**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.

---

**How to read the “Parameter Guide”**

**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.

**Page menu command**

5–1: OSC1 LFO1 ( )

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

**Tab name (1)**

5–1a: OSC1 LFO1

**Parameter number**

5–1b: Waveform

Select the LFO waveform.

**Range of possible parameter values**

---

**Procedure steps ① ② ③ ...**

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

**Page menu command No.**

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.

**Page menu command name**

5–1: Page Menu Command

5–1A: Swap LFO 1&2

**Page menu command No.**

5–2: OSC1 LFO2

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

**Parameter name**

5–3: OSC2 LFO1

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. (w=5–1: OSC1 LFO1)
# 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 .................................. 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 ................................ 15
   3-5: Filter2 ................................... 16
   3-6: Filter2 Mod. ................................ 16
   3-7: Filter2 Lfo Mod (Filter1 LFO Mod.) .......... 16
   3-8: Filter2 EG ................................ 16
   Program P4: Edit -Amp ................................ 17
   4-1: Amp1 Lvl/Pan (Amp1 Level/Pan) ............... 17
   4-2: Amp1 Mod. ................................ 17
   4-3: Amp1 EG .................................. 18
   4-4: Amp2 Lvl/Pan (Amp1 Level/Pan) ............... 20
   4-5: Amp2 Mod. ................................ 20
   4-6: Amp2 EG .................................. 20
   Program P5: Edit-Common LFO ....................... 20
   5-1: OSC1 LFO1 ................................. 20
   5-2: OSC1 LFO2 ................................. 21
   5-3: OSC2 LFO1 ................................. 21
   5-4: OSC2 LFO2 ................................. 22
   Program P6: Edit-Scramble ......................... 22
   7-1: Scramble .................................. 24
   Program P7: Edit-Insert Effect ..................... 24
   8-1: Routing ................................... 24
   8-2: Insert FX ................................ 24
   8-3: IFX 1 .................................... 25
   8-4: IFX 2 .................................... 26
   8-5: IFX 3 .................................... 26
   8-6: IFX 4 .................................... 26
   8-7: IFX 5 .................................... 26
   Program P8: 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: Edt-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-Arpeg ......................... 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: PlayLoop 1–8 (PlayLoop T01–08) ............... 49
   0-6: PlayLoop 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
### 4. Sampling mode 79

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1: Recording</td>
<td>Recording</td>
</tr>
<tr>
<td>0-2: Preference</td>
<td>Preference</td>
</tr>
<tr>
<td>0-4: Memory Status</td>
<td>Memory Status</td>
</tr>
</tbody>
</table>

### Sampling P1: Sample Edit 88

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1: Prog. 1-8 (Program T01-08)</td>
<td>Program Edit</td>
</tr>
<tr>
<td>0-2: Prog. 9-16 (Program T09-16)</td>
<td>Program Edit</td>
</tr>
<tr>
<td>0-3: Mixer 1-8 (Mixer T01-08)</td>
<td>Mixer Setup</td>
</tr>
<tr>
<td>0-4: Mixer 9-16 (Mixer T09-16)</td>
<td>Mixer Setup</td>
</tr>
<tr>
<td>0-5: Preference</td>
<td>Preference</td>
</tr>
</tbody>
</table>

### Sampling P2: Loop Edit 94

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1: Loop Edit</td>
<td>Loop Edit</td>
</tr>
</tbody>
</table>

### Sampling P3: Multisample 96

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1: Controller Setup</td>
<td>Controller Setup</td>
</tr>
<tr>
<td>3-1: Multisample</td>
<td>Multisample</td>
</tr>
<tr>
<td>3-2: Preference</td>
<td>Preference</td>
</tr>
</tbody>
</table>

### Sampling P4: Controller Setup 98

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-1: Insert FX</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-2: IFX 1</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-3: IFX 2</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-4: IFX 3</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-6: IFX 4</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-5: IFX 5</td>
<td>Insert FX</td>
</tr>
</tbody>
</table>

### 5. Song Play mode 101

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1: Jukebox</td>
<td>Jukebox Mode</td>
</tr>
<tr>
<td>2-1: Controller Setup (MFX1)</td>
<td>Controller Setup</td>
</tr>
<tr>
<td>3-1: Select Directory</td>
<td>Select Directory</td>
</tr>
<tr>
<td>3-1: Jukebox</td>
<td>Jukebox Mode</td>
</tr>
</tbody>
</table>

### Song Play P1: Track 104

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1: Status/Scale T01-08</td>
<td>Status/Scale T01-08</td>
</tr>
<tr>
<td>1-2: Status/Scale T09-16</td>
<td>Status/Scale T09-16</td>
</tr>
<tr>
<td>1-3: MOSS 1-8 (MOSS Setup T01-08)</td>
<td>MOSS Setup T01-08</td>
</tr>
<tr>
<td>1-4: MOSS 9-16 (MOSS Setup T09-16)</td>
<td>MOSS Setup T09-16</td>
</tr>
<tr>
<td>3-1: MOSS 1-8</td>
<td>MOSS 1-8</td>
</tr>
<tr>
<td>3-2: MOSS 9-16</td>
<td>MOSS 9-16</td>
</tr>
</tbody>
</table>

### Song Play P2: Controller Setup 105

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1: Controller Setup (Preference)</td>
<td>Controller Setup (Preference)</td>
</tr>
<tr>
<td>3-1: Select Directory</td>
<td>Select Directory</td>
</tr>
<tr>
<td>3-1: Jukebox</td>
<td>Jukebox Mode</td>
</tr>
</tbody>
</table>

### Song Play P7: Arpeggiator 107

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-1: Setup 1-8</td>
<td>Setup 1-8</td>
</tr>
<tr>
<td>7-2: Setup 9-16</td>
<td>Setup 9-16</td>
</tr>
<tr>
<td>7-3: Arpegg. A (Arpeggiator A)</td>
<td>Arpeggiator A</td>
</tr>
<tr>
<td>7-4: Arpegg. B (Arpeggiator B)</td>
<td>Arpeggiator B</td>
</tr>
<tr>
<td>7-5: Scan Zone</td>
<td>Scan Zone</td>
</tr>
</tbody>
</table>

### Song Play P8: Insert Effect 109

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-1: Routing 1-8</td>
<td>Routing 1-8</td>
</tr>
<tr>
<td>8-2: Routing 9-16</td>
<td>Routing 9-16</td>
</tr>
<tr>
<td>8-3: Insert FX</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-4: IFX 1</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-5: IFX 2</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-6: IFX 3</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-7: IFX 4</td>
<td>Insert FX</td>
</tr>
<tr>
<td>8-8: IFX 5</td>
<td>Insert FX</td>
</tr>
</tbody>
</table>

### Sampling P9: Master Effect 111

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-1: Master FX</td>
<td>Master FX</td>
</tr>
<tr>
<td>9-2: MFX1</td>
<td>Master FX</td>
</tr>
<tr>
<td>9-3: MFX2</td>
<td>Master FX</td>
</tr>
<tr>
<td>9-4: Master EQ</td>
<td>Master EQ</td>
</tr>
</tbody>
</table>
6. Global mode .................. 113
Global P6: 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/Enhancer (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
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.

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

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 multisamples 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 the 10’s place, 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.

0–1b: (Tempo)  [040…240, EXT]

Category

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 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.

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 PC/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 (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 loosing 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.

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.

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.

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

2. 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.

3. 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.

4. Press “To Program” to specify the writing destination.

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

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

0–2: Arpeggio

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 (**p.29, 30 in the Basic Guide).
Filter 1, Ampli
maximum of 62-note polyphony

Double:
Drums:

4

Legato
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 Scale]
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 Ill); This is an equal tempered scale that was used since the later Baroque period.

Kirmberger (Kirmberger Ill); 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 (C1 – 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 be sounded by velocities greater than the value of the “Velocity M.Sample 1” to a value of 999, 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

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.

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

Tune

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.

1–2A: 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.

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

1) “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 (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] (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**

#“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 (*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 (*p.212).

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 (*p.210 “AMS (Alternate Modulation Source) List” SW1:CC#60, SW2:CC#61, Porta.SW:#65).

**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 \(\pm 1\) 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 \(\pm 1\) octave of pitch modulation will be applied. **Negative (-) values** will invert the LFO waveform.

AMS (Alternate Modulation Source) \[[Off, (FEG, EXT)]\]
Select the source that will control the depth of pitch modulation applied by the OSC1 LFO1 (*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 \(\pm 1\) 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 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.

-99 = approximately 1 octave
+99 = approximately 1 octave
0 = pitch when key is held (sustained)
Note-on
Start Level
Note-off
Release Level
Time
Attack Time
Release Time

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.

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.

\[\] 2–3c: Time Modulation
These parameters let you use alternate modulation to control the “Time” parameters of the pitch EG.

AMS (Alternate Modulation Source) \([\text{Off}, \text{KT, EXT}]\)
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 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.
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.

![Filter 1 Settings](image)

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.

**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 (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.”

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.

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.

12dB/oct

12dB/oct

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
(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 apply to the range below the specified note number.

**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.

### Intensity to A

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

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

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 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

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.”

AMS2 (Alternate Modulation Source2)  [Off, (PEG, AEG, EXT)]
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 1A 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]

▼ 3–9: Page Menu Command
≡ “0–1A: Write Program,” “1–1A: Copy Oscillator,” and “1–1B: Swap Oscillator.”

3–4: Filter1 EG [AMS on]

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.

3-4c: Time Modulation
These settings let you use alternate modulation to control the “Time” parameters of the filter 1 EG.

AMS1 (Alternate Modulation Source1) [Off, (KT, EXT)]
Select the source that will control the “Time” 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 “AMS1” will have.
For example if “AMS1” is set to Flt KT +/+, 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.

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.

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 (= “AMS1” → “Rl”).

3-5: Filter2
3-6: Filter2 Mod.
3-7: Filter2 Ifo Mod (Filter1 LFO Mod.)
3-8: Filter2 EG

AMSource

These are the filter 2 parameters (for oscillator 2) (= “3-1: Filter 1” → “3-4: Filter 1 EG”).
These will appear when “Oscillator Mode” (1-1a) is Double.
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.

<table>
<thead>
<tr>
<th>Program P4: Edit -Amp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4–1a: Amp Level (Amplifier Level)</strong></td>
</tr>
<tr>
<td>Amp Level</td>
</tr>
<tr>
<td>Set the volume of oscillator 1.</td>
</tr>
<tr>
<td>M</td>
</tr>
</tbody>
</table>

| **4–1b: Pan (Panpot)** |
| Pan | [Random, L001…C064…R127] |
| Set the pan (stereo location) of oscillator 1. |
| M | 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 (##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.”

**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) \([\text{Off}, \{\text{PEG, FEG, AEG, KT, EXT}\}]\)
Select a source that will control the depth by which “OSC1 LFO1” will modulate the volume of oscillator 1 (\(\text{p.210 “AMS (Alternate Modulation Source) List”}\)).

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) \([\text{Off}, \{\text{PEG, FEG, AEG, KT, EXT}\}]\)
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.”

\(\uparrow\) 4–2: Page Menu Command
\(\text{p.2} \), “0–1A: Write Program,” “1–1A: Copy Oscillator,” and “1–1B: Swap Oscillator.”

4–3: Amp1 EG
These parameters let you create time-varying changes in the volume of oscillator 1.

AMS (Alternate Modulation Source) \([\text{Off}, \{\text{PEG, FEG, AEG, KT, EXT}\}]\)
Select a source that will control the depth by which “OSC1 LFO1” will modulate the volume of oscillator 1 (\(\text{p.210 “AMS (Alternate Modulation Source) List”}\)).

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.
**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 times 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 (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 (-) values 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.

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

---

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 (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.

**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 shorten the time, and setting it to – will allow AMS1 to lengthen 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)

 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, +]

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

These parameters specify how “AMS2” will control the amp 1 EG “Time” parameters (+="AMS1"=”RI”).

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

These are the parameters for amp 2 (used for oscillator 2). (+= “4-1: Amp 1 Level / Pan”=“4-3: Amp 1 EG.”)

4–3: Page Menu Command

4–3A: OSC1 LFO1

5–1: 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

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.

Delay

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 (AMS1). 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.

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. (e.g., “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 

[01...16]

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

0–1A

Write Program

5–1A

Swap LFO 1&2

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

Here you can make settings for the OSC1 LFO2, which is the second LFO that can be applied to oscillator 1. (e.g., “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

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 (e.g., “5–1: OSC1 LFO1”).
**5–4: OSC2 LFO2**

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: Arpeggiator 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.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P00: UP</td>
<td>(Preset Arpeggio Pattern)</td>
</tr>
<tr>
<td>P01: DOWN</td>
<td>(Preset Arpeggio Pattern)</td>
</tr>
<tr>
<td>P02: ALT1</td>
<td>(Preset Arpeggio Pattern)</td>
</tr>
<tr>
<td>P03: ALT2</td>
<td>(Preset Arpeggio Pattern)</td>
</tr>
</tbody>
</table>
P00–P04 are preset arpeggio patterns. U00 (A/B–U231 (D) are user arpeggio patterns. User arpeggio patterns can be created in Global P6.

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 [1/4, 1/2, 1, 2, 4, 8]
Specify the timing resolution of the arpeggio. The notes of the arpeggio will be played at the interval you specify: 1/4, 1/2, 1, 2, 4, 8. 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 lengthen the gate time, and rotating it toward the right will shorten 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.

\* Specify the velocity of the notes in the arpeggio.

\* Each note will sound with the specified velocity value.

\* Each note will sound with the velocity value at which it was actually played.

\* 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.

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 real time 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

This shows the “Scan Zone” setting.

7–2a: Zone Map

Top Key: [C–1...G9]  
Bottom Key: [C–1...G9]

7–2b: Scan Zone

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 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.

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 real time.

If you wish to adjust the pan in real time during a note and output the sound from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4, set “BUS Select” to IFX1 (or IFX2–
If “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 OSC2 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 effect 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.

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”).

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).

8–2a: 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.

- **ON** 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)**

[000...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).

- **ON** 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.

- **ON** 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).

Here you can set the effect parameters for the IFX 1/2/3/4/5 that were selected in the Insert FX tab (p.145).

**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 monaural input. The sound that is panned to L and R after passing through the oscillator and insert effects is mixed to a monaural 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 monaural.

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.

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.

LR 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.

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

5. Select the copy destination master effect.
6. 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)

<table>
<thead>
<tr>
<th>Bank A</th>
<th>Bank B</th>
<th>Bank C</th>
<th>Bank D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **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.

- **0–1a: 10’s Hold, Category, Combination Number**
  - **Bank**
    - Use the front panel BANK [A–D] keys to select the bank.
  - **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:**
      - 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**
  - **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 if you wish to find programs in a specific category, or when you need to find a different program in the same category ([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 ([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).

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.

0−1A: 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.

Note: 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 (p.149 “3. Mixer”).

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

Note: 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).

Note: 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-Arp., 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) [♭4, 4, 3, 4, 3, 4, 4, 3, 4]
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 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

* 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.

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.

- 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.

- You can also use the “Detune BPM Adjust” page menu command to automatically make a detune setting from a calculation in BPM units.

“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 \([\text{PRG}, -24...+24]\)
Specify the amount of pitch change that will occur when the pitch bender is operated, in semitone units.

- The MIDI RPN Pitch Bend Change message can be received to control this and change the setting. (However it will not be received if set to PRG.) This message is received on the MIDI channel for each timbre set by “MIDI Channel” (2–1a).

\[ \text{2–3: Page Menu Command} \]

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.

- The scale specified by the program will be used. -24...+24: This setting will be used regardless of the setting in the program.
- The MIDI RPN Pitch Bend Change message can be received to control this and change the setting. (However it will not be received if set to PRG.) This message is received on the MIDI channel for each timbre set by “MIDI Channel” (2–1a).

\[ \text{2–4a: Delay [ms]} \]

Delay [ms] (Delay Time) \([0000...5000, \text{KeyOff}]\)
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.

\[ \text{2–4b: Use Program’s Scale} \]

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 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)

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: MIDl 2 (MIDI Filter-2)

Enable JS X as AMS, Enable JS+Y, Enable JS-Y, Enable Ribbon

Specify whether or not MIDI pitch bend messages (the X axis of the TRITON’s joystick) will be received to control the AMS (Alternate Modulation Source) 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)

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. 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 P0: 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).

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.

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 upward, and will reach the original volume one octave above 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.

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).

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.

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.

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 (SW1Assign) AMSource [Off, ..., After Touch Lock]
SW1 Mode [Toggle, Momentary]
SW2 (SW2Assign) 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] (“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 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 specific 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.

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

Set “Link: Arpeggiator Run A, B” (0–3a).

7–1: Page Menu Command

- 0–1A Write Control Change
- 0–1B Solo Selected Timbre
- 7–1A Copy Arpeggiator
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.

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* [>/sxnoteup /largethree, >/sxnoteup, >/eighthnoteup /largethree, >/eighthnoteup, >/quarternoteup /largethree, >/quarternoteup]
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.
* 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”).
≡ The values of these parameters can also be entered by playing a note on the keyboard while you hold down
   the [ENTER] key.
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.

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), Send1 (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 IFX1, 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.

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, 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.

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: 5–2h) for the individual keys of that drum kit are set to IFX1–5.

Select this command to open the following dialog box.

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 (8–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.

8–3: 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).

In the Drum Kit “IFX” popup, select the insert effect to which you want to patch.

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.

**8–1A: Write Combination**

“Program P8: 8–1A: Write Combination,” and “8–1B: Copy Insert Effect.”
8–3a: Ctrl Ch

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

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

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]

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 (**p.207).

9–4a: Ctrl Ch [Ch01...16, Gch]

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 data dump from an external MIDI sequencer (see p.139, 120, refer to p.40 in the Basic Guide).

Sequencer PO: 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

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.

\[ \text{When "MIDI Clock" (Global P1: 1–1a) is Internal, changing the location will cause Song Position Pointer messages to be transmitted. If this parameter is set to External MIDI or External PC I/F, Song Position Pointer messages from the specified source will change the location.} \]

The range in which the beat and clock can be modified will depend on the currently specified time signature.

0–1b: Meter

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.

\[ \text{(Tempo) } \quad [040\ldots240, \text{EXT}] \]

040…240: When the “Tempo Mode” is Manual, 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/E. 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.

If Tempo is selected as an alternate modulation source, \( \text{J} = 120 \) 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 “J (Tempo)” setting while a song is playing or recording (or during standby).

**Manu (Manual):** The “J (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).

---

**0–1f: Reso (Realtime Quantize Resolution)**

Hi, \( \frac{1}{2} \), ... \( \frac{1}{16} \)

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 (\( \frac{1}{16} \)).

\( \frac{1}{3} \): Data will be corrected to the nearest interval of the specified timing as it is recorded. For example if you select \( \frac{1}{3} \), data will be corrected to the nearest 32nd note triplet interval. If you select \( \frac{1}{4} \) data will be corrected to the nearest quarter note interval.

---

**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 (\( \times P6-3: 

**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**

This shows the MIDI channel number specified for the track.

**RPPR**

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 Track 01...08
0–2i: Program Track 09...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 ([=]Program 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 ([=]Program 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 [A] [2] 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. You can also change the program manually during playback. However if musical data (program change data) is already recorded, the program will change at that point.

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): 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.

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 this track number.

▼ 0–1: Page Menu Command

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” (0–1) buttons are turned on.

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 RPRR 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 RPRR 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 RPRR 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.

This area shows a portion of the category name for the program used by the track.

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.

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.

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.
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 realtime recording process more efficient (**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.

**Remove Data**

This is available when Loop All Tracks is chosen in “Recording Setup.”

**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” (0–1, 2) 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 (**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.

Unselected: 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).

1–1: Location, Meter, , Tempo Mode

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.

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/F, 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.

Specify the tempo at which the song in the cue list will be played (ws “0–1c: Tempo”).
**Tempo Mode**

**Auto:** Playback will use the tempo specified by the currently playing song. During playback, the “\( \text{(Tempo)} \)” setting cannot be modified.

**Manu (Manual):** Tempo specified in the song will be ignored, and playback will use the tempo specified above for “\( \text{(Tempo)} \)”.

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).

**NOTE:** 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/F, 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.

\[ 1-1A: Page Menu Command \]

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1A</td>
<td>Memory Status</td>
</tr>
<tr>
<td>1-1A</td>
<td>Rename Cue List</td>
</tr>
<tr>
<td>1-1B</td>
<td>Delete Cue List</td>
</tr>
<tr>
<td>1-1C</td>
<td>Copy Cue List</td>
</tr>
</tbody>
</table>

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.

- The master track tempo, meter, and all track and effect settings of subsequent songs will all be converted.

\[ 1-2: Converting Song/Track parameters into track events \]

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.

<table>
<thead>
<tr>
<th>Track1–16</th>
<th>Bank/Program, Pan, Volume, Portamento, Detune, Bend Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Track</td>
<td>Tempo, Meter</td>
</tr>
</tbody>
</table>

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 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.

4 To execute the conversion, press the OK button. To cancel, press the Cancel button.

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.
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.

