

EFX - LE

Audio Controller

OWNER'S MANUAL

Version 1.30

Musicom AB
Preserving Your Tone, Pure and Dynamic

Table of Contents

1. Introduction	3
1.1 Main Features	3
1.2 Specifications	4
1.3 Block Diagram	4
1.4 Front Panel	5
1.5 Rear Panel	6
2. Basic Operation	7
2.1 Initial Power Up	7
2.2 Preset Mode	7
2.3 Instant Access (IA) Mode	8
2.3.1 IA1 Mode	8
2.3.2 IA2 Mode	8
2.3.3 IA3 Mode	8
2.4 Mute	9
2.5 Activate/Deactivate TAP Switch	9
3. Song/Set Mode	9
3.1 Song Mode	9
3.2 Set Mode	10
4. Setup Mode	11
4.1 ORDER Menu	11
4.1.1 Changing the Effect Loop Connection Order	12
4.1.2 Making a Parallel Connection	13
4.1.3 Specify Spill Over	13
4.2 MIDI menu	14
4.2.1 Preset MIDI	14
4.2.2 Global MIDI	17
4.3 COPY Menu	19
4.3.1 Preset Copy	19
4.3.2 Bank Copy	19
4.3.3 Song Copy	20
4.3.4 Set Copy	20
4.4 TITLES Menu	21
4.4.1 Preset Titles	21
4.4.2 Song Titles	22
4.5 SONG/SET Menu	23
4.5.1 Song Edit	23
4.5.2 Set Edit	24
4.6 UTILITY Menu	25
4.6.1 Operation Mode	26
4.6.2 Click-Less	26
4.6.3 Hold "BANK DOWN"	26
4.6.4 Mute Position	27
4.6.5 Max Bank Number	27
4.6.6 Duplicated PC	27
4.6.7 Tempo Sync With	28
4.6.8 Tempo Sync Time	28
4.6.9 XPD L Rate	28
4.6.10 Func. Switch 1/2	29
4.6.11 ISO-OUT Source	29
4.6.12 LP 5/6 Return	29
4.6.13 LP 6 Send.R Split	30
4.6.14 Global Preset	30
4.6.15 Mute -> Loop On	30
4.6.16 BPM Display	31
4.6.17 Group Select	31
4.6.18 MIDI SysEx Data	32
4.6.19 Factory Reset	32
5. Cables	33
5.1 XPD L	33
5.2 Function Switches	33
6. MIDI IN Specification	34
6.1 Preset Changes	34
6.2 Individual Loop Controls	34
7. Connection Examples	35

1. Introduction

Thank you for purchasing the Musicom Lab EFX-LE Audio Controller.

The EFX-LE Audio Controller is the ultimate floor-based switching system.

It is a compact, easy to use, has 7 fully programmable loops, 2 function switches and a MIDI foot controller.

The EFX-LE Audio Controller has 360 memory locations, configured as 72 banks of 5 presets, plus a global preset. It can transmit 8 MIDI Program and Control Change and messages on 8 MIDI channels and 18 MIDI Control Change messages on an appointed MIDI channel.

Also one continuous controller port(XPDL) is included and can be programmed with a designated MIDI channel and controller number.

The EFX-LE Audio Controller has two outputs, OUT L and OUT R, can be used as stereo outputs, or as an A/B/Y switch for a mono guitar signal.

The EFX-LE Audio Controller has two low-noise, high quality buffers to prevent the loss of guitar signal. Each buffer can be bypassed/engaged per each preset.

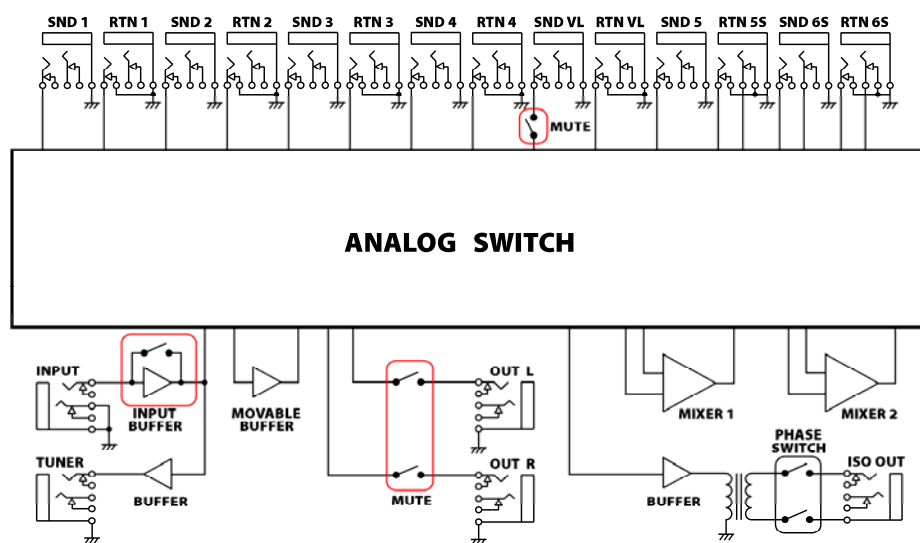
1.1 Main Features

- 7 audio loops. 4 mono loops, 2 stereo loops and 1 volume loop.
Volume Loop can be engaged/bypassed by IA switch or as parts of a preset.
- 2 stereo loops are stereo capable using TRS jacks.
- Changeable loop order per each preset.
- 2 buffers. Input buffer and Movable buffer.
Movable buffer can be placed anywhere in your signal path.
Each buffer can be enabled/disabled by IA switch or as parts of a preset.
- 2 internal unity mixers. each mixer has 2 input(2 Effects or 1 Effect + Dry signal).
Mixers also are used for spillover between presets, even with your analog delay or reverb.
- 2 function switches via one TRS jack. You can control the switching functions of your amp.
- 360 presets (72 banks x 5 presets) and 1 global preset.
- Create up to 99 songs
- Organize the 99 Songs into 40 sets of 40 songs
- Click-Less(Mute) function for reducing popping noise
- ISO OUT that prevent to occur ground hum noise and phase issue.
- Transmits 8 MIDI Program Change and 8 MIDI Control Change messages.
Each MIDI message can be stored differently in each preset.
- Transmits 18 MIDI Control Change message by assigned IA switches.
- Transmits MIDI Timing Clock and synchronizes with Function Switch1.
Tap tempo for both MIDI-compatible pedals and any pedals that have external tap input jacks.
BPM can be stored in each bank preset and song preset.
- Easily copy presets, banks, songs and sets
- 2 Lines x 16 Characters LCD display that can display preset/song titles and other status.

