amount of pitch shift amount	-100...+100cent <div style="text-align: right;"> </div>
e	Lch Delay [msec] Sets the delay time for the left channel	0...1000msec
	Rch Delay [msec] Sets the delay time for the right channel	0...1000msec
f	Feedback Position Switches the feedback connection	Pre, Post <div style="text-align: right;"> </div>

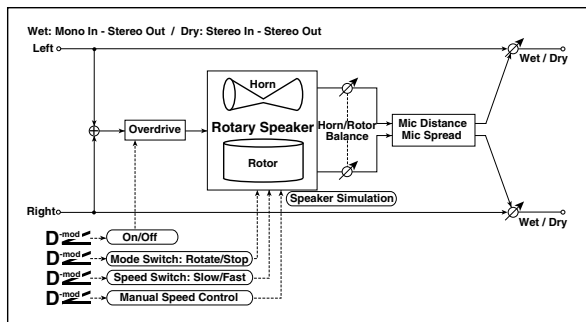
g	Feedback Sets the feedback amount	-100...+100 F ^{mod} Fx:038
	High Damp [%] Sets the damping amount in the high range	0...100%
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 F ^{mod} Fx:037, D ^{mod}
	Src Selects the modulation source for the input level	Off...Tempo F ^{mod} Fx:037
i	Spread Sets the width of the stereo image of the effect sound	-100...+100 F ^{mod} Fx:043
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

b: L/R Pitch

When you select **Up/Down** for this parameter, the pitch shift amount for the right channel will be reversed. If the pitch shift amount is positive, the pitch of the left channel is raised, and the pitch of the right channel is lowered.

096: Rotary Speaker OD (Rotary Speaker Overdrive)

This is a stereo rotary speaker effect. It has an internal speaker simulator that simulates overdrive (recreating the amp distortion) and characteristics of the rotary speaker, producing a very realistic rotary speaker sound.



a	Overdrive Switches overdrive on/off.	Off, On D ^{mod}
	Src Selects the modulation source that switches overdrive on/off	Off...Tempo
	Sw Selects the switching mode of the modulation source that switches overdrive on/off	Toggle, Moment F ^{mod}
b	Overdrive Gain Determines the degree of distortion	0...100
	Overdrive Level Sets the overdrive output level	0...100
c	Overdrive Tone Sets the tonal quality of overdrive	0...15
	Speaker Simulator Switches speaker simulation on/off	Off, On
d	Mode Switch Switches between speaker rotation and stop	Rotate, Stop D ^{mod}
	Src Selects the modulation source that toggles between rotation and stop	Off...Tempo
	Sw Selects the switching mode of the modulation source that toggles between rotation and stop	Toggle, Moment F ^{mod} Fx:040

e	Speed Switch Switches the speaker rotation speed between slow and fast.	Slow, Fast D ^{mod}
	Src Selects the modulation source that toggles between slow and fast	Off...Tempo
f	Sw Selects the switching mode of the modulation source that toggles between slow and fast	Toggle, Moment F ^{mod} Fx:040
	Horn/Rotor Balance Sets the volume level balance between the high-range horn and low-range rotor	Rotor, 1...99, Horn
g	ManualSpeedCtrl Sets the modulation source in case the rotation speed is changed directly	Off...Tempo F ^{mod} Fx:040, D ^{mod}
	Horn Acceleration How quickly the horn rotation speed in the high range is switched	0...100 F ^{mod} Fx:040
	Horn Ratio Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
h	Rotor Acceleration Determines how quickly the rotor rotation speed in the low range is switched	0...100 F ^{mod} Fx:040
	Rotor Ratio Adjusts the (low-range side) rotor rotation speed. Standard value is 1.0. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
i	Mic Distance Distance between the microphone and rotary speaker	0...100 F ^{mod} Fx:040
	Mic Spread Angle of left and right microphones	0...100 F ^{mod} Fx:040
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

a: Sw

This parameter determines how to switch on/off the overdrive via a modulation source.

When "Sw" = **Toggle**, overdrive is turned on/off each time the pedal or joystick is operated.

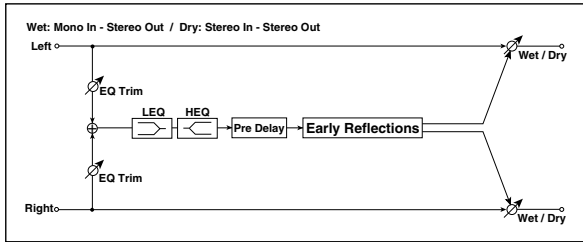
MIDI Overdrive will be switched on/off each time the value of the modulation source exceeds 64.

When "Sw" = **Moment**, overdrive is applied only when you press the pedal or operate the joystick.

MIDI Only when the value for the modulation source is 64 or higher, the overdrive effect is applied.

097: Early Reflections

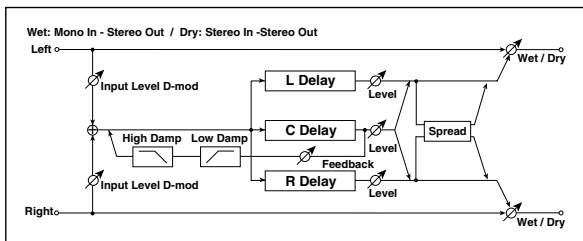
This early reflection effect has more precise early reflections with twice the maximum length of a normal-size effect (Fx:041). You can create a very smooth and dense sound.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse Fx:041
b	ER Time [msec] Sets the time length of early reflection	10...1600msec
c	Pre Delay [msec] Sets the time taken from the original sound to the first early reflection	0...200msec
d	EQ Trim Sets the input level of EQ applied to the effect sound	0...100
e	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB
f	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

098: L/C/R Long Delay

This multitap delay outputs three Tap signals to left, right and center respectively. You can set a maximum of 2,730msec for the delay time.

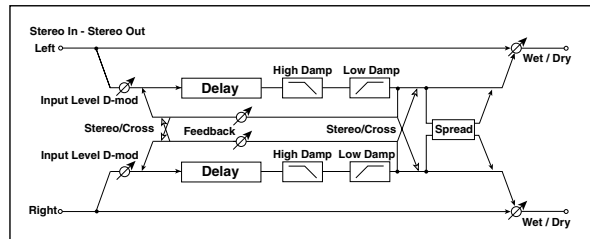


a	L Delay Time [msec] Sets the delay time of TapL	0...2730msec
	Level Sets the output level of TapL	0...50
b	C Delay Time [msec] Sets the delay time of TapC	0...2730msec
	Level Sets the output level of TapC	0...50
c	R Delay Time [msec] Sets the delay time of TapR	0...2730msec
	Level Sets the output level of TapR	0...50
d	Feedback (C Delay) Sets the feedback amount of TapC	-100...+100 D-mod
	Src Selects the modulation source of the TapC feedback amount	Off...Tempo
	Amt Sets the modulation amount of the TapC feedback amount	-100...+100

e	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% Fx:043
f	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 Fx:037, D-mod
	Src Selects the modulation source for the input level	Off...Tempo Fx:037
g	Spread Sets the width of the stereo image of the effect sound	0...50 Fx:043
h	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

099: St/Cross Long Dly (Stereo/Cross Long Delay)

This is a stereo delay, and can be used as a cross-feedback delay effect in which the delay sounds cross over between left and right by changing the feedback routing. You can set a maximum of 1,360msec for the delay time.



a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay Time [msec] Sets the delay time for the left channel	0.0...1360.0msec
c	R Delay Time [msec] Sets the delay time for the right channel	0.0...1360.0msec
d	L Feedback Sets the feedback amount for the left channel	-100...+100 D-mod
	Src Selects the modulation source of feedback amount	Off...Tempo
	Amt L Sets the modulation amount of the left channel feedback	-100...+100
e	R Feedback Sets the feedback amount for the right channel	-100...+100 D-mod
	Amt R Sets the modulation amount of the right channel feedback	-100...+100
f	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
g	Low Damp [%] Sets the damping amount in the low range	0...100% Fx:043
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 Fx:037, D-mod
	Src Selects the modulation source for the input level	Off...Tempo Fx:037
i	Spread Sets the width of the stereo image of the effect sound	-50...+50 Fx:043
j	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

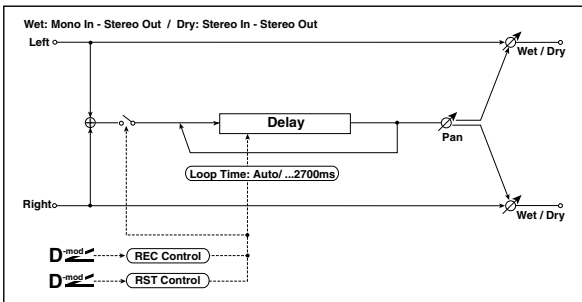
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

a: Time Over? L >, a: R >

You can set the delay time up to 1365msec. If the delay time exceeds this limit, the error message "OVER!!" appears on the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

102: Hold Delay

This effect records the input signal and plays it back repeatedly. You can control the start of recording and reset via a modulation source. Easy to use for real-time performances.



a	Loop Time [msec] Sets Automatic loop time setup mode or specifies loop time	Auto, 1...2700msec	
b	REC Control Src Selects control source for recording	Off...Tempo	
c	RST Control Src Selects control source for reset	Off...Tempo	
d	Manual REC Control Sets the recording switch	REC Off, REC On	
e	Manual RST Control Sets the reset switch	Off, RESET	
f	Pan Sets the stereo image of the effect	L100...L1, C, R1...R100	
	Src Selects the modulation source of stereo image of the effect	Off...Tempo	
	Amt Sets the modulation amount of stereo image of the effect	-100...+100	
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	Src Selects the modulation source of the effect balance	Off...Tempo	
	Amt Sets the modulation amount of the effect balance	-100...+100	

a: Loop Time [msec]

With **Auto**, the loop time is automatically set. Otherwise, you can specify the loop time.

When **Auto** is selected, the Loop Time is automatically set to the time it takes for a performance recorded while the Modulation Source or "Manual Rec Control" is on. However, if the time length exceeds 2,700msec, the loop time will be automatically set to 2,700msec.

b: REC Control Src, d: Manual REC Control

"REC Control Src" selects the modulation source that controls recording.

If this modulation is on, or if "Manual REC Control" is set to **REC On**, you can record the input signal. If a recording has already been carried out, additional signals will be overdubbed.



The effect is off when a value for the modulation source specified for the "REC Control Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

c: RST Control Src, e: Manual RST Control

The "RST Control Src" parameter specifies the modulation source that controls the reset operation.

When you set this modulation source to On, or "Manual RST Control" to **RESET**, you can erase what you recorded. If the Loop Time parameter has been set to Auto, the loop time is also reset.



The effect is off when a value for the modulation source specified for the "RST Control Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

"Hold" procedure (when Loop Time = Auto)



Select the following options for each parameter:

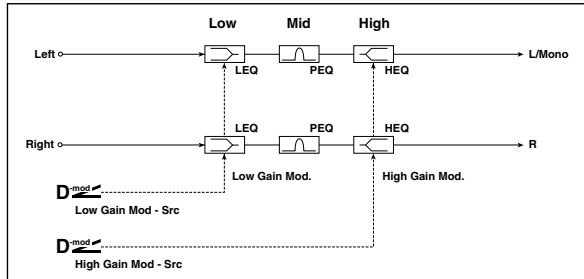
- ① "Loop Time [msec]"=**Auto**
"REC Control Src"=**JS +Y**
"RST Control Src"=**JS -Y**
"Manual REC Control"=**REC Off**
"Manual RST Control"=**RESET**
It should be noted that all recordings will be deleted while Reset is On.
- ② "Manual RST Control"=**Off**
Reset is cancelled and the unit enters Rec ready mode.
- ③ Push the joystick in the +Y direction (forward) and play a phrase you wish to hold. When you pull the joystick to its original position, the recording will be finished and the phrase you just played will be held.
Loop Time is automatically set only for the first recording after resetting. If the time length exceeds 2,700msec, Loop Time will be automatically set to 2,700msec. (If you have set "Loop Time" to **1-2,700msec**, the specified loop time will be used regardless of the time taken from pushing the joystick forward until it is pulled back. However, the recording method remains the same. The phrase being played while the joystick is pushed forward will be held.)
- ④ If you made a mistake during recording, pull the joystick in the -Y direction (back) to reset. In this way, the recording will be erased. Repeat step ③ again.
- ⑤ The recorded phrase will be repeated again and again. You can use this to create an accompaniment.
- ⑥ By pushing the joystick in the +Y direction (forward), you can also overdub performances over the phrase that is being held.



Master EQ

Master EQ

Use P9: Master EQ in Program, Combination, Sequencer, and Song Play modes.

-  You cannot use the Master EQ in Sampling mode.
-  You cannot use the Master EQ for the Insert Effects or Master Effects.



a	Low Cutoff [Hz] Sets the cutoff frequency of Low EQ (shelving type)	20...1.00K
	Gain[dB] Sets the gain of Low EQ	-18.0...+18.0 (0.5step) 
b	Mid Cutoff [Hz] Sets the cutoff frequency of Mid EQ (peaking type)	300...10.00K
	Q Sets the band width of Mid EQ. With a higher value, the band become narrower.	0.5...10.0 (0.1step)
	Gain [dB] Sets the gain of Mid EQ	-18.0...+18.0 (0.5step)
c	High Cutoff [Hz] Sets the cutoff frequency of High EQ (shelving type)	500...20.00K
	Gain [dB] Sets the gain of High EQ	-18.0...+18.0 (0.5step) 
d	Low Gain Mod-Src Selects the modulation source for Low Gain	Off...Tempo
e	High Gain Mod-Src Selects the modulation source for High Gain	Off...Tempo

a: Gain[dB], b: Gain[dB], c: Gain[dB]

These parameters are linked with the “Master EQ Gain [dB]” (9-1d) parameter of the Master FX tab.

d: Low Gain Mod-Src

For example, when this parameter is set to **KnobM1: #17**, you can control the EQ gain in the range from -18dB to +18dB during performance using the [Realtime Control] knob. At this time, set Knob 1-B to **Knob Mod1 (CC#17)** for Realtime Control Knob B-Assign (Program P1: 1-4b, Combination P4: 4-3b, Sequencer P4: 4-7b, Song Play P2: 2-1b). The 12 o'clock position of the knob corresponds to the “Low Gain” value here.

e: High Gain Mod-Src

For example, when this parameter is set to **KnobM2: #19**, you can control the EQ gain in the range from -18dB to +18dB during performance using the [Realtime Control] knob. At this time, set Knob 2-B to **Knob Mod2 (CC#19)** for Realtime Control Knob B-Assign (Program P1: 1-4b, Combination P4: 4-3b, Sequencer P4: 4-7b, Song Play P2: 2-1b). The 12 o'clock position of the knob corresponds to the High Gain value here.



9. Appendices

Alternate Modulation Source (AMS)

About Alternate Modulation

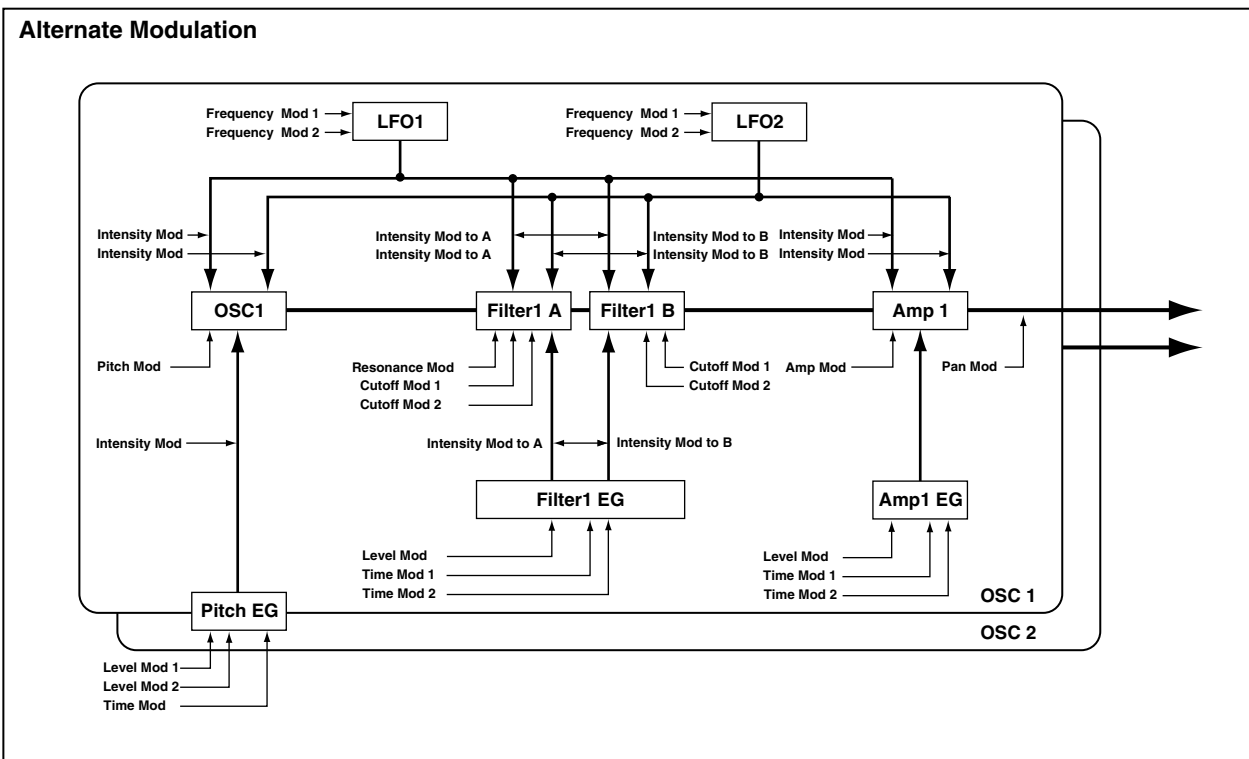
Alternate Modulation can be specified for the following 29 types, in total, 55 alternate modulation destinations shown in the diagram below. (Pitch EG is common to OSC 1 and 2.) AMS (Alternate Modulation Source) can be selected independently for each of these to apply modulation.

About Alternate Modulation Sources

There are 42 Alternate Modulation sources (AMS) that can control Alternate Modulation destinations.

If you select two or more Alternate Modulation destinations for control by the same AMS, a single source will apply modulation to each of the specified destinations.

Frequently used assignments such as using the joystick (X) to control pitch are provided as special parameters, so it is not necessary to use Alternate Modulation to accomplish this.



Different types of Alternate Modulation are used to control the bank F programs (which can be used when the separately sold EXB-MOSS option is installed). (Refer to the EXB-MOSS owner's manual)

AMS (Alternate Modulation Source) List

Off	do not use Alternate Modulation	
(PEG) Pitch EG	pitch EG	
(FEG) Filter EG	filter EG within the same oscillator	
(AEG) Amp EG	amp EG within the same oscillator	
(LFO) LFO1	LFO1 within the same oscillator	
(LFO) LFO2	LFO2 within the same oscillator	
(KT) Flt KTrk +/- (Filter Keyboard Track +/-)	filter keyboard tracking within the same oscillator	(P.211)
(KT) Flt KTrk +/- (Filter Keyboard Track +/-)	filter keyboard tracking within the same oscillator	(P.211)
(KT) Flt KTrk 0/+ (Filter Keyboard Track 0/+)	filter keyboard tracking within the same oscillator	(P.211)
(KT) Flt KTrk +/0 (Filter Keyboard Track +/0)	filter keyboard tracking within the same oscillator	(P.211)
(KT) Amp KTrk +/- (Amp Keyboard Track +/-)	amp keyboard tracking within the same oscillator	(P.211)
(KT) Amp KTrk +/- (Amp Keyboard Track +/-)	amp keyboard tracking within the same oscillator	(P.211)
(KT) Amp KTrk 0/+ (Amp Keyboard Track 0/+)	amp keyboard tracking within the same oscillator	(P.211)
(KT) Amp KTrk +/0 (Amp Keyboard Track +/0)	amp keyboard tracking within the same oscillator	(P.211)
(KT) Note Number	note number	
(EXT) Velocity	velocity	
(EXT) Poly After (Poly After Touch)	polyphonic after touch (transmitted from the TRITON only as sequence data)	
(EXT) After Touch	after touch (channel after touch)	
(EXT) JS X (Joy Stick X)	joystick X (horizontal) axis	
(EXT) JS+Y:CC#01 (Joy Stick +Y: CC#01)	joystick +Y (vertical upward) direction (CC#01)	
(EXT) JS-Y:CC#02 (Joy Stick -Y: CC#02)	joystick -Y (vertical downward) direction (CC#02)	
(EXT) JS+Y & AT/2 (Joy Stick +Y & After Touch/2)	joystick +Y (vertical upward) direction and after touch	(P.211)
(EXT) JS-Y & AT/2 (Joy Stick -Y & After Touch/2)	joystick -Y (vertical downward) direction and after touch	(P.211)
(EXT) Pedal:CC#04 (Foot Pedal: CC#04)	assignable foot pedal (CC#04)	(P.211)
(EXT) Ribbon:CC#16	ribbon controller (CC#16)	
(EXT) Slider:CC#18 (Value Slider: CC#18)	value slider (CC#18)	(P.211)
(EXT) KnobMod1:#17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17)	(P.211)
(EXT) KnobMod2:#19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19)	(P.211)
(EXT) KnobMod3:#20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20)	(P.211)
(EXT) KnobMod4:#21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21)	(P.211)
(EXT) KnobMod1 [+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+]	(P.211)
(EXT) KnobMod2 [+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+]	(P.211)
(EXT) KnobMod3 [+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+]	(P.211)
(EXT) KnobMod4 [+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+]	(P.211)
(EXT) Damper:#64 (Damper: CC#64)	damper pedal (CC#64)	
(EXT) Porta.SW:#65 (Portamento Switch: CC#65)	portamento switch (CC#65)	
(EXT) Sostenuito:#66 (Sostenuto: CC#66)	sostenuto pedal (CC#66)	
(EXT) Soft:CC#67 (Soft Pedal: CC#67)	soft pedal (CC#67)	
(EXT) SW 1:CC#80 (SW1 Mod.: CC#80)	assignable panel switch 1 (SW1 modulation CC#80)	(P.211)
(EXT) SW 2:CC#81 (SW2 Mod.: CC#81)	assignable panel switch 2 (SW2 modulation CC#81)	(P.211)
(EXT) Foot SW:#82 (Foot Switch: CC#82)	assignable foot switch (CC#82)	(P.211)
(EXT) MIDI:CC#83	MIDI control change (CC#83)	
(EXT) Tempo	tempo (tempo data from internal clock or external MIDI clock)	

In the above table, the parentheses () indicate the type of source that can be used for each AMS.

For example, the "AMS" value for OSC1 Pitch (Program P2: 2-1a) can be [Off, (FEG, AEG, EXT)] (p.9). This means that you can select Off, and (FEG), (AEG), or (EXT) sources.