MSB: MIDI data is transmitted and received on the MIDI channel that is specified separately for each track by “MIDI Channel.”

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).

Memo: 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.

2–5(6)a: Transpose, Detune, Bend Range

Transpose

Adjust the pitch of each track in semitone steps. 12 steps are one octave.

Detune (BPM Adj. in Page Menu)

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.

**About Transpose and Detune**

These 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).

**Bend Range**

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 to +24:** Regardless of the setting of the program, pitch bending will use the range you specify here.

Note: 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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1A</td>
<td>Memory Status</td>
</tr>
<tr>
<td>0–1B</td>
<td>Delete Selected Track</td>
</tr>
<tr>
<td>0–1C</td>
<td>Rename Song</td>
</tr>
<tr>
<td>0–1D</td>
<td>Delete Song</td>
</tr>
<tr>
<td>0–1E</td>
<td>Copy From Song</td>
</tr>
<tr>
<td>0–1F</td>
<td>Copy From Cond.</td>
</tr>
</tbody>
</table>

**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).

**2–7: 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)**

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.

* These MIDI filter settings have no effect on the MIDI messages that have already been recorded.

* 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)

3–1a: Enable Program Change, Enable After Touch, Enable Damper, Enable Portamento SW

Enable Program Change
Specify whether or not MIDI program change messages will be 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)

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 1–08 (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.

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).”

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.

*Note: 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 (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)** [Off, ..., After Touch Lock]
**SW1 Mode** [Toggle, Momentary]

**SW2 (SW2 Assign)** [Off, ..., After Touch Lock]
**SW2 Mode** [Toggle, Momentary]

**Note:** “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 (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** [MIDI Source] [Off, ..., MIDI CC#95]
**Knob 2-B** [MIDI Source] [Off, ..., MIDI CC#95]
**Knob 3-B** [MIDI Source] [Off, ..., MIDI CC#95]
**Knob 4-B** [MIDI Source] [Off, ..., MIDI CC#95]

**Note:** “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.

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).

1. 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.

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

3. 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.

4. 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.

5. In “Note Duration,” set the length that the note will actually be held, relative to the “Step Time.” In general, 100% will be tenuto, 50% will be normal, and 80% will be staccato.

6. 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.

7. 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.

- **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 as 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).

6. By modifying the value of the “BT” (Beat Tick) location within the measure, you can move the event within the measure.

7. You can edit each event by modifying its data value(s). When you select a note event, it will sound.

8. 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.

   - 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.

<table>
<thead>
<tr>
<th>BAR (displayed only)</th>
<th>Meter: 1/4...16/16 *1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Measure line)</strong></td>
<td><strong>(Time signature)</strong></td>
</tr>
<tr>
<td>C–1...G9 *2</td>
<td>V: 1...127 *2</td>
</tr>
<tr>
<td><strong>(Note data)</strong></td>
<td><strong>(Velocity)</strong></td>
</tr>
<tr>
<td><strong>(Time signature)</strong></td>
<td><strong>(Length: beats, clocks)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>(Note number)</strong></th>
<th><strong>(Length: beats, clocks)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Value)</strong></td>
<td><strong>(Program bank)</strong></td>
</tr>
<tr>
<td><strong>(Control change)</strong></td>
<td><strong>(Control change number)</strong></td>
</tr>
<tr>
<td>ctrl</td>
<td><strong>(Value)</strong></td>
</tr>
<tr>
<td><strong>(Program change)</strong></td>
<td><strong>(Program number)</strong></td>
</tr>
<tr>
<td>AFTT</td>
<td><strong>(Program number)</strong></td>
</tr>
<tr>
<td>BEND</td>
<td><strong>(Pitch bend)</strong></td>
</tr>
<tr>
<td><strong>(Value)</strong></td>
<td><strong>(Pitch bend)</strong></td>
</tr>
</tbody>
</table>

*1: Phaser 000.000...15984.000

*2: Meter: 1/4...16/16

*3: Length: beats, clocks
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.

   ![Erase Track 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.

   ![Copy Track dialog box]

   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.

   ![Bounce Track dialog box]

   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.

   ![Erase Measure dialog box]

   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.

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.
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.

Example: When measures 3–5 are deleted, measures 6–8 are moved forward.

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.

Example: When measures 2 and 3 (3/4 time) of track 2 are deleted, the measures that were moved forward 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.

① Select this command to open the following dialog box.

② Select this command to open the following dialog box.

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 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.)

③ In “Length,” specify the number of measures that will be inserted.

④ 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.

⑤ 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.

⑥ To execute the Insert Measure command, press the OK button. To cancel, press the Cancel button.

Example: When measures 2 and 3 (3/4 time) of track 2 are deleted, the measures that were moved forward as a result of the Delete operation will change.

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.

5–1I: 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.
To execute the Copy Measure operation, press the button. To cancel, press the Cancel button.

5–1K: Move Measure
This command move 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.”)

3. If you check “All Tracks,” musical data of all tracks including the master track will be moved.

4. 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.)

5. In “To: Track” (if “All Tracks” is unchecked), specify the move destination track. In “Measure,” specify the first measure of the move destination.

6. 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 (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.”
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 (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.

5. If you select After Touch, both channel pressure and polyphonic key pressure will be quantized.

6. 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.

7. 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 1/4, and 48 will be 1/8. 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.

8. 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.

9. To execute the Quantize command, press the OK button. To cancel, press the Cancel button.
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 3. 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” [C ] 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.

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 Note” command (5–1P) 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.
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) (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 (p.77 in the Basic Guide).

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.
1c). Solution)

In 1

This is available when a user pattern is selected. Here you can perform step recording into a pattern.

6

M

used. The assigned key and the specified track are shown.

This area indicates the RPPR 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.

6–1c: 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

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. Specified “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.

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.

3

If you check “All Pattern,” all user patterns in the song will be erased.

4

If “All Patterns” is not checked, only the pattern specified in 3 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.

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 (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.

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. ※“Put To Track” (6–1H).

Example: Pattern 20 has been Put at measures 2, 4, and 6 of track 10. When measures are reached, pattern 20 is called and its data is played.

Example: Pattern 41 has been Copy to measure 2. When those measures are reached, pattern 41 has been copied into measure 2.
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]

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.

- 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 arpeggiator during song track or pattern realtime-recording in Sequencer mode, the musical data generated by the arpeggiator between two different arpeggio patterns, etc.

been split across the keyboard, or use velocity to switch the two arpeggiators simultaneously. This allows you to

There are also two arpeggiators (A and B) that can be assigned to 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 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.

– 1g – 01a – 1a

7–1(2)a: Arpeggiator Assign, Arpeggiator Run A, B

Arpeggiator Assign

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 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.

7–3: 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 [1 1, 1, 1, 1, 1, 1, 1]
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”).

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 “B. 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) (8–5), 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.

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 specified in IFX 1–5 tabs (8–1–8). 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).

8–3: 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.

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).

**8–1: Page Menu Command**

| 0–1A | Memory Status  |
| 0–1B | Select Selected Track  |
| 8–1A | Copy Insert Effect  |
| 8–1B | Swap Insert Effect  |
| 8–1C | DrumKit IFX Patch  |
| 0–11 | FF/REV 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.”

**8–4: 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]

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

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]

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 (*p.207).

9-4a: Ctrl Ch  [Ch01...16, Gch]

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 or being sampled.

The TRITON comes with 16 Mbytes of sample memory (waveform memory). This allows approximately 2 minutes and 54 seconds of monoaural 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 monoaural 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, refer to 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 (e.g., “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.

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 48,004 samples of data.

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.
Each multisample consists of the samples for one or more indexes (an “index” is a range or zone of keys).

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.

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” (e.g., “Key Index”).

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 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.)

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.

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” (0–1) page menu command to change the displayed range of the keyboard.

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.

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----: 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.

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.
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.

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.

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.”

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.

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.

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.

Here you can select the memory bank into which you will sample, specify the sampling time, and select either mono or stereo sampling.

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).
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 change in time will be displayed automatically.

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 multisample 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
“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
“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
“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.

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 exceed, 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.
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, 0–2a) 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.

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.

**0–1A: 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---.

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.

The destination sample number will automatically be included in the sample name of the copy destination.

To execute the Copy Sample command, press the OK button. To cancel, press the Cancel button.

Specify the sample number of the copy destination.

When copying a stereo sample, specify both the L and R channels for the copy destination sample number.

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.
④ 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.

① Select this command to open the following dialog box.

[Image of Rename Sample dialog box]

② 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.

③ 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.

① Select this command to open the following dialog box.

[Image of Delete Multisample dialog box]

② All Multisamples: Check this if you wish to delete all multisamples.

③ Delete Samples too?: Check this if you also wish to delete the samples included in the deleted multisample(s).

④ To execute the Delete Multisample command, press the OK button. To cancel, press the Cancel button.

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.

① Select this command to open the following dialog box.

[Image of Copy Multisample dialog box]

② 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.

① 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.

① Select this command to open the following dialog box.

[Image of Rename Multisample dialog box]

② 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.

③ 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.

① Select this command to open the following dialog box.

[Image of Convert Multisample To Program dialog box]

② 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).

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, D, and E. Specify bank E to make the most efficient use of the banks.

To execute the Convert Multisample To Program command, press the OK button. To cancel, press the Cancel button.

0-1J: 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.”

Select this command to open the following dialog box.

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.

**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.

0-1J: 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 displays the range of the keyboard display. Normally you will select 88 Key Normal (A0–C8).

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

2. 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

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

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

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

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.

3. Be careful of changes in the monitoring volume level (= “Recording Level [dB]” 0–14).

4. 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.

5. Press the [START/STOP] key. Sampling will automatically begin when the input level exceeds the “Threshold” setting.

6. 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

When performing auto sampling (“REC Mode” Auto), this sets the level at which sampling will begin (= “REC Mode” Auto, step 3).

Count Down REC

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 of 4, 8, 3, 6 at the tempo specified number of beats at the tempo of “P” (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

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

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 loosing 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 (set “Recording Level [dB]” 0–1d).

0–2c: Recording Level [dB]  
[-inf, -72.0... 0.0...+18.0]  
#• Link: 0–1d

0–3: Preference

<table>
<thead>
<tr>
<th>0–3a: Create Zone Preference</th>
</tr>
</thead>
</table>
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**  
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 (set “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

<table>
<thead>
<tr>
<th>0–4a: Free Sample Memory</th>
</tr>
</thead>
</table>
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 (set “RAM Bank” 0–1c).

<table>
<thead>
<tr>
<th>0–4b: Free Number</th>
</tr>
</thead>
</table>
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.

<table>
<thead>
<tr>
<th>Multisample[MS]</th>
<th>[0000...0999/1000  000...099%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>[0000...4000/4000  000...100%]</td>
</tr>
<tr>
<td>Sample in MS</td>
<td>[0000...3999/4000  000...099%]</td>
</tr>
</tbody>
</table>
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.”

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).

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]
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).

Range [C–1...B9 — C–1...B9]

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.”

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 [ △ ] [ △ ] 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]

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.
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.

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.

1. Use “Edit Range Start” and “Edit Range End” to specify the editing range.
   The portion that will be left by the “Truncate” command may be auditioned by pressing the front panel [START/STOP] key.
2. Select this command to open the following dialog box.
3. The editing range will be shown in “Range Start” and “End.”
4. 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 ③, this cannot be set.

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.
If you wish to delete the original sample data and overwrite it with the edited sample data, **check “Overwrite” (eq. 1–1).**

To execute the Truncate command, press the OK button. To cancel, press the Cancel button.

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.

   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.

   ![Cut Sample Dialog Box](image)

   - The range to be edited is shown by “Range Start” and “End.”
   - 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 1, 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.
   - If you wish to delete the original sample data and overwrite it with the edited sample data, **check “Overwrite” (eq. 1–1).**
   - To execute the Clear command, press the OK button. To cancel, press the Cancel button.

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.

2. Select this command to open the following dialog box.

   ![Copy Sample Dialog Box](image)

   - The range to be copied is shown by “Range Start” and “End.”
   - 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. The range to be copied is shown by “Range Start” and “End.”

2. To execute the Copy command, press the OK button. To cancel, press the Cancel button.
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.

```
<table>
<thead>
<tr>
<th>Sample Sample NAME</th>
<th>FROM [ ]</th>
<th>TO [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start: End</td>
<td>Save to</td>
<td>Edit</td>
</tr>
<tr>
<td>Save to No.</td>
<td></td>
<td>OK</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>OK</td>
</tr>
</tbody>
</table>
```

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.
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 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.

⑦ 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.

```
<table>
<thead>
<tr>
<th>Sample Sample NAME</th>
<th>FROM [ ]</th>
<th>TO [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start: End</td>
<td>Save to</td>
<td>Edit</td>
</tr>
<tr>
<td>Save to No.</td>
<td></td>
<td>OK</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>OK</td>
</tr>
</tbody>
</table>
```

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.

```
<table>
<thead>
<tr>
<th>Sample Sample NAME</th>
<th>FROM [ ]</th>
<th>TO [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start: End</td>
<td>Save to</td>
<td>Edit</td>
</tr>
<tr>
<td>Save to No.</td>
<td></td>
<td>OK</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>OK</td>
</tr>
</tbody>
</table>
```

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.
⑤ 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 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.

⑧ 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.

```
<table>
<thead>
<tr>
<th>Sample Sample NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM [ ]</td>
</tr>
<tr>
<td>Start: End</td>
</tr>
<tr>
<td>Save to No.</td>
</tr>
<tr>
<td>Cancel</td>
</tr>
</tbody>
</table>
```

① Use “Edit Range Start” to specify the starting address at which the data will be pasted.
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 ⑤, this cannot be set.
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.
⑤ 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 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.

⑧ 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.

- **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.

1–1f: 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.”

- **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.

- **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.

1–1f: 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 Use “Edit Range Start” and “Edit Range End” to specify the range to be edited.

- **End.**
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–F) 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” (⑪–⑬).

8. To execute the Volume Ramp command, press the OK button. To cancel, press the Cancel button.
   - 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” (⑪–⑬).

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.

   - 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” (⑪–⑬).

4. To execute the Reverse command, press the OK button. To cancel, press the Cancel button.
   - **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.**
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.

1–1M: 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.

2 Use the On/Off Radio buttons to switch the grid on or off.

3 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.

4 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). (0=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 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.

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 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 [△]/[▽] 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).

ZOOM
This allows you to zoom-in/out in horizontal and vertical directions of the “sample waveform display” (=1–1c).

2–1A: Page Menu Command

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.
   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.

“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) [0000...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) [C1–9…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 REALTIME 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.

When you execute this command, the “Pitch BPM Adjust” page menu command lets you set the playback time in terms of a BPM value (©p.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,” “Zone” 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).

3-1A: 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.

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 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 (==0-3a).

(==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]

(== “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]

(== “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+1, 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.

**Important**

- 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. **Pro-**

[Diagram of Sampling P8: Insert Effect]

**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 (*p.207).

Effect Dmod (dynamic modulation) is controlled by the global MIDI channel specified in Global Mode P1.
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.

<table>
<thead>
<tr>
<th>0–1b: Location</th>
<th>[001:01:000...999:15.191]</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0–1c: Tempo</th>
<th>[40...240]</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>0–1d: Jukebox</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**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.

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.

<table>
<thead>
<tr>
<th>T (Track) No.: Bank No.: Prog No. and name</th>
</tr>
</thead>
<tbody>
<tr>
<td>This displays the track number, and the bank, number and name of the program selected for that track.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ch [01...16]</th>
</tr>
</thead>
<tbody>
<tr>
<td>This displays the MIDI channel number of the track.</td>
</tr>
</tbody>
</table>

**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 (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.

<table>
<thead>
<tr>
<th>Bank/Program [A...F/0...127, G...g(d)/1...128]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the program that will be used by the track. When you press the popup button, the Bank/Track Program menu (P0: Bank Select 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.</td>
</tr>
</tbody>
</table>

**0–1j: Status (1–1a, 2a)**

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): PLAY/MUTE, SOLO ON/OFF

PLAY/MUTE

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.

-MIN 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.)

A 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Track 1–9, 11–16</th>
<th>Track 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P0</strong> Bank/Program</td>
<td>G000.*A.Piano</td>
<td>g(d)000:STANDARD KIT</td>
</tr>
<tr>
<td>Pan</td>
<td>C064</td>
<td>C064</td>
</tr>
<tr>
<td>Volume</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>P1</strong> Status</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Use Program’s Scale</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>P7</strong> Arpeggiator Assign</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Other Arpeggiator parameters</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>P8</strong> IFX/Indiv. Out BUS Select</td>
<td>L/R</td>
<td>DKit</td>
</tr>
<tr>
<td>Send1(MFX1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Send2(MFX2)</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>IFX1–5</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>IFX1–5</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Pan(CC#8)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>BUS Select</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Send1</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Send2</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Other Insert Effect parameters</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>P9</strong> MFX1</td>
<td>–</td>
<td>016: Stereo Chorus</td>
</tr>
<tr>
<td>MFX2</td>
<td>–</td>
<td>053: Reverb Smooth Hall</td>
</tr>
<tr>
<td>Return1</td>
<td>–</td>
<td>127</td>
</tr>
<tr>
<td>Return2</td>
<td>–</td>
<td>050</td>
</tr>
<tr>
<td>Other Master Effect and Master EQ parameters</td>
<td>–</td>
<td>Default settings</td>
</tr>
</tbody>
</table>

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).

- The track selected by “Play Track Select” (0–1g) is an exception.

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). 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).
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).

0–3(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: 0–7b).

Tracks whose “Status” (1–a, 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.

Tracks whose “Status” (1–a, 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.

0–5: Preference
Here you can make settings for playing SMF files consecutively, and make settings for the metronome.

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
"▼ 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 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 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.

<table>
<thead>
<tr>
<th>Status</th>
<th>Musical data Keyboard and controller operations</th>
<th>Received data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internal tone generator</td>
<td>MIDI OUT</td>
</tr>
<tr>
<td>INT</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>EXT</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>BTH</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

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 (Program P1: 1–1c).

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

Select the tonic key of the selected scale (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 (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.
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.”

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: Controller Setup (Preference)

Assign the functions of the front panel [SW1] and [SW2] switches (=>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            [Off, ..., After Touch Lock]
Toggle/Momentary [Toggle, Momentary]
SW2            [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] (=>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  [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]

# “Realtime Control Knobs B–Assign” (Program P1: 1–4b).
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 reg-
istered 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 (filename extension .JKB), and then select this command. The following dialog box will appear.

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.

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.

**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.

**7-3: 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** [ /s4noteup, /largethree, /s4noteup, /eighthnoteup, /largethree, /quarternoteup, /largethree ]

**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 (eq. “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” (eq. 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.
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, or 1/2 or 3/4.

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.

8–1A: Copy Insert Effect

If “Status” 2–1a is INT or BTH, MIDI control change (CC) #93 or #91 can 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.

8–1B: Swap Insert Effect

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.

8–2: 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. However, unlike in Program mode, “Pan (CC8)” “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 (CC8) 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 (CC8) or send 1 or 2 data, the settings will change accordingly.

8–3: Insert FX

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 P0: 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).
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) (p.207).

<table>
<thead>
<tr>
<th>Master Effect</th>
<th>Low Cut Off Hz</th>
<th>Low Gain dB</th>
<th>Mid Cut Off Hz</th>
<th>Mid Gain dB</th>
<th>High Cut Off Hz</th>
<th>High Gain dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master EQ</td>
<td>60</td>
<td>+4dB</td>
<td>1.8</td>
<td>+1.6</td>
<td>1.0</td>
<td>+1.6</td>
</tr>
<tr>
<td>Low Cut Off</td>
<td>Off</td>
<td></td>
<td>Off</td>
<td></td>
<td>Off</td>
<td></td>
</tr>
<tr>
<td>High Cut Off</td>
<td>Off</td>
<td></td>
<td>Off</td>
<td></td>
<td>Off</td>
<td></td>
</tr>
</tbody>
</table>

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.
In Global mode you can make settings that affect the entire instrument, such as master tuning, MIDI, and memory protection. 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

**Master Tune**

[-50 cent [427.47Hz]…+50 cent [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.

The Global mode “Master Tune” setting can be controlled by receiving the MIDI universal exclusive message Master Coarse 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).

<table>
<thead>
<tr>
<th>Note number transmitted</th>
<th>0</th>
<th>+12</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSON</td>
<td>24..84</td>
<td>36..96</td>
</tr>
<tr>
<td>TRITON pro</td>
<td>16..91</td>
<td>28..103</td>
</tr>
<tr>
<td>TRITON proX</td>
<td>9..96</td>
<td>21..108</td>
</tr>
</tbody>
</table>

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.

### 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.

### 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 of Bank reference
- **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/WR1TE] 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.

③ Press the square in the upper left of the LCD. When your touch has been detected correctly the square will be highlighted.

④ Press the square in the lower right of the LCD. When your touch has been detected correctly the square will be highlighted.

⑤ 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)

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.