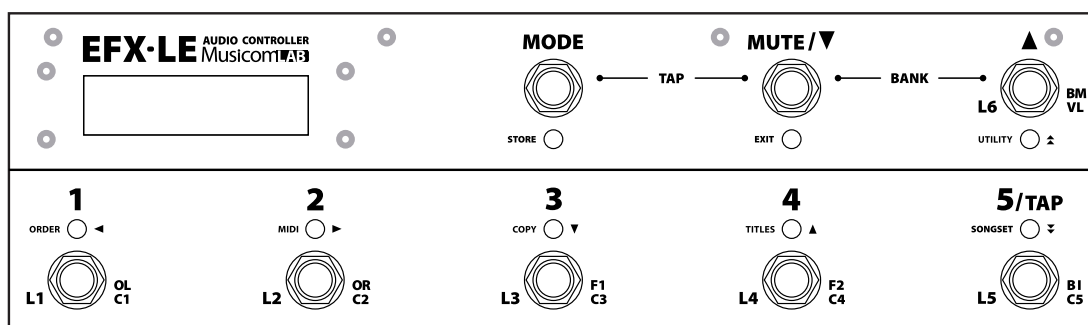
1.2 Specifications

- Buffer Input Impedance 2.2 M Ω
- Buffer Output Impedance 100 Ω
- Nominal Audio Signal Level -10 dBu
- Maximum Audio Signal Level +18 dBu
- Current Draw 250 mA (DC12V Center Negative)
- Dimensions 320 mm(W) x 96 mm(D) x 68 mm(H)
12.6 inches(W) x 3.8 inches(D) x 2.7 inches(H)
- Weight 1,130 g / 2.5 lbs

1.3 Block Diagram



1.4 Front Panel



1 through 4 switches

When in Preset mode these switches are used to recall the corresponding preset. When in **IA1**, **IA2** or **IA3** mode pressing these switch turn on/off the corresponding effect loop, function switches, outputs and buffers.

5/TAP switch

This Switch can have two functions based upon your needs. By default, this button is set up to access the Preset 5, You can also program this switch to TAP TEMPO. Refer to the **Activate/Deactivate TAP Switch** on the page 8 of the manual.

MODE

Pressing this switch puts the EFX-LE into the **IA1** mode, where you can turn individual loops on and off, and store their settings to presets. For the other side, pressing this switch for 2 seconds puts the EFX-LE into the **SETUP** mode.

BANK▲

The 360 presets in the EFX-LE are arranged in banks of 5, and these buttons allow you to select which bank of 5 you'd like to access. Pressing this switch in Preset mode decrements/increments the bank number.

MUTE/BANK▼

This Switch can have two functions(**MUTE** and **BANK DOWN**).

Pressing and holding this switch in Preset mode decrements the bank number.

For the other side, pressing this switch will execute the MUTE function.

LCD Display



Line 1 and 2 - a to d indicate a bank or song number

Line 1 - e to p indicate a Preset or Song Title.

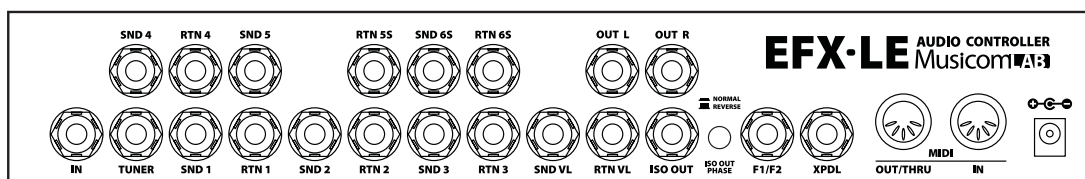
Line 2 - e indicates a preset number within the bank or song.

Line 2 - g to l indicate which of the 6 audio loops are currently active.

Line 2 - m and n indicate which of the two audio outputs are active.

Line 2 - o and p indicate which of the 2 function switches are currently active.

1.5 Rear Panel



IN Jack

This is the main input jack where your guitar plugs in.

SND 1-4, RTN 1-4 Jacks

These jacks provide mono-send mono-return effect loops. SND 1-4 send signals to effect pedals. RTN 1-4 receive signals from effect pedals. Connect the SND 1-4 jacks to the INPUT jack of each effect pedal, and connect the OUTPUT jack of each effect pedal to the RTN 1-4 jacks.

SND 5, RTN 5S Jacks

These jacks provide a mono-send stereo-return effect loop. RTN 5S jack is stereo capable using TRS connectors. If the last stage of the chain is the stereo-send effect loop or the output, the signal is output in stereo. If the last effect loop in the chain is the mono-send effect loop, only the signal received at the tip conductor of the RTN 5S jack is output.

SND 6S, RTN 6S Jacks

These jacks provide a stereo-send stereo-return effect loop. These jacks are stereo capable using TRS connectors. If the last stage of the chain is the stereo-send effect loop or the output, the signal is output in stereo. If the last effect loop in the chain is the mono-send effect loop, only the signal received at the tip conductor of the RTN 6S jack is output.

SND VL, RTN VL Jacks

These jacks are for connecting a volume pedal. You can also use these jacks as send/return for a preamp.

OUT L, OUT R Jacks

These are the output jacks. OUT-L and OUT-R can be turned on/off independently. If the last stage of the chain is the mono output, the OUT-L signal is split up in to the OUT-R.