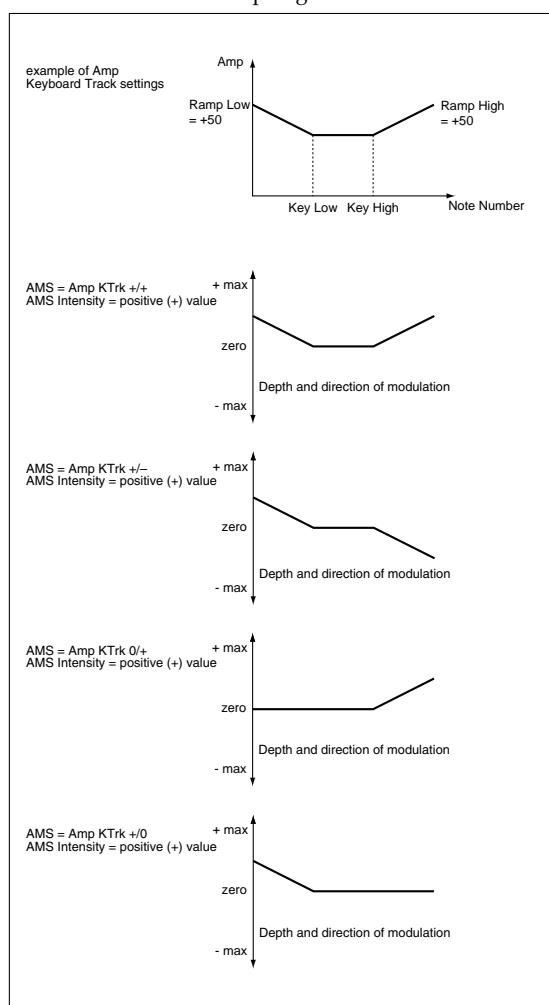
Flt KTrk +/- (Filter Keyboard Track +/-)
Flt KTrk +/- (Filter Keyboard Track +/-)
Flt KTrk 0/+ (Filter Keyboard Track 0/+)
Flt KTrk +/-0 (Filter Keyboard Track +/-0)
Amp KTrk +/- (Amp Keyboard Track +/-)
Amp KTrk +/- (Amp Keyboard Track +/-)
Amp KTrk 0/+ (Amp Keyboard Track 0/+)
Amp KTrk +/-0 (Amp Keyboard Track +/-0)

+/-: The direction of the effect will be determined by the sign (positive or negative) of the "Ramp Low" or "Ramp High" setting.

+/-: The direction of the effect will be determined by the sign of the "Ramp Low" setting, and by the opposite sign of the "Ramp High" setting (-50 for a setting of +50, and +50 for a setting of -50).

0/+ : "Ramp Low" will have no AMS effect. The sign of the "Ramp High" setting will determine the direction of its effect.

+0/: The sign of the "Ramp Low" setting will determine the direction of its effect. "Ramp High" will have no AMS effect.



JS +Y & AT/2 (Joy Stick +Y & After Touch/2)

The effect will be controlled by the joystick +Y (vertically upward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

JS -Y & AT/2 (Joy Stick -Y & After Touch/2)

The effect will be controlled by the joystick -Y (vertically downward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

Pedal:CC#04 (Foot Pedal: CC#04)

If you wish to use the assignable foot pedal as an AMS, set "Foot Pedal Assign" (Global P2: Controller 2-1a) to **Foot Pedal (CC#04)** (≡"Foot Pedal Assign").

A foot controller etc. connected to the ASSIGNABLE PEDAL jack will control the effect.

Slider:CC#18 (Value Slider: CC#18)

When the "Program No.: name" or "Combination No.: name" edit cell is selected in Program mode or Combination mode, the [VALUE] slider will function as a controller corresponding to CC#18.

KnobMod1:#17 (Knob Mod1: CC#17)

KnobMod2:#19 (Knob Mod2: CC#19)

KnobMod3:#20 (Knob Mod3: CC#20)

KnobMod4:#21 (Knob Mod4: CC#21)

If you wish to use a REALTIME CONTROLS knob [1]-[4] as an AMS, make settings in Program, Combination, Song, or Song Play modes to set the Controller tab parameter "Real-time Control Knobs B-Assign" to the following settings respectively: "Knob1-B" to **KnobMod1 (CC#17)**, "Knob2-B" to **KnobMod2 (CC#19)**, "Knob3-B" to **KnobMod3 (CC#20)**, or "Knob4-B" to **KnobMod4 (CC#21)**. (≡"Knob1...4-B Assign")

When you set REALTIME CONTROLS to B-mode and operate knobs [1]-[4], the specified modulation will apply.

If AMS intensity is set to a **positive (+)** value, moving the knob to the 12 o'clock position will produce an AMS effect of 0. Rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (-)** settings, the opposite effect will result.)

KnobMod1 [+](Knob Mod1: CC#17 [+])

KnobMod2 [+](Knob Mod2: CC#19 [+])

KnobMod3 [+](Knob Mod3: CC#20 [+])

KnobMod4 [+](Knob Mod4: CC#21 [+])

These differ from **KnobMod1:#17-KnobMod4:#21** in the knob position and direction of the effect. If AMS intensity is set to a **positive (+)** value, rotating the knob to the far right will produce an AMS effect of 0. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (-)** settings, the opposite effect will result.)

SW 1:CC#80 (SW1 Mod.: CC#80)

SW 2:CC#81 (SW2 Mod.: CC#81)

If you wish to use the [SW1] or [SW2] key as an AMS, make settings in Program, Song, or Song Play modes to set the Controller tab parameter "Panel Switch Assign" to the following values respectively: "SW1" to **SW1 Mod1 (CC#80)**, or "SW2" to **SW2 Mod2 (CC#81)** (≡"SW1/2 Assign"). The effect will be controlled when you operate the [SW1] or [SW2] key.

Foot SW:#82 (Foot Switch: CC#82)

If you wish to use an assignable foot switch as an AMS, set "Foot Switch Assign" (Global P2: Controller 2-1a) to **Foot SW (CC#82)** (≡"Foot Switch Assign").

The effect will be controlled when you operate a foot switch etc. connected to the ASSIGNABLE SWITCH jack.

Alternate Modulation settings

When you operate an AMS (Alternate Modulation Source), the modulation destination will be affected as shown in the table below.

By using alternate modulation, you can create complex systems of modulation in which EG, LFO, keyboard tracks, and controllers work together.

- You can apply complex change to an LFO or EG, for example by using the pitch/filter/amp EG to control the frequency or intensity of an LFO that modulates the pitch/filter/amp, or by using LFO2 to control the frequency of LFO1.
- The tone, EG, and LFO etc. can be controlled not only by velocity or joystick, but also from a switch, knob, or pedal etc.
- Panning can be controlled in realtime from a controller, EG, or LFO etc.
- Controllers etc. can be used to control EG levels or times. This lets you shape the EG in realtime.
- Filter/amp keyboard tracking or note number can be used to control the EG or LFO according to the keyboard pitch that is played.
- Pitch, tone, EG or LFO can be controlled by the tempo of the arpeggiator or sequencer.

Notes for the table

- *1 If **Note Number** is selected as an AMS, the base value will be C4.
- *2 EXT(+): Velocity, Poly After, After Touch, JS+Y:CC#01, JS(-Y):CC#02, JS+Y & AT/2, JS -Y & AT/2, Pedal:CC#04, Slider:CC#18, KnobMod1[+], KnobMod2[+], KnobMod3[+], KnobMod4[+], Damper:#64, Porta.SW:#65, Sostenuito:#66, Soft:CC#67, SW1:CC#80, SW2:CC#81, MIDI:CC#83
- *3 EXT(+/-): KnobMod1:#17, KnobMod1:#19, KnobMod1:#20, KnobMod1:#21
- *4 If **Tempo** is selected as an AMS, the base value will be ♩ =120. For example if the AMS for "Pitch" is set to **Tempo**, and "AMS Intensity" is set to **12.00**, doubling the tempo value (♩ =120 → 240) will raise the pitch one octave, and halving the tempo (♩ =120 → 60) will lower the pitch one octave.
- *5 A dedicated parameter is also provided.
- *6 This will be added to the "Filter Cutoff Frequency" value. As the "Frequency" value increases by **10**, the cutoff frequency will double (rise one octave).
- *7 This will be added to the "Pan" setting.
- *8 It is possible to control LFO "Frequency" by using **Tempo** AMS and "AMS Intensity." However if you use the "Frequency MIDI/Tempo Sync" function (Program P5: 5-1c), the LFO frequency can be synchronized to the tempo and note value.

The effect of alternate modulation on various parameters, and example applications

Pitch (Program P2: 2-1a)

Pitch can be controlled by the filter/amp EG, controllers, or tempo etc.

- If you select **Filter EG** or **Amp EG** as the AMS and set "AMS Intensity" to **+12.00**, the pitch will change up to ±1 octave in synchronization with the EG.
- If you select **Tempo** as the AMS and set "AMS Intensity" to **+12.00**, doubling the tempo (based on ♩ =120) will raise the pitch one octave, and halving the tempo will lower the pitch one octave.

Pitch EG Intensity (Program P2: 2-1b)

Pitch EG intensity can be controlled by keyboard tracking, controllers, or tempo.

- If you select **JS+Y:CC#01** as the AMS and set "AMS Intensity" to **+12.00**, moving the joystick in the +Y direction will gradually increase the effect of the Pitch EG to a maximum of ±1 octave. If "AMS Intensity" has a **negative value**, the effect of the Pitch EG will be inverted.

Pitch LFO 1/2 Intensity (Program P2: 2-1d)

Pitch modulation intensity of the LFO1/2 can be controlled by an EG, keyboard tracking, controllers, or tempo etc.

- If you select **EG** as the AMS, the pitch change width of LFO modulation etc. can be controlled in synchronization with the level changes of the EG. With **positive (+)** settings of "AMS Intensity," the vibrato effect will gradually deepen as the EG level rises, or gradually lessen as the EG level decreases. With **negative (-)** settings of "AMS Intensity," the LFO phase will be inverted.
- If you select a controller such as **SW1** or **2** as the AMS, you can press the [SW1] or [SW2] key when desired to turn on the vibrato effect.

Filter (Cutoff) Frequency (Program P3: 3-2c)

The cutoff frequency of filter A/B can be controlled by the pitch/amp EG, controllers, or tempo. Set "AMS" and "AMS Intensity" for Filter A or B.

- If you select **JS X** or **Ribbon:CC#16** as the AMS and set "AMS Intensity" to a **positive (+)** value, moving the joystick or ribbon controller toward the right will raise the cutoff frequency, and moving it toward the left will lower the cutoff frequency. **Negative (-)** settings will have the opposite effect.

Parameter	AMS → AMS Value → AMS Intensity	PEG/FEG -99...0...+99	AEG 0...+99
Pitch	(+12.00)	-1...0...+1[Octave]	0...+1[Octave]
Pitch EG Int.	(+12.00)	-	-
Pitch LFO1/2 Int.	(+12.00)	-1...0...+1[Octave]	0...+1[Octave]
Filter Frequency *6	(+99)	-99...0...+99	0...+99
Resonance	(+99)	-99...0...+99	0...+99
Filter EG Int.	(+99)	-	-
Filter LFO1/2 Int.	(+99)	-99...0...+99	0...+99
Amp	(+99)	value x(0...1...8)	-
Amp LFO1/2 Int.	(+99)	-99...0...+99	0...+99
Pan *7	(+50)	-63...0...+63	0...+63
EG Level	(+66)	-	-
EG Time	(+49)	-	-
LFO Frequency	(+99)	value x(1/64...1...64)	value x(1...64)

- If you select the same controller as an AMS and set separate intensities for Filter A (Low Pass Filter) “AMS Intensity” and Filter B (High Pass Filter) “AMS Intensity,” you can operate a single controller to simultaneously control the cutoff frequencies of both filters.

Resonance (Program P3: 3–1b)

This can be used when the “Filter Type” is **Low Pass Resonance**. The resonance level can be controlled by EG, LFO, keyboard tracking, controllers or tempo etc.

- If you select **Filter KTrk** or **Amp KTrk** as the AMS, you can use the filter or amp keyboard tracking settings to control the resonance level. For example if the amp keyboard tracking parameters “Ramp Low” and “Ramp High” are set to **positive (+)** values, **Amp KTrk [+/-]** is selected as the AMS, and “AMS Intensity” it set to a **positive (+)** value, playing toward either end of the keyboard will cause amp keyboard tracking to increase the volume, and AMS to raise the resonance level.
- You can select a controller as the AMS, and apply resonance when desired by operating the controller.
- You can select LFO1 or 2 as the AMS, and use the LFO to modulate the resonance level.

Filter EG Intensity (Program P3: 3–2b)

Filter EG intensity can be controlled by a controller or tempo etc. You can use “AMS Intensity to A” and “AMS Intensity to B” to independently specify the intensity for Filter A and B.

- If you select **JS -Y:CC#02** as the AMS and set “AMS Intensity” to a **positive (+)** value, moving the joystick in the -Y direction will gradually increase the effect of the Filter EG. If you set “AMS Intensity” to a **negative (-)** value, the effect of the Filter EG will be inverted.
- If you select **Ribbon:CC#16** as the AMS and set “AMS Intensity” to a **positive (+)** value, operating the ribbon controller toward the right will gradually increase the effect of the Filter EG. Operating the ribbon controller toward the left will gradually increase the effect of the Filter EG with an inverted phase.

Filter LFO 1/2 Intensity (Program P3: 3–3a)

The LFO 1/2 filter modulation intensity can be controlled by EG, keyboard tracking, controller, or tempo. You can use “AMS Intensity to A” and “AMS Intensity to B” to independently specify the intensity for Filter A and B.

- If you select **EG** as the AMS, the auto-wah effect produced by LFO modulation will be controlled by the changes in EG level. If you set “AMS Intensity” to a **positive (+)** value, the wah effect will deepen as the EG level rises, and will lessen as the EG level falls. With

negative (-) values of “AMS Intensity,” the phase of the LFO will be inverted.

- If you use a controller such as **SW1** or **2** as the AMS, you can apply the auto-wah effect when desired by pressing the [SW1] or [SW2] key.

Amp (Program P4: 4–2b)

The volume can be controlled by the pitch/filter EG, controllers, or tempo etc.

- If an EG or controller that changes with a **positive (+)** value (**Amp EG, EXT(+), EXT(SW)**) is selected as the AMS, setting the “AMS Intensity” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume.
- If an EG, LFO, or controller that changes with a **± value** (**Pitch EG, Filter EG, LFO, KT, EXT(+/-)**) is selected as the AMS, setting the “AMS Intensity” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume (for positive (+) changes of the AMS), or to decrease the volume to zero (for negative (-) changes of the AMS).
- In addition to the time-variant changes in volume produced by the amp EG, you can also make the volume change in synchronization with the pitch/filter EG. Select **PitchEG** or **FilterEG** as the AMS, and adjust “AMS Intensity.” If you wish to cancel the effect of the AmpEG and use the pitch/filter EG to control the volume, set all levels of the AmpEG to **+99**.

Amp LFO 1/2 Intensity (Program P4: 4–2c)

The amp modulation intensity of LFO 1/2 can be controlled by EG, keyboard tracking, controllers, or tempo etc.

- If you select **EG** as the AMS, the depth of the tremolo effect produced by LFO modulation will change in synchronization with the changes in EG level. If you set “AMS Intensity” to a **positive (+)** value, the tremolo effect will deepen as the EG level rises, and lessen as the EG level falls. If “AMS Intensity” is set to a **negative (-)** value, the phase of the LFO will be inverted.
- If select a controller such as **SW1** or **2** as the AMS, you can apply the tremolo effect by pressing the [SW1] or [SW2] key when desired.

Pan (Program P4: 4–1b)

The oscillator pan can be controlled by EG, LFO, keyboard tracking, controllers, or tempo etc.

- If you select **Note Number** as the AMS and set “AMS Intensity” to **+50**, panning will be controlled by the keyboard position: center at the C4 note, far right at C6 or above, and far left at C2 or below.

LFO1/2 -99...0...+99	KT(Flt KTrk, Amp KTrk) -99...0...+99	KT(Note Number) *1 ...36(C2)...60(C4)...84(C6) ...	JS X/Ribbon:CC#16 -Max...0...+Max	EXT(+)*2 0...127	EXT(+/-)*3 -Max...0...+Max	EXT(Tempo)*4 (↓) = ...60...120...240...
dedicated parameter -	-1...0...+1[Octave] -1...0...+1[Octave] -1...0...+1[Octave]	dedicated parameter ...-1...0...+1...[Octave] ...-1...0...+1...[Octave]	-1...0...+1[Octave]*5 -1...0...+1[Octave] -1...0...+1[Octave]	0...+1[Octave] 0...+1[Octave] 0...+1[Octave]	-1...0...+1[Octave] -1...0...+1[Octave] -1...0...+1[Octave]	...-1...0...+1...[Octave] ...-1...0...+1...[Octave] ...-1...0...+1...[Octave]
dedicated parameter -99x2...0...+99x2 -	-99...0...+99 -	...-99...0...+99... -	-99...0...+99 -99...0...+99 -99...0...+99 -99...0...+99	0...+99 0...+99 0...+99 0...+99	-99...0...+99 -99...0...+99 -99...0...+99 -99...0...+99	...-99...0...+99... ...-99...0...+99... ...-99...0...+99... ...-99...0...+99...
dedicated parameter -	-99...0...+99 -63...0...+63	...-99...0...+99... ...-63...0...+63...	value x(0...1...8) -99...0...+99 -63...0...+63	value x(1...8) 0...+99 0...+63	value x(0...1...8) -99...0...+99 -63...0...+63	value x(0...1...8...) ...-99...0...+99... ...-99...0...+99... ...-63...0...+63...
- value x(1/128...1...128)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	-99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	0...+99 value x(1...64) value x(1...64)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	-99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...)*8

- If EG is selected as the AMS, the oscillator pan will be controlled in synchronization with the changes in EG level. If “AMS Intensity” is set to a **positive (+)** value, the pan will move toward the right as the EG level increases, and toward the left as the EG level decreases. If “AMS Intensity” is set to a **negative (-)** value, the opposite effect will occur.

EG Level - Pitch EG (Program P2: 2–3b)

Filter EG (Program P3: 3–4b)

Amp EG (Program P4: 4–3b)

EG levels can be controlled by keyboard tracking, controllers, or tempo etc.

Set the “AMS Intensity” value, and select +/-0 for each EG segment (“St” start, “At” attack, “Br” break) to specify the direction of the effect (if any) on that segment.

+: AMS will function according to the Intensity setting.

–: The sign of the Intensity setting will be inverted.

0: AMS will have no effect.

If “AMS Intensity” is set to +66, the various EG levels can be controlled over a maximum range of ±99.

- Set “AMS” to **Velocity** for Amp EG Level Modulation, “AMS Intensity” to +66, “St” to 0, “At” to +, and “Br” to –. Set all Amp EG levels to +00. As you play with increasing velocity, the EG levels will change more greatly. At the maximum velocity, the Start Level will stay at +00, but the Attack Level will change to +99 and the Break Level will change to –99.

EG Time - Pitch EG (Program P2: 2–3c)

Filter EG (Program P3: 3–4c)

Amp EG (Program P4: 4–3c)

EG times can be controlled by keyboard tracking, controllers, or tempo etc. Set the “AMS Intensity” value, and select +/-0 for each EG segment (“At” attack, “Dc” decay, “Sl” slope, “Rl” release) to specify the direction of the effect (if any) on that segment.

+: AMS will function according to the Intensity setting.

–: The sign of the Intensity setting will be inverted.

0: AMS will have no effect.

Each EG time is determined by the Alternate Modulation value at the moment that the corresponding EG point is reached. For example, the Alternate Modulation value at the moment that the Attack Level is reached will determine the Decay Time.

If “AMS Intensity” is set to a value of **8, 17, 25, 33, 41, or 49**, the corresponding time can be multiplied by a maximum of 2, 4, 8, 16, 32, or 64 times (or divided by 1/2, 1/4, 1/8, 1/16, 1/32, 1/64).

- Select **JS +Y:CC#01** for “AMS,” and set “AMS Intensity” to +8, “At” to +, “Dc” to –, and “Sl” and “Rl” to 0. When you move the joystick in the +Y direction, the Attack Time will be lengthened by a maximum of 2 times. The Decay Time will be shortened by a maximum of 1/2. The Slope and Release times will not change.

LFO Frequency (Program P5: 5–1b)

The frequency of LFO 1 or 2 can be controlled by EG, keyboard tracking, controllers, or tempo etc., You can even use the LFO2 frequency to modulate the LFO1 frequency.

If “AMS Intensity” is set to a value of **16, 33, 49, 66, 82, or 99**, the corresponding frequency can be multiplied by a maximum of 2, 4, 8, 16, 32, or 64 times (or divided by 1/2, 1/4, 1/8, 1/16, 1/32, 1/64).

- Select **JS +Y:CC#01** for “AMS,” and set “AMS Intensity” to +16. When you move the joystick in the +Y direction,

the LFO frequency will be increased by a maximum of 2 times. If you set “AMS Intensity” to –16 and move the joystick in the +Y direction, the LFO frequency will be decreased by up to 1/2.

Dynamic Modulation Source

(Dmod)

You can control certain effect parameters using the joystick, ribbon controller, etc. “on the fly.” Controlling effects in this way is referred to as **Dynamic Modulation**. For example, you can use After Touch to speed up the LFO of the chorus and flanger, or you can use the ribbon controller to activate the wah effect. In this way, you will be able to take full advantage of the effects as part of the expressive potential of your instrument.

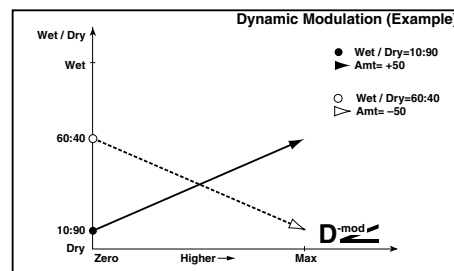
Most of the parameters for dynamic modulation consist of parameter values for Src (source) and Amt (amount). The Src field selects the modulation source, and Amt sets the amount of dynamic modulation effect. When the modulation source is set to the maximum value, the actual degree of the effect will be the parameter value plus the Amt value.

MIDI In Program and Sampling modes, dynamic modulation of the insertion effects and master effects is controlled via the global MIDI Channel. (In Sampling mode, only the insertion effects can be used.)

In Combination, Sequencer, and Song Play modes, dynamic modulation for the insertion effects and master effects is controlled on the MIDI channel independently specified by the “Ctrl Ch” for IFX1–5, MFX1, and MFX2.

Example: “Wet/Dry” 10:90, “Src” After Touch, “Amt” +50

In this case, the effect balance is 10:90. As you apply After Touch, the percentage of the effect sound will increase. When After Touch is at its maximum, the effect balance will be 60:40.



⚠ The dynamic modulation effect will not be affected if you modify the “Amt” value while dynamic modulation is being applied. The change will become effective when you operate the dynamic modulation source again.

Refer to the corresponding effect section for an explanation of other dynamic modulation parameters.

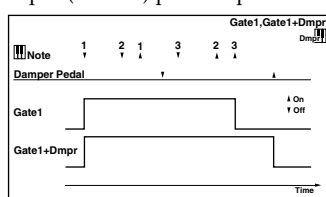
In the table of parameters for each effect, dynamic modulation parameters are marked by a **D^{mod}** symbol at the right of the parameter.

Dynamic Modulation Source List

Source name	Explanation
Off	dynamic modulation is not used
Gate1	note on/off (P.215)
Gate1+Dmpr (Gate1+Damper)	note on + damper on/off (P.215)
Gate2	note on/off (retrigger) (P.215)
Gate2+Dmpr (Gate2+Damper)	note on + damper on/off (retrigger) (P.215)
Note Number	note number
Velocity	Velocity
After Touch	after touch (Channel After Touch)
JS X (Joy Stick X)	joystick X (horizontal) direction
JS+Y: CC#01 (Joy Stick +Y: CC#01)	joystick +Y (away) direction (CC#01)
JS-Y: CC#02 (Joy Stick -Y: CC#02)	joystick Y (toward yourself) direction (CC#02)
Pedal: CC#04 (Foot Pedal: CC#04)	assignable foot pedal (CC#04) (P.215)
FXCtrl1: #12 (FX Control1: CC#12)	MIDI effect control 1(CC#12)
FXCtrl2: #13 (FX Control2: CC#13)	MIDI effect control 2(CC#13)
Ribbon: #16 (Ribbon: CC#16)	ribbon controller (CC#16)
Slider: #18 (Value Slider: CC#18)	value slider (CC#18) (P.215)
KnobM1: #17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17) (P.215)
KnobM2: #19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19) (P.215)
KnobM3: #20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20) (P.215)
KnobM4: #21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21) (P.215)
KnobM1 [+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+] (P.216)
KnobM2 [+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+] (P.216)
KnobM3 [+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+] (P.216)
KnobM4 [+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+] (P.216)
Damper: #64 (Damper: CC#64)	damper pedal (CC#64)
Prta.SW: #65 (Portamento Switch: CC#65)	portamento switch (CC#65)
Sostenu: #66 (Sostenuto: CC#66)	sostenuto pedal (CC#66)
SW 1: CC#80 (SW1 Mod.: CC#80)	assignable panel switch 1 (SW1 modulation CC#80) (P.216)
SW 2: CC#81 (SW2 Mod.: CC#81)	assignable panel switch 2 (SW2 modulation CC#81) (P.216)
Foot SW: #82 (Foot Switch: CC#82)	assignable foot switch (CC#82) (P.216)
MIDI: CC#83	MIDI Control Change (CC#83)
Tempo	tempo (internal clock or external MIDI clock tempo data)

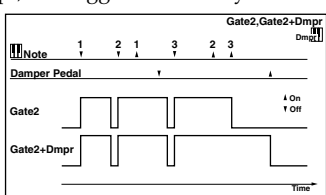
Gate 1, Gate1+Dmpr (Gate1+Damper)

The effect is at maximum during note-on, and will stop when all keys are released. With **Gate1 + Dmpr**, the effect will remain at maximum even after the keys are released, as long as the damper (sustain) pedal is pressed.