<table>
<thead>
<tr>
<th>Bank</th>
<th>KORG</th>
<th>GM(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>00.00 R/T</td>
<td>3F.00 R/T</td>
</tr>
<tr>
<td>B</td>
<td>00.01 R/T</td>
<td>3F.01 R/T</td>
</tr>
<tr>
<td>C</td>
<td>00.02 R/T</td>
<td>3F.02 R/T</td>
</tr>
<tr>
<td>D</td>
<td>00.03 R/T</td>
<td>3F.03 R/T</td>
</tr>
<tr>
<td>E</td>
<td>00.04 R/T</td>
<td>3F.04 R/T</td>
</tr>
<tr>
<td>F</td>
<td>00.05 R/T</td>
<td>3F.05 R/T</td>
</tr>
<tr>
<td>G</td>
<td>79.00, 79.01–09 R/T</td>
<td>79.00, 79.01–09 R/T</td>
</tr>
<tr>
<td>g(1)–g(9)</td>
<td>38.00 R</td>
<td>38.00 R</td>
</tr>
<tr>
<td></td>
<td>00.00, 00.01..</td>
<td>(XG)R</td>
</tr>
<tr>
<td></td>
<td>00.00, 01.00..</td>
<td>(GS)R</td>
</tr>
<tr>
<td>g(d)</td>
<td>78.00 R/T</td>
<td>78.00 R/T</td>
</tr>
<tr>
<td>3E</td>
<td>00.0 R</td>
<td>3E.00 R</td>
</tr>
<tr>
<td></td>
<td>3F.7F R→MUTE(Korg Mute)</td>
<td></td>
</tr>
</tbody>
</table>
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.
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

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 (=*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). (=*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 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 TRI-  

TONE and setting one instrument to  

MIDI device. By connecting the TRITON to another TRI-

TONE 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.

**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 TRI-

TONE 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 TRI-

TONE 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: 0–16) 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 sound that does 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**

<table>
<thead>
<tr>
<th>Page</th>
<th>Stencil</th>
<th>Global P0</th>
<th>Global P1</th>
<th>Global P2</th>
<th>Global P3</th>
<th>Global P4</th>
<th>Global P5</th>
<th>Global P6</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1A</td>
<td>Write Global Setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1A</td>
<td>Dump Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1B</td>
<td>Dump Combinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1C</td>
<td>Dump Drum Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1D</td>
<td>Dump Arpeggio Pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1E</td>
<td>Dump Global Setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1F</td>
<td>Dump Sequencer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–1G</td>
<td>Dump All</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Type of data dumped</th>
<th>Data size (kByte)</th>
<th>Time required (Sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data All</td>
<td>922.7–2122.7</td>
<td>1–3.0</td>
</tr>
<tr>
<td>Program All</td>
<td>345.6</td>
<td>0.3–23.8</td>
</tr>
<tr>
<td>Program Bank (A/B/C/D/E)</td>
<td>691.2</td>
<td>2.2–22.1</td>
</tr>
<tr>
<td>Program Single (A/B/C/D/E)</td>
<td>0.5</td>
<td>0.2–2.2</td>
</tr>
<tr>
<td>Program Single (F)</td>
<td>0.5</td>
<td>0.2–2.2</td>
</tr>
<tr>
<td>Combination All</td>
<td>229.4</td>
<td>73.4–679.25</td>
</tr>
<tr>
<td>Combination Bank</td>
<td>57.3</td>
<td>18.4–679.25</td>
</tr>
<tr>
<td>Combination Single</td>
<td>0.4</td>
<td>0.2–679.25</td>
</tr>
<tr>
<td>Drum Kit All</td>
<td>263.2</td>
<td>84.2–679.25</td>
</tr>
<tr>
<td>Drum Kit Single</td>
<td>4.1</td>
<td>1.3–679.25</td>
</tr>
<tr>
<td>Arpeggio Pattern All</td>
<td>74.2</td>
<td>23.8–679.25</td>
</tr>
<tr>
<td>Arpeggio Pattern Single</td>
<td>0.3</td>
<td>0.1–679.25</td>
</tr>
<tr>
<td>Global Setting</td>
<td>0.8</td>
<td>0.3–679.25</td>
</tr>
<tr>
<td>Sequencer Data</td>
<td>4.0–1204.0</td>
<td>3.0–387.0</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Type of data dumped</th>
<th>Processing time for writing into memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Approximately 16 seconds</td>
</tr>
<tr>
<td>All Programs</td>
<td>Approximately 8 seconds</td>
</tr>
<tr>
<td>All Combinations</td>
<td>Approximately 4 seconds</td>
</tr>
<tr>
<td>All Drum Kits</td>
<td>Approximately 8 seconds</td>
</tr>
<tr>
<td>All Arpeggio Patterns</td>
<td>Approximately 4 seconds</td>
</tr>
<tr>
<td>Global Setting</td>
<td>Approximately 4 seconds</td>
</tr>
<tr>
<td>Sequencer</td>
<td>Approximately 1 second</td>
</tr>
</tbody>
</table>

When you save data dumps from the TRITON to a MIDI data file, 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.

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.

3. 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.”

4. 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.

5. Transmit the data from the other device. For the procedure, refer to the owner’s manual for the device you are using.

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.
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 ("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 ("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. (↓ 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 “−.”

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.

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.

By executing the “3–1A: Copy Scale” page menu command, you can copy the settings of the preset Stretch scale.
The note can also be selected by holding down the [ENTER] key and playing a note on the keyboard.

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 located 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.

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: 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,” select the copy destination scale.

4. To execute the Copy Scale command, press the OK button. To cancel, press the Cancel button.

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.

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 symbol.)

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 +08'. With any setting other than +08', 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.

<table>
<thead>
<tr>
<th>Bank</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 (A/B)</td>
<td>Preset drum kits</td>
</tr>
<tr>
<td>16 (C)...31 (C)</td>
<td>for user drum kits, EXB-PCM series drum kits</td>
</tr>
<tr>
<td>32 (D)...47 (D)</td>
<td>for user drum kits, EXB-PCM series drum kits</td>
</tr>
<tr>
<td>48 (User)...63 (User)</td>
<td>for user drum kits</td>
</tr>
</tbody>
</table>

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 drum samples 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 drum sample 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, 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
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
Adjust the pitch in semitone steps. +12 is one octave up, and –12 is one octave down.

### Tune
Adjust the pitch in one-cent steps.

### Cutoff [Filter-Cutoff]
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 which uses this drum kit.

### Resonance [Filter-Resonance]
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]
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]
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 drum samples 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]

**HD** “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) [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.
Specify the panning for each key. With a setting of Random, the drum sample will be panned randomly at each note-on.

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.

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
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.

\( \downarrow \) (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  
[1, 2, 3, 4]

Sort

Latch

Key Sync. (Keyboard Synchronize)

Keyboard

\# Program P7 “7–1: Arpeg. Setup.”

“Pattern,” “a, (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.

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 is “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 → 2 → 1 → 2 → 2 → rest → 0 ...

As Played (Fill): 0 → 1 → 2 → 2 → 0 → 1 → 2 → 2 → 1 → 2 → 2 → rest → 0 ...

Running Up: 0 → 1 → 2 → 2 → rest → 0 → 1 → 2 → 2 → 1 → 2 → 2 → rest → 0 ...

Up&Down: 0 → 1 → 2 → 2 → 1 → 0 → 1 → 2 → 2 → rest → 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 range of octaves.
Both: Notes will repeatedly ascend and descend within the specified range 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 U208(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 “G”. 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 “I” or “H”. 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

6–2A: 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.
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.

<table>
<thead>
<tr>
<th>Extension</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>.PCG</td>
<td>Program, combination, drum kit, user arpeggio pattern, global settings (TRITON format)</td>
</tr>
<tr>
<td>.SNG</td>
<td>Song, cue list (TRITON format)</td>
</tr>
<tr>
<td>.JKB</td>
<td>Jukebox list (TRITON format)</td>
</tr>
<tr>
<td>.MID</td>
<td>Standard MIDI File (SMF)</td>
</tr>
<tr>
<td>.EXL</td>
<td>MIDI exclusive data</td>
</tr>
<tr>
<td>.KMP</td>
<td>Korg Multisample Parameter file (Korg format)</td>
</tr>
<tr>
<td>.KSF</td>
<td>Korg Sample File (Korg format)</td>
</tr>
<tr>
<td>.KSC</td>
<td>Korg Script File (Korg format)</td>
</tr>
<tr>
<td>.AIF</td>
<td>AIFF file</td>
</tr>
<tr>
<td>.WAV</td>
<td>WAVE file</td>
</tr>
</tbody>
</table>

Files that can be loaded

Files that can be loaded

Files handled by the TRITON have the following structure.

- .PCG file
  - All programs
    - [A–F]
    - All programs
      - 1 program bank
      - 1 program
- .SNG file
  - 1 song
    - [000 – 999]
- .EXL file
  - 1 user pattern
    - [A/B, C, D]
- .JKB file
  - 1 user pattern
    - [A/B, C, D]
- .KSF file
  - 1 user pattern
    - [A/B, C, D]
- .KSC file
  - 1 user pattern
    - [A/B, C, D]
- .AIF file
  - 1 user pattern
    - [A/B, C, D]
- .WAV file
  - 1 user pattern
    - [A/B, C, D]

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.

Files that can be loaded
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.

0-1A: 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 filenames, 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:

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.

3) 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 program into which the data will be loaded. When you press the popup button, the “Bank/Program Select” window will appear. If you select bank F, the “Select Bank” window will appear and will request you to select the bank.

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 “Combination Select” window will appear. If you select bank F, the “Select Bank” window will appear and will request you to select the bank.

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.

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.

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 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 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. (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 file 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:

The .KMP files and .KSF files listed in the .KSC file will be loaded as multisamples and samples respectively.

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.
2. If you check “Load ********.PCG too,” the .PCG file of the same name as the .KSC file will also be loaded.
3. If you check “Load ********.SNG too,” the .SNG file of the same name as the .KSC file will also be loaded.

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.

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:

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.

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.
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 AIF 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).

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>AKAI S1000/S3000 format</th>
<th>TRITON series format after loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loop points</td>
<td>Multiple settings possible</td>
<td>Of the multiple loop points, the settings for the first HOLD loop are used. If there is no HOLD loop, use the longest loop</td>
</tr>
<tr>
<td>Loop length</td>
<td>Settable with resolution of less than one sample</td>
<td>Resolution of less than one sample is ignored</td>
</tr>
</tbody>
</table>
28) Load AKAI Program File:

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.

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 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.

1. Exchange disks as necessary, and move to the directory that contains the file shown in “Where is.”

2. 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).

0–2A: 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.

**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 → NEWMS000.KMP
- 001: 108bpmDrLoop00 → 108BP01.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 → NEWS000.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.

1. When you select this command, the TRITON will wait for exclusive data to be received. The following dialog box will appear.

2. 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.

3. Press the text edit button to access the text input dialog box, and specify the filename.

4. 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.

1. 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).

2. Press the **Select button**, saving will resume.

3. 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 (*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.

**0–3A: Rename**

This command renames the selected file or directory. This command is valid only when a DOS file or a DOS directory is selected.

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

2. Press the text edit button to access the text input dialog box, and modify the name.

3. 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.

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

2. "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, ...
PRELOAD2.PCG : PRELOAD1.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 (="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 timestamp 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."
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.

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.

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).

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.”
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 Insert 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, PROC, 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 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. 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  
*2 The effect parameters marked with D support this function (p.155–).

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

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSC1/2 High, Low Level</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td></td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Filter1/2 Trim</td>
<td>(P1)</td>
</tr>
<tr>
<td>Amp1/2 Level</td>
<td>(P9)</td>
</tr>
<tr>
<td>Send1/2</td>
<td>(P8)</td>
</tr>
<tr>
<td>Effect Trim parameter *1</td>
<td>(P6, P9)</td>
</tr>
</tbody>
</table>

### Combination mode

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td></td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Send1/2</td>
<td>(P0, P1)</td>
</tr>
<tr>
<td>Effect Trim parameter *1</td>
<td>(P6, P9)</td>
</tr>
</tbody>
</table>

### Sequencer mode

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td></td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Send1/2</td>
<td>(P0)</td>
</tr>
<tr>
<td>Effect Trim parameter *1</td>
<td>(P6, P9)</td>
</tr>
</tbody>
</table>

### Song Play mode

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td></td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Send1/2</td>
<td>(P0)</td>
</tr>
<tr>
<td>Effect Trim parameter *1</td>
<td>(P6, P9)</td>
</tr>
</tbody>
</table>

### Sampling mode

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIO INPUT LEVEL on the rear panel</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td>Level</td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Effect Trim parameter *1</td>
<td>(P0)</td>
</tr>
</tbody>
</table>

### Global mode *2

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIO INPUT LEVEL on the rear panel</td>
<td>Effect Wet/Dry parameter</td>
</tr>
<tr>
<td>Level</td>
<td>Return1, 2</td>
</tr>
<tr>
<td>Send1/2</td>
<td>(P0)</td>
</tr>
</tbody>
</table>

*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:

<table>
<thead>
<tr>
<th>Input OSC1/2 High, Low Level (P1)</th>
<th>Output Effect Wet/Dry parameter (P8, P9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input OSC1/2 High, Low Level (P1)</strong></td>
<td><strong>Output Effect Wet/Dry parameter (P8, P9)</strong></td>
</tr>
<tr>
<td><strong>Send1/2 (P8)</strong></td>
<td><strong>Return1, 2 (P9)</strong></td>
</tr>
<tr>
<td>Effect Trim parameter *1 (P6, P9)</td>
<td></td>
</tr>
</tbody>
</table>

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: “Insert FX” 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

---

*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.
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 (*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, 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 (*“3. Mixer”).

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 (*“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 (*“3. Mixer”).

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 (*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.)

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

---

### 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.

---

**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 busses 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 (p#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–c), 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/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.

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.).
“Send1” responds to MIDI Control Change CC#93 and “Send2” responds to MIDI Control Change CC#91.

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” (“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.

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.

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 reverbération to a piano sound assigned to the timbre and tracks, a small amount of reverberation to the strings sound, and no reverbération 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.

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 Send 1 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 the Send 1 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:

- OSC1 Send1=127 (100%)*064(50%)=64(25%)
- OSC1 Send2=064 (50%)*127(100%)=64(50%)
- OSC2 Send1=064 (50%)*064(50%)=32(25%)
- OSC2 Send2=127 (100%)*127(100%)=127(100%)

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.

Effect

Send1 responds to MIDI Control Change CC#93 and Send2 responds to MIDI Control Change CC#91 on MIDI Global channel “MIDI Channel” (Global P8: 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, Send 1 and Send 2 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 (to MFX2)” (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.

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: Sl. 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 “DrumKit” for “BUS Select.” If you select “DrumKit,” 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, PROC, 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 (“3. Mixer”). If 1, 2, 3, 4, 1/2, or 3/4 is selected, the Send 1 and Send 2 settings are ignored.

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. Return1, Return2
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 peaking 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: 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.
### Combination mode, Sequencer mode, Song Play mode

**Effect / Mixer Block Diagram in Combination / Sequencer / Song Play Mode**

- **Pan**
- **BUS Select**
- **Send1**
- **Select from:**
  - (DKIT)
  - L/R
  - IFX1
  - IFX2
  - IFX3
  - IFX4
  - IFX5
  - 1
  - 2
  - 3
  - 4
  - 1/2
  - 3/4
  - Off

- **IFX2 BUS**
  - BUS Select = L/R
  - IFX2

- **IFX1 BUS**
  - BUS Select = L/R
  - IFX1

- **IFX3 BUS**
  - BUS Select = L/R
  - IFX3

- **IFX4 BUS**
  - BUS Select = 1/2
  - IFX4

- **IFX5 BUS**
  - BUS Select = Off
  - IFX5

- **Track 16**
  - BUS Select = L/R

- **IFX / Indiv.Out BUS Select**
  - Stereo
  - Stereo
  - Stereo
  - Stereo
  - Stereo

### Sampling mode

**Effect / Mixer Block Diagram in Sampling Mode**

- **Pan**
- **BUS Select**
- **Send1 / 2**
- **Select from:**
  - L/R
  - IFX1
  - IFX2
  - IFX3
  - IFX4
  - IFX5
  - Off

- **IFX2 BUS**
  - BUS Select = L/R
  - IFX2

- **IFX1 BUS**
  - BUS Select = L/R
  - IFX1

- **IFX3 BUS**
  - BUS Select = L/R
  - IFX3

- **IFX4 BUS**
  - BUS Select = 1/2
  - IFX4

- **IFX5 BUS**
  - BUS Select = Off
  - IFX5

- **Audio Input**
  - Audio Input 1
  - Audio Input 2
  - BUS Select = L/R
  - BUS Select = IFX1

- **Global P0: Audio Input**
  - (Audio Input 1, 2)
  - (Send 1, 2 on Audio Input 1, 2)

- **Master EQ AUDIO OUTPUT**
  - (Main) L/Mono, R

- **Sample Recording**
  - Sample Recording Level Meter
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.

**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.

**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
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.
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.

c: Threshold, d: Attack, d: Release
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 will be 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.
The Wah parameter switches the wah effect on/off.

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.

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.

The switch will be turned on/off each time the value of the modulation source exceeds 64.

This parameter sets the range of sweep 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.

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.

Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

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.

The modulation amount of the effect balance

Selects the modulation source of the effect balance

The modulation amount of the output level

Selects the modulation source for the output level
b: Band1 Type, c: Band4 Type
Selects a filter type for Band 1 and 4.

There are several parameters available for each band:
- Type
  - 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.

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.

- Frequency Bottom
  - Sets the lower limit of the wah center frequency
  - 0...100
- Frequency Top
  - Sets the upper limit of the wah center frequency
  - 0...100

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.

- Frequency Bottom
  - Sets the lower limit of the wah center frequency
  - 0...100
- Frequency Top
  - Sets the upper limit of the wah center frequency
  - 0...100

- Sweep Mode
  - Auto, D-mod, LFO
- Selects the control from auto-wah, modulation source, and LFO

- Response
  - Sets the response speed when Sweep Mode = Auto or D-mod
  - 0...100

- Envelope Sens
  - Sets the sensitivity of auto-wah
  - 0...100
- Envelope Shape
  - Sets the sweep curve of auto-wah
  - -100...+100

- LFO Frequency
  - Sets the LFO speed
  - 0.02...20.00Hz
  - Selects the modulation source of LFO speed
  - Off...Tempo
- Amt
  - Sets the modulation amount of LFO speed
  - -20.00...+20.00Hz

- BPM
  - Selects MIDI Clock and assigns tempo
  - MIDI, 40...240
  - Switches between using the frequency of the LFO speed and using the tempo and notes
  - Off, On
  - Selects the number of notes that specify the LFO speed
  - 1, 2, 4, 8, 16
  - Times
  - x1...x16

- Resonance
  - Sets the resonance amount
  - 0...100

- Low Pass Filter
  - Switches the Wah Low Pass Filter on and off
  - Off, On

- 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.

**d: 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 (\(\frac{1}{2}\)…) (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**
Step-Tri, Random
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…2000Hz
Sets the LFO speed

**d: LFO Step Freq (Frequency) [Hz]**
0.05…500Hz
Sets the modulation amount of LFO speed

**e: BPM/MIDI Sync**
Off, On
Switches between using the frequency of the LFO speed and using the tempo and notes

**f: BPM**
MIDI, 40…240
Selects MIDI Clock and assigns tempo

**g: Base Note**
A, C, E, G
Selects the type of notes that specify the LFO speed

**h: Times**
x1…x16
Sets the number of notes to specify the LFO speed

**i: Step Base Note**
A, C, E, G
Selects the type of notes to specify the LFO step speed

**j: Times**
x1…x32
Sets the number of notes to specify the LFO step speed

**k: Manual**
0…100
Sets the filter center frequency

**l: Depth**
0…100
Sets the modulation depth of filter center frequency

**m: Src**
Off, Tempo
Selects the modulation source of filter modulation

**n: Amt**
-100…+100
Sets the modulation amount of filter modulation

**o: Resonance**
0…100
Sets the resonance amount

**p: Wet/Dry**
Wet, –Wet…–1:99, Dry, 1:99…Wet
Sets the balance between the effect and dry sounds

**q: Src**
Off, Tempo
Selects the modulation source of the effect balance

**r: Amt**
-100…+100
Sets the modulation amount of the effect balance

---

**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.

When “LFO Waveform” is set to Random, the “LFO Step Freq” parameter uses a random LFO cycle.

**b: LFO Phase [degrees]**

Offsetting the left and right phases alters how modulation is applied to the left and right channels, creating a swelling effect.