TUNER Jack

This jack is for connecting an external tuner.

F1/F2 Jack

Latch or momentary function switch jack for amplifier channel switching or on/off controlling of reverb.

TRS plug's Tip : F1 TRS plug's Ring : F2 TRS plug's Sleeve : Common ground for F1/F2

XPD L Jack

An expression pedals can be connected to this jack using a 1/4" TRS cable. Also an external Tap-Tempo switch and LED to this jack using a 1/4" TRS cable. The TRS cable must be connected before supplying power to the EFX MK-V. Refer to the **5.1 XPD L** on the page 33 of the manual for cabling.

ISO OUT Jack and ISO PHASE Switch

There is an isolation transformer before the ISO OUT jack. The isolation transformer may help reduce hum that can occur when using two amps or 4CM. If the ISO OUT are used, ISO OUT can also be inverted the phase by pressing the ISO OUT PHASE switch. Refer to the **ISO-OUT SOURCE** on the page 29 of the manual.

MIDI IN, MIDI OUT/THRU Connector

MIDI IN connector receives MIDI signals from an external MIDI device. MIDI OUT/THRU connector is used to feed MIDI signals to external MIDI devices. When the operation mode of MIDI OUT/THRU has been set to 'THRU', MIDI signals received at MIDI IN pass through the EFX-LE without any changes.

DC12V Power Connector

This is the main power input for the EFX-LE. The EFX-LE requires a DC12V supply. The current draw is approximately 250mA at DC12V (Center Negative).

2. Basic Operation

2.1 Initial Power Up

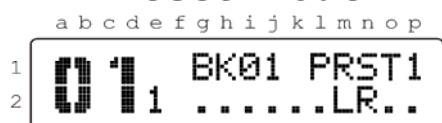


- Line 1 - e to j indicate the serial number of your unit.
- Line 1 - m to p indicate the firmware version of your unit.
- Line 2 - a to h indicate the power test results.
 - TEST OK** : Input Voltage is 11V~13V.
 - Too Low** : Input Voltage is under 11V.
 - Too High** : Input Voltage is over 13V.
- Line 2 - k to p indicate the operating mode (PRESET, SONG or SET01 to SET40).

The EFX-LE requires a **DC12V** power supply.

When you power up the EFX-LE, the LCD display will show the serial number, firmware, power test results and operating Mode. And then the first preset of **Bank 01**(or **Song 01**) is selected.

2.2 Preset Mode



- Line 1 and 2 - a to d indicate a bank number.
- Line 1 - e to p indicate a preset title.
- Line 2 - e indicates a preset number(1 to 5) within the bank.
- Line 2 - g to p indicate the on/off status of loops, outputs and function switches.

The EFX-LE has 360 presets and 1 global preset that you can choose from, and they're arranged in banks of four or five. When the EFX-LE powers up, it selects Bank 1 and Preset 1.

Press/hold **MUTE/BANK▼** or **BANK▲** switch to shift other banks, pressing one of the four or five switches (**1 – 4** or **5**) selects a preset in the new bank.

- ① Press/hold the **MUTE/BANK▼** or **BANK▲** switch to scroll through the 72 available banks.
- ② The LEDs above **1 - 5** switches will blink in blue.
- ③ The preset is selected via pressing any switches from **1** through **5**.
- ④ The LEDs above **1 - 5** switches will stop blinking and the LED above the switch will be turned on in blue.

For example: to select the second preset of bank 3, press the **MUTE/BANK▼** or **BANK▲** switch until the bank number **3** is shown on the display. And then press the **2** switch.

The **Global Preset** is a preset with all the capabilities of preset 1 through 5, but is the same for all banks. Pressing the switch of a preset that is already on selects the global preset and will cause the LED above the switch to be turned off. To enable/disable the Global Preset, refer to the **GLOBAL PRESET** on the page 30 of the manual.

2.3 IA (Instant Access) Mode

2.3.1 IA1 Mode (L1-L6)

This mode allows you to turn each of the audio loops on or off individually. In the Preset, Song or Set mode, pressing the **MODE** switch brings you to the IA1 mode. To left bottom of the each switch, there is a label reading **L1** through **L6**. The following is the assignment of each switch in the **IA1** Mode.

1	2	3	4	5/TAP	BANK▲
Loop 1	Loop 2	Loop 3	Loop 4	Loop 5	Loop 6

Pressing & holding the **MODE** switch for 1 second will store the edit and return to the Preset mode. For the other side, pressing the **MODE** switch will move to the **IA2** Mode. Pressing the **MUTE/▼** switch will return to the Preset mode without storing the edit.

2.3.2 IA2 Mode (OL-BM)

This mode allows you to control 2 function switches, outputs and buffers individually. To first right bottom of the each switch, there is a label what the switch does in the IA2 mode. The following is the assignment of each switch in the IA2 Mode.

1	2	3	4	5/TAP	BANK▲
Output Left	Output Right	Function Switch 1	Function Switch 2	Buffer 1 (Input)	Buffer 2 (Movable)

Pressing & holding the **MODE** switch for 1 second will store the edit and return to the Preset mode. For the other side, pressing the **MODE** switch will move to the **IA3** Mode. Pressing the **MUTE/▼** switch will return to the Preset mode without storing the edit.

2.3.3 IA3 Mode (C1-VL)

This Mode allows you to control the volume loop and 5 MIDI Control Change messages individually. To second right bottom of the each switch, there is a label what the switch does in the **IA3** mode. The following is the assignment of each switch in the **IA3** Mode.

1	2	3	4	5/TAP	BANK▲
C1 (MIDI CC)	C2 (MIDI CC)	C3 (MIDI CC)	C4 (MIDI CC)	C5 (MIDI CC)	Volume Loop

Pressing & holding the **MODE** switch for 1 second will store the edit and return to the Preset mode. For the other side, pressing the **MODE** switch will move to the **IA1** Mode. Pressing the **MUTE/▼** switch will return to the Preset mode without storing the edit.