Gate 2, Gate2+Dmpr (Gate2+Damper)

This is essentially the same as for Gate 1 or Gate 1 + Dmpr. However when **Gate 2** or **Gate 2 + Dmpr** are used as a dynamic modulation source for the EG of 022: St. Envelope Flanger etc. or the AUTOFADE of 027: Stereo Vibrato, a trigger will occur at each note-on. (In the case of Gate 1 and Gate 1 + Dmpr, the trigger occurs only for the first note-on.)



Pedal: CC#04 (Foot Pedal: CC#04)

If you wish to use the assignable foot pedal as a dynamic modulation source, set “Foot Pedal Assign” (Global P2: Controller 2-1a) to **Foot Pedal (CC#04)**. (“Foot Pedal Assign.”) A foot controller etc. connected to the ASSIGNABLE PEDAL jack can be used to control an effect.

Slider: #18 (Value Slider: CC#18)

When the “Program No.: name” or “Combination No.: name” edit cell is selected in Program mode or Combination mode, the [VALUE] slider will function as a controller corresponding to CC#18.

KnobM1: #17 (Knob Mod1: CC#17)

KnobM2: #19 (Knob Mod2: CC#19)

KnobM3: #20 (Knob Mod3: CC#20)

KnobM4: #21 (Knob Mod4: CC#21)

If you wish to use a REALTIME CONTROLS knob [1]–[4] as a dynamic modulation source, make settings in Program, Combination, Song, Song Play, or Sampling modes to set the Controller tab parameter “Realtime Control Knobs B-Assign” to the following settings respectively: “Knob1-B” to **KnobMod1 (CC#17)**, “Knob2-B” to **KnobMod2 (CC#19)**, “Knob3-B” to **KnobMod3 (CC#20)**, or “Knob4-B” to **KnobMod4 (CC#21)**. (“Knob1...4-B Assign”)

When you set REALTIME CONTROLS to B-mode and operate knobs [1]–[4], the effect will be controlled.

Moving the knob to the 12 o'clock position will produce a

effect of 0 as the dynamic modulation source. If “Amt” is a **positive (+)** value, rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (-)** values, the opposite effect will result.)

KnobM1 [+] (Knob Mod1: CC#17 [+])

KnobM2 [+] (Knob Mod2: CC#19 [+])

KnobM3 [+] (Knob Mod3: CC#20 [+])

KnobM4 [+] (Knob Mod4: CC#21 [+])

These differ from KnobMod1:CC#17–KnobMod4:CC#21 in the knob position and direction of the effect. If “Amt” is set to a **positive (+)** value, rotating the knob to the far right will produce an effect of 0 as the dynamic modulation source. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (-)** settings, the opposite effect will result.)

SW 1: CC#80 (SW1 Mod.: CC#80)

SW 2: CC#81 (SW2 Mod.: CC#81)

If you wish to use the [SW1] or [SW2] key as a dynamic modulation source, make settings in Program, Song, Song Play, or Sampling modes to set the Controller tab parameter “Panel Switch Assign” to the following values respectively: “SW1” to **SW1 Mod1 (CC#80)**, or “SW2” to **SW2 Mod2 (CC#81)** (☞ “SW1/2 Assign”).

The effect will be controlled when you operate the [SW1] or [SW2] key.

Foot SW: #82 (Foot Switch: CC#82)

If you wish to use an assignable foot switch as a dynamic modulation source, set “Foot Switch Assign” (Global P2: Controller 2–1a) to **Foot SW (CC#82)** (☞ “Foot Switch Assign”).


The effect will be controlled when you operate a foot switch etc. connected to the ASSIGNABLE SWITCH jack.

Tempo

Modulation sources other than Tempo are internally processed as a value of 0–127 (–128 – +127). In contrast, **Tempo** uses the tempo data (BPM value) of the internal clock or the external MIDI clock. This means that when “♪” is 127 (BPM), it will have the same result as the maximum value (+127) of other modulation sources.

About the BPM/MIDI SYNC function

BPM/MIDI SYNC can be used for most effects that have an LFO, such as **009:St. Wah/Auto Wah**, and for some delay-type effects such as **049:L/C/R BPM Delay**. You can apply modulation that is synchronized to the tempo, or specify the delay time in terms of a note value so that the effect will synchronize to the tempo of the arpeggiator or sequencer during a live performance even if you change the tempo.

Parameters that allow BPM/MIDI SYNC to be used are marked by a  symbol at their right in the list of parameters for each effect.

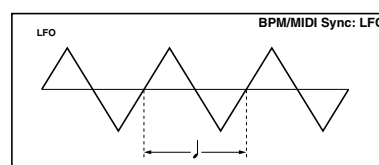
Example 1. LFO

“BPM/MIDI Sync” On

“Base Note” ♪

“Times” x1

In this case, each cycle of the LFO will be as long as one quarter note.



If “BPM” is set to **MIDI**, the effect will synchronize to the tempo of the arpeggiator or sequencer (or to an external MIDI clock). If “BPM” is in the range of **40–240**, the specified value will be used.

Example 2. Delay Time

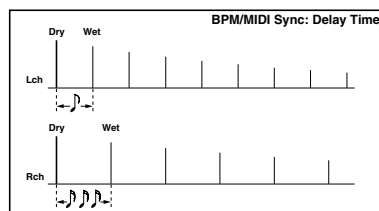
“L Delay Base Note” ♪

“Times” x1

“R Delay Base Note” ♪

“Times” x3

In this case, the delay time of the left channel will be the duration of an eighth note, and the delay time of the right channel will be the duration of a sixteenth note triplet.



When “BPM” is set to **MIDI**, the effect will synchronize to the tempo of the arpeggiator or sequencer (or to an external MIDI clock). If “BPM” is in the range of **40–240**, the specified value will be used.

If the tempo, “Base Note,” and “Times” settings in conjunction would cause the maximum delay time to be exceeded, a warning such as “Time Over? >OVER!!” will appear in the display. Please modify your settings so that this setting does not appear. (The maximum delay time will depend on the effect type.)

SW1/2 Assign

The following functions can be assigned to the [SW1] or [SW2] keys.

- For a program, assignments are set by Program P1: Controller tab “Panel Switch Assign” (1–4a).
- For a combination, assignments are set by Combination P4: Controller tab “Panel Switch Assign” (4–4a).
- For songs in Sequencer mode, assignments are set by Sequencer P4: Controller tab “Panel Switch Assign” (4–7a).

- For Song Play mode, assignments are set by Song Play P2: Controller Setup “Panel Switch Assign” (2–1a).
- For Sampling mode, assignments are set by Sampling P4: Controller Setup “Panel Switch Assign” (4–1a).

note These settings can be made in Program mode for each program, in Combination mode for each combination, and in Sequencer mode for each song. In Song Play mode and Sampling mode, these settings are made for the entire mode.

SW1, SW2 Assign List

Off	no function
SW1 Mod.:CC#80 (SW1 Modulation:CC#80) SW2 Mod.:CC#81 (SW2 Modulation:CC#81)	Select this when using the switch as an Alternate Modulation or Effect Dynamic Modulation source. In this case, you must first specify the control destination. Each time the switch is turned On/Off, a CC#80 (or CC#81) message will be transmitted (Off: 0, On: 127). (P.217)
Porta.SW:CC#65 (Portamento Switch:CC#65)	When you press SW1 (or SW2) to turn it on (LED lit), portamento will be applied. Each time this is turned On/Off, CC#65 will be transmitted (Off: 0, On: 127). (P.217)
Octave Down	Each time you press SW1 (or SW2), the pitch will alternate between 1 octave lower and the original octave setting (1 octave down when the LED is lit).
Octave Up	Each time you press SW1 (or SW2), the pitch will alternate between 1 octave higher and the original octave setting (1 octave up when the LED is lit).
JS X Lock	Lock the effect of the joystick X direction. (P.217)
JS+Y Lock	Lock the effect of the joystick +Y direction. (P.217)
JS-Y Lock	Lock the effect of the joystick -Y direction. (P.217)
Ribbon Lock	Lock the effect of the ribbon controller. (P.217)
JS X & Ribbon Lock	Simultaneously lock the effects of the joystick X direction and the ribbon controller. (P.217)
JS+Y & Ribbon Lock	Simultaneously lock the effects of the joystick +Y direction and the ribbon controller. (P.217)
JS-Y & Ribbon Lock	Simultaneously lock the effects of the joystick -Y direction and the ribbon controller. (P.217)
After Touch Lock	Lock the effect of after touch. (P.217)

SW1 Mod.:CC#80 (SW1 Modulation:CC#80)

SW2 Mod.:CC#81 (SW2 Modulation:CC#81)

This effect differs between SW1 and SW2. SW1 is handled as CC#80, and SW2 is handled as CC#81.

Porta.SW:CC#65 (Portamento Switch:CC#65)

When Program P1: Edit-Basic “Oscillator Mode” (1–1a) is **Single**, turning the switch on (LED lit) will apply portamento regardless of the P2: Edit-Pitch “Enable” (2–1c) setting, and turning the switch off will not apply portamento. If “Oscillator Mode” (1–1a) is **Double**, and if the P2: Edit-Pitch “Enable” (2–1c) setting is the same for OSC1 and 2 (i.e., **Enable** or **Disable** for both OSC1 and 2), then portamento will be applied to OSC1 and 2 when the switch is turned on (LED lit), and portamento will not be applied to OSC1 and 2 when the switch is turned off (LED dark). If the P2: Edit-Pitch “Enable” (2–1c) setting is different for OSC1 and 2 (i.e., OSC1 is **Enable** and OSC2 is **Disable**, or OSC1 is **Disable** and OSC2 is **Enable**), then portamento will be applied to the OSC whose setting is **Enable** when the switch is turned on (LED lit), and portamento will be applied to neither OSC when the switch is turned off (LED dark).

JS X Lock, JS+Y Lock, JS-Y Lock, Ribbon Lock, JS X & Ribbon Lock, JS+Y & Ribbon Lock, JS-Y & Ribbon Lock, After Touch Lock

The state of the selected controller (joystick, ribbon controller, after touch) will alternate between Lock and Unlock (Lock when the LED is lit).

While the joystick or after touch is being operated, turning Lock on will lock (fix) the effect at the current position of that controller. If Lock is turned on for the ribbon controller, the effect at that time will be held even after you release your finger from the ribbon controller. If Lock is off, releasing your finger from the ribbon controller will reset the effect to the center position.

For example if you select JS (+Y) Lock, move the joystick away from yourself, and then turn Lock on, the operation produced by the joystick (+Y) will be locked (held) at that position. Even if you return the joystick to its original position, the modulation will continue to apply. At this time you can even move the joystick in the -Y direction to apply both types of modulation (joystick +Y and -Y) simultaneously.

MIDI When you Lock the joystick or after touch, MIDI transmission of the corresponding controller will be halted, but reception will still occur.

Knob 1...4 B-Assign

The following functions can be assigned to the REALTIME CONTROLS [1]-[4] knobs in B-mode.


- For a program, assignments are set by Program P1: Controller tab “Realtime Control Knob B-Assign” (1–4b).
- For a combination, assignments are set by Combination P4: Controller tab “Realtime Control Knob B-Assign” (4–4b).
- For a song in Sequencer mode, assignments are set by Sequencer P4: Controller tab “Realtime Control Knob B-Assign” (4–7b).

- For Song Play mode, assignments are set by Song Play P2: Controller Setup “Realtime Control Knob B-Assign” (2–1b).
- For Sampling mode, assignments are set by Sampling P4: Controller Setup “Realtime Control Knob B-Assign” (4–1b).

note These settings can be made in Program mode for each program, in Combination mode for each combination, and in Sequencer mode for each song. In Song Play mode and Sampling mode, these settings are made for the entire mode.

Realtime Control Knobs B-Assign List

Off	No function
Knob Mod. 1 (CC#17)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobMod1:#17 for “AMS,” or KnobM1:#17 for “Dmod Src.” Simultaneously, CC#17 will be transmitted.
Knob Mod. 2 (CC#19)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobMod2:#19 for “AMS,” or KnobM2:#19 for “Dmod Src.” Simultaneously, CC#19 will be transmitted.
Knob Mod. 3 (CC#20)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobMod3:#20 for “AMS,” or KnobM3:#20 for “Dmod Src.” Simultaneously, CC#20 will be transmitted.
Knob Mod. 4 (CC#21)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobMod4:#21 for “AMS,” or KnobM4:#21 for “Dmod Src.” Simultaneously, CC#21 will be transmitted.
Master Volume	Control the volume. Simultaneously, the universal system exclusive message Master Volume [FOH, 7FH, nn, 04, 01, vv, mm, F7H] will be transmitted to adjust the volume of all tracks or timbres (while preserving the volume balance between tracks or timbres).
Portamento Time (CC#05)	Control the portamento time. CC#5 will be transmitted.
Volume (CC#07)	Control the volume. CC#7 will be transmitted.
Post IFX Pan (CC#08)	Control the panning after the insertion effect. CC#8 will be transmitted.
Pan (CC#10)	Control the oscillator panning. CC#10 will be transmitted.
Expression (CC#11)	Control the expression. CC#11 will be transmitted.
FX Control 1 (CC#12)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to FXCtrl1:#12 . Simultaneously, CC#12 will be transmitted.
FX Control 2 (CC#13)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to FXCtrl2:#13 . Simultaneously, CC#13 will be transmitted.
LFP Cutoff (CC#74)	Control the cutoff frequency of the filter (low pass filter). Simultaneously, CC#74 will be transmitted.
Resonance/HPF (CC#71)	Control the resonance of the filter, or the cutoff frequency of the high pass filter. If the program’s “Filter Type” is Low Pass Resonance , the resonance level will be controlled. If it is Low Pass & High Pass , the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.
Filter EG Int. (CC#79)	Control the EG intensity of the filter. Simultaneously, CC#79 will be transmitted.
F/A Attack (CC#73)	Control the EG attack of the filter and amplifier. Simultaneously, CC#73 will be transmitted.
F/A Decay (CC#75)	Control the EG decay time and slope time of the filter and amplifier. Simultaneously, CC#75 will be transmitted.
F/A Sustain (CC#70)	Control the EG sustain level of the filter and amplifier. Simultaneously, CC#70 will be transmitted.
F/A Release (CC#72)	Control the EG release time of the filter and amplifier. Simultaneously, CC#72 will be transmitted.
Pitch LFO1 Spd (CC#76)	Control the frequency of LFO1. Simultaneously, CC#76 will be transmitted.
Pitch LFO1 Dep (CC#77)	Control the LFO1 intensity of the pitch. Simultaneously, CC#77 will be transmitted.
Pitch LFO1 Dly (CC#78)	Control the delay of LFO1. Simultaneously, CC#78 will be transmitted.
SW 1 Mod. (CC#80)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to SW1:CC#80 . Simultaneously, CC#80 will be transmitted.
SW 2 Mod. (CC#81)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to SW2:CC#81 . Simultaneously, CC#81 will be transmitted.
Foot Switch (CC#82)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to FootSW:#82 . Simultaneously, CC#82 will be transmitted.
MIDI CC#83 (CC#83)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to MIDI:CC#83 . Simultaneously, CC#83 will be transmitted.
MFX Send 1 (CC#93)	Control the send level to Master Effect1. Simultaneously, CC#93 will be transmitted.
MFX Send 2 (CC#91)	Control the send level to Master Effect2. Simultaneously, CC#91 will be transmitted.
MIDI CC#00...CC#95	The specified MIDI control change (CC#) will be transmitted. If the TRITON is set so as to be controlled by the control change message, the corresponding control will occur.

 The A-mode functions of the REALTIME CONTROLS are fixed.

Knob1-A: LPF CUTOFF (Filter LPF Cutoff: CC#74)

Control the low pass filter cutoff frequency of the filter. Simultaneously, CC#74 will be transmitted.

Knob2-A: RESONANCE/HPF (Filter Resonance/HPF Cutoff: CC#71)

Control the resonance level or the cutoff frequency of the high pass filter. If the program "Filter Type" is **Low Pass Resonance**, the resonance level will be controlled. If "Filter Type" is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.

Knob3-A: EG-Intensity (Filter EG Intensity: CC#79)

Control the filter EG intensity. Simultaneously, CC#79 will be transmitted.


Knob4-A: EG-Release (Filter, Amplifier EG Release: CC#72)

Control the release time of the filter and amplifier EG. Simultaneously, CC#72 will be transmitted.

Foot Switch Assign

You can assign the function of an assignable switch (separately sold Korg PS-1 option) connected to the ASSIGNABLE SWITCH jack.

- This setting is made in Global P2: Controller "Foot Switch Assign" (2-1a).

 If you select a function that includes a CC#, that MIDI control change message will be transmitted each time the switch is turned on/off. (Off: 0, On: 127)

Portamento SW (CC#65)

When the "Oscillator Mode" is **Single**, turning the switch on will apply portamento regardless of the P2: Edit-Pitch "Enable" setting, and turning the switch off will not apply portamento.

If "Oscillator Mode" is **Double**, and if the P2: Edit-Pitch "Enable" setting is the same for OSC1 and 2 (i.e., **Enable** or **Disable** for both OSC1 and 2), then portamento will be applied to OSC1 and 2 when the switch is turned on, and portamento will not be applied to OSC1 and 2 when the switch is turned off.

If the P2: Edit-Pitch "Portamento Enable" setting is different for OSC1 and 2 (i.e., OSC1 is **Enable** and OSC2 is **Disable**, or OSC1 is **Disable** and OSC2 is **Enable**), then portamento will be applied to the OSC whose setting is **Enable** when the switch is turned on, and portamento will be applied to neither OSC when the switch is turned off.

Foot Switch Assign List

Off	The connected foot switch will not function.
Foot SW (CC#82)	Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set "AMS" or "Dmod Src" to Foot SW:#82 .
Portamento SW (CC#65)	Control portamento on/off.
Sostenuto (CC#66)	Control the sostenuto effect (which holds only the keys (Note No.) that were being held at the moment that the pedal switch was turned on).
Soft (CC#67)	Turn the soft pedal effect on/off.
Arpeggio SW	Turn the arpeggiator on/off. The NRPN message [Bn 63 00 Bn 62 02 Bn 06 00 (off) or 7F (on)] will be transmitted each time this is turned on/off.
Program Up	The switch can be used to select programs or combinations. When in Program P0: Play, the program that follows the currently selected program will be selected. When in Combination P0: Play, the combination that follows the currently selected combination will be selected. Simultaneously, a Bank Select message and Program Change message will be transmitted.
Program Down	The switch can be used to select programs or combinations. When in Program P0: Play, the program that precedes the currently selected program will be selected. When in Combination P0: Play, the combination that precedes the currently selected combination will be selected. Simultaneously, a Bank Select message and Program Change message will be transmitted.
Song Start/Stop	The switch can be used to start/stop the sequencer. Simultaneously, a MIDI Start or Stop message will be transmitted.
Song Punch In/Out	If Sequencer P0: Preference "Recording Setup"(0-7a) is set to Manual Punch In , the switch can be used to punch-in and punch-out when recording on the sequencer.
Cue Repeat Control	This can be used if in Sequencer P1: Cue List, the "Repeat" (1-1d) setting of each step has been set to FS . Turning the pedal switch on while that step is repeating will be the trigger for advancing to the next step. When the end of the song is reached, this will advance to the next step (song).

Foot Pedal Assign

You can assign the function that will be controlled by an assignable pedal (separately sold Korg XVP-10 or EXP-2 option) connected to the ASSIGNABLE PEDAL jack.

- This setting is made in Global P2: Controller “Foot Pedal Assign” (2–1a).

MIDI If you select a function that includes a CC#, that MIDI control change message will be transmitted each time the pedal is operated. (min: 0, max: 127)

Foot Pedal Assign List

Off	The connected pedal will not function.
Master Volume	Control the volume. Simultaneously, the universal exclusive message Master Volume [F0H, 7FH, nn, 04, 01, vv, mm, F7H] will be transmitted to control the volume of all timbres or tracks (while preserving the volume balance between timbres or tracks).
Foot Pedal (CC#04)	Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to Pedal:CC#04 .
Portamento Time (CC#05)	Control the speed at which portamento will change the pitch.
Volume (CC#07)	Control the volume of a Program, of a timbre in a Combination, or of a track in Sequencer/Song Play modes.
Post IFX Pan (CC#08)	Control the pan after passing through the insertion effect.
Pan (CC#10)	Control the pan of a Program, of a timbre in a Combination, or of a track in Sequencer/Song Play modes.
Expression (CC#11)	Control the volume of a Program, of a timbre in a Combination, or of a track in Sequencer/Song Play modes. Expression is multiplied with the Volume value to determine the actual volume level.
FX Control 1 (CC#12)	Control Effect Dynamic Modulation. To control this, set Dmod Src to “FXCtrl1:#12.
FX Control 2 (CC#13)	Control Effect Dynamic Modulation. To control this, set Dmod Src to “FXCtrl2:#13.
MFX Send 1 (CC#93)	Control the send level to master effect 1 (MFX1) from a Program, a timbre in a Combination, or a track in Sequencer/Song Play modes. Simultaneously, this will also control the send level to master effect 1 (MFX1) from after the insertion effect of the matching MIDI channel.
MFX Send 2 (CC#91)	Control the send level to master effect 2 (MFX2) from a Program, a timbre in a Combination, or a track in Sequencer/Song Play modes. Simultaneously, this will also control the send level to master effect 2 (MFX2) from after the insertion effect of the matching MIDI channel.

MIDI transmission/reception when the TRITON's controllers are operated

The following table shows the relation between the MIDI messages that are transmitted when the TRITON's controllers are operated, and the AMS (alternate modulation source) or DMS (dynamic modulation source) that correspond to each MIDI message. # indicates a fixed function, and * indicates an assignable function.

When one of the TRITON's controllers is operated, the corresponding or the assigned control change will be transmitted. Pitch Bend messages will be transmitted only when the joystick is moved in the X (horizontal) direction. The operation in each mode is described below. (Explanations are given only for control changes, but the same applies to pitch bend as well.)