**d: Pre LEQ Gain [db]**

Sets the gain of Low EQ

Pre HEQ Gain [db]

Sets the gain of High EQ

**g: Wet/Dry**

Sets the balance between the effect and dry sounds

Dry, 1:99...99:1, Wet

**h: Wet/Dry**

Sets the modulation amount of the effect balance

Off...Tempo

Sets the modulation amount of the effect balance

–100...+100

**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.

**Exciter Blend**

Sets the intensity (depth) of the Exciter effect –100...+100

**Src**

Selects the modulation source of the Exciter intensity

**Amt**

Sets the modulation amount of the Exciter intensity –100...+100

**Emphatic Point**

Sets the frequency to be emphasized 0...70

**Src**

Selects the modulation source of the frequency to be emphasized

**Amt**

Sets the amount of modulation of the frequency to be emphasized –70...+70

**Enhancer Dly L (Enhancer Delay L) [msec]**

Sets the delay time for the Enhancer left channel 0.0...50.0msec

**Enhancer Dly R (Enhancer Delay R) [msec]**

Sets the delay time for the Enhancer right channel 0.0...50.0msec

**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.

**OSC Mode**

Determines whether the oscillator frequency follows the note number or whether it is fixed

**Note (Key Follow), Fixed**

**Note Interval**

Sets the pitch difference from the note number when OSC Mode=Note (Key Follow)

**Note Fine**

Fine adjustment of the oscillator frequency

–48...0

–100...+100

–100...+100
013: Talking Modulator

This effect adds an unusual character, like a human voice, to the input signal. Modulating the tone via dynamic modulation, you can create an interesting effect that sounds as if the guitar or synthesizer is talking.

![Talking Modulator Control Diagram]

**a:** OSC Mode, **b:** Note Interval, **c:** Note Fine

The “OSC Mode” parameter selects the oscillator operation mode. When Note (Key Follow) is selected, the oscillator’s frequency is determined based on the note number, allowing you to use it as an octaver. The “Note Interval” parameter sets the pitch offset from the original note number by semitone steps. The “Note Fine” parameter allows you to fine-tune in steps of cents.

**d:** Envelope Pre LPF

This parameter sets the upper limit of the frequency range for which very low harmonics are added. Adjust this parameter if you do not want to add lower harmonics to the higher range.

**e:** Voice Top, **f:** Voice Center, **g:** Voice Bottom

These parameters assign vowels to the top, center, and bottom position of the controller. E.g.: When “Voice Top”=A, “Voice Center”=I, and “Voice Bottom”=O.

If “Sweep Mode” is set to D-mod and Ribbon is selected as the modulation source, moving your finger from the right to left of the ribbon controller will change the sound from “a” to “i,” then “u.”

If Sweep Mode is set to LFO, the sound will change cyclically from “a” to “i,” “u,” “i,” then “a.”

**h:** Formant Shift

This parameter adjusts the frequency level to which the effect is applied. If you wish to apply the effect to a higher-range sound, set this parameter to a higher value; to apply the effect to a lower-range sound, set this to a lower value.

**i:** Resonance

This parameter sets the intensity of resonance for the voice pattern. A larger value will add more character to the sound.
**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.
  - **High Damp [%]**
    Set the ratio of cut of the high range.
    - Off...On

- **b: Sampling Frequency (Hz)**
  Sets the sampling frequency.
  - **Src**
    Selects the modulation source of the sampling frequency.
  - **Amt**
    Sets the modulation amount of the sampling frequency.
  - **Pre LPF**
    Set the ratio of cut of the high range.
    - Off...Tempo

- **c: LFO Frequency (Hz)**
  Sets the LFO speed.
  - **Src**
    Selects the modulation source of the LFO speed.
  - **Amt**
    Sets the modulation amount of the LFO speed.

- **d: Depth**
  Sets the depth of the sampling frequency LFO modulation.
  - **Src**
    Selects the modulation source of the sampling frequency LFO modulation.
  - **Amt**
    Sets the modulation amount of the sampling frequency LFO modulation.

- **e: Resolution**
  Sets the data bit length.
  - **Output Level**
    Sets the output level.
    - **Src**
      Selects the modulation source of the output level.
    - **Amt**
      Sets the modulation amount of the output level.

- **f: Wet/Dry**
  Sets the balance between the effect and dry sounds.
  - **Src**
    Selects the modulation source of the effect balance.
  - **Amt**
    Sets the modulation amount of the effect balance.

**015: St. 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.

- **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 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.

**016: Stereo Chorus**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>Stereo Chorus</td>
</tr>
<tr>
<td>Right</td>
<td>Stereo Chorus</td>
</tr>
</tbody>
</table>

- **L Pre Delay [msec]**: Sets the delay time for the left channel
- **R Pre Delay [msec]**: Sets the delay time for the right channel

### 017: St. 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.

**017: St. Harmonic Chorus**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>Stereo Harmonic Chorus</td>
</tr>
<tr>
<td>Right</td>
<td>Stereo Harmonic Chorus</td>
</tr>
</tbody>
</table>

- **L Pre Delay [msec]**: Sets the delay time for the left channel
- **R Pre Delay [msec]**: Sets the delay time for the right channel

---

### Parameters

- **LFO Waveform**
  - Triangle, Sine
- **LFO Phase [degree]**: Sets the LFO phase difference between the left and right channels
- **LFO Frequency [Hz]**: Sets the LFO speed
- **BPM/MIDI Sync**
  - Off, On
- **Base Note**: Selects the type of notes that specify the LFO speed
- **Times**: Sets the number of notes that specify the LFO speed
- **Pre Delay [msec]**
  - Left: Sets the delay time for the left channel
  - Right: Sets the delay time for the right channel
- **Depth**: Sets the depth of LFO modulation
- **EQ Trim**: Sets the EQ input level
- **Pre LEQ Gain [dB]**: Sets the gain of Low EQ
- **Pre HEQ Gain [dB]**: Sets the gain of High EQ
- **Wet/Dry**: Sets the balance between the effect and dry sounds
- **Src**: Selects the modulation source of the LFO modulation depth
- **High/Low Split Point**: Sets the frequency split point between the low and high range
- **Feedback**: Sets the feedback amount of the chorus block
- **Low Level**: Sets the low range output level
- **High Level**: Sets the high range (chorus) output level
- **Wet/Dry**: Sets the balance between the effect and dry sounds
- **Src**: Selects the modulation source of the effect balance

---

### Diagram

[Diagram showing the stereo in-stereo out setup for Stereo Chorus and St. Harmonic Chorus]
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.

- **LFO Frequency [Hz]**
  Sets the LFO speed
  - **a**
    - Tap1(000) [msec]: 0.02...13.00Hz
      Sets the LFO speed
    - Depth: 0...30
      Sets the Tap1 chorus depth
    - Level: 0...30
      Sets the Tap1 output level
    - Pan: L6...L1, C, R1...R6
      Sets the Tap1 stereo image

- **Depth**
  Sets the Tap1 chorus depth
  - **b**
    - Tap2(180) [msec]: 0...570msec
      Sets the Tap2 chorus depth
    - Level: 0...30
      Sets the Tap2 output level
    - Pan: L6...L1, C, R1...R6
      Sets the Tap2 stereo image

- **c**
  - Tap3(90) [msec]: 0...570msec
    - Sets the Tap3 chorus depth
    - Level: 0...30
      Sets the Tap3 output level
    - Pan: L6...L1, C, R1...R6
      Sets the Tap3 stereo image

- **d**
  - Tap4(270) [msec]: 0...570msec
    - Sets the Tap4 chorus depth
    - Level: 0...30
      Sets the Tap4 output level
    - Pan: L6...L1, C, R1...R6
      Sets the Tap4 stereo image

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.

- **Speed**
  Sets the LFO speed
  - **a**
    - Src: Off, Tempo
      Selects the modulation source of LFO speed
    - Amt: 0...100
      Sets the modulation amount of LFO speed

- **Depth**
  Sets the depth of LFO modulation
  - **b**
    - Src: Off, Tempo
      Selects the modulation source of the LFO modulation depth
    - Amt: 0...100
      Sets the modulation amount of the LFO modulation depth

- **c**
  - Shimmer: 0...100
    - Sets the amount of shimmering of the LFO waveform
    - Wet/Dry: Dry: 1:99...99:1, Wet
      Sets the balance between the effect and dry sounds
    - Amt: 0...100
      Sets the modulation amount of the effect balance

- **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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Delay Time [msec]</td>
</tr>
<tr>
<td>b</td>
<td>LFO Waveform</td>
</tr>
<tr>
<td>c</td>
<td>LFO Phase [degree]</td>
</tr>
<tr>
<td>d</td>
<td>LFO Frequency [Hz]</td>
</tr>
<tr>
<td>e</td>
<td>LFO Shape</td>
</tr>
<tr>
<td>f</td>
<td>Feedback</td>
</tr>
<tr>
<td>g</td>
<td>High Damp [%]</td>
</tr>
<tr>
<td>h</td>
<td>Wet/Dry</td>
</tr>
</tbody>
</table>

**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”.

**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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Delay Time [msec]</td>
</tr>
<tr>
<td>b</td>
<td>LFO Waveform</td>
</tr>
<tr>
<td>c</td>
<td>LFO Phase [degree]</td>
</tr>
<tr>
<td>d</td>
<td>LFO Frequency [Hz]</td>
</tr>
<tr>
<td>e</td>
<td>LFO Shape</td>
</tr>
<tr>
<td>f</td>
<td>Feedback</td>
</tr>
<tr>
<td>g</td>
<td>High Damp [%]</td>
</tr>
<tr>
<td>h</td>
<td>Wet/Dry</td>
</tr>
</tbody>
</table>

**b: LFO Phase**

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.
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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L Dly Bottom</td>
<td>Sets the lower limit of the delay time on the left channel</td>
</tr>
<tr>
<td>L Dly Top</td>
<td>Sets the upper limit of the delay time on the left channel</td>
</tr>
<tr>
<td>R Dly Bottom</td>
<td>Sets the lower limit of the delay time on the right channel</td>
</tr>
<tr>
<td>R Dly Top</td>
<td>Sets the upper limit of the delay time on the right channel</td>
</tr>
<tr>
<td>Sweep Mode</td>
<td>Determines whether the flanger is controlled by the envelope generator or by the modulation source</td>
</tr>
<tr>
<td>Src</td>
<td>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)</td>
</tr>
<tr>
<td>EG Attack</td>
<td>Sets the EG attack speed</td>
</tr>
<tr>
<td>EG Decay</td>
<td>Sets the EG decay speed</td>
</tr>
<tr>
<td>Feedback</td>
<td>Sets the feedback amount</td>
</tr>
<tr>
<td>High Damp [%]</td>
<td>Sets the feedback damping amount in the high range</td>
</tr>
<tr>
<td>Wet/Dry</td>
<td>Sets the balance between the effect and dry sounds</td>
</tr>
<tr>
<td>Src</td>
<td>Selects the modulation source of the effect balance</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the effect balance</td>
</tr>
</tbody>
</table>

**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 is 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.

**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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFO Waveform</td>
<td>Triangle, Sine</td>
</tr>
<tr>
<td>LFO Shape</td>
<td>Determines how much the LFO waveform is changed</td>
</tr>
<tr>
<td>LFO Phase (degree)</td>
<td>Sets the LFO phase difference between the left and right</td>
</tr>
<tr>
<td>LFO Frequency [Hz]</td>
<td>Sets the LFO speed</td>
</tr>
<tr>
<td>Wet/Dry</td>
<td>Sets the modulation amount of LFO speed</td>
</tr>
<tr>
<td>Depth</td>
<td>Sets the depth of LFO modulation</td>
</tr>
<tr>
<td>LFO Shape</td>
<td>Selects LFO Waveform</td>
</tr>
<tr>
<td>LFO Waveform</td>
<td>Selects LFO Waveform</td>
</tr>
<tr>
<td>Bpm/Midi</td>
<td>BPM/MIDI Sync</td>
</tr>
<tr>
<td>Base Note</td>
<td>Selects the type of notes that specify the LFO speed</td>
</tr>
<tr>
<td>Times</td>
<td>Sets the number of notes that specify the LFO speed</td>
</tr>
<tr>
<td>Manual</td>
<td>Sets the frequency to which the effect is applied</td>
</tr>
<tr>
<td>Depth</td>
<td>Sets the depth of LFO modulation</td>
</tr>
<tr>
<td>LFO Shape</td>
<td>Selects LFO Waveform</td>
</tr>
<tr>
<td>LFO Waveform</td>
<td>Selects LFO Waveform</td>
</tr>
<tr>
<td>Bpm/Midi</td>
<td>BPM/MIDI Sync</td>
</tr>
<tr>
<td>Base Note</td>
<td>Selects the type of notes that specify the LFO speed</td>
</tr>
<tr>
<td>Times</td>
<td>Sets the number of notes that specify the LFO speed</td>
</tr>
<tr>
<td>Manual</td>
<td>Sets the frequency to which the effect is applied</td>
</tr>
<tr>
<td>Src</td>
<td>Selects the modulation source for the LFO modulation depth</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the LFO modulation depth</td>
</tr>
<tr>
<td>Resonance</td>
<td>Sets the resonance amount</td>
</tr>
<tr>
<td>High Damp [%]</td>
<td>Sets the resonance damping amount in the high range</td>
</tr>
<tr>
<td>Wet/Dry</td>
<td>Sets the balance between the effect and dry sounds</td>
</tr>
<tr>
<td>Src</td>
<td>Selects the modulation source of the effect balance</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the effect balance</td>
</tr>
</tbody>
</table>

**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
(Strobe Random Phaser)

This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.

- **Stereo In - Stereo Out**
- **Phaser**
- **Resonance**
- **High Damp**
- **Wet / Dry**

### Parameters

#### a) LFO Waveform
- **Step-Tri, Step-Sin, Random**
- **Selects LFO Waveform**

#### b) LFO Phase [degrees]
- **Sets the LFO phase difference between the left and right**

#### c) LFO Frequency [Hz]
- **Sets the LFO speed**

#### d) LFO Step Freq (Frequency) [Hz]
- **Sets the LFO step speed**

#### e) BPM/MIDI Sync
- **Off, On**
- **Switches between using the frequency of the LFO speed and tempo and notes**

#### f) Step Base Note
- **Selects the type of notes to specify the LFO speed**

#### g) Manual
- **Sets the frequency to which the effect is applied**

#### h) Depth
- **Sets the depth of LFO modulation**

#### i) Resonance
- **Sets the resonance amount**

#### j) Wet/Dry
- **Sets the balance between the effect and dry sounds**

#### k) Src
- **Selects the modulation source of the effect balance**

#### l) Amt
- **Sets the modulation amount of the effect balance**

---

025: St. Env. Phaser
(Strobe 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.

### Parameters

#### a) L Manu Bottom (L Manual Bottom)
- **Sets the lower limit of the frequency range for the effect on the left channel**

#### b) R Manu Bottom (R Manual Bottom)
- **Sets the lower limit of the frequency range for the effect on the right channel**

#### c) L Manu Top (L Manual Top)
- **Sets the upper limit of the frequency range for the effect on the left channel**

#### d) R Manu Top (R Manual Top)
- **Sets the upper limit of the frequency range for the effect on the right channel**

#### e) EG Attack
- **Sets the EG attack speed**

#### f) EG Decay
- **Sets the EG decay speed**

#### g) Resonance
- **Sets the resonance amount**

#### h) High Damp [%]
- **Sets the resonance damping amount in the high range**

#### i) Wet/Dry
- **Sets the balance between the effect and dry sounds**

#### j) Src
- **Selects the modulation source of the effect balance**

#### k) Amt
- **Sets the modulation amount of the effect balance**

---

---
**026: St. Biphase Mod.**  
*(Stereo Biphase Modulation)*

This stereo chorus effect adds two different LFOs together. You can set the Frequency and Depth parameters for each LFO individually. Depending on the setting of these LFOs, very complex waveforms will create an analog-type, unstable modulated sound.

![Stereo In - Stereo Out](image)

| LFO1 Waveform | Triangle, Sine | a |
| LFO2 Waveform | Triangle, Sine | b |
| LFO Phase Sw | 0 degree, 180 degree | c |
| LFO1 Frequency [Hz] | 0.02...30.00Hz | d |
| Src | Off...Tempo | e |
| Depth1 | 0...100 | f |
| Src | Off...Tempo | g |
| L Pre Delay [msec] | 0.0...5.0msec | h |
| Feedback | –100...+100 | i |
| Wet/Dry | –Wet...–1.99, Dry: 1.99...Wet | j |
| Src | Off...Tempo | k |

**027: Stereo Vibrato**

This effect causes the pitch of the input signal to shimmer. Using the AutoFade allows you to increase or decrease the shimmering speed.

![Stereo In - Stereo Out](image)

| AUTOFADE Src | Off...Tempo | a |
| Fade-In Delay [msec] | 00...2000msec | b |
| LFO Waveform | Triangle, Sine | c |
| LFO Shape | –100...+100 | d |
| LFO Frequency Mod | D-mod, AUTOFADE | e |
| BPM/MIDI Sync | Off, On | f |
| BPM | MIDI: 40...240 | g |
| Base Note | /eighthnoteup /pause /quarternoteup /largethree /pause /halfnoteup /largethree /pause /wholenote | h |
| Wet/Dry | Dry: 1.99...99.1, Wet | i |

**d: LFO Frequency Mod, a: AUTOFADE Src, b: Fade-In Rate**

When “LFO Frequency Mod” is set to AUTOFADE, you can use the modulation source selected in “AUTO FADE Src” as a trigger to automatically fade in the modulation amount. When “BPM/MIDI Sync” is set to On, you cannot use this.

The “Fade-in Rate” parameter specifies the rate of fade-in. The “Fade-in Delay” parameter determines the time from AutoFade modulation source ON until the fade-in starts.

The following is an example of fade-in where the LFO speed is increased from “1.0Hz” to “4.0Hz” when a note-on message is received.
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.
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.

### 030: Doppler

- **Voice2: Level**
  - Sets the Voice2 output level
  - Value range: 0...100

- **Pan**
  - Sets the Voice2 stereo image
  - Value range: L6...R6

- **Wet/Dry**
  - Dry: 1:99...99:1, Wet: 1:99...99:1
  - Sets the balance between the effect and dry sounds
  - Value range: Off...Tempo

- **Res**
  - Selects the modulation source of the effect balance
  - Value range: Off...Tempo

- **Amp**
  - Sets the modulation amount of the effect balance
  - Value range: –100...+100

<table>
<thead>
<tr>
<th>Control Mode</th>
<th>Voice1: Resonance</th>
<th>Voice2: Resonance</th>
</tr>
</thead>
<tbody>
<tr>
<td>This parameter determines the resonance intensity. When “Control Mode” is 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” is 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” is D-mod, the resonance is controlled by the dynamic modulation source. If JS 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a: LFO/D-mod Invert</td>
<td>a: LFO Mode</td>
<td>Value range: 1-Shot, 1-Shot</td>
</tr>
<tr>
<td>When “Control Mode” is 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).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pitch parameter specifies the pitch of resonance by note name. The “Fine” parameter allows for fine adjustment in steps of cents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e: High Damp [%]</td>
<td>e: High Damp [%]</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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 for 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. 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.

![Scratch Diagram](image)

**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.

<table>
<thead>
<tr>
<th>a</th>
<th>Scratch Source</th>
<th>Off...Tempo</th>
<th>Selects the modulation source for simulation control</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>Response</td>
<td>0...100</td>
<td>Sets the speed of the response to the Scratch Source</td>
</tr>
<tr>
<td>c</td>
<td>Envelope Select</td>
<td>D-mod, Input</td>
<td>Selects whether the start and end of recording is controlled via the modulation source or the input signal</td>
</tr>
<tr>
<td>d</td>
<td>Threshold</td>
<td>0...100</td>
<td>Sets the recording start level when Envelope Select is set to D-mod</td>
</tr>
<tr>
<td>e</td>
<td>Response</td>
<td>0...100</td>
<td>Sets the speed of the response to the end of recording</td>
</tr>
<tr>
<td>f</td>
<td>Wet/Dry</td>
<td>Dry, 1:99...99:1, Wet</td>
<td>Selects how a dry sound is mixed</td>
</tr>
<tr>
<td>g</td>
<td>Src</td>
<td>Off...Tempo</td>
<td>Selects the modulation source of the effect balance</td>
</tr>
<tr>
<td></td>
<td>Amt</td>
<td>-100...+100</td>
<td>Sets the modulation amount of the effect balance</td>
</tr>
</tbody>
</table>

**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.
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.

- **LFO Waveform**
  - Triangle, Sine, Vintage, Up, Down
  - Selects LFO Waveform

- **LFO Shape**
  - –100...+100
  - Determines how much the LFO waveform is changed

- **LFO Phase [degree]**
  - –180...+180
  - Sets the LFO phase difference between the left and right

- **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

- **Depth**
  - 0...100
  - Sets the depth of LFO modulation
  - 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

**Effect**

- **LFO Waveform**
  - Triangle Sine Vintage Up Down
  - 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.

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.

- **Envelope Sens (Envelope Sensitivity)**
  - 0...100
  - Sets the envelope sensitivity of the input signal

- **Envelope Shape**
  - –100...+100
  - Sets the envelope curve shape of the input signal

- **LFO Shape**
  - –100...+100
  - Determines how much the LFO waveform is changed

- **LFO Phase [degree]**
  - –180...+180
  - Sets the LFO phase difference between the left and right

- **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

- **Depth**
  - 0...100
  - Sets the depth of LFO modulation
  - 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

**Effect**

- **LFO Waveform**
  - Triangle Sine Vintage Up Down
  - 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.