2.3 Mute

In the **Preset** mode, pressing(& holding) **MUTE/▼** switch will mute the guitar signal. When muted, the MUTE LED turns on in purple. Pressing the **MUTE/▼** or any switches from **1** through **5** switch will cancel the MUTE function.

NOTE :

- The EFX-LE executes Bank Down or MUTE function, by Press & holding the **MUTE/▼** switch for 1 second in the Preset mode. Refer to the *Hold "BANK DOWN"* on the page 26.
- The mute function is not available in the **IA** mode.
- The mute position (**VOL LOOP**, **OUTPUT** or **NO ASSIGN**) to be linked with this switch can be selected in UTILITY menu. Refer to the *Block Diagram* on the page 4 and the *Mute Position* on the page 27 of the manual.

2.4 Activate/Deactivate TAP Switch

The **5/TAP** switch can have two functions based upon your needs. By default, this switch is set up to access the Preset 5. You can change this switch to tap tempo function. The TAP switch function can be activated/deactivated by pressing the **MODE** and **MUTE/▼** switches simultaneously.

TAP can be synchronized with MIDI Time Clock(MTC) or Function Switch 1(F1). The F1 supports for devices that only have an analog tap tempo input. Also you can select whether to send the MTC/F1 for 1 bar, 2 bars or continuously. When TAP switch function is selected, tapping the **5/TAP** switch will change the MTC or F1 rate to the tempo of your taps. At this time, the Global BPM will be changed to the tempo of your taps. When the EFX-LE powers up, the Global BPM is 120.

Refer to the *TAP SYNC WITH* and *TAP SYNC TIME* on the page 28 of the manual.

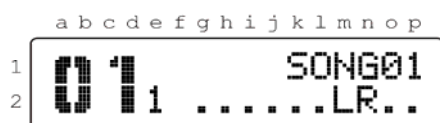
3. Song / Set Mode

The Song operating mode allows access to the EFX-LE's 99 songs. A Song is a group of 5 presets that are selected for use in a particular song. Each preset in a song can be chosen from any of the 360 presets. The Set operating mode allows up to 40 songs of the EFX-LE's 99 songs to be arranged in any order to create a set. The EFX-LE can support 40 different sets.

When You are in the Song and Set mode, the **MUTE/BANK▼** or **BANK▲** Switches move from song to song instead of moving from bank to bank.

Refer to the *OPERATIONG MODE* on the page 26 of the manual.

3.1 Song Mode



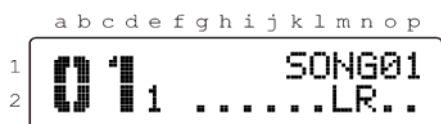
- Line 1 and 2 - a to d indicate a song number.
- Line 1 - e to p indicate a song title.
- Line 2 - e indicates a preset number(1 to 5) within the song.
- Line 2 - g to p indicate the on/off status of loops, outputs and function switches.

- ① Press/hold the **MUTE/BANK▼** or **BANK▲** switch to scroll through the 99 available songs.
- ② The LEDs above **1 - 5** switches will blink in blue and the LCD display will show the song title.
- ③ The preset is selected via pressing any switches from **1** through **5**.
- ④ The LEDs above **1 - 5** switches will stop blinking, the LED above the switch will be turned on in blue.
The LCD display will show the preset title for 2 seconds and then show the song title.

For example: to select the second preset of song 3, press the **MUTE/BANK▼** or **BANK▲** switch until the song number **3** is shown on the display. And then press the **2** switch.

The **Global Preset** is a preset with all the capabilities of preset 1 through 5, but is the same for all songs. Pressing the switch of a preset that is already on selects the global preset and will cause the LED above the switch to be turned off. To enable/disable the Global Preset, refer to the **GLOBAL PRESET** on the page 30 of the manual.

3.2 Set Mode



- Line 1 and 2 - a to d indicate a song number.
- Line 1 - e to p indicate a song title.
- Line 2 - e indicates a preset number(1 to 5) within the song.
- Line 2 - g to p indicate the on/off status of loops, outputs and function switches.

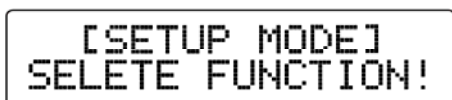
- ① Press/hold the **MUTE/BANK▼** or **BANK▲** switch to scroll through the 40 available songs.
- ② The LEDs above **1 - 5** switches will blink in blue and the LCD display will show the song title.
- ③ The preset is selected via pressing any switches from **1** through **5**.
- ④ The LEDs above **1 - 5** switches will stop blinking, the LED above the switch will be turned on in blue.
The LCD display will show the preset title for 2 seconds and then show the song title.

For example: to select the second preset of song 3, press the **MUTE/BANK▼** or **BANK▲** switch until the song number **3** is shown on the display. And then press the **2** switch.

The **Global Preset** is a preset with all the capabilities of preset 1 through 5, but is the same for all songs. Pressing the switch of a preset that is already on selects the global preset and will cause the LED above the switch to be turned off. To enable/disable the Global Preset, refer to the **GLOBAL PRESET** on the page 30 of the manual.

4. SETUP Mode

To enter the SETUP Mode, press and hold the **MODE** switch for 2 seconds. The display will show the following picture.



- Press the **ORDER (1)** switch to enter the Order menu.
- Press the **MIDI (2)** switch to enter the MIDI menu.
- Press the **COPY (3)** switch to enter the Copy menu.
- Press the **TITLES (4)** switch to enter the Titles menu.
- Press the **SONG/SET (5/TAP)** switch to enter the SongSet menu.
- Press the **UTILITY (BANK▲)** switch to enter the Utility menu.
- Press the **MUTE/▼** switch to exit the SETUP mode.

4.1 ORDER Menu

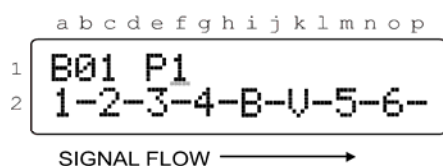
The ORDER menu allows changing loop structure you can make the following settings.