	TRITON controller												Available for AMS	Available for DMOD
	Joy Stick	Ribbon	Value Slider	Realtime Controls A	Realtime Controls B	Gate Knob	Velocity Knob	SW1,2	ARP On/Off	Damper	Assign-able Switch	Assign-able Pedal		
MIDI channel messages														
													*	*
													*	*
													*	*
CC#	0				*									
	1	Modulation 1	# (+Y)		*								*	*
	2	Modulation 2	# (-Y)		*								*	*
	3	-			*									
	4	Foot controller			*							*	*	*
	5	Portamento time			*									
	6	Data entry (MSB)			*									
	7	Volume			*							*	*	*
	8	Post insertion effect panpot			*							*	*	*
	9	-			*									
	10	Panpot			*							*	*	*
	11	Expression			*							*	*	*
	12	Effect control 1			*							*	*	*
	13	Effect control 2			*							*	*	*
	14...15	-			*									
	16	Ribbon controller	#		*								*	*
	17	Knob modulation 1			*								*	*
	18	Controller (CC#18)		#	*								*	*
	19	Knob modulation 2			*								*	*
	20	Knob modulation 3			*								*	*
	21	Knob modulation 4			*								*	*
	22...31	-			*									
	32	Bank select (LSB)			*									
	33...37	-			*									
	38	Data entry (LSB)			*									
	39...63	-			*									
	64	Damper			*					#			*	*
	65	Portamento On/Off			*			*					*	*
	66	Sostenuto On/Off			*						*		*	*
	67	Soft			*						*		*	*
	68...69	-			*									
	70	Sustain level			*									
	71	Filter resonance level/High pass filter cutoff frequency			*	(Knob2)								
	72	Release time			*	(Knob4)								
	73	Attack time			*									
	74	Low pass filter cutoff frequency			*	(Knob1)								
	75	Decay time			*									
	76	LFO1 speed			*									
	77	LFO1 depth (pitch)			*									
	78	LFO1 delay			*									
	79	Filter EG intensity			*	(Knob3)								
	80	SW1 modulation On/Off			*			*	(SW1)				*	*
	81	SW2 modulation On/Off			*			*	(SW2)				*	*
	82	Foot switch On/Off			*						*		*	*
	83	Controller (CC#83)			*								*	*
	84...90	-			*									
	91	Effect depth 1 (send 2 level)			*							*	*	*
	92	Effect depth 2 (insertion effect 1,2,3,4,5 On/Off)			*							*	*	*
	93	Effect depth 3 (send 1 level)			*							*	*	*
	94	Effect depth 4 (master effect 1 On/Off)			*							*	*	*
	95	Effect depth 5 (master effect 2 On/Off)			*							*	*	*
	96	Data increment			*									
	97	Data decrement			*									
	98	NRPN(LSB)			*									
		2: Arpeggiator on/off switch			*					#			*	*
		10: Arpeggiator gate control			*					#			*	*
		11: Arpeggiator velocity control			*					#			*	*
	99	NRPN(MSB) 0			*					#		*	*	*
	100	RPN(LSB)			*					#		*	*	*
		0: Bend range			*									
		1: Fine tune			*									
		2: Coarse tune			*									
	101	RPN(MSB) 0			*					#		*	*	*
	102...127	-			*									
		Program change			*								*	*
		Channel after touch			*								*	*
		Bender change	# (X)		*								*	*
		Universal exclusive			*								*	*
		Master volume			*							*	*	*
		Master balance			*							*	*	*
		Master fine tune			*							*	*	*
		Master coarse tune			*							*	*	*

Program mode

When one of the TRITON's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" Global P1: 1-1a).

- ▶ If the B-mode of a REALTIME CONTROLS [1]-[4] knob or the assignable pedal has been set to **Master Volume**, the universal system exclusive message Master Volume will be transmitted.

Combination mode

When one of the TRITON's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" Global P1: 1-1a).

Simultaneously, the message will also be transmitted on the MIDI channel ("MIDI Channel" Combination P2: 2-1a) of any timbre whose "Status" (Combination P0:0-1f, P2: 2-1a) is **EXT** or **EX2**.

When one of the TRITON's controllers is operated, its effect will apply to any timbre whose "Status" is **INT** and whose "MIDI Channel" setting is either **Gch** or the same as the global MIDI channel.

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted only on the global MIDI channel.
- ▶ You can make settings for MIDI Filter (Combination P3) to **enable** or **disable** control changes and controllers for each timbre. When **checked**, the above operations will be enabled.

Effect dynamic modulation can be controlled when the "Ctrl Ch" (Combination P8: 8-3a, P9: 9-2a, 9-4a) setting for IFX1-5, MFX1, 2, or MEQ is either set to **Gch** or to the same channel as the global MIDI channel. (In the case of **All Routed**, control is possible on the MIDI channel of any routed timbre.)

Sequencer mode

When one of the TRITON's controllers is operated, its effect will apply to the track 1-16 that is selected by "Track Select" (Sequencer P0: 0-1e).

If the "Status" (Sequencer P2: 2-1a, 2-2a) of the track selected by "Track Select" is **EXT**, **EX2**, or **BTH**, a control change message will be transmitted on the MIDI channel specified by "MIDI Channel" (Sequencer P2: 2-1a, 2-2a). If the "Status" is **INT** or **BTH**, operating one of the TRITON's controllers will affect only that track. Simultaneously, the same effect will also apply to any track with the same "MIDI Channel" setting.

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.
- ▶ You can make settings for MIDI Filter (Sequencer P3) to **enable** or **disable** control changes and controllers for each track. When checked, the operations effective for a "Status" of **INT** or **BTH** will be enabled. Tracks whose "Status" is **EXT**, **EX2**, or **BTH** will transmit control changes regardless of this setting.

Effect dynamic modulation can be controlled when the "Ctrl Ch" (Sequencer P8: 8-4a, P9: 9-2a, 9-4a) setting for IFX1-5, MFX1, 2, or MEQ matches the MIDI channel of the track selected by "Track Select." (In the case of **All Routed**, control is possible on the MIDI channel of all routed tracks.)

If one of the TRITON's controllers is operated during real-time recording, the corresponding or assigned control change will be recorded.

Song Play mode

When one of the TRITON's controllers is operated, the effect will apply to the track 1-16 that is selected by "Play Track Select" (Song Play P0: 0-1g).

If the "Status" (Song Play P1: 1-1a, 1-2a) of the track selected by "Play Track Select" is either **EXT** or **BTH**, control change messages will be transmitted on the MIDI channel of the track (or in the case of Song Play mode, on MIDI channels 1-16 for tracks 1-16).

If the "Status" is **INT** or **BTH**, operating one of the TRITON's controllers will affect that track.

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.

Effect dynamic modulation can be controlled when the "Ctrl Ch" (Song Play P8: 8-4a, P9: 9-2a, 9-4a) setting for IFX1-5, MFX1, 2, or MEQ matches the MIDI channel of the track selected by "Track Select." (In the case of **All Routed**, control is possible on the MIDI channel of all routed tracks.)

Sampling mode

When one of the TRITON's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" Global P1: 1-1a).

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.
- ▶ It is not possible to make AMS settings in Sampling mode.

TRITON operations when control changes are transmitted/ received

The following table shows the operations that the TRITON will perform when control change messages are received, and the relation between settings and controller movements on the TRITON

CC#	Control	Value	Function
0	Bank select (MSB)	0...127	bank select message MSB *1
1	Modulation 1	0...127	corresponds to joystick movement in the +Y direction (away from yourself)
2	Modulation 2	0...127	corresponds to joystick movement in the -Y direction (toward yourself)
4	Foot controller	0...127	corresponds to when the assignable pedal function is set to Foot Pedal
5	Portamento time	0...127	portamento time
6	Data entry (MSB)	0...127	MSB of RPN and NRPN data *2
7	Volume	0...127	volume *3
8	Post insertion effect panpot	0...127	pan after the insertion effect
10	Panpot	0...127	pan
11	Expression	0...127	volume *3
12	Effect control 1	0...127	corresponds to effect dynamic control source FXCtrl1
13	Effect control 2	0...127	corresponds to effect dynamic control source FXCtrl2
16	Ribbon controller	0...127	corresponds to ribbon controller operation
17	Knob modulation 1	0...127	corresponds to when Knob Mod.1 is assigned as the B-mode function of a REALTIME CONTROLS knob
18	Controller (CC#18)	0...127	for control of Alternate Modulation or Effect Dynamic Modulation *8
19	Knob modulation 2	0...127	corresponds to when Knob Mod.2 is assigned as the B-mode function of a REALTIME CONTROLS knob
20	Knob modulation 3	0...127	corresponds to when Knob Mod.3 is assigned as the B-mode function of a REALTIME CONTROLS knob
21	Knob modulation 4	0...127	corresponds to when Knob Mod.4 is assigned as the B-mode function of a REALTIME CONTROLS knob
32	Bank select (LSB)	0...127	LSB of bank select message *1
38	Data entry (LSB)	0...127	LSB of RPN or NRPN data *2
64	Damper	0...127	damper effect
65	Portamento On/Off	0...63(Off), 64...127(On)	turn the portamento effect on/off
66	Sostenuto On/Off	0...63(Off), 64...127(On)	turn the sostenuto effect on/off
67	Soft	0...127	soft pedal effect
70	Sustain level	0...127	sustain levels of the filter EG and amp EG *4
71	Filter resonance level	0...127	resonance level of the filter *5
	High pass filter cutoff frequency	0...127	cutoff frequency of the high pass filter *4
72	Release time	0...127	release times of the filter EG and amp EG *4
73	Attack time	0...127	attack times of the filter EG and amp EG *4
74	Low pass filter cutoff frequency	0...127	cutoff frequency of the low pass filter *4
75	Decay time	0...127	decay times/slope times of the filter EG and amp EG *4
76	LFO1 speed	0...127	LFO1 speed *4
77	LFO1 depth	0...127	pitch LFO1 intensity *4
78	LFO1 delay	0...127	LFO1 delay *4
79	Filter EG intensity	0...127	filter EG intensity *4
80	Panel switch 1 On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW1 function is set to SW1 Mod.
81	Panel switch 2 On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW2 function is set to SW2 Mod.
82	Foot switch On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the function of the assignable foot switch is set to Foot SW
83	Controller (CC#83)	0...127	for controlling Alternate Modulation or Effect Dynamic Modulation
91	Effect 1 depth	0...127	send 2 level
92	Effect 2 depth	0(Off), 1...127(On)	turn insertion effect 1, 2, 3, 4, 5 on/off *6
93	Effect 3 depth	0...127	send 1 level
94	Effect 4 depth	0(Off), 1...127(On)	master effect 1 on/off *6
95	Effect 5 depth	0(Off), 1...127(On)	master effect 2 on/off *6
96	Data increment	0	
97	Data decrement	0	
98	NRPN(LSB)	2 10 11	corresponds to the arpeggiator on/off switch *7 corresponds to the arpeggiator Gate control knob *7 corresponds to the arpeggiator Velocity control knob *7
99	NRPN(MSB)	0	MSB of NRPN
100	RPN(LSB)	0	select the pitch bend range *2
		1	select Fine Tune *2
		2	select Coarse Tune *2
101	RPN(MSB)	0	MSB of RPN

Any control change number (CC#00–95) can be assigned as the B-mode function of a REALTIME CONTROLS knob. In this case, the transmitted values will all be 0–127.

*1 On the TRITON’s sequencer, bank select messages are normally specified as a program change event (“Event Edit” Sequencer P5: 5–1B). However in some cases this will be insufficient when you wish to change banks on an external device. In such cases, you can use CC#00 and CC#32 to specify the banks.

For information on the relation between bank select numbers and the banks of your external device, refer to the owner’s manual for your external device.

*2 Unlike conventional control changes, pitch bend range, fine tune, and coarse tune settings are made using RPC (Registered Parameter Control) messages. In Program, Combination, Sequencer, and Song Play modes, you can use RPC messages to control the bend range and tuning for each program, combination (Combination), or track (Sequencer, Song Play). The procedure is to use an RPN (Registered Parameter Number) message to select the parameter that you wish to edit, and then use Data Entry to input a value for that parameter. To select the parameter, use CC#100 (with a value of 00–02) and CC#101 (with a value of 00). use CC#06 and CC#38 to enter the data.

The data entry values for each parameter and the corresponding settings are as follows.

RPN=0 (Pitch bend range)

CC#06	CC#38	Parameter value (Semitone steps)
00	00	0
01	00	+ 1
⋮	⋮	⋮
12	0	+12

RPN=1 (Fine tune)

CC#06	CC#38	Parameter value (1 cent steps)
32	00	-50
⋮	⋮	⋮
48	00	-25
⋮	⋮	⋮
64	00	0
⋮	⋮	⋮
96	00	+50

RPN=2 (Coarse tune)

CC#06	CC#38	Parameter value (Semitone steps)
40	00	-24
⋮	⋮	⋮
52	00	-12
⋮	⋮	⋮
64	00	0
⋮	⋮	⋮
88	00	+24

For example, if in Sequencer mode you wish to set a track that is receiving channel 1 to a transpose (coarse tuning) value of -12, you would first transmit [B0, 64, 02] (64H=CC#100) and [B0, 65, 00] (65H=CC#101) to the TRITON to select the RPN coarse tune. Then you would set this to -12 by transmitting [B0, 06, 34] (06H=CC#6), 34H=52 (corresponds to -12), and [B0, 26, 00] (26H=CC#38, 00H=0).

*3 The volume of the TRITON is determined by multiplying the Volume (CC#07) with the Expression (CC#11). In Sequencer and Song Play modes when you stop the song playback and return the location to the beginning of the track, the Volume will be set to the starting value, and the Expression will be set to the maximum value (127).

*4 A value of 64 will correspond to the value specified by the program parameter. 0 will be the minimum, and 127 will be the maximum. Changing from 63–1 or from 65–126 will adjust the effect from the program parameter setting toward the minimum value or maximum value. The internal program parameters listed in (*4, *5) will be controlled.

*5 If the filter type of the corresponding program is **Low Pass Resonance**, the filter resonance level will be controlled. If the filter type is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled.

*4, *5

CC#70–79 correspond to the following program parameters of the TRITON.

In Program mode, when CC#70–79 is received on the global MIDI channel (“MIDI Channel” Global P1: 1–1A), or when a REALTIME CONTROLS [1]–[4] knob is operated in A-mode or in B-mode when the function is assigned to CC#70–79, the corresponding program parameter will be edited temporarily. You can execute “Write Program” (Program 0–1A) to save that state (except for some parameters). When you execute “Write Program,” the values of the corresponding program parameters will be rewritten.

In Sampling mode when playing the currently selected multisample on the keyboard, the same control changes or knob operations as in Program mode will temporarily edit the corresponding program parameters. You can use “Convert MS to Program” (Sampling 0–1G) to save that state as a program (except for some parameters).

In Combination, Sequencer, and Song Play modes, the program parameters of the program for the timbre/track of the corresponding MIDI channel will change, but this state can not be saved directly in the program.

CC#70: Sustain level

Corresponds to “Filter/ Amp EG Sustain Level” (Program P3: Filter 1/2 EG, P4: Amp 1/2 EG tab).

CC#71: Filter resonance level/High pass filter cutoff frequency
Corresponds to “Filter A Resonance” (Program P3: Filter 1/2 tab).

Corresponds to “Filter B Frequency” (Program P3: Filter 1/2 tab).

CC#72: Release time

Corresponds to “Filter/ Amp EG Release Time” (Program P3: Filter 1/2 EG tab, P4: Amp 1/2 EG tab).

CC#73: Attack time

Corresponds to Filter/ Amp EG Attack Time” (Program P3: Filter 1/2 EG tab, P4: Amp 1/2 EG tab)

Corresponds to “Amp EG Start Level” (Program P4: Filter 1/2 EG tab).

Corresponds to “Amp EG Attack Level” (Program P4: Filter 1/2 EG tab).

Corresponds to “Amp EG Level Modulation St” (Program P4: Filter 1/2 EG tab).

Corresponds to “Amp EG Time Modulation At” (Program P4: Filter 1/2 EG tab).

CC#74: Low pass filter cutoff frequency

Corresponds to “Filter A Frequency” (Program P3: Filter 1/2 tab).

Corresponds to “Filter B Frequency” (Program P3: Filter 1/2 tab).

CC#75: Decay time

Corresponds to “Filter/ Amp EG Decay Time” (Program P3: Filter 1/2 EG tab, P4: Amp 1/2 EG tab)

Corresponds to “Filter/ Amp EG Slope Time” (Program P3: Filter 1/2 EG tab, P4: Amp 1/2 EG tab)

CC#76: LFO1 speed

Corresponds to “LFO 1 Frequency” (Program P5: OSC1/2 LFO1 tab).

CC#77: LFO1 depth (pitch LFO1 intensity)

Corresponds to “Pitch LFO1 Intensity” (Program P2: OSC1/2 P.Mod tab).

CC#78: LFO1 delay

Corresponds to “LFO1 Delay” (Program P5: OSC1/2 LFO1 tab).

CC#79: Filter EG intensity

Corresponds to “Filter EG Intensity to A, B” (Program P3: Filter 1/2 Mod. tab).

Different parameters are controlled for the bank F programs that are available when the separately sold EXB-MOSS option is installed. (see EXB-MOSS owner’s manual)

*6 Controlled on the global MIDI channel.

*7 NRPN (Non Registered Parameter Number) and Data Entry can be used to control the following parameters.

Arpeggiator on/off

[Bn 63 00 Bn 62 02 Bn 06 nn] (nn:00–3F off, 40–7F on)

Arpeggiator gate control

[Bn 63 00 Bn 62 0A Bn 06 nn] (nn:00–7F)

Arpeggiator velocity control

[Bn 63 00 Bn 62 0B Bn 06 nn] (nn:00–7F)

*8 Corresponds to the operation of the [VALUE] slider as a controller in Program or Combination P0: Play when “Program Number: name” or “Combination Number: name” is the edit cell.

Disk mode information

Chunks that are supported

AIFF files

When data is loaded into the TRITON, the following four chunks are referenced: Common chunk, Sound Data chunk, Marker chunk, and Instrument chunk. Other chunks are ignored.

Restrictions on the parameters in each chunk are described below.

Common chunk

Only one (mono) or two (stereo) channels are supported. Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

Sound Data chunk

Offset and block size are ignored. (Block-Aligning Sound Data is not supported.)

Marker chunk

Up to eight markers are supported. The ninth and subsequent markers will be ignored.

Instrument chunk

If the loop play mode is ForwardBackwardLooping, this will be handled as ForwardLooping. baseNote, detune, lowNote, highNote, lowVelocity, highVelocity, gain, and releaseLoop will be ignored.

WAVE files

When loading, the TRITON will reference the Format chunk and the Wave chunk. The following limitations apply.

Format chunk

Standard PCM format is the only format category that is supported.

Only one (mono) or two (stereo) channels are supported. Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

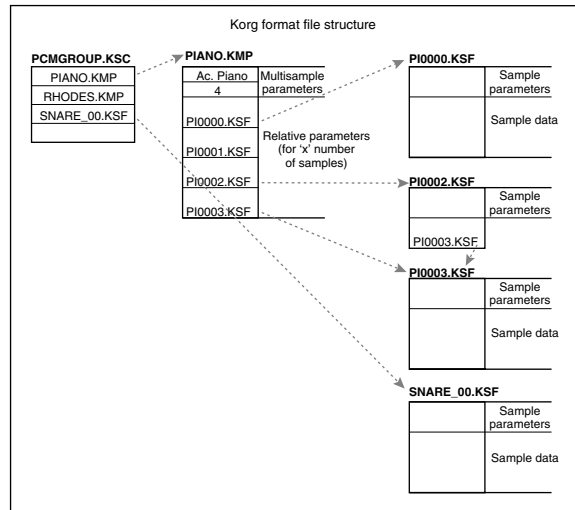
Wave data

The Wave List chunk is not supported.

About KORG format files

KORG format file structure

There are three types of files: .KMP files for multisamples, .KSF files for samples, and .KSC files which handle the first two as a collection. Similar to the IFF format, .KMP/.KSF files consist of chunks.



Unless stated otherwise, all data is MSByte first.

● When a Korg format file saved on the TRITON is loaded by the TRINITY,

- Of the parameters for each song, the following parameters are ignored (the chunk that includes the parameter is given in parentheses)

Filter cutoff	(RLP1 chunk)
Transpose	(RLP2 chunk)
Resonance	(RLP2 chunk)
Attack	(RLP2 chunk)
Decay	(RLP2 chunk)

- Of the parameters for each sample, reverse playback and loop off settings (included in the attribute parameters of the SMD1 chunk) will be ignored, and will be handled respectively as forward playback and loop on. Only the twelve types of sampling frequency supported by the Trinity will be loaded correctly, and if the frequency is unsupported, the next lowest frequency will be selected.

- Split sample files cannot be loaded.

● When a Korg format file saved on the TRINITY is loaded into the TRITON,

- Compressed sample files cannot be loaded.
- Multisamples that use internal samples of the Trinity will be assigned identically-numbered RAM samples.

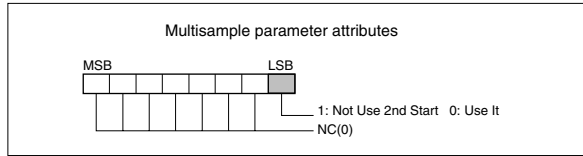
KMP (KORG Multisample Parameter) files

These consist of the following chunks.

● Multisample parameter chunk

Chunk ID ('MSP1')	[4 bytes]
Chunk size (fixed at 18)	[4 bytes]
Multisample name	[16 bytes]
Number of samples in the multisample	[1 byte]
Attributes	[1 byte]

- Attributes



- **Relative parameter chunk 1**

Chunk ID ('RLP1')	[4 bytes]
Chunk size (18 × number of samples in the multisample)	[4 bytes]
Original key	[1 byte]
MSB 1: Non Transpose 0: Transpose	
bits 6–0 original key	
Top key (0–127)	[1 byte]
Tune (–99...+99 cents)	[1 byte]
Level (–99...+99 cents)	[1 byte]
Pan (0–127 currently unused)	[1 byte]
Filter cutoff (–99...+99 currently unused)	[1 byte]
KSF filename (including period and extension)	[12 bytes] × number of samples in the multisample

If the .KSF filename is "SKIPPEDSAMPL", it will be treated as a sample skipped during loading.
 If the .KSF filename is "INTERNALnnnn", internal samples will be used.

- **Relative parameter chunk 2**

Chunk ID ('RLP2')	[4 bytes]
Chunk size (4)	[4 bytes]
Transposing (–64...+63)	[1 byte]
Resonance (–99...+99)	[1 byte]
Attack (–99...+99)	[1 byte]
Decay (–99...+99)	[1 byte]

- **Multisample number chunk**

Chunk ID('MNO1')	[4 bytes]
Chunk size (4)	[4 bytes]
Multisample number (0–)	[4 bytes]

KSF (KORG Sample File) files

There are four types of structure for these files. One consists of a Sample Parameter chunk, Sample Data chunk, and Sample Number chunk (SMP1 + SMD1 + SNO1). Another consists of a Sample Parameter chunk, Sample Data chunk, Sample Filename chunk, and Sample Number chunk (SMP1 + SMD1 + SMF1 + SNO1). The latter structure is in the case where the sample data of the Sample chunk is empty, and uses the sample data of the .KSF file specified by the Sample Filename chunk (shared sample data).

When saving to a floppy disk and a single disk cannot accommodate all of the data, it is possible to automatically divide the file and continue the save operation.

When a .KSF file is created in this way, the first file will consist of the Sample Parameter chunk, Sample Number chunk, a divided Sample Parameter chunk, and a divided Sample Data chunk (SMP1 + SNO1 + SPD1 + SDD1), and the second and subsequent files will consist of a divided Sample Data chunk (SDD1).