**Note:**
- 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
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.

- **LFO Waveform**: Triangle, Sine
- **LFO Shape**: −100...+100
  - Determines how much the LFO waveform is changed
- **LFO Phase [degree]**: −180...+180
  - Sets the LFO phase difference between the left and right
- **LFO Frequency [Hz]**: 0.02...20.00Hz
  - Sets the LFO speed
  - **Src**: Off...Tempo
  - **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
  - **Base Note**: /sxnoteup /pause /eighthnoteup /largethree /pause /eighthnoteup /pause /quarternoteup /largethree /pause /quarternoteup /pause /halfnoteup /largethree /pause /halfnoteup /pause /wholenote
  - **Times**: x1...x16
    - Sets the number of notes that specify the LFO speed
- **Depth**: 0...100
  - Sets the depth of LFO modulation
  - **Src**: Off...Tempo
    - **Amt**: −100...+100
      - Sets the modulation amount of the depth of modulation
- **Wet/Dry**: Dry, 1:99...99:1, Wet
  - Sets the balance between the effect and dry sounds
  - **Src**: Off...Tempo
    - **Amt**: −100...+100
      - Sets the modulation amount of the effect balance

**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.

- **Type**: Phs - Trml...Phs LR - Trml LR
  - Selects the type of the tremolo and phaser LFOs
- **LFO Phase [degree]**: −180...+180
  - Sets the phase difference between the tremolo and phaser LFOs
- **LFO Frequency [Hz]**: 0.02...20.00Hz
  - Sets the LFO speed
  - **Src**: Off...Tempo
    - **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
  - **Base Note**: /sxnoteup /pause /eighthnoteup /largethree /pause /eighthnoteup /pause /quarternoteup /largethree /pause /quarternoteup /pause /halfnoteup /largethree /pause /halfnoteup /pause /wholenote
    - **Times**: x1...x16
      - Sets the number of notes that specify the LFO speed
  - **Depth**: 0...100
    - Sets the phaser frequency range
    - **Resonance**: −100...+100
      - Sets the phaser resonance amount
The dry sound.
The balance between the oscillator frequency with a note number will produce a ring modulation effect in specifying the oscillator frequency and using a note number produces a ring modulation. Match to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Match to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Match to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation.

**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.

### Parameters

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phaser Depth</td>
<td>Sets the phaser modulation depth</td>
</tr>
<tr>
<td>Src</td>
<td>Selects the modulation source for the phaser modulation depth</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount for the phaser modulation depth</td>
</tr>
<tr>
<td>Phasor Wet/Dry</td>
<td>Sets the balance between the phaser effect and dry sounds</td>
</tr>
<tr>
<td>Tremolo Shape</td>
<td>Sets the degree of the tremolo LFO shaping</td>
</tr>
<tr>
<td>Tremolo Depth</td>
<td>Sets the tremolo modulation depth</td>
</tr>
<tr>
<td>Src</td>
<td>Selects the modulation source for the tremolo modulation depth</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the tremolo modulation depth</td>
</tr>
</tbody>
</table>

#### 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.

#### 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.

#### 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 specifies 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.

Pitch Shift [1/2tone] -24...+24
Sends the pitch shift amount by steps of a semitone
Src Off...Tempo
Selects the modulation source of pitch shift amount
Amt -24...+24
Sets the modulation amount of pitch shift amount
Fine [cent] -100...+100cent
Sets the pitch shift amount by steps of a cent
Src Off...Tempo
Selects the modulation source of pitch shift amount
Amt -100...+100cent
Sets the modulation amount of pitch shift amount
Delay Time [msec] 0...1000msec
Sets the delay time
Feedback Position Pre, Post
Switches the feedback connection.
Pre, Post
Sets the feedback amount
High Damp [%] 0...100%
Sets the damping amount in the high range
Input Level Dmod [%] -100...+100
Sets the modulation amount of the input level
Fx:037, Dmod
Src Off...Tempo
Selects the modulation source for the input level
Fx:037
Sets the modulation amount of the input level
Wet/Dry Dry, 1:99...99:1, Wet
Sets the balance between the effect and dry sounds
Dry, 1:99...99:1, Wet
Src Off...Tempo
Selects the modulation source of the effect balance
Off...Tempo
Sets the modulation amount of the effect balance

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.

Pitch Shift [1/2tone] -24...+24
Sends the pitch shift amount by steps of a semitone
Src Off...Tempo
Selects the modulation source of pitch shift amount
Amt -24...+24
Sets the modulation amount of pitch shift amount
Fine [cent] -100...+100cent
Sets the pitch shift amount by steps of a cent
Src Off...Tempo
Selects the modulation source of pitch shift amount
Amt -100...+100cent
Sets the modulation amount of pitch shift amount
Delay Time [msec] 0...1000msec
Sets the delay time
Feedback Position Pre, Post
Switches the feedback connection.
Pre, Post
Sets the feedback amount
High Damp [%] 0...100%
Sets the damping amount in the high range
Input Level Dmod [%] -100...+100
Sets the modulation amount of the input level
Fx:037, Dmod
Src Off...Tempo
Selects the modulation source for the input level
Fx:037
Sets the modulation amount of the input level
Wet/Dry Dry, 1:99...99:1, Wet
Sets the balance between the effect and dry sounds
Dry, 1:99...99:1, Wet
Src Off...Tempo
Selects the modulation source of the effect balance
Off...Tempo
Sets the modulation amount of the effect balance

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.”

ej: 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.

- **Pitch Shift (cent)**
  - Sets the pitch difference from the input signal
- **LFO Waveform**
  - Selects LFO Waveform
- **LFO Frequency (Hz)**
  - Sets the LFO speed
- **BPM/MIDI Sync**
  - Switches between using the frequency of the LFO speed and using the tempo and notes
  - Selects MIDI Clock and assigns tempo
- **Base Note**
  - Selects the type of notes that specify the LFO speed
- **Times**
  - Sets the number of notes that specify the LFO speed
- **Depth**
  - Sets the LFO modulation depth for pitch shift amount
- **Pan**
  - Sets the pan control amount
- **Wet/Dry**
  - Sets the balance between the effect and dry sounds

**Mode Switch**
- Selects the modulation source that toggles between rotation and stop
- Switches between speaker rotation and stop
- Adjusts the modulation source that switches between slow and fast
- Selects the modulation source of the effect balance
- Sets the modulation amount of the effect balance
- Sets the modulation amount of the effect balance

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.

- **Mode Switch**
  - Rotates, stops, selects modulation source
- **Speed Switch**
  - Switches between slow and fast
- **Sw**
  - Selects switching mode of the modulation source that toggles between rotation and stop
- **Manual Speed Ctrl**
  - Selects switching mode of the modulation source that toggles between slow and fast
- **Horn Acceleration**
  - How quickly the horn rotation speed in the high range is switched
- **Horn Ratio**
  - Sets the (high-range side) horn rotation speed
- **Rotor Acceleration**
  - Sets the (low-range side) rotor rotation speed
- **Horn/Rotor Balance**
  - Switches the level balance between the high-range horn and low-range rotor
- **Mic Distance**
  - Sets the distance between the microphone and rotary speaker
- **Mic Spread**
  - Sets the angle of left and right microphones
- **Wet/Dry**
  - Sets the balance between the effect and dry sounds
- **Src**
  - Selects the modulation source of the effect balance

**Sw**
- This parameter sets how the modulation source switches between rotation and stop.
- 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.

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.

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.

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.

![Early Reflections Diagram](image)

- **Type**
  This parameter selects the decay curve for the early reflection.

- **ER Time [msec]**
  Sets the time length of early reflection
  10...800msec

- **Pre Delay [msec]**
  Sets the time taken from the original sound to the first early reflection
  0...200msec

- **EQ Trim**
  Sets the input level of EQ applied to the effect sound
  0...100

- **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

- **Dry/Wet 1:99...99:1, Wet**
  Dry, 1:99...99:1, Wet
  Sets the balance between the effect and dry sounds

- **Src**
  Selects the modulation source of the effect balance
  Off...Tempo

- **Amt**
  Sets the modulation amount of the effect balance
  –100...+100

---

178
042: Auto Reverse

This effect records the input signal and automatically plays it in reverse (the effect is similar to a tape reverse sound).

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.

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.
044: Stereo/Cross Delay

This is a stereo delay, and can by used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.

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.
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.

- **Reversed L/R control by modulation source**: D-mod Modulation
  - When the modulation source is used for control, this parameter reverses the left and right modulation direction.

- **LFO synchronization**: LFO Sync
  - Selects the modulation source that resets the LFO

- **L/R modulation**: L/R: +/+ +/
  - Switches LFO modulation control and modulation source

- **Modulation amount of the effect balance**: Amt
  - Sets the modulation amount of the effect balance

- **Modulation source of the effect balance**: Src
  - Selects the modulation source that controls delay time

- **LFO waveform**: LFO Waveform
  - Selects LFO Waveform

- **L/R modulation direction**: D-mod Modulation
  - Switches between LFO modulation control and modulation source

- **L/R delay time**: L/R Delay Time
  - Sets the delay time for the left and right channels

- **Feedback amount**: Feedback
  - Sets the feedback amount of left and right delays

- **Level control**: Wet/Dry
  - Sets the level to which the effect is applied

- **Offset of level control**: Offset
  - Sets the offset of level control

- **Reverses level control**: Polarity
  - Changes in pitch sweep for the left and right channels individually.

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.

- **Control Target**: None, Out, FB
  - Selects from no control, output, and feedback

- **Polarity**: None, Out, FB
  - Reverses level control

- **Threshold**: 0.100
  - Sets the level to which the effect is applied

- **Offset**: 0.100
  - Sets the offset of level control

- **Threshold**: 0.100
  - Sets the threshold of level control

- **Release**: 0.100
  - Sets the release time of level control

- **L/R delay time**: L/R Delay Time
  - Sets the delay time for the left and right channels

- **Feedback amount**: Feedback
  - Sets the feedback amount

- **High Damp [%]**
  - Sets the damping amount in the high range

- **Low Damp [%]**
  - Sets the damping amount in the low range

- **Spread**: 0.100
  - Sets the spread of the stereo image of the effect sound

- **Wet/Dry**: None, Out, FB
  - Sets the balance between the effect and dry sounds

- **Mix**: 0.0...100%
  - Sets the balance between the effect and dry sounds

- **Wet/Dry**: None, Out, FB
  - Sets the mix of the effect and dry sounds

- **Offset**: 0.100
  - Sets the offset of level control
a: Control Target
This parameter selects no level control, delay output control (effect balance), or feedback amount control.

a: Polarity, b: Threshold, 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.

---

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.

---

### Parameters

- **L Delay Time [msec]**
  - Sets the delay time for the left channel
  - 0.0...680.0msec

- **R Delay Time [msec]**
  - Sets the delay time for the right channel
  - 0.0...680.0msec

- **High Damp [%]**
  - Sets the damping amount in the high range
  - 0...100%

- **Low Damp [%]**
  - Sets the damping amount in the low range
  - 0...100%

- **LFO Waveform**
  - Triangle, Sine

- **LFO Shape**
  - Determines how much the LFO waveform is changed
  - -100...+100

- **LFO Phase [degree]**
  - Sets the LFO phase difference between the left and right
  - -180...+180

- **Panning Frequency [Hz]**
  - Sets the panning speed
  - 0.02...20.000Hz

- **Panning Depth**
  - Sets the panning width
  - 0...100

- **Src**
  - Selects the modulation source for the panning width
  - Off...Tempo

- **Amt**
  - Sets the modulation amount of the panning width
  - -100...+100

- **Wet/Dry**
  - 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
This stereo delay enables you to set the delay time to match the song tempo.

050: St. BPM Delay (Stereo BPM Delay)

The delay time is the length of the note obtained by multiplying the "Base Note" parameter by the Times value, in relation to the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to MIDI).

**a: Time Over? >**
You can set the delay time up to 136ms. If the delay time exceeds this limit, the error message "OVER!!" appears in the display. Set the delay time parameters so that this message will not appear. "Time Over? >" is only a display parameter.

**051: Sequence Delay**

This four-tap delay enables you to select a tempo and rhythm pattern to set up each tap.
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 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.

---

**Reverb parameters**

- **Reverb Time [sec]**
  - Sets the reverberation time
  - 0.1...10.0sec

- **High Damp [%]**
  - Sets the damping amount in the high range
  - 0...100%

- **Pre Delay [msec]**
  - Sets the delay time from the dry sound
  - 0...200msec

- **Pre Delay Thru [%]**
  - Sets the mix ratio of non-delay sound
  - 0...100%

- **EQ Trim**
  - Sets the EQ input level
  - 0...100

- **Pre LEQ Gain [dB]**
  - Sets the gain of Low EQ
  - –15...+15dB

- **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

- **Src**
  - Selects the modulation source for the effect balance
  - Off...Tempo

- **Amt**
  - Sets the modulation amount of the effect balance
  - –100...+100

**Reverb - Hall / Plate Type**

**Pre Delay**

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.

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.

058: P4EQ – Exciter

(Parametric 4-Band EQ – Exciter)

This effect combines a mono-type four-band parametric equalizer and an exciter.
### 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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trim</td>
<td>Sets the parametric EQ input level</td>
<td>0...100</td>
</tr>
<tr>
<td>Band 1 CutOff [Hz]</td>
<td>Sets the center frequency of Band 1</td>
<td>20...100kHz</td>
</tr>
<tr>
<td>Band 1 Gain [dB]</td>
<td>Sets the gain of Band 1</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 2 CutOff [Hz]</td>
<td>Sets the center frequency of Band 2</td>
<td>50...500kHz</td>
</tr>
<tr>
<td>Band 2 Gain [dB]</td>
<td>Sets the gain of Band 2</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 3 CutOff [Hz]</td>
<td>Sets the center frequency of Band 3</td>
<td>300...10kHz</td>
</tr>
<tr>
<td>Band 3 Gain [dB]</td>
<td>Sets the gain of Band 3</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 4 CutOff [Hz]</td>
<td>Sets the center frequency of Band 4</td>
<td>500...20kHz</td>
</tr>
<tr>
<td>Band 4 Gain [dB]</td>
<td>Sets the gain of Band 4</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Frequency Bottom</td>
<td>Sets the lower limit of the wah center frequency</td>
<td>0...100</td>
</tr>
<tr>
<td>Frequency Top</td>
<td>Sets the upper limit of the wah center frequency</td>
<td>0...100</td>
</tr>
<tr>
<td>Sweep Mode</td>
<td>Selects the control from auto-wah, modulation source, and LFO</td>
<td>Auto, D-mod, LFO</td>
</tr>
<tr>
<td>LFO Frequency [Hz]</td>
<td>Sets the LFO speed</td>
<td>0.02...20Hz</td>
</tr>
<tr>
<td>Resonance</td>
<td>Sets the resonance amount</td>
<td>0...100</td>
</tr>
<tr>
<td>LPF</td>
<td>Switches the wah low pass filter on and off</td>
<td>Off, On</td>
</tr>
<tr>
<td>PEQ to Wah</td>
<td>Changes the order of the parametric equalizer and wah connection</td>
<td>Wah to PEQ</td>
</tr>
</tbody>
</table>

### 060: P4EQ – Cho/Flng

**Parametric 4-Band EQ – Chorus/Flanger**

This effect combines a mono-type four-band parametric equalizer and a chorus/flanger.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trim</td>
<td>Sets the parametric EQ input level</td>
<td>0...100</td>
</tr>
<tr>
<td>Band 1 CutOff [Hz]</td>
<td>Sets the center frequency of Band 1</td>
<td>20...100kHz</td>
</tr>
<tr>
<td>Band 1 Gain [dB]</td>
<td>Sets the gain of Band 1</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 2 CutOff [Hz]</td>
<td>Sets the center frequency of Band 2</td>
<td>50...500kHz</td>
</tr>
<tr>
<td>Band 2 Gain [dB]</td>
<td>Sets the gain of Band 2</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 3 CutOff [Hz]</td>
<td>Sets the center frequency of Band 3</td>
<td>300...10kHz</td>
</tr>
<tr>
<td>Band 3 Gain [dB]</td>
<td>Sets the gain of Band 3</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Band 4 CutOff [Hz]</td>
<td>Sets the center frequency of Band 4</td>
<td>500...20kHz</td>
</tr>
<tr>
<td>Band 4 Gain [dB]</td>
<td>Sets the gain of Band 4</td>
<td>-18...+18dB</td>
</tr>
<tr>
<td>Delay Time [msec]</td>
<td>Sets the delay time</td>
<td>0.0...50msec</td>
</tr>
<tr>
<td>LFO Frequency [Hz]</td>
<td>Sets the LFO speed</td>
<td>0.02...20Hz</td>
</tr>
<tr>
<td>LFO Waveform</td>
<td>Selects LFO Waveform</td>
<td>Triangle, Sine</td>
</tr>
<tr>
<td>Depth</td>
<td>Sets the depth of LFO modulation</td>
<td>0...100</td>
</tr>
<tr>
<td>Feedback</td>
<td>Sets the feedback amount</td>
<td>-100...+100</td>
</tr>
<tr>
<td>Modulation Source</td>
<td>Selects the modulation source for the effect balance</td>
<td>Off, Tempo</td>
</tr>
</tbody>
</table>

#### 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.

- **Effect Diagram**
  - Left: Parametric 4Band EQ
  - Center: Phaser
  - Right: Normal Output Mode

#### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong></td>
<td>[E] Trim</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>[E] Band1 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>c</strong></td>
<td>[E] Band2 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>[E] Band3 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>e</strong></td>
<td>[E] Band4 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>f</strong></td>
<td>[P] LFO Frequency [Hz]</td>
</tr>
<tr>
<td><strong>g</strong></td>
<td>[P] Manual</td>
</tr>
<tr>
<td><strong>h</strong></td>
<td>[P] Depth</td>
</tr>
<tr>
<td><strong>i</strong></td>
<td>[P] Phaser Wet/Dry</td>
</tr>
<tr>
<td><strong>j</strong></td>
<td>[P] Wet/Dry</td>
</tr>
<tr>
<td><strong>k</strong></td>
<td>Src</td>
</tr>
<tr>
<td><strong>l</strong></td>
<td>Amt</td>
</tr>
</tbody>
</table>

### 062: P4EQ – Mt. Delay

*(Parametric 4-Band EQ – Multitap Delay)*

This effect combines a mono-type four-band parametric equalizer and a multitap delay.

- **Effect Diagram**
  - Left: Parametric 4Band EQ
  - Center: Multitap Delay
  - Right: Normal Output Mode

#### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong></td>
<td>[E] Trim</td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>[E] Band1 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>c</strong></td>
<td>[E] Band2 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>[E] Band3 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>e</strong></td>
<td>[E] Band4 Cutoff [Hz]</td>
</tr>
<tr>
<td><strong>f</strong></td>
<td>[P] LFO Frequency [Hz]</td>
</tr>
<tr>
<td><strong>g</strong></td>
<td>[P] Manual</td>
</tr>
<tr>
<td><strong>h</strong></td>
<td>[P] Depth</td>
</tr>
<tr>
<td><strong>i</strong></td>
<td>[P] Phaser Wet/Dry</td>
</tr>
<tr>
<td><strong>j</strong></td>
<td>[P] Wet/Dry</td>
</tr>
<tr>
<td><strong>k</strong></td>
<td>Src</td>
</tr>
<tr>
<td><strong>l</strong></td>
<td>Amt</td>
</tr>
</tbody>
</table>
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.

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.

065: Comp – OD/HiGain
(Compressor – Overdrive/Hi.Gain)
This effect combines a mono-type compressor and an overdrive/high-gain distortion. You can change the order of the effect connection.
**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.

- **[C] Sensitivity** Sets the sensitivity
  - 1...100
  - FX:002
- **[C] Attack** Sets the attack level
  - 1...100
  - FX:002
- **Output Level** Sets the compressor output level
  - 0...100
  - FX:002
- **[C] EQ Trim** Sets the parametric EQ input level
  - 0...100
- **[E] Trim** Sets the parametric EQ input level
- **[E] Band1 Cutoff [Hz]** Sets the center frequency of Band 1
  - 20...100kHz
- **[E] Band1 Gain [dB]** Sets the gain of Band 1
  - -18...+18dB
- **[E] Band2 Cutoff [Hz]** Sets the center frequency of Band 2
  - 50...500kHz
- **[E] Band2 Gain [dB]** Sets the gain of Band 2
  - -18...+18dB
- **[E] Band3 Cutoff [Hz]** Sets the center frequency of Band 3
  - 300...10,000Hz
- **[E] Band3 Gain [dB]** Sets the gain of Band 3
  - -18...+18dB
- **[E] Band4 Cutoff [Hz]** Sets the center frequency of Band 4
  - 500...20,000Hz
- **[E] Band4 Gain [dB]** Sets the gain of Band 4
  - -18...+18dB

---

**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.

- **[C] Sensitivity** Sets the sensitivity
  - 1...100
  - FX:002
- **[C] Attack** Sets the attack level
  - 1...100
  - FX:002
- **Output Level** Sets the compressor output level
  - 0...100
  - FX:002
- **[C] EQ Trim** Sets the EQ input level
  - 0...100
- **[C] Pre LEQ Gain [dB]** Sets the gain of Low EQ
  - -15...+15dB
- **[C] Pre HEQ Gain [dB]** Sets the gain of High EQ
  - -15...+15dB
- **[F] Delay Time [msec]** Sets the delay time
  - 0.0...50.0msec
- **[F] LFO Frequency [Hz]** Sets the LFO speed
  - 0.02...20.0Hz
- **[F] LFO Waveform** Selects LFO Waveform
  - Triangle, Sine
- **[F] Depth** Sets the depth of LFO modulation
  - 0...100
- **Feedback** Sets the feedback amount
  - -100...+100
  - FX:020
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.