- Change the connection order of effect loops
- Create a parallel connection
- Specify Spill Over

The EFX-LE has two internal mixers. By using these internal mixers, you can connect loops in parallel and use the Spill Over function.

NOTE :

- The same mixers are used for parallel connections and for Spill Over functions.
- The **Movable Buffer** and **Volume Loop** *CAN NOT* be used for **Parallel connection** or **Spill Over function**.
- For the mono/stereo returns of effect loops 5 and 6, Refer to the **LP5/6 RETURN** and **LP6 SEND6.R SPLIT** on the page 29 and 30 of the manual.
- The Spill Over function allows the return signal of a currently selected preset to 'Spill' into the next selected preset.



- Line 1 – a to f indicate the bank number and preset that you want to edit.
- Line 2 – a to p indicate the loop structure of the preset.

1_6	Loop Number
U	Volume Loop
B	Movable Buffer (BM)
I_E	A loop for which Spill Over is specified
-	Mono connection
=	Stereo connection

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at tthe Line 1 - f : Decreasing/increasing a preset number. When the cursor is at the other positions : Moving the loops number.</i>
5/TAP	<i>When the cursor is at the Line 1 - f : Decreasing a bank number. When the cursor is at the other positions : Activating/deactivating the Spill Over function.</i>
BANK▲	<i>When the cursor is at the Line 1 - f : Increasing a bank number. When the cursor is at the other positions : Activating/deactivating the Mixer function.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the SETUP menu.

4.1.1 Changing the Effect Loop Connection Order

Example : Change the order of effect loops 3 and 4.

Before the change

```
B01 P1
1-2-3-4-B-U-5-6-
```

- ① Use the **1** or **2** switch to move the cursor to loop 3.

```
B01 P1
1-2-3-4-B-U-5-6-
```

- ② Press **4** switch to move the loop 3.

```
B01 P1
1-2-4-3-B-U-5-6-
```

- ③ Press the **MODE** switch to store this edit.

You can change other connection orders in the same way.

4.1.2 Making a Parallel Connection

Example : Connect effect loops 5 and 6 in parallel.

Before the change

```
B01 P1
1-2-3-4-B-U-5-6-
```

- ① Use the **1** or **2** switch to move the cursor to loop 6.

```
B01 P1
1-2-3-4-B-U-5-6^
```

- ② Press **BANK▲** switch to specify the parallel connection.

```
B01 P1
1-2-3-4-B-U-5-6^
```

- ③ Use the **1** switch to move the cursor to loop 5.

```
B01 P1
1-2-3-4-B-U-5^6^
```

- ④ Press **4** switch to move the loop 3 into the parallel connection.

```
B01 P1
1-2-3-4-B-U-5^6^
```

- ⑤ Press the **MODE** switch to store this edit.

You can change other connections in the same way.

4.1.3 Specify Spill Over

Example : You can specify Spill Over for effect loop 6.

Before the change

```
B01 P1
1-2-3-4-B-U-5-6-
```

- ① Use the **1** or **2** switch to move the cursor to loop 6.

```
B01 P1
1-2-3-4-B-U-5-6^
```

- ② Press the **5/TAP** switch to specify the Spill Over.

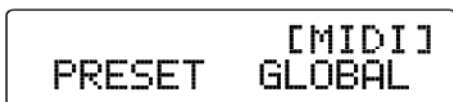
```
B01 P1
1-2-3-4-B-U-5-6^
```

- ③ Press the **MODE** switch to store this edit.

You can change other Spill Over in the same way.

4.2 MIDI Menu

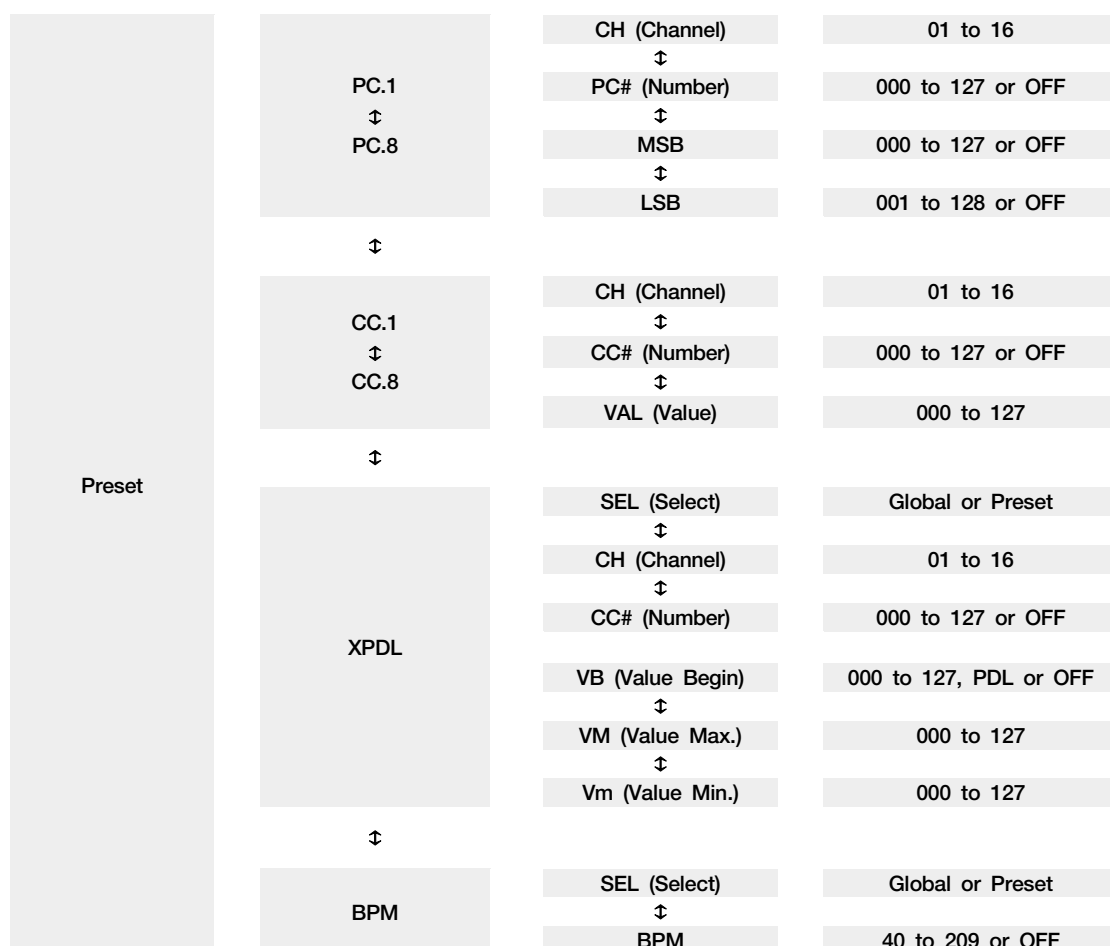
The MIDI menu allows accessing to the MIDI features of the EFX-LE.