- **Sample parameter chunk**

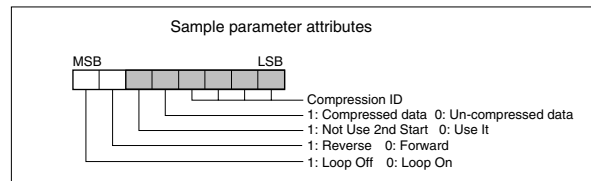
Chunk ID ('SMP1')	[4 bytes]
Chunk size (32)	[4 bytes]
Sample name	[16 bytes]
Default bank (0–3)	[1 bytes]
Start address	[3 bytes]

2nd start address	[4 bytes]
Loop start address	[4 bytes]
Loop end address	[4 bytes]

- **Sample data chunk**

Chunk ID ('SMD1')	[4 bytes]
Chunk size (12 + number of sample databytes)	[4 bytes]
Sampling frequency	[4 bytes]
The sampling frequencies supported by the TRITON series are 48000/47619/44100/32000/31746/31250/29400/24000/23810/22254/22050/21333/21164/20833/19600/16000/15873/15625/14836/14700/14222/14109/13889/13067/12000/11905/11127/11025/10667/10582/10417/9891/9800/9481/9406/9259/8711/8000/7937/7813/7418/7350/7111/7055/6945/6534/6000/5953/5564/5513/5333/5291/5208/4945/4900/4741/4703/4630/4356/4000/3968/3906/3709/3675/3556/3527/3472/3267/3000/2976/2782/2756/2667/2646/2604/2473/2450/2370/2352/2315/2178/2000/1984/1855/1838(Hz).	
Attributes	[1 byte]
Loop tune (–99...+99 cents)	[1 byte]
Number of channels (1)	[1 byte]
Sample size (8/16)	[1 byte]
Number of samples	[4 bytes]
Sample data	variable length

- Attributes



- **Sample number chunk**

Chunk ID ('SNO1')	[4 bytes]
Chunk size (4)	[4 bytes]
Sample number (0–)	[4 bytes]

- **Sample filename chunk**

Chunk ID ('SMF1')	[4 bytes]
Chunk size (12)	[4 bytes]
KSF filename	[12 bytes]

If the .KSF filename is "SKIPPEDSAMPL", it will be treated as a sample skipped during loading.
 If the .KSF filename is "INTERNALnnnn", internal samples will be used.

- **Divided sample parameter chunk**

Chunk ID ('SPD1')	[4 bytes]
Chunk size (12)	[4 bytes]
The following up to the sample size is the same as in the SMD1 chunk	
Sampling frequency	[4 bytes]
Attributes	[1 byte]
Loop tune	[1 byte]
Number of channels	[1 byte]
Sample size	[1 byte]
Number of samples	[4 bytes]
Total number of samples in all divided files	

- **Divided sample data chunk**

Chunk ID ('SDD1')	[4 bytes]
-------------------	-----------

KSC(Korg SScript) file

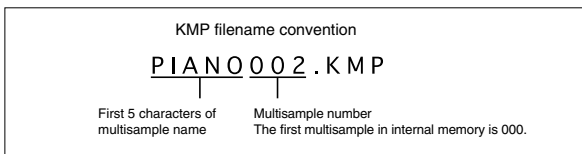
These files are text files which contain a list of filenames for .KMP/.KSF files which are to be handled together.

Lines beginning with # are ignored as comment lines.

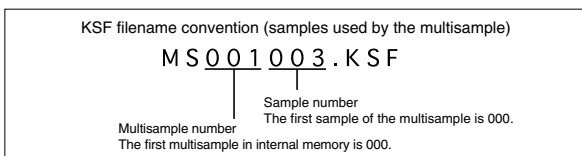
The first line of the file must begin with "#KORG Script Version 1.0" and subsequent lines (except for comment lines) consist only of filename. Only files with an extension of KMP/KSF are processed.

Filename conventions

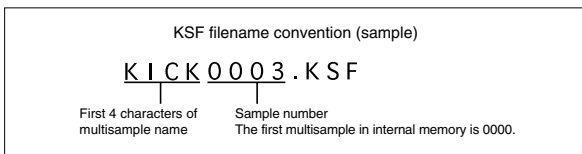
.KMP filename for "Save All" or "Save All Multisamples"



When data is saved using "Save All," "Save All Multisample" or "Save One Multisample," the individual .KSF files used by the Multisample (the .KMP file) are automatically given filenames according to the following convention.



Likewise, when data is saved using "Save All" or "Save All Samples," the individual .KSF files are automatically given filenames according to the following convention.



Various messages

A

Are you sure ?

Meaning: This message asks you to confirm execution. To execute press the OK button. To cancel, press the Cancel button.

C

Can't calibrate

Meaning: Calibration could not be performed correctly.
Action: Try again.

Can't copy/swap double size effect

Meaning: When copying or swapping an insertion effect, you attempted to place a double-size effect in IFX1 or IFX5.
Action: Modify your settings so that a double-size effect is not moved to IFX1 or 5, and execute again.

Can't open pattern

Meaning: When you finished recording or editing, it was not possible to allocate enough memory to open the pattern that was Put into the track. (When it must be opened automatically.) If you press the OK button, the pattern data will be deleted, and the recorded or edited content will be saved. If you press the Cancel button, the recorded or edited content will be discarded.

Continue ?

Completed

Meaning: Execution of the command ended normally.

D

Destination and source are identical

Meaning: When copying or bouncing, the same cue list, song, track or pattern was selected for both the source and destination.
Action: Select a different cue list, song, track, or pattern for the source and destination.

Destination from-measure within the limits of source

Meaning: When executing the Move Measure command for all tracks or within the same track, the specified destination measure is within the source range.
Action: Set a destination measure that is outside of the source range.

Destination is empty

Meaning: When editing, the track or pattern that was specified as the destination contains no musical data.
Action: Select a track or pattern that contains musical data.

Destination measure is empty

Meaning: The measure that was specified as the destination contains no data.
Action: Specify a destination measure that contains data.

Destination multisample already exists

Meaning: A multisample already exists at the destination (save location) multisample.
Action: Either delete the multisample at the destination (save location), or change the save destination multisample number.

Destination multisample and source multisample are identical

Meaning: The same multisample is selected for the source and destination.
Action: Select different multisamples for the source and destination.

Destination sample already exists

Meaning: A sample already exists at the destination (save location).
Action: Either delete the sample at the destination (save location), or change the save destination sample number.

Destination sample data used in source sample

Meaning: Since the sample data at the destination (save location) is also used by the source sample, it cannot be overwritten.
Action: Without using Overwrite, specify a different sample for the destination (save location).

Destination sample is empty

Meaning: The sample for editing is empty.

Destination song is empty

Meaning: The song that was specified as the copy destination or bounce destination does not exist.
Action: Execute the Create New Song command in the dialog box that appears when a new song is selected before copying or bouncing.

Directory is not empty

Meaning: When deleting a directory, files or directories exist within that directory.
Action: Delete all directories or files within the directory.

Disk not formatted

Meaning: When you attempted to perform a high-level format (quick format) of media, the media had not been physically formatted yet.
Action: Execute the Disk mode Utility "Format" to physically format the media (full format).

E

Error in formatting medium

Meaning: An error occurred while performing a physical format (full format) or high-level format (quick format) of the media.
Action: Use other media.

Error in reading from medium

Meaning: An error occurred while reading data from a medium.

Action: Execute the reading operation once again. If the same error occurs, it is possible that the data on the disk has been damaged.

Error in writing to medium

Meaning: An error occurred while writing data to a medium. (Verify error)

Action: It is possible that the floppy disk has been physically damaged. Try another disk. Avoid using the floppy disk that produced the error.

F

File already exists

Meaning: When executing a Create Directory or File Rename operation, a directory or file of the same name already exists on the disk.

Meaning: When executing the Disk mode Utility "Copy" command without using wild cards, the copy destination contained a file of the same name as the copy source.

Action: Either delete the existing directory or file, or specify a different filename.

File is read-only protected

Meaning: You attempted to write to a file or to delete a file that had a read-only attribute.

Meaning: You attempted to save a file to a floppy disk that contained a read-only file of the same name.

Action: Save the file with a different name.

File unavailable

Meaning: You attempted to load or open a file whose format was incorrect.

File/path not found

Meaning: When loading a sample file in Disk mode, the file name specified in the dialog box for selecting a directory hierarchy or other media did not exist in the specified location.

Meaning: When executing the Disk mode Utility command "Delete," the specified file did not exist.

Meaning: When executing the Disk mode Utility command "Copy" and you used a wild card to specify the copy file name, the specified file was not found. Alternatively, the length of the copy source path name exceeded 76 characters.

Meaning: In Disk mode or Song Play mode when you used the Open button to open a directory, the path length including the selected directory name exceeded 76 characters.

Action: Check the file or directory.

Format not supported

Meaning: For an AIFF file etc., you attempted to load a file format that the TRITON series does not support.

Action: If possible, use a computer etc. to convert the data into a format supported by the TRITON, and load it.

I

Illegal file description

Meaning: The filename that you specified when saving a file or creating a directory contained invalid characters.

Action: Change the filename you are specifying. Filenames not permitted by MS-DOS cannot be used as a filename.

Illegal SMF data

Meaning: You attempted to load a file that was not a Standard MIDI File.

Illegal SMF division

Meaning: You attempted to load a Standard MIDI File that was timecode-based.

Illegal SMF format

Meaning: You attempted to load a Standard MIDI File of a format other than 0 or 1.

M

Master Track can't be recorded alone

Meaning: When realtime-recording a single track, you attempted to begin recording with the master track as the current track.

Action: Begin recording with a track 1-16.

Measure size over limit

Meaning: When loading a Standard MIDI File, the number of events in a measure exceeded the maximum (approximately 10,000 events).

Meaning: The attempted edit operation would cause the maximum number of events in a measure (approximately 10,000) to be exceeded.

Action: Use event editing etc. to delete unwanted data.

Measure number over limit

Meaning: The attempted edit operation would cause the track length to exceed 999 measures.

Action: Delete unnecessary measures.

Medium changed

Meaning: When executing the Disk mode Utility command "Copy," the media was exchanged or ejected, and it was not possible to copy between separate media on the same drive.

Medium write protected

Meaning: The floppy disk or other media to which you attempted to save is write-protected.

Action: Turn off write protect on the floppy disk or other media, and execute the command once again.

Memory full

Meaning: In Sequencer mode when editing a song, track or pattern, the total data of all songs has used up all of the sequence data memory, and further editing is not possible.

Action: Delete other song data etc. to increase the amount of free memory.

Meaning: While realtime recording in Sequencer mode, there is no more free memory to accommodate the recorded data, so recording has been forcibly halted.

Meaning: In Disk mode when loading a Standard MIDI File, the sequence memory has filled up.

Action: Delete song data. (If necessary, save the data before deleting it.)

Memory overflow

Meaning: In Disk mode when using "Save Exclusive" to receive exclusive data, the sequence memory has filled up.

Action: If you are receiving two or more sets of exclusive data, transmit them separately to the TRITON.

Meaning: In Disk mode, you attempted to load more sample waveform data than there was free memory capacity.

Action: In Sampling mode, execute Delete sample to create free space in the sample waveform data area, and re-load the data.

Memory protected

Meaning: The internal program, combination, song, drum kit, or user arpeggio pattern is protected.

Action: In Global mode, turn off write-protect, and execute the write or load operation once again.

Multisample L and R are identical

Meaning: Since the destination (save location) L and R multisample numbers are the same, the editing operation could not be executed.

Action: Select a different multisample number for the L and R of the destination (save location).

N

No data

Meaning: When loading a Standard MIDI File, the file contained no events.

No medium

Meaning: When executing a command in Disk mode, no media (floppy disk etc.) was inserted in the drive.

Action: Insert media such as a floppy disk, or mount the drive.

No recording track specified

Meaning: When performing realtime multi-track recording, you attempted to begin recording with no tracks set to REC.

Action: Set the desired tracks for recording to REC.

No space available on medium

Meaning: When you attempted to save a file or create a director, the medium (floppy disk etc.) contained no free space.

Action: Either delete an existing file, or exchange the medium with one that has sufficient free space.

Not enough memory

Meaning: When starting realtime recording in Sequencer mode, the minimum amount of free memory (such as memory for the BAR events up to the recording start location) could not be allocated.

Action: Delete other song data etc. to increase the amount of free memory.

Meaning: When executing "Save Exclusive" in Disk mode, there was no remaining sequence memory. Alternatively, when executing "Load Exclusive," sufficient free sequence memory could not be allocated.

Action: Delete song data. (If necessary, save the data before deleting it.)

Not enough memory to load

Meaning: When you attempted to load a .SNG file in Disk mode, there was insufficient free memory.

Action: Delete other song data etc. to increase the amount of free memory.

Not enough memory to open pattern

Meaning: There was insufficient sequencer memory to open the pattern, so editing is not possible.

Action: Either delete unwanted data such as a song, track, or pattern, or do not open the pattern.

Not enough multisample memory

Meaning: There is insufficient multisample memory. (The number of multisamples would exceed the maximum of 1,000.)

Action: Delete multisamples to increase the amount of free memory.

Not enough relative parameter memory

Meaning: There is insufficient memory for relative parameters. (The number of samples in the multisamples would exceed the maximum of 8,000.)

Action: Delete multisamples or indices of multisamples to increase the amount of free memory.

Not enough sample memory

Meaning: There is insufficient sample memory (for sample parameters or sample waveform data).

Action: Delete samples to increase the amount of free memory.

Not enough sample/multisample locations available

Meaning: The data you attempted to load would exceed the maximum number of multisamples or samples.

Action: In Sampling mode, execute "Delete Multisample" or "Delete Sample" to free a sufficient number, and reload the data.

O

Oscillator Mode conflicts (check PROG P1)

Meaning: In Sampling mode when you executed "Convert MS To Program" with Use Destination Program Parameters checked, the conversion destination program "Oscillator Mode" setting did not match.

Action: In Program mode, set the "Oscillator Mode" of the conversion destination program. If converting a monaural multisample, select Single. If converting a stereo multisample, select Double.

P

Pattern conflicts with events

Meaning: It was not possible to execute the Bounce operation because one of the tracks contained a pattern, and the same measure of the other track contained events or a pattern.

Action: Open the pattern.

Pattern exists across destination to-end-of-measure or source from-measure

Meaning: When moving a measure, the edit operation could not be executed because a pattern had been put in the destination end measure or the source start measure, and had not been opened.

Action: Open the pattern.

Pattern exists in destination or source track Open pattern ?

Meaning: A pattern has been placed in the track that you specified as a destination or source for editing. If you wish to open the pattern and execute (the events of the pattern will be copied), press the OK button. If you wish to execute without opening the pattern, press the Cancel button.

Pattern used in song Continue ?

Meaning: When editing, the specified pattern has been placed in a track. If you wish to execute, press the OK button. If you decide not to execute, press the Cancel button.

R

Root directory is full

Meaning: You attempted to create a file or directory in the root directory of the media, but this would exceed the maximum number of root directory entries.

Action: Either delete an existing file or directory, or exchange media.

S

Sample data used in other sample(s) Continue ?

Meaning: Other sample(s) use the same sample data as the sample that you are editing. To continue editing, press the OK button.

Sample L and R are identical

Meaning: The edit operation could not be executed because the destination (save location) L and R sample numbers are identical.

Action: Select different sample numbers for L and R of the destination (save location).

Sample length is shorter than minimum

Meaning: You attempted to execute an editing operation that would make the sample data shorter than 8 samples.

Action: Change the editing range so that the sample data will be longer than 8 samples.

Sample used in other multisample(s) Continue ?

Meaning: The sample you are editing is used by other multisamples. To continue editing, press the OK button.

Selected file/path is not correct

Meaning: When loading a KSF file that was split across multiple media, the order in which you attempted to load the files was incorrect.

Action: Load the KSF file in the correct order. To view the file number order in which the KSF files were saved, you can check the "Translation" page menu command. (The sample name and number of the first KSF file will be displayed.)

Source is empty

Meaning: No data exists in the track or pattern that you specified as the source.

Action: Specify a track or pattern that contains musical data.

Source sample is empty

Meaning: When executing Insert, Mix, or Paste, the source sample is empty.

Action: Execute the Copy operation before executing Insert, Mix, or Paste.

T

There is no readable data

Meaning: Either the file size is 0 or the file does not contain data that can be accessed by the load or open operation. Alternatively, the data is damaged etc., and cannot be loaded or accessed.

U

Unable to create directory

Meaning: You attempted to create a directory that would exceed the maximum pathname length (76 characters for the full pathname).

Unable to save file

Meaning: When executing the Disk mode Utility command "Copy," the copy destination path length exceeded 76 characters.

Meaning: When saving a file in Disk mode or Song Play mode, the save destination path exceeded 76 characters.

Y

You can't undo last operation Are you sure ?

Meaning: Once you enter event editing (even if you leave event editing without actually editing an event), it will no longer be possible to execute a Compare of the previous edit. If you wish to enter event editing, press the OK button. To cancel, press the Cancel button.

You can't undo this operation Are you sure ?

Meaning: When you exit recording or event editing in Sequencer mode, the memory area for Undo (Compare function) is not allocated. If you wish to keep the data that was just recorded or edited, press the OK button. If you wish to return to the previous data (i.e., to delete the data that was just recorded or edited), press the Cancel button.

Meaning: When editing in Sequencer mode, memory area for Undo (Compare function) cannot be allocated. If you wish to execute the edit, press the OK button. (It will not be possible to return to the state before editing.) If you decide not to execute the edit, press the Cancel button.

Action: In order to allocate memory area for Undo (Compare function), delete unneeded data such as songs, tracks, or patterns. We recommend that you save data to floppy disk before you execute the edit operation.

TRITON-SERIES MIDI IMPLEMENTATION

5.Apr.1999

Consult your local Korg dealer for more information on MIDI System Exclusive implementation.

1-1 TRANSMITTED DATA

1-1 CHANNEL MESSAGES

Status [Hex]	Second [H]	Third [D]	Description (Transmitted by ...)	[H] .Hex, [D] :Decimal
Bn	kk (kk)	40 (64)	Note Off (Key Off)	*1 A
Bn	kk (kk)	vv (vv)	Note On (Key On)	*1 A
An	kk (kk)	vv (vv)	Poly Key Pressure (Seq. recorded data)	T,Q
Bn	00 (00)	mm (mm)	Bank Select (MSB) (Bank keys, Prog/Combi change)	*2 PB
Bn	01 (01)	vv (vv)	Modulation1 (Joy Stick x/y)	
Bn	02 (02)	vv (vv)	Modulation2 (Joy Stick x/y)	
Bn	04 (04)	vv (vv)	Foot Pedal (A.Fd1/Knob-B = Foot Pedal)	C
Bn	05 (05)	vv (vv)	Portamento Time (A.Fd1/Knob-B = Porta.Time,S Chg)	C
Bn	06 (06)	vv (vv)	Data Entry (MSB) (ARP ON/OFF, GATE, VELOCITY) *3	C
Bn	07 (07)	vv (vv)	Volume (A.Fd1/Knob-B = Volume, S/C Chg)	C
Bn	08 (08)	vv (vv)	Tempo (A.Fd1/Knob-B = PostPctn,S Chg)	C
Bn	09 (09)	vv (vv)	Expression (A.Fd1/Knob-B = Expr.Seg)	C
Bn	0C (12)	vv (vv)	Effect Control 1 (A.Fd1/Knob-B = FX Ctrl1)	C
Bn	0D (13)	vv (vv)	Effect Control 2 (A.Fd1/Knob-B = FX Ctrl2)	C
Bn	10 (16)	vv (vv)	Multi Purpose Ctrl1 (Ribbon Controller)	C
Bn	11 (17)	vv (vv)	Multi Purpose Ctrl11 (Knob-B = Knob Mod1)	C
Bn	12 (18)	vv (vv)	Multi Purpose Ctrl12 (Value Slider)	C
Bn	13 (19)	vv (vv)	Multi Purpose Ctrl13 (Knob-B = Knob Mod2)	C
Bn	14 (20)	vv (vv)	Multi Purpose Ctrl14 (Knob-B = Knob Mod3)	C
Bn	15 (21)	vv (vv)	Multi Purpose Ctrl15 (Knob-B = Knob Mod4)	C
Bn	20 (32)	bb (bb)	Bank Select (LSB) (Bank keys, Prog/Combi change)	*2 PB
Bn	40 (64)	vv (vv)	Hold1 (Damp)	
Bn	41 (65)	00/7F (00/127)	Portamento Off/On (SM1/SW2/A.SW = Porta.SW, S Chg)	C
Bn	42 (66)	00/7F (00/127)	Sostenuto Off/On (A.SW = Porta.SW)	C
Bn	43 (67)	vv (vv)	Soft Pedal (A.SW = Porta.SW)	C
Bn	46 (70)	vv (vv)	Sound Controller 1 (Knob-B = F/A Sustain)	C
Bn	47 (71)	vv (vv)	Sound Controller 2 (Knob-1A, Knob-B = Resonance/HPF)	C
Bn	48 (72)	vv (vv)	Sound Controller 3 (Knob-1A, Knob-B = F/A Release)	C
Bn	49 (73)	vv (vv)	Sound Controller 4 (Knob-B = F/A Attack)	C
Bn	4A (74)	vv (vv)	Sound Controller 5 (Knob-1A, Knob-B = LPF Cutoff)	C
Bn	4B (75)	vv (vv)	Sound Controller 6 (Knob-B = F/A Decay)	C
Bn	4C (76)	vv (vv)	Sound Controller 7 (Knob-B = Pitch LP01 Spd)	C
Bn	4D (77)	vv (vv)	Sound Controller 8 (Knob-B = Pitch LP01 Dep)	C
Bn	4E (78)	vv (vv)	Sound Controller 9 (Knob-B = Pitch LP01 Play)	C
Bn	4F (79)	vv (vv)	Sound Controller 10 (Knob-1A, Knob-B = Filter EG Int)	C
Bn	50 (80)	00/7F (00/127)	Multi Purpose Ctrl15 (SW2)	C
Bn	51 (81)	00/7F (00/127)	Multi Purpose Ctrl16 (SW2)	C
Bn	52 (82)	00/7F (00/127)	Multi Purpose Ctrl17 (Foot SW)	C
Bn	5B (91)	vv (vv)	Effect 1 Depth (A.Fd1 = MFX Send2, S Chg)	C
Bn	5C (92)	00/7F (00/127)	Effect 2 Depth (All Inset FX Off/On)	C
Bn	5D (93)	vv (vv)	Effect 3 Depth (A.Fd1 = MFX Send1, S Chg)	C
Bn	5E (94)	00/7F (00/127)	Effect 4 Depth (Master FX1 Off/On)	C
Bn	5F (95)	00/7F (00/127)	Effect 5 Depth (Master FX2 Off/On)	C
Bn	cc (cc)	vv (vv)	Control (cc)=0-95 (Knob-B = MIDI (CH00-95))	C
Bn	62 (98)	ss (ss)	NRPN Param No. (LSB) (ARP ON/OFF, GATE, VELOCITY) *3	C
Bn	63 (99)	tt (tt)	NRPN Param No. (MSB) (ARP ON/OFF, GATE, VELOCITY) *3	C
Bn	cc (cc)	vv (vv)	Control (cc)=0-101 (Seq. recorded data)	Q
Cn	pp (pp)	-- --	Program Change (Prog/Combi change)	*2 P
Bn	vv (vv)	-- --	Channel Pressure (After Touch)	T
Bn	bb (bb)	bb (bb)	Bender Change (Joy Stick X)	C

A.Fd1 : Assignable Pedal
 A.SW : Assignable Switch
 S Chg : Transmitted when change a Song No.(Seq. mode) . (Status = EXT,EX2,BTH)
 C/S Chg : Transmitted when change a Combination of Song No.(Seq. mode) . (Status = EXT,EX2,BTH)
 n : MIDI Channel No. (0 - 15) ***** Usually Global Channel.
 g : When in Combination/Sequencer/Song Play mode, each timbre's/track's channel. (Status = EXT,EX2 or BTH)
 g : Always Global Channel No. (0 - 15)

ENA = A : Always Enabled
 C : Enabled when Enable Control Change in Global mode is checked
 P : Enabled when Enable Program Change in Global mode is checked
 PB: Enabled when Enable Program and Bank Change in Global mode is checked
 T : Enabled when Enable After Touch in Global mode is checked
 Q : Enabled when Sequencer is playing(transmit), recording(receive)

*1 : kk = 24 - 108 : TRITON (61keys + Transpose)
 = 16 - 115 : TRITON pro (76keys + Transpose)
 = 09 - 120 : TRITON PRO (88keys + Transpose)
 = 00 - 127 : Sequencer and Arpeggiator

*2 : Program BankA 000 - 127 : BankA 000 - 127 : mm,bb,pp (Bank Map is KORG) = 00,00, 00 - 7F = 3F,00, 00 - 7F
 B 000 - 127 : B 000 - 127 : 00,01, 00 - 7F = 3F,01, 00 - 7F
 C 000 - 127 : C 000 - 127 : 00,02, 00 - 7F = 3F,02, 00 - 7F
 D 000 - 127 : D 000 - 127 : 00,03, 00 - 7F = 3F,03, 00 - 7F
 E 000 - 127 : 00,04, 00 - 7F = 3F,04, 00 - 7F
 F 000 - 127 : 00,05, 00 - 7F = 3F,05, 00 - 7F
 g(11)-(9) 001 - 128 : 79,01-09,00 - 7F = 79,01-09,00 - 7F
 g(d) 001 - 128 : 78,00, 00 - 7F = 78,00, 00 - 7F

*3 : ARPEGGIATOR ON/OFF : Em,63,00, Bn,62, 02, Bn, 06, mm (Bank Map is GM(2))
 ARPEGGIATOR GATE Knob : [Em,63,00, Bn,62, 0A, Bn, 06, mm] mm = 00-7F
 ARPEGGIATOR VELOCITY Knob : [Em,63,00, Bn,62, 0B, Bn, 06, mm] mm = 00-7F
 When in Program/Combination mode, Global channel.
 When in Sequencer/Song Play mode, current selected track's channel.