### 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.
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.

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.

Effect 070: Limiter – P4EQ

- **Limiter – Parametric 4-Band EQ**

Effect 071: Limiter – Cho/Flng

- **Limiter – Chorus/Flanger**
072: Limiter – Phaser

This effect combines a mono-type limiter and a phaser. You can change the order of the effect connection.

- **[L] Ratio 1.0:1...50.0:1, Inf:1**
  - Sets the signal compression ratio

- **Threshold [dB] –40...0dB**
  - Sets the level above which the compressor is applied

- **[L] Attack 1...100**
  - Sets the attack time

- **Release 1...100**
  - Sets the release time

  - Sets the limiter output gain

073: Limiter – Mt. Delay

(Formatter – Multitap Delay)

This effect combines a mono-type limiter and a multitap delay. You can change the order of the effect connection.

- **[L] Ratio 1.0:1...50.0:1, Inf:1**
  - Sets the signal compression ratio

- **Threshold [dB] –40...0dB**
  - Sets the level above which the compressor is applied

- **[L] Attack 1...100**
  - Sets the attack time

- **Release 1...100**
  - Sets the release time

  - Sets the limiter output gain

- **[P] Tap1 Time [msec] 0...680msec**
  - Sets the Tap1 delay time

- **Feedback (Tap2) –100...+100**
  - Sets the Tap2 feedback amount

- **[D] Mt.Dly Wet / Dry Dry, 1:99...99:1, Wet**
  - Sets the multitap delay effect balance

- **High Damp [%] 0...100%**
  - Sets the damping amount in the high range

- **Routing LMT → DL Y, DL Y → LMT**
  - Switches the order of the limiter and multitap delay connection
074: Exciter – Comp (Exciter – Compressor)
This effect combines a mono-type exciter and a compressor. You can change the order of the effect connection.

- **Exciter Blend**: Sets the intensity (depth) of the Exciter effect. -100…+100
- **Emphatic Point**: Sets the frequency range to be emphasized. 0…70
- **EQ Trim**: Sets the EQ input level. 0…100
- **Pre LEQ Gain [dB]**: Sets the gain of Low EQ. -15…+15dB
- **Pre HEQ Gain [dB]**: Sets the gain of High EQ. -15…+15dB
- **Sensitivity**: Sets the sensitivity. 1…100
- **Attack**: Sets the attack level. 1…100
- **Release**: Sets the release time. 1…100
- **Gain Adjust**: Sets the limiter output gain. Inf...-36…+24dB
- **Routing**: Switches the order of the exciter and compressor connection
- **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

075: Exciter – Limiter
This effect combines a mono-type exciter and a limiter. You can change the order of the effect connection.

- **Exciter Blend**: Sets the intensity (depth) of the Exciter effect. -100…+100
- **Emphatic Point**: Sets the frequency range to be emphasized. 0…70
- **EQ Trim**: Sets the EQ input level. 0…100
- **Pre LEQ Gain [dB]**: Sets the gain of Low EQ. -15…+15dB
- **Pre HEQ Gain [dB]**: Sets the gain of High EQ. -15…+15dB
- **Delay Time [msec]**: Sets the delay time. 0.0…50.0msec
- **LFO Frequency [Hz]**: Sets the LFO speed. 0.02…20.0Hz
- **LFO Waveform**: Selects LFO Waveform. Triangle, Sine
- **Depth**: Sets the depth of LFO modulation. 0…100
- **Feedback**: Sets the feedback amount. –Inf, –38…+24dB
- **Cho/Flng Wet/Dry**: Sets the effect balance of the chorus/flanger. –Wet…–2:98, Dry, 2:98…Wet
- **Output Mode**: Selects the output mode for the chorus/flanger. Normal, Wet Invert
- **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

076: Exciter – Cho/Flng (Exciter – Chorus/Flanger)
This effect combines a mono-type limiter and a chorus/flanger.

- **Threshold [dB]**: Sets the level above which the compressor is applied. –40…0dB
- **Attack**: Sets the attack time. 1…100
- **Release**: Sets the release time. 1…100
- **Gain Adjust [dB]**: Sets the limiter output gain. –Inf…-36…+24dB
- **Routing**: Switches the order of the exciter and limiter connection
- **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
**077: Exciter – Phaser**

This effect combines a mono-type limiter and a phaser.

**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

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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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] 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

**f**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**g**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**h**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---

**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**

[D] Tap1 Time [msec]
Sets the Tap1 delay time

0...680msec

Tap1 Level
Sets the Tap1 output level

0...100

**g**

[D] Tap2 Time [msec]
Sets the Tap2 delay time

0...680msec

Feedback (Tap2)
Sets the Tap2 feedback amount

–100...+100

**h**

[M] High Damp [%]
Sets the damping amount in the high range

0...100%

**i**

[M] Mt. Delay Wet/Dry
Sets the multitap delay effect balance

Dry, 1:99...99:1, Wet

---
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.

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.
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.

- **Drive Mode**: Switches between overdrive and high-gain distortion
  - **Drive**: Sets the degree of distortion
    - 1...100
    - Fx:006

- **Output Level**: Sets the overdrive output level
  - 0...50
  - Fx:006, Off...Tempo

- **Low Cutoff [Hz]**: Sets the center frequency for Low EQ (shelving type)
  - 20...1.00kHz
    - Gain [dB]: –18...+18dB

- **Mid1 Cutoff [Hz]**: Sets the center frequency for Mid/High EQ 1 (peaking type)
  - 300...10.00kHz
    - Q: 0.5...10.0
      - Fx:006
    - Gain [dB]: –18...+18dB

- **Mid2 Cutoff [Hz]**: Sets the center frequency for Mid/High EQ 2 (peaking type)
  - 500...20.00kHz
    - Q: 0.5...10.0
      - Fx:006
    - Gain [dB]: –18...+18dB

- **Tap1 Time [msec]**: Sets the Tap1 delay time
  - 0...680msec
    - Tap1 Level: 0...100
    - Feedback: –100...+100

- **Mt.Dly Wet/Dry**: Sets the multitap delay effect balance
  - Dry, 2:98...98:2, Wet

082: OD/HG – Mt. Delay
(Overdrive/Hi.Gain – Multitap Delay)
This effect combines a mono-type overdrive/high-gain distortion and a multitap delay.
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.

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.

085: Decimator – Comp
(Decimator – Compressor)

This effect combines a mono-type decimator and a compressor. You can change the order of the effect connection.
086: Amp Sim – Tremolo
(Amp Simulation – Tremolo)
This effect combines a mono-type amp simulation and a tremolo.

087: Cho/Flng – Mt. Dly
(Chorus/Flanger – Multitap Delay)
This effect combines a mono-type chorus/flanger and a multitap delay.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifier Type</td>
<td>Selects the type of guitar amplifier</td>
<td>SS, EL84, 6L6</td>
</tr>
<tr>
<td>T LFO Waveform</td>
<td>Selects LFO Waveform</td>
<td>Triangle, Sine, Vintage, Up, Down</td>
</tr>
<tr>
<td>LFO Shape</td>
<td>Determines how much the LFO waveform is changed</td>
<td>–100...+100</td>
</tr>
<tr>
<td>T LFO Frequency</td>
<td>Sets the LFO speed</td>
<td>0.02...20.00Hz</td>
</tr>
<tr>
<td>T Depth</td>
<td>Sets the depth of LFO modulation</td>
<td>0...100</td>
</tr>
<tr>
<td>Wet/Dry</td>
<td>Sets the balance between the effect and dry sounds</td>
<td>Dry, 1:99...99:1, Wet</td>
</tr>
<tr>
<td>Sqc</td>
<td>Selects the modulation source of the effect balance</td>
<td>Off...Tempo</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the effect balance</td>
<td>–100...+100</td>
</tr>
<tr>
<td>Delay Time [msec]</td>
<td>Sets the delay time</td>
<td>0.0...50.00msec</td>
</tr>
<tr>
<td>LFO Frequency [Hz]</td>
<td>Sets the LFO speed</td>
<td>0.02...20.00Hz</td>
</tr>
<tr>
<td>Depth</td>
<td>Sets the depth of LFO modulation</td>
<td>0...100</td>
</tr>
<tr>
<td>EQ Trim</td>
<td>Sets the EQ input level</td>
<td>0...100</td>
</tr>
<tr>
<td>Pre LEQ Gain [dB]</td>
<td>Sets the gain of Low EQ</td>
<td>–15...+15dB</td>
</tr>
<tr>
<td>Pre HEQ Gain [dB]</td>
<td>Sets the gain of High EQ</td>
<td>–15...+15dB</td>
</tr>
<tr>
<td>Tap1 Time [msec]</td>
<td>Sets the Tap1 delay time</td>
<td>0...680msec</td>
</tr>
<tr>
<td>Tap1 Level</td>
<td>Sets the Tap1 output level</td>
<td>0...100</td>
</tr>
<tr>
<td>Tap2 Time [msec]</td>
<td>Sets the Tap2 delay time</td>
<td>0...680msec</td>
</tr>
<tr>
<td>Feedback (Tap2)</td>
<td>Sets the Tap2 feedback amount</td>
<td>–100...+100</td>
</tr>
<tr>
<td>Mt.Delay Wet/Dry</td>
<td>Sets the multitap delay effect balance</td>
<td>Dry, 1:99...99:1, Wet</td>
</tr>
<tr>
<td>High Damp [%]</td>
<td>Sets the damping amount in the high range</td>
<td>0...100%</td>
</tr>
<tr>
<td>Wet/Dry</td>
<td>Sets the balance between the effect and dry sounds</td>
<td>Dry, 1:99...99:1, Wet</td>
</tr>
<tr>
<td>Sqc</td>
<td>Selects the modulation source of the effect balance</td>
<td>Off...Tempo</td>
</tr>
<tr>
<td>Amt</td>
<td>Sets the modulation amount of the effect balance</td>
<td>–100...+100</td>
</tr>
</tbody>
</table>
088: Phaser – Cho/Flng
(Phaser – Chorus/Flanger)

This effect combines a mono-type phaser and a chorus/flanger.

089: Reverb – Gate

This effect combines a mono-type reverb and a gate.
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
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).

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.

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.
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 instruments by inputting a voice to the Modulator via a mon use of this effect is to produce the sound of various (Modulator) to the left channel signal input (Carrier). A com-

---

**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 instruments by inputting a voice to the Modulator via a mon use of this effect is to produce the sound of various (Modulator) to the left channel signal input (Carrier). A com-

---

**Using a voice from a microphone as a modulator**

(Vocoder is selected for IFX2 in Program mode)

1. 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.

2. To set up the input, use the “Audio Input” parameter (Global P6: 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.

- **Selects on, off, or modulation source for the control of Tap2 output**
  - **Status**: Always On, Always Off, On (dm)
- **Sets the Tap2 chorus depth**
- **Sets the Tap2 (LFO phase=180 degrees) delay time**
  - **Tap2 Delay**: 0...570 msec

- **Selects on, off, or modulation source for the control of Tap1 output**
  - **Status**: Always On, Always Off, On (dm)
- **Sets the Tap1 chorus depth**
- **Sets the Tap1 (LFO phase=0 degrees) delay time**
  - **Tap1 Delay**: 0...570 msec

- **Selects on, off, or modulation source for the control of Tap5 output**
  - **Status**: Always On, Always Off, On (dm)
- **Sets the Tap5 chorus depth**
- **Sets the Tap5 (LFO phase=120 degrees) delay time**
  - **Tap5 Delay**: 0...570 msec

- **Selects on, off, or modulation source for the control of Tap6 output**
  - **Status**: Always On, Always Off, On (dm)
- **Sets the Tap6 chorus depth**
- **Sets the Tap6 (LFO phase=300 degrees) delay time**
  - **Tap6 Delay**: 0...570 msec

- **Panning Preset**
  - Specifies the stereo image of each Tap: 1, 2, 3, 4

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.

- **Mode**: Slow, Medium, Fast
- **L/R Pitch**: Normal, Up/Down
- **Pitch Shift [1/2tone]**
  - Sets the pitch shift amount in steps of a semitone
  - **Pitch Shifter**: Fx:038
  - **Src**: Off...Tempo
  - **Amt**: –24...+24
- **Fine [cent]**
  - Determines whether or not the L/R pitch shift amount is inverted
  - **Src**: Off...Tempo
  - **Amt**: –100...100 cent
- **L/R Delay [msec]**
  - Sets the delay time for the left channel
  - **Src**: 0...1000 msec
  - **Amt**: 0...1000 msec
- **Feedback Position**
  - **Src**: Pre, Post
  - **Fx**: Fx:038
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.

- **Feedback**
  - Sets the feedback amount
  - Sets the damping amount in the high range

- **Input Level Dmod [%]**
  - Sets the modulation amount of the input level
  - Sets the modulation source for the input level

- **Spread**
  - Sets the width of the stereo image of the effect sound

- **Wet/Dry**
  - Sets the balance between the effect and dry sounds
  - Selects the modulation source of the effect balance

- **Overdrive**
  - Switches overdrive on/off.
  - Selects the modulation source that switches overdrive on/off
  - Selects the switching mode of the modulation source that switches overdrive on/off

- **Overdrive Gain**
  - Determines the degree of distortion

- **Overdrive Tone**
  - Sets the tonal quality of overdrive

- **Speaker Simulator**
  - Switches speaker simulation on/off

- **Mode Switch**
  - Switches between speaker rotation and stop

- **Speed Switch**
  - Switches the speaker rotation speed between slow and fast.

- **Horn/Rotor Balance**
  - Sets the volume level balance between the high-range horn and low-range rotor

- **Horn Acceleration**
  - Adjusts the (high-range side) horn rotation speed. Standard value is 1.0. Selecting “Stop” will stop the rotation

- **Horn Ratio**
  - Determines how quickly the rotor rotation speed in the low range is switched

- **Horn/Rotor Balance**
  - Sets the volume level balance between the high-range horn and low-range rotor

- **Horn Acceleration**
  - Adjusts the (low-range side) rotor rotation speed. Standard value is 1.0. Selecting “Stop” will stop the rotation

- **Horn Ratio**
  - Adjusts the (low-range side) rotor rotation speed

- **Mic Distance**
  - Sets the mic distance

- **Mic Spread**
  - Sets the angle of left and right microphones

- **Wet/Dry**
  - Sets the balance between the effect and dry sounds

- **Selection**
  - Sets the modulation amount of the effect balance

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.

- Only when the value for the modulation source is 64 or higher, the overdrive effect is applied.

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.
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.

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.

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.
100: LCR BPM Long Dly
(L/C/R BPM Long Delay)
The L/C/R delay enables you to match the delay time with the song tempo. You can set the delay time up to 2,730msec.

- **BPM**
  - MIDI: 40...240
  - Selects MIDI Clock and assigns tempo

- **Time Over? >**
  - Displays an error message when the delay time exceeds the upper limit

- **L Delay Base Note**
  - Selects the type of notes to specify the delay time for TapL
  - Times x1...x16
  - Level
  - Sets the output level of TapL

- **C Delay Base Note**
  - Selects the type of notes to specify the delay time for TapC
  - Times x1...x16
  - Level
  - Sets the output level of TapC

- **R Delay Base Note**
  - Selects the type of notes to specify the delay time for TapR
  - Times x1...x16
  - Level
  - Sets the output level of TapR

- **Feedback (C Delay)**
  - Sets the feedback amount of TapC
  - –100...+100
  - Src
  - Selects the modulation source for the TapC feedback
  - Amt
  - Sets the modulation amount of the TapC feedback

- **High Damp [%]**
  - Sets the damping amount in the high range
  - 0...100%

- **Low Damp [%]**
  - Sets the damping amount in the low range
  - 0...100%

- **Input Level D Mod [%]**
  - Sets the modulation amount of the input level
  - –100...+100
  - Src
  - Selects the modulation source for the input level

- **Spread**
  - Sets the width of the stereo image of the effect sound
  - 0...50

- **Wet/Dry**
  - Dry, 1:99...99:1, Wet
  - Src
  - Selects the modulation source of the effect balance
  - Amt
  - Sets the modulation amount of the effect balance

a: **Time Over? >**
You can set the delay time up to 2,730msec. 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.

101: St. BPM Long Delay
(Stereo BPM Long Delay)
The stereo delay enables you to match the delay time with the song tempo. You can set the delay time up to 1365msec.
If this modulation is on, or if recording.
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 parameter. Easy to use for real-time performances.

![Diagram](image)

- **Wet/Dry**: Sets the balance between the effect and dry sounds.
- **Src**: Selects the modulation source of the effect balance.
- **Amt**: Sets the modulation amount of the effect balance.

**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.

**b: REC Control Src, d: Manual REC Control**
- REC Control Src: Selects control source for recording.
- Manual REC Control: Sets the recording switch.

**c: RST Control Src, e: Manual RST Control**
- RST Control Src: Selects control source for reset.
- Manual RST Control: Sets the reset switch.

**g: Wet/Dry**: Sets the balance between the effect and dry sounds.
- Wet: Mono In - Stereo Out / Dry: Stereo In - Stereo Out
- Dry, 1:99...99:1, Wet

**f: Pan**: Sets the stereo image of the effect.
- L100...L1, C, R1...R100

**i: Delay**
- Delay: Sets the delay time parameters so that this message will not appear.

**206**

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.

**d: REC Control Src, e: Manual REC Control**
- “REC Control Src” selects the modulation source that controls recording.

**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.
Effect

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.

**Master EQ**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Low Cutoff [Hz]</td>
</tr>
<tr>
<td>b</td>
<td>Mid Cutoff [Hz]</td>
</tr>
<tr>
<td>c</td>
<td>High Cutoff [Hz]</td>
</tr>
<tr>
<td>d</td>
<td>Low Gain Mod-Src</td>
</tr>
<tr>
<td>e</td>
<td>High Gain Mod-Src</td>
</tr>
</tbody>
</table>

- **Gain [dB]**: The gain of the EQ bands can be set from -18.0 to +18.0 in 0.5 dB steps.
- **Q** (Bandwidth): For Mid and High EQs, the bandwidth can be set from 0.5 to 10.0 in 0.1 dB steps.