- Press the **1** switch to edit the **PRESET** MIDI setting.
- Press the **2** switch to edit the **GLOBAL** MIDI setting.
- Press the **MUTE/▼** switch to exit the **MIDI** menu.

4.2.1 PRESET MIDI

The **PRESET** MIDI menu allows assigning 8 MIDI Program Change and 8 MIDI Control Change and determining how the expression port will function when used function in the preset.



MIDI Program Change

a b c d e f g h i j k l m n o p
 1 B01 P1 PC.1
 2 CH:01 PC#:001 M»

- Line 1 - b and c indicate the bank number (01 to 72) that the preset is located in.
- Line 1 - f indicates the preset number(1 to 5 or 0 for the Global Preset) that is going to be created/modified.
- Line 1 - m to p indicate the MIDI Program Change (1 to 8).
- Line 2 - d and e indicate the MIDI Program Change Channel (01-16).
- Line 2 - k to m indicate the MIDI Program Change Number (001-128 or OFF).

a b c d e f g h i j k l m n o p
 1 B01 P1 PC.1
 2 «MSB:OFF LSB:OFF

- Line 2 - f to h indicate the MIDI Program Change MSB. (000-127 or OFF)
- Line 2 - n to p indicate the MIDI Program Change LSB. (000-127 or OFF)

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a bank number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM by 5.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value by 10.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

MIDI Control Change

a b c d e f g h i j k l m n o p
 1 B01 P1 CC.1
 2 CH:01 CC#:00F U»

- Line 1 - b and c indicate the bank number (01 to 72) that the preset is located in.
- Line 1 - f indicates the preset number(1 to 5 or 0 for the Global Preset) that is going to be created/modified.
- Line 1 - m to p indicate the MIDI Control Change (1 to 8).
- Line 2 - d and e indicate the MIDI Control Change Channel (01-16).
- Line 2 - k to m indicate the MIDI Control Change Number (001-128 or OFF).

a b c d e f g h i j k l m n o p
 1 B01 P1 CC.1
 2 «VAL:000

- Line 2 - f to h indicate the MIDI Control Change Value. (000-127)

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a bank number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM by 5.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value by 10.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

XPDL in PRESET.MIDI

a b c d e f g h i j k l m n o p

```

1 B01 P1 XPDL
2 SEL:GLB CH:01 C%

```

- Line 1 - b and c indicate the bank number (01 to 72) that the preset is located in.
- Line 1 - f indicates the preset number(1 to 5 or 0 for the Global Preset) that is going to be created/modified.
- Line 1 - m to p indicate that you are in the XPDL.
- Line 2 - e to g indicate whether the XPDL is configured as Preset (PST) or Global (GLB).
- Line 2 - l and m indicate the MIDI Control Change Channel (01-16).

a b c d e f g h i j k l m n o p

```

1 B01 P1 XPDL
2 «CC#:0FE UB:OFF»

```

- Line 2 - f to h indicate the MIDI Control Change Number (001-128 or OFF).
- Line 2 - m to o indicate the initial XPDL value that the expression pedal port will transmit when the preset is selected.

a b c d e f g h i j k l m n o p

```

1 B01 P1 XPDL
2 «UM:127 Um:000

```

- Line 2 - e to g indicate the highest XPDL value that the expression pedal port can transmit when its pedal is moved.
- Line 2 - l to m indicate the lowest XPDL value that the expression pedal port can transmit when its pedal is moved.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a bank number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM by 5.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value by 10.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

BPM in PRESET.MIDI

a b c d e f g h i j k l m n o p

```

1 B01 P1 BPM
2 SEL:GLB J:120

```

- Line 1 - b and c indicate the bank number (01 to 72) that the preset is located in.
- Line 1 - f indicates the preset number(1 to 5 or 0 for the Global Preset) that is going to be created/modified.
- Line 1 - n to p indicate that you are in the BPM.
- Line 2 - e to g indicate whether the XPDL is configured as Preset (PST) or Global (GLB).
- Line 2 - k to m indicate the BPM of current preset.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a bank number.</i> <i>When the cursor is at the Line 1 - p : Scrolling PC.1 to BPM by 5.</i> <i>When the cursor is at the other positions : Decreasing/increasing a value by 10.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

4.2.2 GLOBAL.MIDI

The **GLOBAL** MIDI Menu allows defining global parameters such as ; the MIDI channel that the EFX-LE will respond to incoming MIDI messages on, the MIDI Control Change messages that are assigned the IA Switches, expression pedal port(XPDL) MIDI Control Change Message...