1-2 SYSTEM COMMON MESSAGES

Status [Hex]	Second [H]	Third [D]	Description (Transmitted when)	[H] .Hex, [D] :Decimal
P2	ss (ss)	tt (tt)	Song Position Pointer (Always in Prog/Combi/Seq/Song Play mode) ss : Least significant [LSB] tt : Most significant [MSB]	*4
P3	ss (ss)		Song Select (Song or Cue List is selected) ss : Song (0-127)/Cue List (0-19) No.	*4

Transmits Song Position Pointer message when in Sequencer and Song Play mode (Internal Clock)
 Transmits Song Select message when in Sequencer mode (Internal Clock)
 *4 : For example, if time signature is 4/4 or 8/8, tt,ss = 00,10 means one measure.

1-3 SYSTEM REALTIME MESSAGES

Status [Hex]	Description (Transmitted when ...)
F8	Timing Clock (Always in Prog/Combi/Seq/Song Play mode)
F9	Start (START in Seq/Song Play mode)
FA	Continue (Continue Seq/Song Play mode)
FB	Stop (STOP in Seq/Song Play mode)
FE	Active Sensing (Always)

Transmits these message when MIDI Clock in Global mode is Internal.

1-4 SYSTEM EXCLUSIVE

1-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)
 [F0,7E,0g,06,02,42,50,00,mm,00,mm,00,vv,00,F7]
 3rd byte g : Global Channel
 6th byte 42 : KORG ID
 7th byte 50 : TRITON series ID
 9th byte mm : TRITON pro mm = ??
 TRITON pro mm = ??
 11th byte nn : System No. (01 -)
 13th byte vv : System Version (01 -)

1-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)

O Master volume
 [F0,7E,0g,04,01,vv,mm,F7]
 3rd byte g : Global Channel
 6th byte vv : Value (LSB)
 7th byte mm : Value (MSB)
 mm,vv = 00,00 - 7F,7F : Min - Max

2. RECOGNIZED RECEIVE DATA
2-1 CHANNEL MESSAGES

Status [Hex]	Second [H]	Third [D]	[H] :Hex, [D] :Decimal	Description (Use)	ENA
Bn	8k (kk)	xx (xx)		Note Off	A
9n	kk (kk)	00 (00)		Note On (vv)=1-127	A
An	kk (kk)	vv (vv)		Poly Key Pressure	A
Bn	00 (00)	mm (mm)		Bank Select (MSB)	P
Bn	01 (01)	vv (vv)		Modulation1 (as Joy Stick +Y)	C
Bn	02 (02)	vv (vv)		Modulation2 (as Joy Stick -Y)	C
Bn	04 (04)	vv (vv)		Foot Pedal (as AMS & FX Dmod Src =Pedal)	C
Bn	05 (05)	vv (vv)		Portamento Time	C
Bn	06 (06)	vv (vv)		Data Entry (MSB)	C
Bn	07 (07)	vv (vv)		Volume (for RPC edit)	C
Bn	08 (08)	vv (vv)		Balance Control (for Post IFX Panpot control)	*2
Bn	0A (10)	vv (vv)		Panpot	C
Bn	0C (12)	vv (vv)		Expression	C
Bn	0D (13)	vv (vv)		Effect Control 1 (as FX Dmod Src)	C
Bn	0E (14)	vv (vv)		Effect Control 2 (as FX Dmod Src)	C
Bn	11 (17)	vv (vv)		Multi Purpose Ctrl1 (as AMS FX Dmod Src =KnobMod1)	C
Bn	12 (18)	vv (vv)		Multi Purpose Ctrl2 (as AMS FX Dmod Src =KnobMod2)	C
Bn	13 (19)	vv (vv)		Multi Purpose Ctrl3 (as Value Slider)	C
Bn	14 (20)	vv (vv)		Multi Purpose Ctrl4 (as AMS & FX Dmod Src =KnobMod2)	C
Bn	15 (21)	vv (vv)		(as AMS & FX Dmod Src =KnobMod3)	C
Bn	20 (32)	bb (bb)		Bank Select(LSB)	*1
Bn	26 (38)	vv (vv)		Data Entry (LSB)	C
Bn	40 (64)	vv (vv)		Hold1 (for RPC edit)	C
Bn	41 (65)	53F/240 (563/264)		Portamento Off/On	C
Bn	42 (66)	53F/240 (563/264)		Sostenuto Off/On	C
Bn	43 (67)	vv (vv)		Soft Pedal	C
Bn	46 (70)	vv (vv)		Sound Controller 1 (for Sustain Level control)	C
Bn	47 (71)	vv (vv)		Sound Controller 2 (for Resonance/HPF Cutoff ctrl)	C
Bn	48 (72)	vv (vv)		Sound Controller 3 (for Release Time control)	C
Bn	49 (73)	vv (vv)		Sound Controller 4 (for Attack Time control)	C
Bn	4A (74)	vv (vv)		Sound Controller 5 (for LPF Cutoff control)	C
Bn	4B (75)	vv (vv)		Sound Controller 6 (for Decay Time control)	C
Bn	4C (76)	vv (vv)		Sound Controller 7 (for LFO1 Speed control)	C
Bn	4D (77)	vv (vv)		Sound Controller 8 (for LFO1 Pitch Depth control)	C
Bn	4E (78)	vv (vv)		Sound Controller 9 (for LFO1 Delay control)	C
Bn	4F (79)	vv (vv)		Sound Controller 10 (for Filter EG Intensity ctrl)	C
Bn	50 (80)	vv (vv)		Multi Purpose Ctrl15 (as AMS & FX Dmod Src =SW 1)	C
Bn	51 (81)	vv (vv)		Multi Purpose Ctrl16 (as AMS & FX Dmod Src =SW 2)	C
Bn	52 (82)	vv (vv)		Multi Purpose Ctrl17 (as AMS & FX Dmod Src =Foot SW)	C
Bn	53 (83)	vv (vv)		Multi Purpose Ctrl18 (as AMS & FX Dmod Src =Foot SW)	C
Bn	5B (91)	vv (vv)		Effect 1 Depth (for Send 2 Level control)	C
Bg	5C (92)	00/#000		Effect 2 Depth (for All Insert FX Off/On)	C
Bn	5D (93)	vv (vv)		Effect 3 Depth (for Send 1 Level control)	C
Bg	5E (94)	00/#000		Effect 4 Depth (for Master FX1 Off/On)	C
Bg	5F (95)	00/#000		Effect 5 Depth (for Master FX2 Off/On)	C
Bn	60 (96)	00 (00)		Data Increment (for RPC edit)	C
Bn	61 (97)	00 (00)		Data Decrement (for RPC edit)	C
Bn	62 (98)	ss (ss)		NRPN Param No. (LSB) (for NRPN select)	*3
Bn	63 (99)	tt (tt)		NRPN Param No. (MSB) (for NRPN select)	*3
Bn	64 (100)	0r (0r)		RPN Param No. (LSB) (for RPN select)	*4
Bn	65 (101)	00 (00)		RPN Param No. (MSB) (for RPN select)	*4
Bn	cc (cc)	vv (vv)		Control data (for Prog/Combi change)	C,Q
Bn	78 (120)	00 (00)		All Sound Off	C
Bn	79 (121)	00 (00)		Reset All Controllers	C
Bn	7A (122)	00/7F (00/127)		Local Control Off/On	A
Bn	7B (123)	00 (00)		All Notes Off	A
Bn	7C (124)	00 (00)		Omi Mode Off (as All Notes Off)	A
Bn	7D (125)	00 (00)		Omi Mode On (as All Notes Off)	A
Bn	7E (126)	510 (516)		Mono Mode On	A
Bn	7F (127)	00 (00)		Poly Mode On (as All Notes Off)	A
Ch	pp (pp)	--		Program Change (for Prog/Combi change)	*1
Bn	bb (bb)	--		Channel Pressure (as After Touch)	T
Bn	bb (bb)	bb (bb)		Bender Change	C

AMS : Alternate Modulation Source
FX Dmod Src: Effect Dynamic Modulation Source
n : MIDI Channel No. (0 - 15) ***** Usually Global Channel.
When in Combination/Sequencer/Song Play mode, each timbre/s/track's channel. (Status is INT or BTH)
g : Always Global Channel No. (0 - 15)

*1 : When Bank Map in Global mode is KORG; MIDI In [Hex] Program Combination
mm,bb,pp = 00,00, 00 - 7F : Bank A 000 - 127 : Bank A 000 - 127
00,01, 00 - 7F : Bank B 000 - 127 : B 000 - 127
00,02, 00 - 7F : C 000 - 127 : C 000 - 127
00,03, 00 - 7F : D 000 - 127 : D 000 - 127
00,04, 00 - 7F : E 000 - 127 : E 000 - 127
00,05, 00 - 7F : F 000 - 127 : F 000 - 127
79,00, 00 - 7F : G 001 - 128 : G 001 - 128
79,01-09,00 - 7F : g(1)-g(9) 001 - 128 : g(1)-g(9) 001 - 128
78,00, 00 - 7F : g(d) 001 - 128 : g(d) 001 - 128
3E,00, 00 - 7F : G 001 - 128 : G 001 - 128
3F,01, 00 - 7F : Bank A 000 - 127 : Bank A 000 - 127
3F,02, 00 - 7F : Bank B 000 - 127 : B 000 - 127
3F,03, 00 - 7F : C 000 - 127 : C 000 - 127
3F,04, 00 - 7F : D 000 - 127 : D 000 - 127
3F,05, 00 - 7F : E 000 - 127 : E 000 - 127
3F,06, 00 - 7F : F 000 - 127 : F 000 - 127
79,00, 00 - 7F : G 001 - 128 : G 001 - 128
79,01-09,00 - 7F : g(1)-g(9) 001 - 128 : g(1)-g(9) 001 - 128
78,00, 00 - 7F : g(d) 001 - 128 : g(d) 001 - 128
00,00, 00 - 7F : G 001 - 128 : G 001 - 128
38,00, 00 - 7F : G 001 - 128 : G 001 - 128
3E,00, 00 - 7F : Mute (KORG MUTE)
3F,7F, 00 - 7F : Assign correspond program in G, g(1) - g(9)
(XG) 00,01 - : Assign correspond program in G, g(1) - g(9)
(GS) 01,00 - : Assign correspond program in G, g(1) - g(9)

*2 : When in Program/Sampling mode, Global channel
When in Combination/Sequencer/Song Play mode, each IFX's channel.
MIDI In [Hex] Program Combination
mm,bb,pp = 3F,00, 00 - 7F : Bank A 000 - 127 : Bank A 000 - 127
3F,01, 00 - 7F : Bank B 000 - 127 : B 000 - 127
3F,02, 00 - 7F : C 000 - 127 : C 000 - 127
3F,03, 00 - 7F : D 000 - 127 : D 000 - 127
3F,04, 00 - 7F : E 000 - 127 : E 000 - 127
3F,05, 00 - 7F : F 000 - 127 : F 000 - 127
79,00, 00 - 7F : G 001 - 128 : G 001 - 128
79,01-09,00 - 7F : g(1)-g(9) 001 - 128 : g(1)-g(9) 001 - 128
78,00, 00 - 7F : g(d) 001 - 128 : g(d) 001 - 128
00,00, 00 - 7F : G 001 - 128 : G 001 - 128
38,00, 00 - 7F : G 001 - 128 : G 001 - 128
3E,00, 00 - 7F : Mute (KORG MUTE)
3F,7F, 00 - 7F : Assign correspond program in G, g(1) - g(9)
(XG) 00,01 - : Assign correspond program in G, g(1) - g(9)
(GS) 01,00 - : Assign correspond program in G, g(1) - g(9)

*3 : tt.ss = 00.02 : Arpeggiator Off/On
= 00.0A : Arpeggiator Gate control
= 00.0B : Arpeggiator Velocity control
When in Program/Combination mode, Global channel message is valid.
When in Sequencer/Song Play mode, current selected track's channel message is valid.
Data Entry LSB value has no effect.
tt.ss = 01.08 : Vibrato Rate
tt.ss = 01.09 : Vibrato Depth
tt.ss = 01.0A : Vibrato Delay
tt.ss = 01.0B : Filter Cutoff
tt.ss = 01.21 : Filter Cutoff
tt.ss = 01.63 : EG Attack Time
tt.ss = 01.64 : EG Decay Time
tt.ss = 01.66 : EG Release Time
tt.ss = 14.kk : Drum Filter Cutoff *
tt.ss = 14.kk : Drum Filter Resonance *
tt.ss = 15.kk : Drum EG Attack Time *
tt.ss = 16.kk : Drum EG Decay Time *
tt.ss = 17.kk : Drum EG Coarse Tune *
tt.ss = 18.kk : Drum EG Fine Tune *
tt.ss = 19.kk : Drum Volume *
tt.ss = 1A.kk : Drum Panpot *
tt.ss = 1C.kk : Drum Rev Send(Send2) *
tt.ss = 1E.kk : Drum Cho Send(Send1) *

*4 : r = 0 : Pitch Bend Sensitivity (Bend Range)
= 1 : Fine Tune (Decue)
= 2 : Coarse Tune (Transpose)
For drum program, both of Fine Tune and Coarse Tune affect to Detune.
Data Entry LSB value has no effect.

2-2 SYSTEM COMMON MESSAGES

[H] : Hex, [D] : Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description (Use for)
F2	ss (ss)	tt (tt)	Song Position Pointer (Location) ss : Least significant [LSB] tt : Most significant [MSB]
F3	ss (ss)		Song select (Song or Cue List select) *6 ss : Song (0-127)/Cue List(0-15) No.

Receive when in Sequencer mode (External Clock)

*6 : When in the cue list page (Sequencer mode P1), respond to Location and No. of Cue List.

2-3 SYSTEM REALTIME MESSAGES

Status[Hex]	Description (Use for.....)
F8	Timing Clock (Tempo, AMS, & FX Dmod Src)
FA	Start (Seq Start & Arpeggiator Control)
FB	Continue (Seq Continue start & Arpeggiator Control)
FC	Stop (Seq Stop & Arpeggiator Control)
FE	Active Sensing (MIDI Connect check)

Receive when MIDI Clock in Global mode is External MIDI or External PCI/F.

2-4 SYSTEM EXCLUSIVE

2-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

○ DEVICE INQUIRY (When received this message, transmits INQUIRY MESSAGE REPLY)
 [F0,7F,nm,06,01,F7]
 3rd byte nm : Channel = 0 - F : Global Channel
 = 7F : Any Channel

○ GM System On (Receive when in Song Play mode)

[F0,7F,nm,09,01,F7]
 3rd byte nm : Channel = 0 - F : Global Channel
 = 7F : Any Channel

2-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)

○ Master Volume

[F0,7F,09,04,01,vv,nm,F7]

3rd byte g : Global Channel

6th byte vv : Value (LSB)

7th byte mm : Value (MSB)

nm,vv = 00,00 - 7F,7F : Min - Max

○ Master Balance

[F0,7F,09,04,02,vv,nm,F7]

3rd byte g : Global Channel

6th byte vv : Value (LSB)

7th byte mm : Value (MSB)

nm,vv = 00,00:left, 40,00:center, 7F,7F:right

○ Master Fine Tune (Control Master Tune (cent) in Global)

[F0,7F,09,04,03,vv,nm,F7]

3rd byte g : Global Channel

6th byte vv : Value (LSB)

7th byte mm : Value (MSB)

nm,vv = 20,00:-50, 40,00:+00, 60,00:+50

▲Master Coarse Tune (Control Transpose (chromatic step) in Global)

[F0,7F,09,04,04,vv,nm,F7]

3rd byte g : Global Channel

6th byte vv : Value (LSB)

7th byte mm : Value (MSB)

nm,vv = 34,00:-12, 40,00:+00, 4C,00:+12

Option boards/memory

Please read this before you begin installation

Safety precautions

Warnings

- When installing, repairing, or replacing the parts of this product, you must perform only those actions that the owner's manual directs, and no other.
- Do not apply excessive force to the electronic components or connectors of the circuit board(s), or attempt to disassemble them. This could cause electric shock, fire, or malfunction.
- Before installing this product, be sure to disconnect the power supply cable, and the connecting cables to any peripheral devices. Failure to do so could cause electrical shock or may damage this device.

Cautions

- Do not allow this product to become wet, and do not allow objects to be placed on top of it. Doing so could cause malfunction.
- Before touching this product, touch a metal component of the device into which it will be installed, to discharge any static electricity that may be present in your body. Static electricity may damage the electronic components.
- When handling this product, be careful not to touch the leads on the back side of the circuit board (the side opposite that on which the components are mounted). The sharp points may cause injury.
- When installing this product, never touch components or circuit boards that are not related to the connections you are required to make. Doing so may cause electrocution or malfunctions.
- When installing this product, be careful not to cut your hands on the sharp edges of the metal brackets etc. of this product or of the device into which it is being installed.
- When installing this product, be careful that screws or other parts do not fall into the device into which it is being installed.

Korg Inc. takes no responsibility for any malfunctions or damage that may occur from improper use or modification of this product. Nor will Korg Inc. be responsible for any damages resulting from the loss or destruction of data.

About option boards and memory


By installing option boards or memory into your TRITON, you can expand its functionality. The following four types of expansion are possible.

● EXB-MOSS (DSP synthesizer board)

This adds to the TRITON a MOSS tone generator that provides thirteen oscillator algorithms, including Standard, Ring Modulation, VPM, Resonance, Organ Model, and Electric Piano Model. This lets you use the MOSS tone generator in program, combination, sequence, or song play modes. The MOSS tone generator has six-note polyphony.

● EXB-SCSI (SCSI interface board)

This adds a SCSI connector to the TRITON. In the same way that you save programs, combinations, sequence data and sample data etc. from the TRITON to a floppy disk, you can save/load this data to/from an external SCSI high-capacity storage device (hard disk, ZIP disk, JAZ disk). This also allows you to load Akai (S1000/S3000), Korg, AIFF, and WAVE format sample files etc. from a CD-ROM drive.

 This format cannot be executed for media that is not 512 bytes/block (such as 640 MB MO disks etc.).

CD-ROM formats that can be loaded

- AKAI (S1000/S3000) format
- ISO9660 Level 1 format
- TRINITY format (only .KSC / .KMP / .KSF files can be loaded)

● EXB-PCM series (PCM expansion boards)

Each of these boards adds 16 Mbytes of multisamples and drum samples to the TRITON. (The details will differ according to the series.)

EXB-PCM01 This board concentrates on stereo piano and vintage keyboard sounds.

EXB-PCM02 This board provides sounds that are frequently used in pop music, such as stereo strings, stereo brass, and choir.

* As of April 1999

■ DRAM SIMM (sample data memory modules)

These can be used as sample data memory. Up to two 72-pin DRAM SIMM (either 16 Mbyte or 32 Mbyte) modules can be installed, providing a maximum of 64 Mbytes. (⚠ "Caution when purchasing DRAM SIMM modules")

note DRAM SIMM boards are not a manufacturer option. Please purchase commercially-available boards that are sold for use in computers.

note In order to achieve the maximum 64 Mbyte capacity, you will need to remove the 16 Mbyte DRAM SIMM that is standard, and install two 32 Mbyte DRAM SIMM boards.

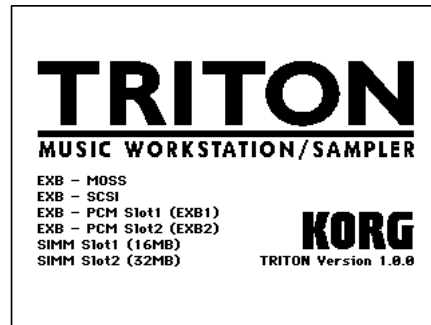
note The memory banks and sampling time will depend on the capacity of the DRAM SIMM boards you install, and on the slot locations. (⚠ p.81)

Please note when installing an option board/memory

- So that static electricity in your body does not damage the electronic components, touch the ground wire of a grounded device or an unpainted metallic component to discharge any static electricity in your body before installing an option board or memory. Internal components of the TRITON and of the option/memory boards may be damaged by static electricity.
- Follow the installation procedure, and be sure that each part is installed correctly and in the correct orientation.
- Please use care in handling option boards/memory. Dropping them or applying pressure to them may damage the components.
- Avoid touching exposed metal edges of the circuit board, or portions that need not be handled during installation.
- All screws (and washers) that are removed will be used, so be careful not to misplace them.
- Do not use screws other than those that are installed in the option board/memory and the TRITON. Using screws of a different shape or length may damage the unit or cause it to malfunction.
- Be sure to firmly tighten the screws used for attachment.
- Be sure that the option board/memory is inserted correctly into the connector or slot. After installation, be sure to check that the board is installed correctly. If the board is not inserted all the way, faulty contact or power supply shorts can occur, making the unit malfunction.
- Be careful not to drop parts or the option board/memory into the inside of the instrument. If you are unable to retrieve a screw or part that was dropped inside the instrument, please contact your local Korg distributor.

Checking after installation

- When the TRITON is turned on, the currently installed option boards/memory will be shown in the LCD screen. After installing an option board/memory, be sure to turn on the power and make sure that the option board/memory that you installed is displayed in the LCD screen. If it is not displayed, the installation may not have been performed correctly. Check once again that the board is installed correctly. If you have any questions regarding installation, please contact your local Korg distributor.



- EXB-MOSS: EXB-MOSS is installed
- EXB-SCSI: EXB-SCSI is installed
- EXB-PCM Slot1 (EXB1): EXB-PCM installed in slot 1
() indicates the series name
- EXB-PCM Slot2 (EXB2): EXB-PCM installed in slot 2
() indicates the series name
- SIMM Slot1 (16MB): SIMM installed in slot 1
() indicates the capacity in bytes
- SIMM Slot2 (32MB): SIMM installed in slot 2
() indicates the capacity in bytes

Caution when purchasing DRAM SIMM modules

- Some commercially available DRAM SIMM modules cannot be used on the TRITON. Before you purchase memory modules, please check the following points.

Types of DRAM SIMM modules that can be used on the TRITON

- 72-pin 16 Mbyte or 32 Mbyte
- Access time of 60 ns or less
- Address input 11 bit (A0–A10)
- Power supply voltage 5 V
- DRAM SIMM height of 26 mm or less

DRAM SIMM modules that meet the above requirements can be used.

If you have any questions regarding the type of DRAM SIMM modules that can be used, please contact your local Korg distributor.

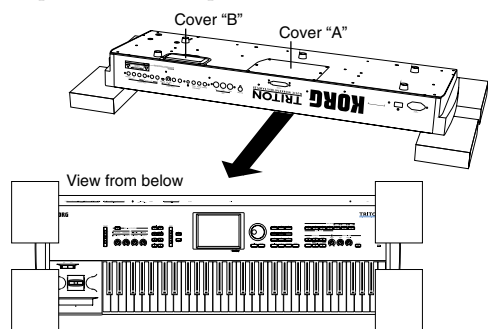
Option board/memory installation procedure

- ⚠ Before you perform the installation, be sure to read the foregoing section "Please note when installing an option board/memory."