![Diagram of Master EQ](image)

**a: 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

<table>
<thead>
<tr>
<th>AMS Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>do not use Alternate Modulation</td>
</tr>
<tr>
<td>PEG Pitch</td>
<td>pitch EG</td>
</tr>
<tr>
<td>Filter EG</td>
<td>filter EG within the same oscillator</td>
</tr>
<tr>
<td>Amp EG</td>
<td>amp EG within the same oscillator</td>
</tr>
<tr>
<td>LFO1</td>
<td>LFO1 within the same oscillator</td>
</tr>
<tr>
<td>LFO2</td>
<td>LFO2 within the same oscillator</td>
</tr>
<tr>
<td>Filter KTrk +/– (Filter Keyboard Track +/–)</td>
<td>filter keyboard tracking within the same oscillator (p.211)</td>
</tr>
<tr>
<td>Amp KTrk +/0 (Amplifier Keyboard Track +/0)</td>
<td>amp keyboard tracking within the same oscillator (p.211)</td>
</tr>
<tr>
<td>Note Number</td>
<td>note number</td>
</tr>
<tr>
<td>Velocity</td>
<td>velocity</td>
</tr>
<tr>
<td>Poly After/Touch</td>
<td>polyphonic after touch (transmitted from the TRITON only as sequence data)</td>
</tr>
<tr>
<td>After Touch</td>
<td>after touch (channel after touch)</td>
</tr>
<tr>
<td>JS X (Joy Stick X)</td>
<td>joystick X (horizontal axis)</td>
</tr>
<tr>
<td>JS+Y:CC#01 (Joy Stick +Y: CC#01)</td>
<td>joystick +Y (vertical upward direction) (CC#01)</td>
</tr>
<tr>
<td>JS–Y:CC#02 (Joy Stick –Y: CC#02)</td>
<td>joystick –Y (vertical downward direction) (CC#02)</td>
</tr>
<tr>
<td>JS+Y &amp; AT/2 (Joy Stick +Y &amp; AfterTouch/2)</td>
<td>joystick +Y (vertical upward direction) and after touch (p.211)</td>
</tr>
<tr>
<td>JS–Y &amp; AT/2 (Joy Stick –Y &amp; AfterTouch/2)</td>
<td>joystick –Y (vertical downward direction) and after touch (p.211)</td>
</tr>
<tr>
<td>Pedal:CC#04 (Foot Pedal: CC#04)</td>
<td>assignable foot pedal (CC#04) (p.211)</td>
</tr>
<tr>
<td>Slider:CC#18 (Value Slider: CC#18)</td>
<td>value slider (CC#18) (p.211)</td>
</tr>
<tr>
<td>KnobMod1:#17 (Knob Mod1: CC#17)</td>
<td>realtime control knob 1 in B-mode (knob modulation 1 CC#17) (p.211)</td>
</tr>
<tr>
<td>KnobMod2:#19 (Knob Mod2: CC#19)</td>
<td>realtime control knob 2 in B-mode (knob modulation 2 CC#19) (p.211)</td>
</tr>
<tr>
<td>KnobMod3:#20 (Knob Mod3: CC#20)</td>
<td>realtime control knob 3 in B-mode (knob modulation 3 CC#20) (p.211)</td>
</tr>
<tr>
<td>KnobMod4:#21 (Knob Mod4: CC#21)</td>
<td>realtime control knob 4 in B-mode (knob modulation 4 CC#21) (p.211)</td>
</tr>
<tr>
<td>KnobMod1 [+](Knob Mod1: CC#17 [+])</td>
<td>realtime control knob 1 in B-mode <a href="p.211">+</a></td>
</tr>
<tr>
<td>KnobMod2 [+](Knob Mod2: CC#19 [+])</td>
<td>realtime control knob 2 in B-mode <a href="p.211">+</a></td>
</tr>
<tr>
<td>KnobMod3 [+](Knob Mod3: CC#20 [+])</td>
<td>realtime control knob 3 in B-mode <a href="p.211">+</a></td>
</tr>
<tr>
<td>KnobMod4 [+](Knob Mod4: CC#21 [+])</td>
<td>realtime control knob 4 in B-mode <a href="p.211">+</a></td>
</tr>
<tr>
<td>Damper:CC#64 (Damper: CC#64)</td>
<td>damper pedal (CC#64) (p.211)</td>
</tr>
<tr>
<td>Porta:SW:#65 (Portamento Switch: CC#65)</td>
<td>portamento switch (CC#65)</td>
</tr>
<tr>
<td>Sostenuto:CC#66 (Sostenuto: CC#66)</td>
<td>sostenuto pedal (CC#66)</td>
</tr>
<tr>
<td>Soft:CC#67 (Soft Pedal: CC#67)</td>
<td>soft pedal (CC#67)</td>
</tr>
<tr>
<td>SW1:CC#80 (SW1 Mod.: CC#80)</td>
<td>assignable panel switch 1 (SW1 modulation CC#80) (p.211)</td>
</tr>
<tr>
<td>SW2:CC#81 (SW2 Mod.: CC#81)</td>
<td>assignable panel switch 2 (SW2 modulation CC#81) (p.211)</td>
</tr>
<tr>
<td>Foot SW#:82 (Foot Switch: CC#82)</td>
<td>assignable foot switch (CC#82) (p.211)</td>
</tr>
<tr>
<td>MIDI:CC#83</td>
<td>MIDI control change (CC#83)</td>
</tr>
<tr>
<td>Tempo</td>
<td>tempo (tempo data from internal clock or external MIDI clock)</td>
</tr>
</tbody>
</table>

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.
Amp KTrk +/0 (Amp Keyboard Track +/0)
Amp KTrk 0/+ (Amp Keyboard Track 0/+)
Amp KTrk +/ (Amp Keyboard Track +/)
Flt KTrk +/0 (Filter Keyboard Track +/0)
Flt KTrk 0/+ (Filter Keyboard Track 0/+)
Flt KTrk +/- (Filter Keyboard Track +/-)

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. (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.

AMS Intensity = positive (+) value
AMS = Amp KTrk +/

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 KnobMod1 (CC#17), “SW2” to KnobMod2 (CC#19), “SW3” to KnobMod3 (CC#20), or “SW4” 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.)
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 a combination of EG and LFO.
- Panning can be controlled in realtime from a controller, EG, or LFO etc.

Notes for the table

*1 If Note Number is selected as an AMS, the base value will be C4.


*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 SW2 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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>AMS Value → AMS Intensity</th>
<th>PEG/PEG → –99...0...+99</th>
<th>AEG → 0...+99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitch</td>
<td>(+12.00)</td>
<td>–1...0...+1[Octave]</td>
<td>0...+1[Octave]</td>
</tr>
<tr>
<td>Pitch EG Int.</td>
<td>(+12.00)</td>
<td>–1...0...+1[Octave]</td>
<td>0...+1[Octave]</td>
</tr>
<tr>
<td>Pitch LFO1/2 Int.</td>
<td>(+12.00)</td>
<td>–1...0...+1[Octave]</td>
<td>0...+1[Octave]</td>
</tr>
<tr>
<td>Filter Frequency</td>
<td>(+99)</td>
<td>–99...0...+99</td>
<td>0...+99</td>
</tr>
<tr>
<td>Resonance</td>
<td>(+99)</td>
<td>–99...0...+99</td>
<td>0...+99</td>
</tr>
<tr>
<td>Filter EG Int.</td>
<td>(+99)</td>
<td>–99...0...+99</td>
<td>0...+99</td>
</tr>
<tr>
<td>Filter LFO1/2 Int.</td>
<td>(+99)</td>
<td>–99...0...+99</td>
<td>0...+99</td>
</tr>
<tr>
<td>Amp</td>
<td>(+99)</td>
<td>value x(0...1...8)</td>
<td>–</td>
</tr>
<tr>
<td>Amp LFO1/2 Int.</td>
<td>(+99)</td>
<td>–99...0...+99</td>
<td>0...+99</td>
</tr>
<tr>
<td>Pan *7</td>
<td>(+50)</td>
<td>–63...0...+63</td>
<td>0...+63</td>
</tr>
<tr>
<td>EG Level</td>
<td>(+46)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>EG Time</td>
<td>(+49)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>LFO Frequency</td>
<td>(+99)</td>
<td>value x(1/64...1...64)</td>
<td>value x(1...84)</td>
</tr>
</tbody>
</table>
• 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 KT Jrk or Amp KT Jrk 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 KT Jrk [+/+] 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 decrease 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(SW1)) 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 theAMS), or to decrease the volume to zero (for negative (-) changes of the AMS).

• In addition to the time-variations 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 you 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.

<table>
<thead>
<tr>
<th>LFO1/2</th>
<th>KT(Filt KT Jrk, Amp KT Jrk)</th>
<th>KT(Note Number) *1</th>
<th>JS X/Ribbon:CC#16</th>
<th>EXT(+)*2</th>
<th>EXT(+)*3</th>
<th>EXT(Tempo)*4</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Appendices
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 towards the right as the EG level increases, and towards 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 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**

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.

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 **Dmod** symbol at the right of the parameter.

---

214
Dynamic Modulation Source List

<table>
<thead>
<tr>
<th>Source name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>dynamic modulation is not used</td>
</tr>
<tr>
<td>Gate1</td>
<td>note on/off (PG.215)</td>
</tr>
<tr>
<td>Gate1+Dmpr</td>
<td>note on + damper on/off (PG.215)</td>
</tr>
<tr>
<td>Gate2</td>
<td>note on/off (retrigger) (PG.215)</td>
</tr>
<tr>
<td>Gate2+Dmpr</td>
<td>note on + damper on/off (retrigger) (PG.215)</td>
</tr>
<tr>
<td>Note Number</td>
<td>note number</td>
</tr>
<tr>
<td>Velocity</td>
<td>Velocity</td>
</tr>
<tr>
<td>After Touch</td>
<td>after touch (Channel After Touch)</td>
</tr>
<tr>
<td>JS X (Joy Stick X)</td>
<td>joystick X (horizontal) direction</td>
</tr>
<tr>
<td>JS+Y: CC#01</td>
<td>joystick Y (away) direction (CC#01)</td>
</tr>
<tr>
<td>JS–Y: CC#02</td>
<td>joystick Y (toward yourself) (CC#02)</td>
</tr>
<tr>
<td>Pedal: CC#04</td>
<td>assignable foot pedal (CC#04) (PG.215)</td>
</tr>
<tr>
<td>FXCtrl1: #12</td>
<td>MIDI effect control 1 (CC#12)</td>
</tr>
<tr>
<td>FXCtrl2: #13</td>
<td>MIDI effect control 2 (CC#13)</td>
</tr>
<tr>
<td>Slider: #18</td>
<td>value slider (CC#18) (PG.215)</td>
</tr>
<tr>
<td>KnobM1: #17</td>
<td>realtime control knob 1 in B-mode (knob modulation 1 CC#17) (PG.215)</td>
</tr>
<tr>
<td>KnobM2: #19</td>
<td>realtime control knob 2 in B-mode (knob modulation 2 CC#19) (PG.215)</td>
</tr>
<tr>
<td>KnobM3: #20</td>
<td>realtime control knob 3 in B-mode (knob modulation 3 CC#20) (PG.215)</td>
</tr>
<tr>
<td>KnobM4: #21</td>
<td>realtime control knob 4 in B-mode (knob modulation 4 CC#21) (PG.215)</td>
</tr>
<tr>
<td>Damper: #64</td>
<td>damper pedal (CC#64)</td>
</tr>
<tr>
<td>Prta.SW: #65</td>
<td>portamento switch (CC#65)</td>
</tr>
<tr>
<td>Sostenu: #66</td>
<td>sostenuto pedal (CC#66) (PG.215)</td>
</tr>
<tr>
<td>SW 1: CC#80</td>
<td>assignable panel switch 1 (SW1 modulation CC#80) (PG.215)</td>
</tr>
<tr>
<td>SW 2: CC#81</td>
<td>assignable panel switch 2 (SW2 modulation CC#81) (PG.215)</td>
</tr>
<tr>
<td>Foot SW: #82</td>
<td>assignable foot switch (CC#82) (PG.215)</td>
</tr>
<tr>
<td>MIDI: CC#83</td>
<td>MIDI Control Change (CC#83)</td>
</tr>
<tr>
<td>Tempo</td>
<td>tempo (internal clock or external MIDI clock tempo data)</td>
</tr>
</tbody>
</table>

**Gate 1, Gate1+Dmp [Gate1+Damper]**

The effect is at maximum during note-on, and will stop when all keys are released. With Gate1+Dmp, the effect will remain at maximum even after the keys are released, as long as the damper (sustain) pedal is pressed.

**Gate 2, Gate2+Dmp [Gate2+Damper]**

This is essentially the same as for Gate 1 or Gate 1 + Dmp. However when Gate 2 or Gate 2 + Dmp 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 + Dmp, the trigger occurs only for the first note-on.)

For more details, refer to the sections on Gate1 and Gate1+Dmp for Gate 1, and Gate2 and Gate2+Dmp for Gate 2.
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).

**SW1, SW2 Assign List**

<table>
<thead>
<tr>
<th>Off</th>
<th>no function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW1 Mod.:CC#80 (SW1 Modulation:CC#80) SW2 Mod.:CC#81 (SW2 Modulation:CC#81)</td>
<td>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)</td>
</tr>
<tr>
<td>Porta.SW:CC#65 (Portamento Switch:CC#65)</td>
<td>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)</td>
</tr>
<tr>
<td>Octave Down</td>
<td>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).</td>
</tr>
<tr>
<td>Octave Up</td>
<td>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).</td>
</tr>
<tr>
<td>JS X Lock</td>
<td>Lock the effect of the joystick X direction. (P.217)</td>
</tr>
<tr>
<td>JS+Y Lock</td>
<td>Lock the effect of the joystick +Y direction. (P.217)</td>
</tr>
<tr>
<td>JS-Y Lock</td>
<td>Lock the effect of the joystick -Y direction. (P.217)</td>
</tr>
<tr>
<td>Ribbon Lock</td>
<td>Lock the effect of the ribbon controller. (P.217)</td>
</tr>
<tr>
<td>JS X &amp; Ribbon Lock</td>
<td>Simultaneously lock the effects of the joystick X direction and the ribbon controller. (P.217)</td>
</tr>
<tr>
<td>JS+Y &amp; Ribbon Lock</td>
<td>Simultaneously lock the effects of the joystick +Y direction and the ribbon controller. (P.217)</td>
</tr>
<tr>
<td>JS-Y &amp; Ribbon Lock</td>
<td>Simultaneously lock the effects of the joystick -Y direction and the ribbon controller. (P.217)</td>
</tr>
<tr>
<td>After Touch Lock</td>
<td>Lock the effect of after touch. (P.217)</td>
</tr>
</tbody>
</table>

**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.

When you Lock the joystick or after touch, MIDI transmission of the corresponding controller will be halted, but reception will still occur.

---

**Appendices**
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).

### Realtime Control Knobs B-Assign List

<table>
<thead>
<tr>
<th>Off</th>
<th>No function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knob Mod. 1 (CC#17)</td>
<td>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.</td>
</tr>
<tr>
<td>Knob Mod. 2 (CC#19)</td>
<td>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.</td>
</tr>
<tr>
<td>Knob Mod. 3 (CC#20)</td>
<td>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.</td>
</tr>
<tr>
<td>Knob Mod. 4 (CC#21)</td>
<td>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.</td>
</tr>
<tr>
<td>Master Volume</td>
<td>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).</td>
</tr>
<tr>
<td>Portamento Time (CC#05)</td>
<td>Control the portamento time. CC#5 will be transmitted.</td>
</tr>
<tr>
<td>Volume (CC#07)</td>
<td>Control the volume. CC#7 will be transmitted.</td>
</tr>
<tr>
<td>Post IFX Pan (CC#08)</td>
<td>Control the panning after the insertion effect. CC#8 will be transmitted.</td>
</tr>
<tr>
<td>Pan (CC#10)</td>
<td>Control the oscillator panning. CC#10 will be transmitted.</td>
</tr>
<tr>
<td>Expression (CC#11)</td>
<td>Control the expression. CC#11 will be transmitted.</td>
</tr>
<tr>
<td>FX Control 1 (CC#12)</td>
<td>Control Effect Dynamic Modulation. When controlling this, set “Dmd Src” to FXCtrl1:#12. Simultaneously, CC#12 will be transmitted.</td>
</tr>
<tr>
<td>FX Control 2 (CC#13)</td>
<td>Control Effect Dynamic Modulation. When controlling this, set “Dmd Src” to FXCtrl2:#13. Simultaneously, CC#13 will be transmitted.</td>
</tr>
<tr>
<td>LFP Cutoff (CC#74)</td>
<td>Control the cutoff frequency of the filter (low pass filter). Simultaneously, CC#74 will be transmitted.</td>
</tr>
<tr>
<td>Resonance/HPF (CC#71)</td>
<td>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 &amp; High Pass, the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.</td>
</tr>
<tr>
<td>Filter EG Int. (CC#79)</td>
<td>Control the EG intensity of the filter. Simultaneously, CC#79 will be transmitted.</td>
</tr>
<tr>
<td>F/A Attack (CC#73)</td>
<td>Control the EG attack of the filter and amplifier. Simultaneously, CC#73 will be transmitted.</td>
</tr>
<tr>
<td>F/A Decay (CC#75)</td>
<td>Control the EG decay time and slope time of the filter and amplifier. Simultaneously, CC#75 will be transmitted.</td>
</tr>
<tr>
<td>F/A Sustain (CC#70)</td>
<td>Control the EG sustain level of the filter and amplifier. Simultaneously, CC#70 will be transmitted.</td>
</tr>
<tr>
<td>F/A Release (CC#72)</td>
<td>Control the EG release time of the filter and amplifier. Simultaneously, CC#72 will be transmitted.</td>
</tr>
<tr>
<td>Pitch LFO1 Spd (CC#76)</td>
<td>Control the frequency of LFO1. Simultaneously, CC#76 will be transmitted.</td>
</tr>
<tr>
<td>Pitch LFO1 Dly (CC#78)</td>
<td>Control the delay of LFO1. Simultaneously, CC#78 will be transmitted.</td>
</tr>
<tr>
<td>SW 1 Mod. (CC#80)</td>
<td>General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmd Src” to SW1:CC#80. Simultaneously, CC#80 will be transmitted.</td>
</tr>
<tr>
<td>SW 2 Mod. (CC#81)</td>
<td>General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmd Src” to SW2:CC#81. Simultaneously, CC#81 will be transmitted.</td>
</tr>
<tr>
<td>Foot Switch (CC#82)</td>
<td>General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmd Src” to FootSW:#82. Simultaneously, CC#82 will be transmitted.</td>
</tr>
<tr>
<td>MIDI CC#83 (CC#83)</td>
<td>General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmd Src” to MIDI:CC#83. Simultaneously, CC#83 will be transmitted.</td>
</tr>
<tr>
<td>MFX Send 1 (CC#93)</td>
<td>Control the send level to Master Effect1. Simultaneously, CC#93 will be transmitted.</td>
</tr>
<tr>
<td>MFX Send 2 (CC#91)</td>
<td>Control the send level to Master Effect2. Simultaneously, CC#91 will be transmitted.</td>
</tr>
<tr>
<td>MIDI CC#00...CC#95</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

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).

**Foot Switch Assign**

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The connected foot switch will not function.</td>
</tr>
<tr>
<td>Foot SW (CC#82)</td>
<td>Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to Foot SW=82.</td>
</tr>
<tr>
<td>Portamento SW (CC#65)</td>
<td>Control portamento on/off.</td>
</tr>
<tr>
<td>Sostenuto (CC#66)</td>
<td>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).</td>
</tr>
<tr>
<td>Soft (CC#67)</td>
<td>Turn the soft pedal effect on/off.</td>
</tr>
<tr>
<td>Arpeggio SW</td>
<td>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.</td>
</tr>
<tr>
<td>Program Up</td>
<td>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.</td>
</tr>
<tr>
<td>Program Down</td>
<td>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.</td>
</tr>
<tr>
<td>Song Start/Stop</td>
<td>The switch can be used to start/stop the sequencer. Simultaneously, a MIDI Start or Stop message will be transmitted.</td>
</tr>
<tr>
<td>Song Punch In/Out</td>
<td>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.</td>
</tr>
<tr>
<td>Cue Repeat Control</td>
<td>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).</td>
</tr>
</tbody>
</table>
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).

**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

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>The connected pedal will not function.</td>
</tr>
<tr>
<td>Master Volume</td>
<td>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).</td>
</tr>
<tr>
<td>Foot Pedal (CC#04)</td>
<td>Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to Pedal:CC#04.</td>
</tr>
<tr>
<td>Portamento Time (CC#05)</td>
<td>Control the speed at which portamento will change the pitch.</td>
</tr>
<tr>
<td>Volume (CC#07)</td>
<td>Control the volume of a Program, of a timbre in a Combination, or of a track in Sequencer/Song Play modes.</td>
</tr>
<tr>
<td>Post IFX Pan (CC#08)</td>
<td>Control the pan after passing through the insertion effect.</td>
</tr>
<tr>
<td>Pan (CC#10)</td>
<td>Control the pan of a Program, of a timbre in a Combination, or of a track in Sequencer/Song Play modes.</td>
</tr>
<tr>
<td>Expression (CC#11)</td>
<td>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.</td>
</tr>
<tr>
<td>FX Control 1 (CC#12)</td>
<td>Control Effect Dynamic Modulation. To control this, set Dmod Src to “FXCtrl1:#12.</td>
</tr>
<tr>
<td>FX Control 2 (CC#13)</td>
<td>Control Effect Dynamic Modulation. To control this, set Dmod Src to “FXCtrl2:#13.</td>
</tr>
<tr>
<td>MFX Send 1 (CC#93)</td>
<td>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.</td>
</tr>
<tr>
<td>MFX Send 2 (CC#91)</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.)

### MIDI transmission/reception when the TRITON’s controllers are operated

The relation between the MIDI messages 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.

<table>
<thead>
<tr>
<th>Note-off</th>
<th>Note-on (note number)</th>
<th>Note-on (velocity)</th>
<th>Poly after touch</th>
<th>Modulation 1</th>
<th>Modulation 2</th>
<th>Modulation 3</th>
<th>Modulation 4</th>
<th>Foot controller</th>
<th>Gate controls</th>
<th>Velocity controls</th>
<th>Damper controls</th>
<th>Assignable Pedal</th>
<th>Assignable Switch</th>
<th>Assignable Pedal</th>
<th>Assignable Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td></td>
<td></td>
<td>#</td>
<td>#</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
<td></td>
<td></td>
<td>#</td>
<td>#</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>J</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>K</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>L</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>O</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>P</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>S</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>T</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>U</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes

<table>
<thead>
<tr>
<th><strong>Notes</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Note-off</td>
<td></td>
</tr>
<tr>
<td>Note-on</td>
<td></td>
</tr>
<tr>
<td>Poly after touch</td>
<td></td>
</tr>
</tbody>
</table>

### Available for AMS/DMS

<table>
<thead>
<tr>
<th><strong>Available for AMS</strong></th>
<th><strong>Available for DMS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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]–[14] 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.
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.