CC.L1 ⇕ CC.MT	CH (Channel)	1 to 16
	⇕	
	CC# (Number)	000 to 127 or OFF
	⇕	
XPDL	VN (Value On)	000 to 127 or OFF
	⇕	
	VF (Value Off)	000 to 127 or OFF
	⇕	
IN/OUT	CH (Channel)	1 to 16
	⇕	
	CC# (Number)	000 to 127 or OFF
	⇕	
	VM (Value Max)	000 to 127
	⇕	
	Vm (Value Min)	000 to 127
	⇕	
	RCH (RECEIVE CHANNEL)	01to 16 or --
	⇕	
	MIDI	OUT or THRU

MIDI Control Change

	a b c d e f g h i j k l m n o p
1	CC.L1
2	CH:01 CC#:00F U»

- Line 1 - l to p indicate the you are in the CC.L1 to CC.MT.
- Line 2 - d and e indicate the MIDI Control Change Channel (01-16).
- Line 2 - k to m indicate the MIDI Control Change Number (001-128 or OFF).

	a b c d e f g h i j k l m n o p
1	CC.L1
2	«VN:127 VF:000

- Line 2 - e to g indicate the MIDI Control Change Value when a instant access switch will be 'ON'.
- Line 2 - l to n indicate the MIDI Control Change Value when a instant access switch will be 'OFF'.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT . When the cursor is at the other positions : Decreasing/increasing a value.
5/TAP & BANK▲	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT by 5. When the cursor is at the other positions : Decreasing/increasing a value by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

Note :

- If CC #(numbers) of **CC.L1** to **CC.L6** are not **OFF**, the assigned audio loops are always bypassed.
- The CC.MT is the MIDI CC message is sent when the mute function is On/Off.

XPDL in GLOBAL.MIDI

a b c d e f g h i j k l m n o p

```

1      XPDL
2 CH:01 CC#:00F U»

```

- Line 1 - m to p indicate the you are in the Global XPDL.
- Line 2 - d and e indicate the MIDI Control Change Channel (01-16).
- Line 2 - k to m indicate the MIDI Control Change Number (001-128 or OFF).

a b c d e f g h i j k l m n o p

```

1      XPDL
2 «UM:127 Um:000

```

- Line 2 - e to g indicate the highest XPDL value that the expression pedal port can transmit when its pedal is moved.
- Line 2 - l to m indicate the lowest XPDL value that the expression pedal port can transmit when its pedal is moved.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT . When the cursor is at the other positions : Decreasing/increasing a value.
5/TAP & BANK▲	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT by 5. When the cursor is at the other positions : Decreasing/increasing a value by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

IN/OUT (RECEIVE CHANNEL & MIDI OUT/THRU)

a b c d e f g h i j k l m n o p

```

1      IN/OUT
2 RCH:01 MIDI:OUT

```

- Line 1 - k to p indicate the you are in the IN/OUT.
- Line 2 - e and f indicate the MIDI Channel that the EFX-LE will receive.
- Line 2 - m to p indicate the MIDI OUT or MIDI THRU.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT . When the cursor is at the other positions : Decreasing/increasing a value.
5/TAP & BANK▲	When the cursor is at the Line 1 - p : Scrolling CC.L1 to IN/OUT by 5. When the cursor is at the other positions : Decreasing/increasing a value by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the MIDI menu.

4.3 COPY Menu

The Copy Menu allows copying presets, banks, songs and sets from one location to another.

```
          [COPY]
PRST BNK SNG SET
```

- Press the **1** switch to Copy **PRESET**.
- Press the **2** switch to Copy **BANK**.
- Press the **3** switch to Copy **SONG**.
- Press the **4** switch to Copy **SET**.
- Press the **MUTE/▼** switch to exit the **COPY** menu.

4.3.1 PRESET COPY

The sub-menu allows a single preset to be copied from one preset location to another.

```
  a b c d e f g h i j k l m n o p
1          [PRST]
2 B01 P1 TO B01 P1
```

- Line 2 – a to f indicate the preset that is going to be copied.
- Line 2 – k to p indicate the destination preset location to copy to.

1 & 2	Press to move cursor.
3 & 4	Decreasing/increasing a preset.
5/TAP & BANK▲	Decreasing/increasing a bank.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the COPY menu.

4.3.2 BANK COPY

The sub-menu allows an entire bank of five presets to be copied from one bank location to another.

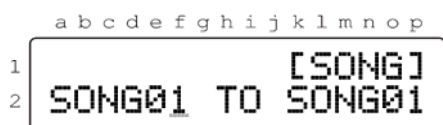
```
  a b c d e f g h i j k l m n o p
1          [BANK]
2 BANK01 TO BANK01
```

- Line 2 – a to f indicate the bank that is going to be copied.
- Line 2 – k to p indicate the destination bank location to copy to.

1 & 2	Press to move cursor.
3 & 4	Decreasing/increasing a bank.
5/TAP & BANK▲	Decreasing/increasing a bank by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the COPY menu.

4.3.3 SONG COPY

The sub-menu allows a song to be copied from one song location to another. This sub-menu copies the presets and locations associated with the song to be copied.

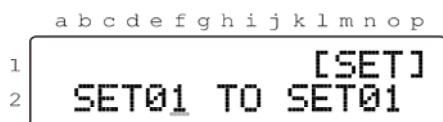


- Line 2 – a to f indicate the song that is going to be copied.
- Line 2 – k to p indicate the destination song location to copy to.

1 & 2	Press to move cursor.
3 & 4	Decreasing/increasing a song.
5/TAP & BANK▲	Decreasing/increasing a song by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the COPY menu.

4.3.4 SET COPY

The sub-menu allows an entire set to be copied from one set location to another. This sub-menu copies all of the songs and their order of an entire set (40 songs).

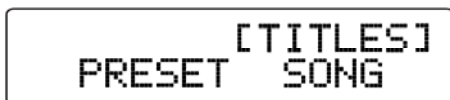


- Line 2 – b to f indicate the set that is going to be copied.
- Line 2 – k to o indicate the destination set location to copy to.

1 & 2	Press to move cursor.
3 & 4	Decreasing/increasing a set.
5/TAP & BANK▲	Decreasing/increasing a set by 10.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the COPY menu.

4.4 TITLES Menu

The Titles Menu allows custom titles to be entered for each presets and songs. Each custom preset and song title can be up to 12 characters in length.