1. Preparations for installation

- ⚠ During the installation, be careful not to cut your hand on any sharp edges of the TRITON or of the option board/memory.

- ① You will need a "+" (plus) screwdriver, and some magazines or other material (to prevent damage to the joystick and knobs etc.: see diagram below).
- ② Turn off the TRITON, and disconnect the AC power supply cable and any other cables by which other devices are connected.
- ③ As shown in the following diagram, place four magazines etc. at the four corners of the instrument to prevent damage to the joystick and knobs, and place the TRITON upside down on top of them.



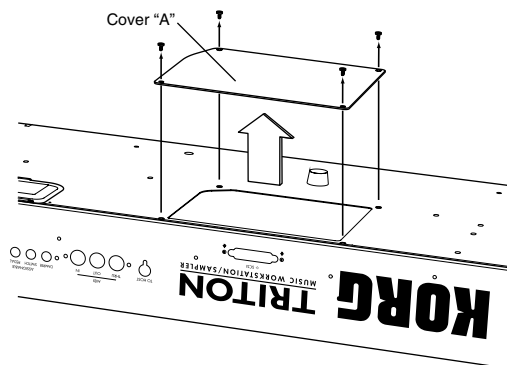
Place in each of the four corners so that joystick and knobs are not contacted

- ⚠ When turning the TRITON upside down, be careful not to lose your balance and drop the instrument.

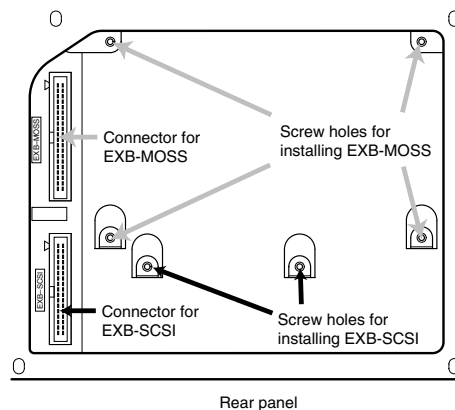
- ④ Detach the appropriate cover for the option board/memory you wish to install. When installing the EXB-SCSI or EXB-MOSS, detach cover "A." When installing the EXB-PCM or DRAM SIMM, detach cover "B."
- (☞ Detaching the cover is described in the following sections "1-A" or "1-B.")

1-A. Detaching cover "A" for the EXB-SCSI or EXB-MOSS

- ⑤ Use a screwdriver to remove four screws from cover "A." When the TRITON is upturned and the rear panel is toward you, cover "A" is the large one at the right.

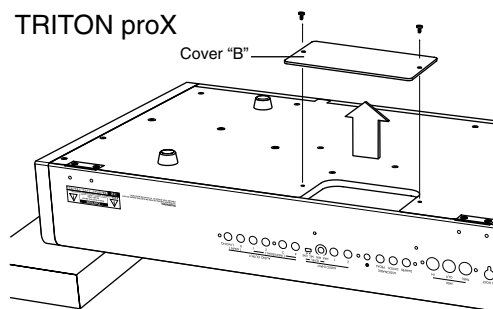
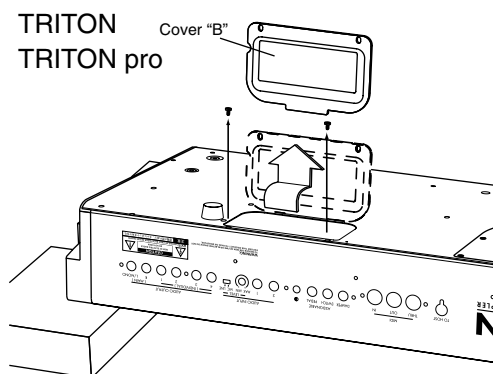


When cover "A" is removed

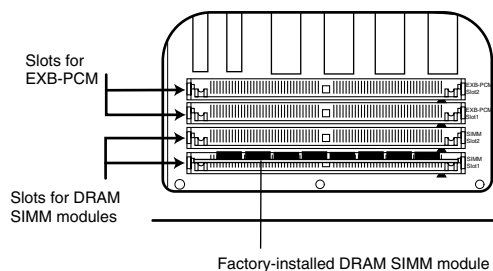


1-B. Detaching cover "B" for EXB-PCM or DRAM SIMM

- ⑤ Use a screwdriver to remove two screws from cover "B." When the TRITON is upturned and the rear panel is toward you, cover "B" is the small one at the left.



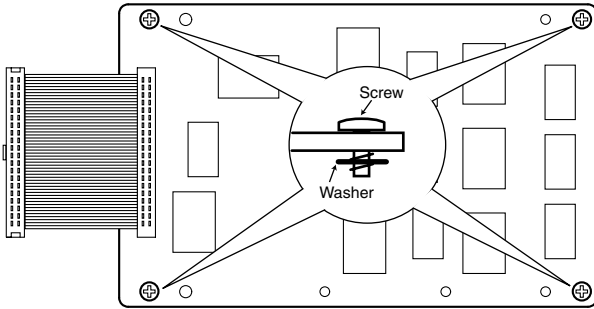
When cover "B" is removed



2-A1. Installing the EXB-MOSS

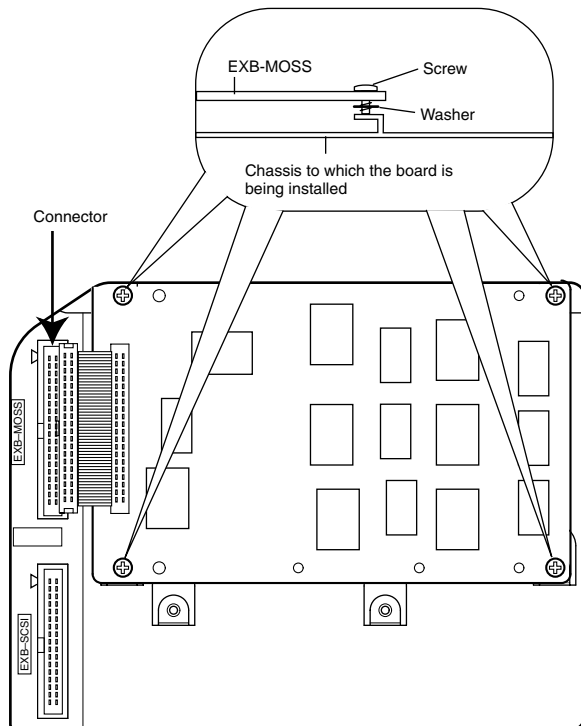
⚠ Be sure that the AC power cable remains disconnected until you have completed all steps of removing the cover, installing the option board/memory, and re-attaching the cover.

- ① Make sure that cover "A" has been removed. (See "1. Preparations for installation," "1-A. Removing cover "A" for the EXB-SCSI or EXB-MOSS.")
- ② Remove the EXB-MOSS from its packing pouch.
- ③ Note that screws and washers are attached to the four corners of the board.



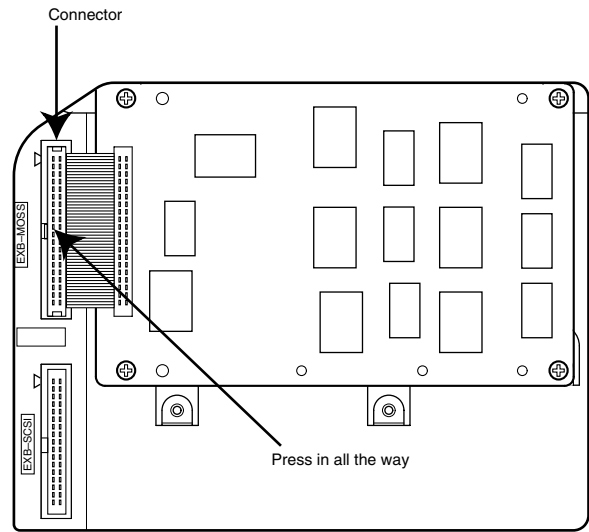
- ④ Use the four screws to attach the EXB-MOSS to the corresponding brackets inside the TRITON.

⚠ Before the screws are tightened, the EXB-MOSS will float slightly above the brackets. If at this time you apply excessive force to the EXB-MOSS, the screws or washers may come out.



- ⑤ Plug the cable into the connector as shown in the diagram. Press the cable firmly in until it stops.

⚠ Do not touch any part of the circuit board other than the connector in which the cable is being inserted.

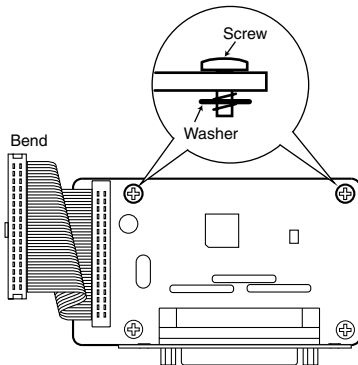


- ⑥ Reversing the procedure by which you removed cover "A," re-attach the cover.
- ⑦ When all steps have been completed, turn on the power and make sure that the EXB-MOSS has been installed correctly. (See "Checking after installation")

2-A2. Installing the EXB-SCSI

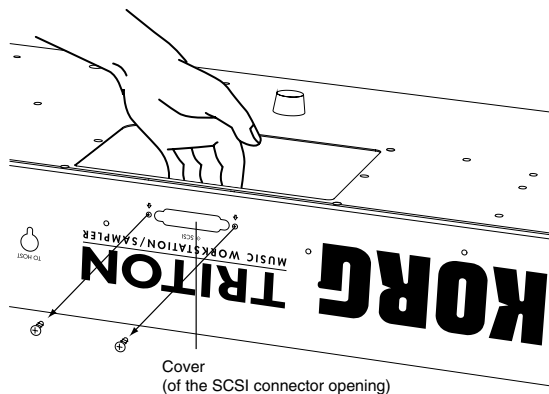
⚠ Be sure that the AC power cable remains disconnected until you have completed all steps of removing the cover, installing the option board/memory, and re-attaching the cover.

- ① Make sure that **cover "A"** has been removed. (See "1. Preparations for installation," "1-A. Removing cover "A" for the EXB-SCSI or EXB-MOSS.")
- ② Remove the EXB-SCSI from its packing pouch.
- ③ Note that screws and washers are attached to two corners of the board.
- ④ Lightly bend the wiring harness as shown below.

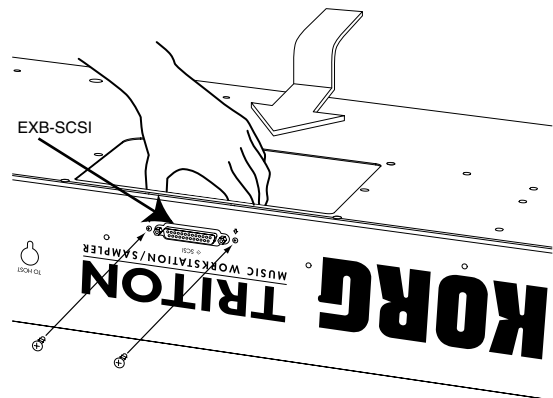


- ⑤ Remove the two screws of the lid that covers the opening for the SCSI connector, and remove the lid of the SCSI connector opening. The two screws you removed will be used later to fasten the EXB-SCSI in place.

⚠ The cover of the SCSI connector opening will not be used. Be sure that it does not remain inside the TRITON.



- ⑥ Insert the SCSI connector of the EXB-SCSI through the opening so that it extends from the rear panel of the TRITON. Hold the EXB-SCSI with one hand, and use the two screws that you removed in step ⑤ to fasten the connector from the outside of the rear panel.

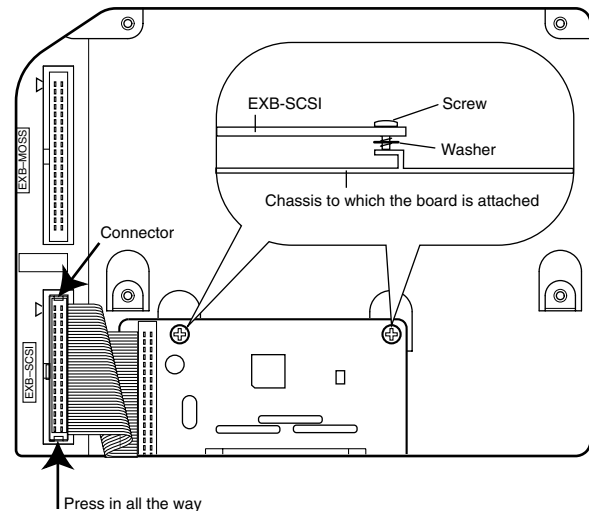


- ⑦ Use the two screws to attach the EXB-SCSI to the corresponding brackets inside the TRITON.

⚠ Before the screws are tightened, the EXB-SCSI will float slightly above the brackets. If at this time you apply excessive force to the EXB-SCSI, the screws or washers may come out.

- ⑧ Plug the cable into the connector as shown in the diagram. Press the cable firmly in until it stops.

⚠ Do not touch any part of the circuit board other than the connector in which the cable is being inserted.



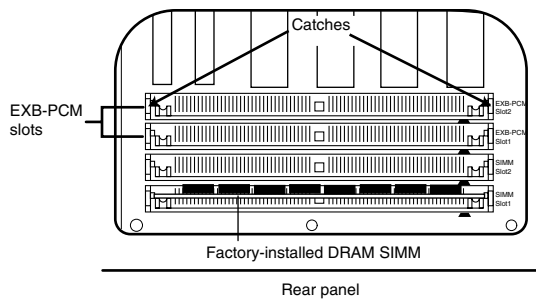
- ⑨ Reversing the procedure by which you removed **cover "A,"** re-attach the cover.

- ⑩ When all steps have been completed, turn on the power and make sure that the EXB-SCSI has been installed correctly. (See "Checking after installation")

2-B1. Installing an EXB-PCM

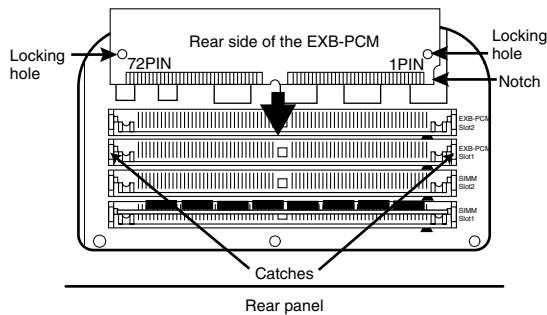
- ⚠ A maximum of two EXB-PCM boards can be installed simultaneously.
If you are installing a single EXB-PCM, it will function correctly whether installed in either slot. For ease in installation, you may wish to use EXB-PCM slot 1 first.
- ⚠ Be sure that the AC power cable remains disconnected until you have completed all steps of removing the cover, installing the option board/memory, and re-attaching the cover.

- ① Make sure that cover "B" has been removed. (See "1. Preparations for installation," "1-B. Removing cover "B" for the EXB-PCM or DRAM SIMM.")
- ② Remove the EXB-PCM from its packing pouch.
- ③ Verify the location of the slot into which you wish to install the EXB-PCM. With the rear panel of the TRITON facing toward you, **the back two rows are the EXB-PCM slots.**

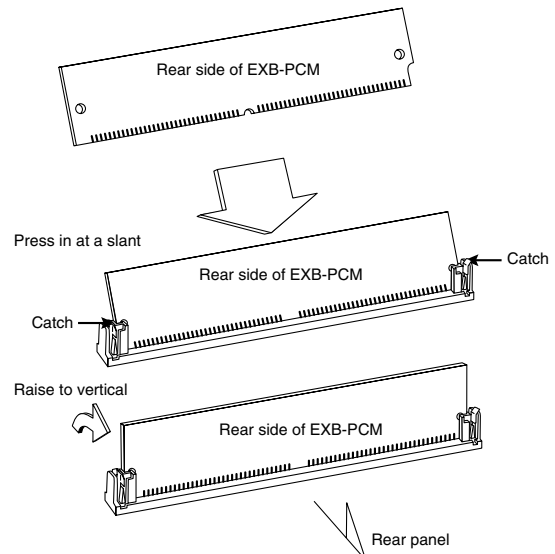


- ④ The notched side of the EXB-PCM is PIN 1. Install the EXB-PCM with its PIN 1 side aligned with the PIN 1 mark (→) of the slot.

- ⚠ The EXB-PCM slots and the DRAM SIMM slots are shaped identically. Be careful not to install a board in the wrong slot.



- ⑤ At a slant, press the EXB-PCM firmly all the way into the slot, and raise it to the vertical position until the catches of the slot click into the locking holes of the EXB-PCM. When doing so, pressing the catches of the slot apart to the left and right will help the board go in smoothly.

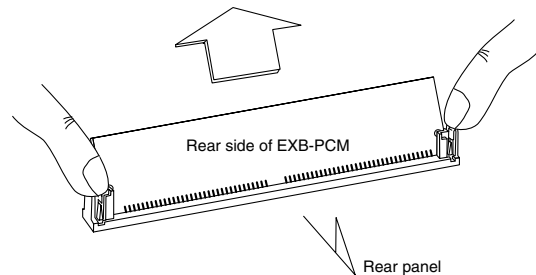


- ⑥ Reversing the procedure by which you removed cover "B," re-attach the cover.
- ⑦ When all steps have been completed, turn on the power and make sure that the EXB-PCM has been installed correctly. (See "Checking after installation")

Removing an EXB-PCM

Spread the catches of the slot apart to the left and right, and (after removing the stoppers from the catches) tilt the EXB-PCM and pull it out.

- ⚠ When you spread the catches of the slot apart, the EXB-PCM may pop out vigorously and fall into an opening (inside the instrument). Please be careful.

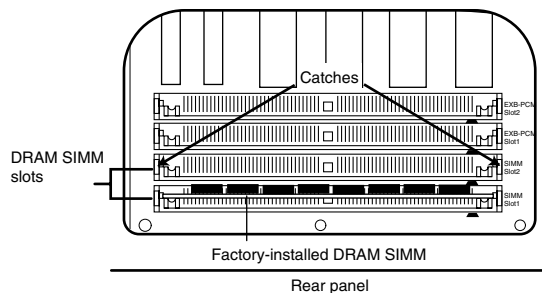


2-B2. Installing a DRAM SIMM

⚠ A maximum of two memory boards can be installed simultaneously. If you wish to use two 32 Mbyte DRAM SIMM modules, you must first remove the factory-installed 16 Mbyte DRAM SIMM as described below in "Removing a DRAM SIMM."

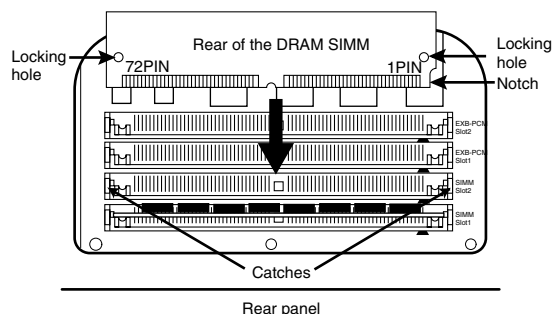
⚠ Be sure that the AC power cable remains disconnected until you have completed all steps of removing the cover, installing the option board/memory, and re-attaching the cover.

- ① Make sure that cover "B" has been removed. (See "1. Preparations for installation," "1-B. Removing cover "B" for the EXB-PCM or DRAM SIMM.")
- ② Have the DRAM SIMM at hand.
- ③ Verify the location of the slot into which you wish to install the DRAM SIMM. With the rear panel of the TRITON facing toward you, the front two rows are the DRAM SIMM slots.

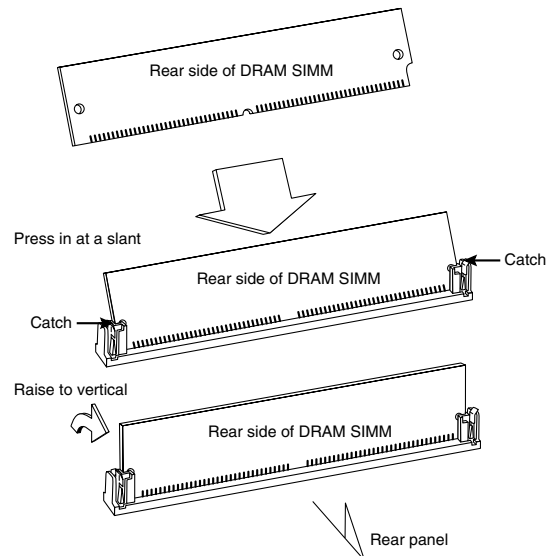


- ④ In the slot closest to you, there is a factory-installed 16 Mbyte DRAM SIMM. If you are installing only one module, install it in the remaining slot. If you are installing two DRAM SIMM modules, you will need to remove the factory-installed DRAM SIMM as explained in "Removing a DRAM SIMM" so that both slots are available.
- ⑤ The notched side of the DRAM SIMM is PIN 1. Install the DRAM SIMM with its PIN 1 side aligned with the PIN 1 mark (▲) of the slot.

⚠ The DRAM SIMM slots and the EXB-PCM slots are shaped identically. Be careful not to install a board in the wrong slot.



- ⑥ At a slant, press the DRAM SIMM firmly all the way into the slot, and raise it to the vertical position until the catches of the slot click into the locking holes of the DRAM SIMM. When doing so, pressing the catches of the slot apart to the left and right will help the board go in smoothly.

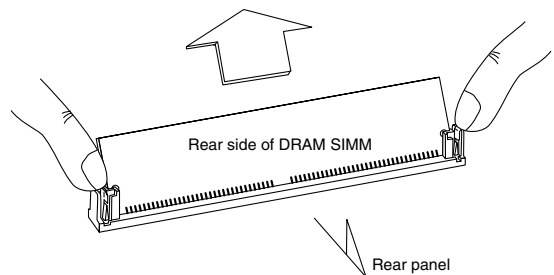


- ⑦ Reversing the procedure by which you removed cover "B," re-attach the cover.
- ⑧ When all steps have been completed, turn on the power and make sure that the DRAM SIMM has been installed correctly. (See "Checking after installation")

Removing a DRAM SIMM

Spread the catches of the slot apart to the left and right, and (after removing the stoppers from the catches) tilt the DRAM SIMM and pull it out.

⚠ When you spread the catches of the slot apart, the DRAM SIMM may pop out vigorously and fall into an opening (inside the instrument). Please be careful.