<table>
<thead>
<tr>
<th>CC#</th>
<th>Control</th>
<th>Value</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Bank select (MSB)</td>
<td>0...127</td>
<td>bank select message MSB</td>
</tr>
<tr>
<td>1</td>
<td>Modulation 1</td>
<td>0...127</td>
<td>corresponds to joystick movement in the +Y direction (away from yourself)</td>
</tr>
<tr>
<td>2</td>
<td>Modulation 2</td>
<td>0...127</td>
<td>corresponds to joystick movement in the -Y direction (toward yourself)</td>
</tr>
<tr>
<td>4</td>
<td>Foot controller</td>
<td>0...127</td>
<td>corresponds to when the assignable pedal function is set to Foot Pedal</td>
</tr>
<tr>
<td>5</td>
<td>Portamento time</td>
<td>0...127</td>
<td>portamento time</td>
</tr>
<tr>
<td>6</td>
<td>Data entry (MSB)</td>
<td>0...127</td>
<td>MSB of RPN and NRPN data</td>
</tr>
<tr>
<td>7</td>
<td>Volume</td>
<td>0...127</td>
<td>volume</td>
</tr>
<tr>
<td>8</td>
<td>Post insertion effect panpot</td>
<td>0...127</td>
<td>pan after the insertion effect</td>
</tr>
<tr>
<td>10</td>
<td>Panpot</td>
<td>0...127</td>
<td>pan</td>
</tr>
<tr>
<td>11</td>
<td>Expression</td>
<td>0...127</td>
<td>volume</td>
</tr>
<tr>
<td>12</td>
<td>Effect control 1</td>
<td>0...127</td>
<td>corresponds to effect dynamic control source FXCtrl1</td>
</tr>
<tr>
<td>13</td>
<td>Effect control 2</td>
<td>0...127</td>
<td>corresponds to effect dynamic control source FXCtrl2</td>
</tr>
<tr>
<td>16</td>
<td>Ribbon controller</td>
<td>0...127</td>
<td>corresponds to ribbon controller operation</td>
</tr>
<tr>
<td>17</td>
<td>Knob modulation 1</td>
<td>0...127</td>
<td>corresponds to when Knob Mod.1 is assigned as the B-mode function of a REALTIME CONTROLS knob</td>
</tr>
<tr>
<td>18</td>
<td>Controller (CC#18)</td>
<td>0...127</td>
<td>for control of Alternate Modulation or Effect Dynamic Modulation</td>
</tr>
<tr>
<td>19</td>
<td>Knob modulation 2</td>
<td>0...127</td>
<td>corresponds to when Knob Mod.2 is assigned as the B-mode function of a REALTIME CONTROLS knob</td>
</tr>
<tr>
<td>20</td>
<td>Knob modulation 3</td>
<td>0...127</td>
<td>corresponds to when Knob Mod.3 is assigned as the B-mode function of a REALTIME CONTROLS knob</td>
</tr>
<tr>
<td>21</td>
<td>Knob modulation 4</td>
<td>0...127</td>
<td>corresponds to when Knob Mod.4 is assigned as the B-mode function of a REALTIME CONTROLS knob</td>
</tr>
<tr>
<td>32</td>
<td>Bank select (LSB)</td>
<td>0...127</td>
<td>LSB of bank select message</td>
</tr>
<tr>
<td>38</td>
<td>Data entry (LSB)</td>
<td>0...127</td>
<td>LSB of RPN or NRPN data</td>
</tr>
<tr>
<td>64</td>
<td>Damper</td>
<td>0...127</td>
<td>damper effect</td>
</tr>
<tr>
<td>65</td>
<td>Portamento On/Off</td>
<td>0...63(Off), 64...127(On)</td>
<td>turn the portamento effect on/off</td>
</tr>
<tr>
<td>66</td>
<td>Sostenuto On/Off</td>
<td>0...63(Off), 64...127(On)</td>
<td>turn the sostenuto effect on/off</td>
</tr>
<tr>
<td>67</td>
<td>Soft</td>
<td>0...127</td>
<td>soft pedal effect</td>
</tr>
<tr>
<td>70</td>
<td>Sustain level</td>
<td>0...127</td>
<td>sustain levels of the filter EG and amp EG</td>
</tr>
<tr>
<td>71</td>
<td>Filter resonance level</td>
<td>0...127</td>
<td>resonance level of the filter</td>
</tr>
<tr>
<td>72</td>
<td>Release time</td>
<td>0...127</td>
<td>release times of the filter EG and amp EG</td>
</tr>
<tr>
<td>73</td>
<td>Attack time</td>
<td>0...127</td>
<td>attack times of the filter EG and amp EG</td>
</tr>
<tr>
<td>74</td>
<td>Low pass filter cutoff frequency</td>
<td>0...127</td>
<td>cutoff frequency of the low pass filter</td>
</tr>
<tr>
<td>75</td>
<td>Decay time</td>
<td>0...127</td>
<td>decay times/slope times of the filter EG and amp EG</td>
</tr>
<tr>
<td>76</td>
<td>LFO1 speed</td>
<td>0...127</td>
<td>LFO1 speed</td>
</tr>
<tr>
<td>77</td>
<td>LFO1 depth</td>
<td>0...127</td>
<td>pitch LFO1 intensity</td>
</tr>
<tr>
<td>78</td>
<td>LFO1 delay</td>
<td>0...127</td>
<td>LFO1 delay</td>
</tr>
<tr>
<td>79</td>
<td>Filter EG intensity</td>
<td>0...127</td>
<td>filter EG intensity</td>
</tr>
<tr>
<td>80</td>
<td>Panel switch 1 On/Off</td>
<td>0...63(Off), 64...127(On)</td>
<td>corresponds to on/off when the SW1 function is set to SW1 Mod.</td>
</tr>
<tr>
<td>81</td>
<td>Panel switch 2 On/Off</td>
<td>0...63(Off), 64...127(On)</td>
<td>corresponds to on/off when the SW2 function is set to SW2 Mod.</td>
</tr>
<tr>
<td>82</td>
<td>Foot switch On/Off</td>
<td>0...63(Off), 64...127(On)</td>
<td>corresponds to on/off when the function of the assignable foot switch is set to Foot SW</td>
</tr>
<tr>
<td>83</td>
<td>Controller (CC#83)</td>
<td>0...127</td>
<td>for controlling Alternate Modulation or Effect Dynamic Modulation</td>
</tr>
<tr>
<td>91</td>
<td>Effect 1 depth</td>
<td>0...127</td>
<td>send 2 level</td>
</tr>
<tr>
<td>92</td>
<td>Effect 2 depth</td>
<td>0(Off), 1...127(On)</td>
<td>turn insertion effect 1, 2, 3, 4, 5 on/off</td>
</tr>
<tr>
<td>93</td>
<td>Effect 3 depth</td>
<td>0...127</td>
<td>send 1 level</td>
</tr>
<tr>
<td>94</td>
<td>Effect 4 depth</td>
<td>0(Off), 1...127(On)</td>
<td>master effect 1 on/off</td>
</tr>
<tr>
<td>95</td>
<td>Effect 5 depth</td>
<td>0(Off), 1...127(On)</td>
<td>master effect 2 on/off</td>
</tr>
<tr>
<td>96</td>
<td>Data increment</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>Data decrement</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>NRPN(LSB)</td>
<td>2</td>
<td>corresponds to the arpeggiator on/off switch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>corresponds to the arpeggiator Gate control knob</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11</td>
<td>corresponds to the arpeggiator Velocity control knob</td>
</tr>
<tr>
<td>99</td>
<td>NRPN(MSB)</td>
<td>0</td>
<td>MSB of NRPN</td>
</tr>
<tr>
<td>100</td>
<td>RPN(LSB)</td>
<td>0</td>
<td>select the pitch bend range</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>select Fine Tune</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>select Coarse Tune</td>
</tr>
<tr>
<td>101</td>
<td>RPN(MSB)</td>
<td>0</td>
<td>MSB of RPN</td>
</tr>
</tbody>
</table>
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).

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)

<table>
<thead>
<tr>
<th>CC#06</th>
<th>CC#38</th>
<th>Parameter value (Semitone steps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>00</td>
<td>0</td>
</tr>
<tr>
<td>01</td>
<td>00</td>
<td>+1</td>
</tr>
<tr>
<td>12</td>
<td>00</td>
<td>+12</td>
</tr>
</tbody>
</table>

### RPN=1 (Fine tune)

<table>
<thead>
<tr>
<th>CC#06</th>
<th>CC#38</th>
<th>Parameter value (1 cent steps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>00</td>
<td>–50</td>
</tr>
<tr>
<td>48</td>
<td>00</td>
<td>–25</td>
</tr>
<tr>
<td>64</td>
<td>00</td>
<td>0</td>
</tr>
<tr>
<td>96</td>
<td>00</td>
<td>+50</td>
</tr>
</tbody>
</table>

### RPN=2 (Coarse tune)

<table>
<thead>
<tr>
<th>CC#06</th>
<th>CC#38</th>
<th>Parameter value (Semitone steps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>00</td>
<td>–24</td>
</tr>
<tr>
<td>52</td>
<td>00</td>
<td>–12</td>
</tr>
<tr>
<td>64</td>
<td>00</td>
<td>0</td>
</tr>
<tr>
<td>88</td>
<td>00</td>
<td>+24</td>
</tr>
</tbody>
</table>

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).

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).

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.

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.

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–ICG) to save that state as a program (except for some parameters).
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 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. (**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.
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**

  **Multisample parameter attributes**

<table>
<thead>
<tr>
<th>MSB</th>
<th>LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

  1: Not Use 2nd Start  0: Use It

- **Relative parameter chunk 1**

  Chunk ID ('RLP1')  [4 bytes]
  Chunk size (18 × number of samples in the multisample)  [4 bytes]
  Original key  [1 byte]
  Top key (0–127)  [1 byte]
  Tune (-99...99 cents)  [1 byte]
  Level (-99...99 cents)  [1 byte]
  Pan (-99...99 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 “SKIPPEDSAMPLE”, 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 + SMO1 + 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 + SMO1 + 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 byte]
  Start address  [3 bytes]

- **Sample data chunk**

  Chunk ID ('SMD1')  [4 bytes]
  Chunk size (12 + number of sample databytes)

  - **Sampling frequency**  [4 bytes]
  - **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**

- **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 “SKIPPEDSAMPLE”, 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 SCript) 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.

.KSF filename convention (samples used by the multisample)

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.

.KSF filename convention (sample)
### 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.

#### 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.
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.

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.

Illegal file description
Meaning: The filename 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.

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
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.

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)
Meaning: The sample you are editing is used by other multisamples. To continue editing, press the OK button.

Sample used in other multisample(s)
Meaning: Continue?
Action: Open the pattern.

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.

S

Sample data used in other sample(s)
Meaning: Other sample(s) use the same sample data as the sample that you are editing. To continue editing, press the OK button.
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 edit-
ing, press the OK button. To cancel, press the Can-
cel 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 but-
tton. (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 (Com-
pare 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

1A TRANSMITTED DATA

1-1 CHANNEL MESSAGES

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>(Transmitted by)</th>
<th>ENA</th>
</tr>
</thead>
<tbody>
<tr>
<td>8n</td>
<td>kk</td>
<td>40</td>
<td>Note Off</td>
<td>Key Off</td>
<td>A</td>
</tr>
<tr>
<td>9n</td>
<td>kk</td>
<td>vv</td>
<td>Note On</td>
<td>Key On</td>
<td>A</td>
</tr>
<tr>
<td>10n</td>
<td>kk</td>
<td>64</td>
<td>Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11n</td>
<td>kk</td>
<td></td>
<td>Expression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12n</td>
<td>kk</td>
<td></td>
<td>Effect Chnl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13n</td>
<td>kk</td>
<td></td>
<td>Song No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14n</td>
<td>kk</td>
<td></td>
<td>Bender Chng</td>
<td>Joy Stick X</td>
<td>C</td>
</tr>
<tr>
<td>15n</td>
<td>kk</td>
<td></td>
<td>Snd Chng</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>16n</td>
<td>kk</td>
<td></td>
<td>Program Chng</td>
<td></td>
<td>Q</td>
</tr>
<tr>
<td>17n</td>
<td>kk</td>
<td></td>
<td>Comb Chng</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **n**: MIDI Channel No. (0 - 15)
- **kk**: Usually Global Channel.
- **kk kk**: When in Combination/Sequencer/Song Play mode.

**ENA** = A : Always Enabled
P : Enabled when Enable Program Change in Global mode is checked
S : Enabled when Enable System Exclusive 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 proX (88keys + Transpose)         = 00 - 127 : Sequencer and Arpeggiator

1-2 SYSTEM COMMON MESSAGES

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>(Transmitted when)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>ss</td>
<td>tt</td>
<td>Song Position Pointer</td>
<td>Song Position Pointer message when in Sequencer and Song Play mode (Internal Clock)</td>
</tr>
</tbody>
</table>

*4 : For example, if the time signature is 4/4 or 8/8, tt:ss = 00,10 means one measure.

1-3 SYSTEM REALTIME MESSAGES

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>(Transmitted when)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F8</td>
<td></td>
<td></td>
<td>Timing Clock</td>
<td>Always in Prog/Combi/Seq/Song Play mode</td>
</tr>
<tr>
<td>FA</td>
<td></td>
<td></td>
<td>Start</td>
<td>Start in Seq/Song Play mode</td>
</tr>
<tr>
<td>FB</td>
<td></td>
<td></td>
<td>Continue</td>
<td>Continue in Seq/Song Play mode</td>
</tr>
<tr>
<td>FC</td>
<td></td>
<td></td>
<td>Stop</td>
<td>Stop in Seq/Song Play mode</td>
</tr>
<tr>
<td>FE</td>
<td></td>
<td></td>
<td>Active Sensng</td>
<td>Always</td>
</tr>
</tbody>
</table>

Send these messages when MIDI Clock in Global mode is Internal.

1-4 SYSTEM EXCLUSIVE

1-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (NON REALTIME)

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>(Transmitted when)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td>A1 Chn</td>
<td>A1 Chn Message</td>
</tr>
<tr>
<td>B1</td>
<td></td>
<td></td>
<td>B1 Chn</td>
<td>B1 Chn Message</td>
</tr>
<tr>
<td>C1</td>
<td></td>
<td></td>
<td>C1 Chn</td>
<td>C1 Chn Message</td>
</tr>
<tr>
<td>D1</td>
<td></td>
<td></td>
<td>D1 Chn</td>
<td>D1 Chn Message</td>
</tr>
</tbody>
</table>

1-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>(Transmitted when)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td></td>
<td>A1 Chn</td>
<td>A1 Chn Message</td>
</tr>
<tr>
<td>B1</td>
<td></td>
<td></td>
<td>B1 Chn</td>
<td>B1 Chn Message</td>
</tr>
<tr>
<td>C1</td>
<td></td>
<td></td>
<td>C1 Chn</td>
<td>C1 Chn Message</td>
</tr>
<tr>
<td>D1</td>
<td></td>
<td></td>
<td>D1 Chn</td>
<td>D1 Chn Message</td>
</tr>
</tbody>
</table>

**A1** : Assignable Pedal
**B1** : Assignable Switch
**C1** : Unenable when change a Song No. (Seq. mode). (Status = EXT,EX2,BTH)
**D1** : Unenable when change a Combination or Song No.(Seq. mode). (Status = EXT,EX2,BTH)

When in Program/Combination mode, Global channel.
When in Sequencer/Song Play mode, current selected track's channel.
## 2. RECOGNIZED RECEIVE DATA

### 2-1 CHANNEL MESSAGES

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description</th>
<th>Use</th>
<th>ENA</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Hex]</td>
<td>[H]</td>
<td>[D]</td>
<td>[H]</td>
<td>[D]</td>
<td></td>
</tr>
<tr>
<td>8n</td>
<td>kk (kk)</td>
<td></td>
<td>Note Off</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>9n</td>
<td>kk (kk)</td>
<td></td>
<td>Note Off</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>40 (64)</td>
<td></td>
<td>Portamento Off/On</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>41 (65)</td>
<td></td>
<td>Portamento On</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>42 (66)</td>
<td></td>
<td>Sostenuto Off/On</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>43 (67)</td>
<td></td>
<td>Soft Pedal</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>46 (68)</td>
<td></td>
<td>Effect 1 Depth</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>47 (69)</td>
<td></td>
<td>Effect 2 Depth</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>48 (70)</td>
<td></td>
<td>Effect 3 Depth</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>49 (71)</td>
<td></td>
<td>Effect 4 Depth</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Bn</td>
<td>50 (72)</td>
<td></td>
<td>Effect 5 Depth</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Cn</td>
<td>pp (pp)</td>
<td></td>
<td>Bender Change</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>En</td>
<td>bb (bb)</td>
<td></td>
<td>Bender Change</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

### AMS
- AMS: Alternate Modulation Source
- FX Dmod Src: Effect Dynamic Modulation Source

### FX/DP
- n: MIDI Channel No. (0 - 15)
- Usually Global Channel
- When in Combination/Sequencer/Song Play mode, each track's channel.
- g: Always Global Channel No. (0 - 15)

### Notes
- When in Program/Sampling mode, Program channel. When in Combination/Sequencer/Song Play mode, each track's channel.
- *1: When Bank Map in Global mode is KORG; MIDI In [Hex] Program Combination
- *2: When in Program/Sampling mode, Global channel
- *3: When in Program/Sampling mode, Global channel
- *4: r = 0 : Pitch Bend Sensitivity (Bend Range)
2-2 SYSTEM COMMON MESSAGES

<table>
<thead>
<tr>
<th>Status</th>
<th>Second</th>
<th>Third</th>
<th>Description (Use for....)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>ss (ss)</td>
<td>tt (tt)</td>
<td>Song Position Pointer (Location) *6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ss: Least significant [LSB]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>tt: Most significant [MSB]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Song Select (Song or Cue List select) *6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ss: Song (0-127)/Cue List (0-19) No.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Status</th>
<th>Description (Use for....)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F8</td>
<td>Timing Clock (Tempo, AMS, &amp; FX Clock Src)</td>
</tr>
<tr>
<td>FB</td>
<td>Continue (Seq Start &amp; Arpeggiator Control)</td>
</tr>
<tr>
<td>FE</td>
<td>Active Sensing (MIDI Connect check)</td>
</tr>
</tbody>
</table>

Receive when MIDI Clock in Global mode is External MDR or External P/.

2-4 SYSTEM EXCLUSIVE

2-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (NON REALTIME)

DEVICE INQUIRY (When received this message, transmit INQUIRY MESSAGE REPLY):
[80,78,mn,04,0F]
3rd byte mn: Channel + 0 - F: Global Channel + 7F: Any Channel

GM SYSTEM ON (Receive when in Song Play mode):
[80,78,mn,04,0F]
3rd byte mn: Channel + 0 - F: Global Channel + 7F: Any Channel

2-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)

Master Volume
[F0,7F,0g,04,01,00,00,F7]
3rd byte g: Global Channel
6th byte vv: Value(0H-127)
7th byte mm: Value(MIN)
m, mm = 00,00:+50, 40,00:+00, 60,00:+50

Master Tune (Control Transpose of Global):
[F0,7F,0g,04,04,00,00,F7]
3rd byte g: Global Channel
6th byte vv: Value(0H-127)
7th byte mm: Value(MIN)
m, mm = 00,00:+50, 40,00:+00, 60,00:+50

Master Tune (Control Transpose of chromatic scale in Global):
[F0,7F,0g,04,04,00,00,F7]
3rd byte g: Global Channel
6th byte vv: Value(0H-127)
7th byte mm: Value(MIN)
m, mm = 00,00:+50, 40,00:+00, 60,00:+50

Master coarse Tune (Control Transpose of chromatic scale in Global):
[F0,7F,0g,04,04,00,00,F7]
3rd byte g: Global Channel
6th byte vv: Value(0H-127)
7th byte mm: Value(MIN)
m, mm = 00,00:+50, 40,00:+00, 60,00:+50

Master coarse Tune (Control Transpose (chromatic scale in Global))
[F0,7F,0g,04,04,00,00,F7]
3rd byte g: Global Channel
6th byte vv: Value(0H-127)
7th byte mm: Value(MIN)
m, mm = 00,00:+50, 40,00:+00, 60,00:+50
### 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.

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”)  

- **DRAM SIMM boards are not a manufacturer option. Please purchase commercially-available boards that are sold for use in computers.**

- **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.**

- **The memory banks and sampling time will depend on the capacity of the DRAM SIMM boards you install, and on the slot locations. (see 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.

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.

---

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
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.

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

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.

1–B. Detaching cover “B” for EXB-PCM or DRAM SIMM

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.
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. (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.

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. (1. 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. (*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.

8 Plug the cable into the connector as shown in the diagram. Press the cable firmly in until it stops.

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. (*2 “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. (="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.

Press in at a slant

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. (="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. (⇒ “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. (⇒ “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 (AIFF) 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, Time 3, 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 # Arpeggiator
Drumsample 123
Foot Pedal Assign 121, 220
Foot Switch Assign 121, 219
Realtime Control Knobs B Assign
RPRR Setup 71
SW1, SW2
Attack 19
Attack Level
Amp EG 18, 19
Filter EG 15
Pitch EG 10
Realtime Control Knobs B Assign
218
BPM
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/received 223
MIDI Filter 118

244
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 Mea-
sure 49
Loop Tune 95
Loop5 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
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 #6
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

248
Appendices

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