Index

Numerics

000: No Effect 146, 150

10's Hold

Combination 29

Program 1

A

ADC OVERLOAD !! 87

After Touch

After Touch Curve 114

AMS 210

Convert Position 118

MIDI Filter 118

Combination 35

Sequencer 58

AIFF file(.AIF) 131, 137, 226

AKAI S1000/S3000 format 137

All Routed 150

Alternate Modulation 209

Alternate Modulation Source 209

Amp

Amp 17, 213

Amp EG 18, 214

Amp Level 2, 17

Amp LFO 1/2 Intensity 18, 213

Amp Mod. 17

AMS 210

AMS(Alternate Modulation Source) 209

Amp 18, 213

Amp EG, Level 19, 214

Amp EG, Time 19, 214

Amp LFO 1/2 Intensity 18, 213

Filter EG Intensity 13, 213

Filter EG, Level 15, 214

Filter EG, Time 15, 214

Filter Frequency 12, 212

Filter LFO 1/2 Intensity 14, 213

LFO, Frequency 20, 214

Pan 17, 213

Pitch 8, 212

Pitch EG 9, 212

Pitch EG, Level 10, 214

Pitch EG, Time 11, 214

Pitch LFO 9, 212

Resonance 12, 213

Arpeggiator

Arpeggiator Assign

Combination 39

Sequencer 73

Song Play 107

Arpeggiator Run A, B

Combination 32

Sequencer 74

Song Play 108

Combination 32, 39

Program 3, 22

Sequencer 73

Song Play 107

Arpeggio

Arpeggio Pattern 3, 22, 32, 40, 74,
108, 127, 134

Arpeggio Tone Mode 127

Arpeggio Type 127

Preset Arpeggio Pattern 22

User Arpeggio Pattern 23, 126

Load 134

Save 139

Write 128

Assign

Arpeggiator Assign ^{ESP} Arpeggiator

Drumsample 123

Foot Pedal Assign 121, 220

Foot Switch Assign 121, 219

Realtime Control Knobs B-Assign ^{ESP}

RPPR Setup 71

SW1, SW2 ^{ESP}

Attack 19

Attack Level

Amp EG 18, 19

Filter EG 15

Pitch EG 10

Realtime Control Knobs B-Assign

218

Attack Time

Amp EG 19

Drum Kit, Key 124

Filter EG 15, 16

Filter EG + Amp EG 2

Pitch EG 10, 11

Realtime Control Knobs B-Assign

218

Sample 7

Audio Input

(COMBI, PROG, SEQ, S.PLAY) 116

(SAMPLING) 86

AUDIO OUTPUT (INDIVIDUAL) 153

Auto

Auto Arpeggiator 114

Auto Loop On 87

Auto Punch In 50

Auto Start 103

B

Bank

Bank/Program, Combination 30

Bank/Program, Sequencer 47

Bank/Program, Song Play 102

Change all bank references 115

Combination 29

High Drumsample 123

Low Drumsample 124

Program 1

RAM Bank, Sampling 81

Bank Change, MIDI Filter 119

Bank Select

Bank Map 115

Combination 33

Sequencer 55

Bank/Timbre Program Select 30

Base key 80

Beep Enable 116

Bend Range

Combination 34

MIDI Filter

Combination 36

Program 8, 9

Sequencer 56, 58

Bounce

Bounce Pattern 70

Bounce Track 63

BPM 56

BPM/MIDI Sync function 145, 216

Detune (BPM Adj. in Page Menu)

Combination 34

Sequencer 56

Detune BPM Adjust

Combination 34

Sequencer 56

Grid 88, 94, 95, 95

MIDI/Tempo Sync., LFO 21

BUS Select

Audio Input 117, 149, 152, 152

Combination 41, 42, 147, 151

DrumKit 125, 147, 148

Metronome

Sampling 87

Sequencer 51

Song Play 103

Program 24, 26, 147, 151

Sampling 87, 150, 152

Sequencer 75, 147, 151

Song Play 109, 147, 151

Use DKit Setting 24

C

Calibration

Half Damper 115

Touch Panel 115

Category

Combination 29, 30

Drumsample 124

IFX Select 25

MFX Select 27

Program 1, 3, 6

Rename 122

Sequencer 47

Song Play 101

Cautions regarding sample data 79

Chain

IFX 25, 148

MFX 152

Chain Direction 27

Chain Level 27, 153

Chain Signal 27, 152

Chain to next file 103

Change

Change all bank references 115

MS Mono To Stereo/MS Stereo To

Mono 85

Sample Mono To Stereo 85

Changing the time signature 45

Chord strummed on a guitar 129

Combination 29

Combination Change, MIDI Filter

119

Load 133

Save 139

Write 30

Control change

AMS, CC83# 210

Control changes are transmitted/re-

ceived 223

MIDI Filter 118

- Controller 221
- Convert
 - Convert Cue List to Song 53
 - Convert Multisample To Program 84
 - Convert Position 118
 - Rate Convert 93
- Convert Position 118
- Copy
 - Copy Arpeggiator
 - Combination 40
 - Program 23
 - Sequencer 74
 - Song Play 108
 - Copy Arpeggio Pattern 128
 - Copy Cue List 53
 - Copy Drum Kit 125
 - Copy From Combi 48
 - Copy From Song 48
 - Copy Insert Effect
 - Combination 42
 - Program 25
 - Sampling 99
 - Sequencer 76
 - Song Play 110
 - Copy Key Setup 125
 - Copy Master Effect
 - Combination 43
 - Program 28
 - Sequencer 77
 - Song Play 111
 - Copy Measure 65
 - Copy Multisample 84
 - Copy Oscillator 5
 - Copy Pattern 69
 - Copy Sample 83
 - Copy Scale 122
 - Copy Song 54
 - Copy Step 129
 - Copy To Track 70
 - Copy Track 63
 - Copy, Event 62
 - Copy, File, Directory 141
 - Copy, Index 97
 - Copy, Sample 90
- Count
 - Count Down REC, Sampling 86
 - Precount, Sequencer 51
- Create
 - Create Control Data 65
 - Create Directory 142
 - Create, Index 81, 97
- Creates a new directory 142
- Ctrl 76, 77, 153
- Ctrl Ch 150, 153
 - Combination 43, 44
 - Sequencer 76, 77
 - Song Play 110, 112
- Cue List 51, 135
 - Load 135
 - Save 140
- Current directory 106, 132
- Cut
 - Cut, Index 97
 - Cut, Sample 90
 - Cut, Step 53
- Cutoff Frequency 12
 - Cutoff, Sample 7
- Realtime Control Knobs B–Assign 218
- D**
- Damper pedal
 - AMS 210
 - Damper Polarity 121
 - Half Damper Calibration 115
 - MIDI Filter 118
 - Combination 35
 - Sequencer 58
- Data transmission rate 116
- Decay Time
 - Amp EG 19
 - Drum Kit, Key 124
 - Filter EG 15, 16
 - Filter EG + Amp EG 2
 - Pitch EG 10
 - Realtime Control Knobs B–Assign 218
- Delay
 - LFO 21
- Delay Time
 - Combination 34
 - Drum Kit 7
 - Program 6
 - Sequencer 56
- Delete
 - Cut, Event 62
 - Delete button, Jukebox 106
 - Delete Cue List 53
 - Delete Measure 63
 - Delete Multisample 84
 - Delete Sample 83
 - Delete Song 47
 - Delete Step 129
 - Delete, File, Directory 142
 - StepBack, note, rest 62
 - Truncate 89, 95
- Double 4
- Double-size effect 146
- DRAM SIMM (sample data memory modules) 237, 238
- Drive select 106, 132
- Drum Kit 134
 - DrumKit IFX Patch 148
 - Combination 42
 - Sequencer 76
 - Song Play 110
 - Load 134
 - Program 6
 - Save 139
 - Use DKit Setting 17, 24
 - Write 125
- Drum program 147, 148
- Drums 4
- Dump 119
 - Reception 120
 - Transmission 119
- Dynamic modulation Source (Dmod) 145, 214
- E**
- Edit Range End 88
- Edit Range Start 88
- Effect Global Switch 114
- Erase
 - Clear, Sampling 90
 - Erase Control Data 66
 - Erase Measure 63
 - Erase Pattern 69
 - Erase Track 63
 - Remove Data 50, 69
 - Shift/Erase Note 67
- Event
 - Copy 62
 - Delete 62
 - Event Edit 62
 - Insert 62
 - Move 62
- Event Edit 62, 69
- EXB-MOSS (DSP synthesizer board) 237
- EXB-PCM series (PCM expansion boards) 237
- EXB-SCSI (SCSI interface board) 237
- Exclusive
 - Exclusive Data 135, 141
 - MIDI Filter 119
- Exclusive Group 125
- EXL file(.EXL) 131, 135
- F**
- Fade
 - LFO 21
- FF/REW Speed 48
- Filter
 - AMS 210
 - Cutoff Frequency 12, 212
 - Filter 12
 - Filter EG 13, 15, 214
 - Filter EG Intensity 13, 15, 213
 - Filter LFO 1/2 Intensity 14, 213
 - Filter Mod. 13
 - Filter Type 12
 - Filter-Cutoff, Drum Kit 124
 - Filter-Resonance, Drum Kit 124
 - Low Pass & High Pass 12
 - Low Pass Resonance 12
- Fixed Note Mode 127
- Flam 128
- Foot Pedal/Foot Switch
 - AMS 210
 - Foot Pedal Assign 121, 220
 - Foot Pedal/Switch
 - MIDI Filter, Combination 36
 - MIDI Filter, Sequencer 59
 - Foot Switch Assign 121, 219
 - Foot Switch Polarity 121
- Force OSC Mode
 - Combination 33
 - Sequencer 55
- Format 142
 - Format Type 143
- Format 0, 1 101
- Free Sample Memory
 - Sampling 87
 - Sequencer 47

Full Format 143

G

Gain

MEQ 207

Combination 44

Program 28

Sequencer 78

Song Play 112

Gate 23, 40, 74, 108, 128

Get

Get From Track 70

Global MIDI Channel 117

Global Setting

Load 134

Save 139

Write 114

GM 115

GM Initialize 102

GS, XG 115

Grid 88, 94, 95

H

Hide unknown files 132

Hold 4

Hold Balance 31

I

Icon 131

Index 80, 88, 94, 96

Initialize Steps 129

Inputting a tie 62

Inputting notes 61

Inputting rests 62

Insert

Insert Measure 64

Insert Sample 90

Insert Step, Arpeggio 129

Insert Zero 91

Insert, Index 97

Insert, Step, Cue List 53

Insert Effects (IFX)

IFX 1...IFX 5 146

Combination 42

Program 25

Sampling 100

Sequencer 76

Song Play 110

IFX Balance 2

IFX1-5 Off 114

J

JKB file(.JKB) 131

Joy Stick

AMS 210

Dmod 215

Joystick +Y

Pitch Mod., LFO 1/2 9

Joystick Lock 217

Joystick X

Pitch 9

Joystick -Y

Filter, LFO 1/2 Mod. 14

MIDI Filter

Combination 36

Sequencer 58

Jukebox 101, 106

Jukebox List 107

K

Key

Key Zone

Combination 37

Sequencer 59

KEY, Drum Kit 123

Original Key 81

Original Key Position 87

Scan Zone, Arpeggiator

Combination 40

Program 24

Sequencer 74

Song Play 109

Top Key 81, 97

Zone Range 87

Key Split 37

Keyboard & Index 80

Keyboard Display 85

Keyboard Track

AMS 210

Key

Amp 17

Filter 13

Ramp

Amp 17

Filter 13

KMP file 136

Translation 132

KMP file(.KMP) 131, 136, 226

KORG format 226

KSC file(.KSC) 131, 136, 228

KSF file

Translation 132

KSF file(.KSF) 131, 136, 137, 227

L

Layer 37

Legato

Fingered 9

Legato 4

Length 127

Level 146

Audio Input

AUDIO INPUT [Level] knob

Level 117

Send 117

Combination

Chain level 43

Return 43

Send 42

Volume 31, 32

Drum Kit 124

Level 124

Metronome

Sampling 87

Sequencer 51

Song Play 103

Program

Amp Level 2, 17

Chain Level 27, 153

Level, Sample 7

Multisample Level 6

OSC Balance 2

Return 27

Send 25

Trim 12

Sampling

AUDIO INPUT [Level] knob

Level 86, 97

Level Adj. 92

Recording Level 82, 87

Sequencer

Chain level 77

Return 77

Send 76

Volume 49

Song Play

Chain level 111

Return 111

Send 110

Volume 103

LFO 20

Amp 18, 213

AMS 210

Cutoff Frequency 214

Filter 14, 213

Pitch 8, 212

Waveform, LFO waveform 20

Load

Load FX? 52

Load Jukebox List 107

Load selected 132

Load Template Song

Sequencer 48

Song Play 102

Program, Combination, Drum Kit,

Arpeggio Pattern, Global Setting,

Song, Cue List, Track, Pattern, Multi-

sample, Sample, SMF, Exclusive 132

Local Control 117

Local Control On 117

Location

Cue List 51

Sequencer 45, 48

Song Play 101, 102

Loop

Auto Loop On 87

Loop All Tracks 50

Loop Lock 95

Loop On 95

Loop Start Measure/Loop End Measure 49

Loop Tune 95

LoopS 95

Track Play Loop 49

Low Pass & High Pass 12

Low Pass Resonance 12

M

Master Effect(MFX) 150

MFX Balance 2

MFX1 Off/MFX2 Off 114


MFX1, 2

Combination 43

Program 28

Sequencer 77

- Song Play 111
 - Master EQ(MEQ) 153, 207
 - Combination 44
 - Program 28
 - Sequencer 78
 - Song Play 112
 - Master Tune 113
 - Media
 - Device Type 143
 - Free Size 143
 - Total Size 143
 - Memory Protect 116
 - Meter
 - Cue List 51
 - Sequencer 45
 - Song Play 101
 - Metronome
 - Count Down REC 86
 - Sequencer 51, 69
 - Song Play 103
 - MID file(.MID) 131
 - MIDI 117
 - MIDI Channel
 - Combination 33, 43, 44, 222
 - Global MIDI Channel 117
 - IFX 150
 - MFx 153
 - Program 1, 222
 - Sampling 222
 - Sequencer 55, 76, 77, 222
 - Song Play 101, 222
 - MIDI Clock 118
 - MIDI Filter 35, 57, 118
 - Mix 91
 - Mixer 149, 152
 - Mono-in/Stereo-out 150
 - Monophonic 4
 - MOSS 237
 - Move
 - Move Measure 65
 - Shift/Eraser Note 67
 - MS Mono To Stereo 85
 - Multi REC 50
 - Multisample 5, 80, 88, 94, 96
 - Load 136
 - Save 140
 - Multi-track recording 50
 - Mute
 - PLAY/MUTE, Song Play 102
 - PLAY/MUTE/REC, Sequencer 47
- N**
- Normalize 92
 - Note
 - Note On/Off Receive 125
 - Note Receive Filter 118
 - Note number
 - AMS 210
 - Note priority 4
- O**
- Octave
 - Arpeggiator 127
 - Octave Motion 127
 - Octave, Combination 32, 40
 - Octave, Program 3, 23
 - Octave, Sequencer 74
 - Octave, Song Play 108
 - Octave, Drum Kit 6
 - Octave, Program 2, 6
 - Offset
 - Offset, LFO 20
 - Offset, Sequencer 66
 - Start Offset
 - Drum Kit 124
 - Program 6
 - Original Key 81, 96
 - Original Key Position 87
 - Oscillator
 - OSC Select
 - Combination 33
 - Sequencer 55
 - Oscillator Mode 4
 - Over Dub 50
 - Over Write 50
 - Overwrite 89
- P**
- Pan
 - Pan 220
 - AUDIO INPUT 117
 - Combination 31, 32
 - Drum Kit 126
 - Program 17, 20, 213
 - Sampling 86
 - Sequencer 49
 - Song Play 103
 - Pan (CC#8), IFX 149, 220
 - Combination 42
 - Program 25
 - Sampling 99
 - Sequencer 76
 - Song Play 110
 - Use DKit Setting 17
 - Paste, Sample 91
 - Pattern
 - Pattern Edit 68
 - Pattern, Track/RPPR 68, 135
 - Preset pattern 68
 - User pattern 68
 - Load 135
 - Save 139
 - PC I/F Baud Rate 116
 - PCG file(.PCG) 131, 132, 140
 - Performance Editor 2
 - Pitch
 - Constant Pitch 96
 - JS (+X) 9
 - JS (-X) 9
 - Pitch BPM Adjust 97
 - Pitch EG
 - AMS 9, 10, 210, 212
 - Pitch EG Intensity 212
 - Pitch Modulation 10
 - Pitch LFO 1/2 Intensity 212
 - Pitch Mod. 8
 - Pitch Offset 128
 - Pitch Shift Mod. 177
 - Pitch Shifter 176
 - Pitch Slope 8
 - Pitch, Sample 7
 - Ribbon 8
 - Sampling 97
 - Shift 71
 - Poly/Mono 4
 - Portamento
 - AMS 210
 - Combination 33
 - MIDI Filter
 - Combination 35
 - Sequencer 58
 - Program 9
 - Sequencer 55
 - Position 87
 - Positional Cross-fade 37
 - Power On Mode 116
 - Pre Trigger REC 86
 - Priority 4
 - Program 1, 133
 - Combination 30
 - Convert MS To Program 84
 - Load 133
 - Program Change
 - Sequencer 57
 - Save 140
 - Sequencer 47
 - Song Play 101
 - Write 3
 - Program Change
 - MIDI Filter 118
 - Combination 35
 - Punch In
 - Auto Punch In 50
 - Manual Punch In 50
 - Put
 - Put To Track 70
- Q**
- Quantize 66
 - Pattern
 - Reso, Quantize 69
 - Song
 - Realtime Quantize 46
 - Reso, Quantize 66
 - Quick Format 143
- R**
- Range 81, 88, 97
 - Rate Convert 93
 - Realtime Control Knobs B-Assign 218
 - AMS 210
 - Combination 38
 - MIDI Filter
 - Combination 36
 - Sequencer 58
 - Program 8
 - Sampling 98
 - Sequencer 60
 - Song Play 105
 - REC Mode 86
 - Rename
 - Cue List 53
 - File, Directory 141

Pattern name 71
 Program 3
 Program/Combination Cat. 122
 Rename Arpeggio Pattern 128
 Rename Drum Kit 125
 Rename Multisample 84
 Rename Sample 84
 Song 47
 Track Name 68
 Repeat
 Loop 
 Repeat Measure 64
 Repeat, Cue List 52
 Resolution
 Arpeggiator 3, 23, 32, 40, 74, 108, 127
 Sequencer 46, 66, 69
 Resonance 12, 213, 218
 Sample 7, 7
 Reverse
 Reverse, Drum Kit 124
 Reverse, Program 6
 Reverse, Sampling 93, 95
 Ribbon controller 8
 AMS 210
 MIDI Filter
 Combination 36
 Sequencer 58
 Rotate
 Rotate Step 129
 Routing 147, 151
 Combination 41
 Program 24
 Sequencer 75
 Song Play 109
 RPPR (Realtime Pattern Play/Recording) 71
 RPPR ON/OFF 46

S

Sample 80, 88, 96
 Load 136
 Sample data memory modules 237, 238
 Sample Mode 82
 Sample Parameters 7
 Sample Time 82
 Sample waveform display 88, 94
 Save 140
 Sample Mono To Stereo 85
 Sampling
 Rate Convert, Sampling Rate 93
 Sampling Data 140
 Sampling will be started 86
 Save 139
 Program, Combination, Drum Kit, Arpeggio Pattern, Global Setting, Song, Cue List, Track, Pattern, Multisample, Sample, SMF, Exclusive 139
 Save Jukebox List 107
 Save Template Song 48, 102
 Set Date/Time 142
 Scale
 Combination 35
 Program 4
 Sequencer 57
 Song Play 104

User All Notes Scale 121
 User Octave Scale 121
 SCSI ID 143
 Select
 Arpeggio Select 127
 Bank/Combination Select 29
 Bank/Timbre Program Select 30
 Category/Combination Select 29
 File select 101
 High Drumsample Select 124
 IFX 25
 Key Select
 Drum Kit 123
 RPPR 71
 Low Drumsample Select 124
 MFX Effect Select 27
 Pattern Select 68
 RPPR 71
 Play Track Select 101
 Select Directory 106
 Select other medium 141
 Song Select, Cue List 52
 Track Select, Sequencer 46
 Send 147, 149
 AUDIO INPUT 117, 149, 152
 Combination 42, 147, 151
 Drum Kit 126
 Program 25, 147, 151
 Sequencer 76, 147, 151
 Song Play 110, 147, 151
 SEQ, Data 140
 Single 4
 Single Trigger
 Drum Kit 125
 Program 4
 SMF(Standard MIDI Files) 101
 Load 135
 Save 141
 SNG file(.SNG) 131, 134
 Solo
 SOLO ON/OFF, Sequencer 47
 SOLO ON/OFF, Song Play 102
 Solo Selected Timbre, Combination 31
 Solo Selected Track, Sequencer 47
 Solo Selected Track, Song Play 102
 Song 45, 101, 135
 Convert Cue List to Song 53
 Load 135
 Load Template Song 48, 102
 Save 140
 Save Template Song 48, 102
 Sort 3, 23, 32, 40, 74, 108, 127
 Sound continues playing 4
 Standard MIDI File(SMF) 135, 140
 Status
 Combination 30
 Sequencer 55
 Song Play 104
 Step
 Cue List 52
 Current Step 53
 Step No. 128
 Step Recording 61, 69
 Stereo input—Stereo output 146

Stereo multisample 81
 Stereo sample 81
 Stereo To Mono 85
 SW1, SW2
 AMS 210
 Assign 217
 Combination 38
 Program 8
 Sampling 98
 Sequencer 60
 Song Play 105
 MIDI Filter 118
 Combination 36
 Sequencer 59
 Swap
 Swap Insert Effect 25, 42, 76, 99, 110
 Swap LFO 1&2 21
 Swap Master Effect 28, 43, 77, 111
 Swap Oscillator 5
 Swing 23, 40, 74, 108
 Sync.
 Key Sync.
 Arpeggiator 127
 Arpeggio, Combination 32, 40
 Arpeggio, Program 3, 23
 Arpeggio, Sequencer 74
 Key Sync., LFO 21
 MIDI/Tempo, LFO 21
 Sync Both EGs 16
 Sync, RPPR 71
 Tempo, Sequencer 45
 System Exclusive Data 234
 Load 135
 MIDI Filter 119
 Save 141

T

Template Song
 Load Template Song 48, 102
 Preset Template Song 48
 Save Template Song 48, 102
 Solo Selected Track 102
 User Template Song 48
 Tempo 1, 22, 29, 45, 51, 69, 86, 101, 127
 AMS 210
 Tempo Mode 46, 52
 Threshold 86
 Timbre 29, 32
 Timbre assign 32
 Tone 127, 129
 Tone No. 129
 Top Key 81, 97
 Top Key, Bottom Key
 Combination 37
 Sequencer 59
 Top Slope, Bottom Slope
 Combination 37
 Sequencer 59
 Top Velocity, Bottom Velocity
 Combination 38
 Sequencer 60
 Track 135
 Load 135
 Play Track Select 101
 RPPR 71

- Save 139
- Track Edit 61
- Track Select
 - Cur List 52
 - Sequencer 46, 61
- Transpose
 - Combination 34
 - Convert Position 118
 - Drum Kit 7, 124
 - Global 113
 - Program 6
 - Pitch Stretch 2
 - Sequencer 56
- TRINITY 226
- Truncate 89, 95
- Tune
 - Pitch Stretch 2
 - Tune, Drum Kit 7, 124
 - Tune, Program 6
 - User All Notes Scale 121
 - User Octave Scale 121

U

- Use DKit Setting 17, 24
- Use Zero 88, 95
- User All Notes Scale 121
- User Arpeggio 126
- User Octave Scale 121
- User Scale 121

V

- VALUE slider
 - AMS 210
- Velocity
 - AMS 210
 - Modify Velocity 67
 - Scan Zone, Arpeggiator
 - Combination 40
 - Program 24
 - Sequencer 74
 - Song Play 109
 - Velocity Cross-fade 37
 - Velocity Curve 113
 - Specified location 118
 - Velocity Intensity, Amp Mod. 18
 - Velocity M.Sample SW Lo→Hi 6
 - Velocity Sample SW Lo→Hi 123
 - Velocity Switch 37
 - Velocity, Arpeggiator 23, 40, 74, 108, 128
 - Velocity, Filter EG 13
- Velocity Zone
 - Combination 37
 - Program 7
 - Sequencer 60
- Vocoder 201
- Volume
 - Hold Balance 31
 - Volume Label 143
 - Volume Ramp, Sampling 92
 - Volume, Combination 31
 - Volume, Sequencer 49
 - Volume, Song Play 103

W

- WAVE file(.WAV) 131, 137, 226
- Write
 - Write Arpeggio Patterns 128
 - Write Combination 30
 - Write Drum Kits 125
 - Write Global Setting 114
 - Write Program 3
- Write Protect 143

Z

- Zero-cross 88
- Zone Map
 - Arpeggiator
 - Program 24
 - Sequencer 74
 - Song Play 108
 - Combination 37
 - Sequencer 59
- Zone Range
 - Sampling 87
- ZOOM 88, 95