- Press the **1** switch to edit **PRESET** titles.
- Press the **2** switch to edit **SONG** titles.
- Press the **MUTE/▼** switch to exit the **TITLES** menu.

4.4.1 PRESET TITLES

The sub-menu allows a custom preset title, up to 12 characters in length, to be created/modified for each of the all presets.

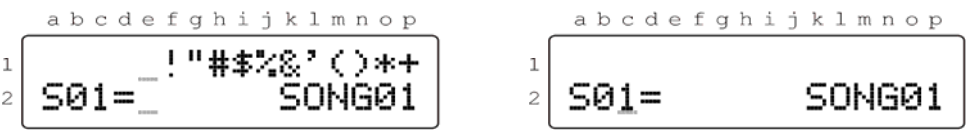


- Line 1 – a to c and Line 2 - a to c indicate the preset that is going to be created/modified.
- Line 1 - e to p indicate the available characters.
- Line 2 - e to p indicate the preset title.

1 & 2	Press to move cursor.
3 & 4	<p><i>When the cursor is at the Line 2 - c : Decreasing/increasing a preset number.</i></p> <p><i>When the cursor is at the other positions : Moving through the available characters.</i></p>
5/TAP & BANK▲	<p><i>When the cursor is at the Line 2 - c : Decreasing/increasing a bank number.</i></p> <p><i>When the cursor is at the other positions : Moving through the available other characters.</i></p> <pre> ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } </pre>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the TITLES menu.

4.4.2 SONG TITLES

The sub-menu allows a custom song title, up to 12 characters in length, to be created/modified for each of the all 99 songs.

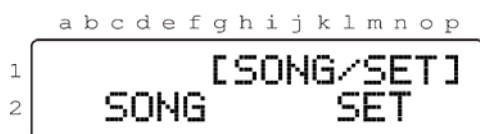


- Line 2 - a to c indicate the song that is going to be created/modified.
- Line 1 - e to p indicate the available characters.
- Line 2 - e to p indicate the song title.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 2 - c : Decreasing/increasing a song number.</i> <i>When the cursor is at the other positions : Moving through the available characters.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 2 - c : Decreasing/increasing a song number by 5.</i> <i>When the cursor is at the other positions : Moving through the available other characters.</i> ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { }
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the TITLES menu.

4.5 SONG/SET Menu

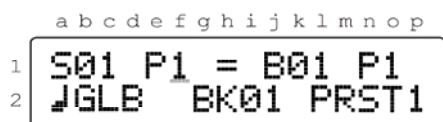
The Song/Set Menu allows for the EFX-LE's regular presets to be organized in a custom bank to create a song (or custom bank of presets). Multiple songs can then be arranged in a bank in order to create a set.



- Press the **1** switch to create/edit **SONG**.
- Press the **2** switch to create/edit **SET**.
- Press the **MUTE/▼** switch to exit the **SONG/SET** menu.

4.5.1 SONG EDIT

The sub-menu allows you to create a song (custom bank of presets) by assigning 5 presets. Each song contains 5 presets. The EFX-LE can support 99 songs.



- Line 1 - b and c indicate the song number (01 to 99).
- Line 1 - f indicates the preset within the song that is going to be created/edited.
- Line 1 - k and l indicate the bank number (01 to 72) that the original preset is located in.
- Line 1 - o indicates the preset number in the above bank to be used in the song.
- Line 2 - b to d indicates the BPM of the song preset. (40-209, PST or GLB)
 - PST : The preset of this song is recalled from the Preset BPM.
 - GLB : The preset of this song is recalled from the Global BPM.
- Line 2 - e to p indicate the preset title.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 1 - o : Decreasing/increasing a preset number.</i> <i>When the cursor is at the Line 2 - d : Decreasing/increasing a BPM</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - f : Decreasing/increasing a song number.</i> <i>When the cursor is at the Line 1 - o : Decreasing/increasing a bank number.</i> <i>When the cursor is at the Line 2 - d : Decreasing/increasing a BPM by 10</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the Song/Set menu.

4.5.2 SET EDIT

The sub-menu allows songs to be arranged in a bank order to create set. The EFX-LE can support 40 sets, they can be accessed via SET01 - SET40 Operating Modes.

```

a b c d e f g h i j k l m n o p
1 SET01 S01 = S01
2          SONG01

```

- Line 1 - d and e indicate the set number (01 to 40) that is going to be created/edited.
- Line 1 - h and i indicate the song number (01 to 40) within the set.
- Line 1 - n and o indicate the original song number (01 to 99) to be used in the set.
- Line 2 - i to x indicate the song title.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - e : Decreasing/increasing a set number.</i> <i>When the cursor is at the Line 1 - i : Decreasing/increasing a song number.</i> <i>When the cursor is at the Line 1 - o : Decreasing/increasing a song number</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - e : Decreasing/increasing a set number by 10.</i> <i>When the cursor is at the Line 1 - i : Decreasing/increasing a song number by 10.</i> <i>When the cursor is at the Line 1 - o : Decreasing/increasing a song number by 10</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Returning to the Song/Set menu.

4.6 UTILITY Menu

The UTILITY Menu allows configuring the EFX-LE's general functionality by selecting its operating mode, Click-less, mute position, maximum instant access page and defining how the 2 function switches will function when used. Its sub-menu's also provide access to the data dump/load and factory default setting.

OPERATING MODE	PRESET, SONG or SET01 to SET40
⇕	
CLICK-LESS	OFF, BI CHANGE or ALWAYS ON
⇕	
HOLD "BANK DOWN"	MUTE or BANK DOWN
⇕	
MUTE POSITION	VL.SEND, OUT.L/R or NO ASSIGN
⇕	
MAX BANK NUMBER	1 to 72
⇕	
DUPLICATED PC	SEND or NOT SEND
⇕	
TEMPO SYNC WITH	OFF, MTC, F1 or MTC+F1
⇕	
TEMPO SYNC TIME	1 BAR, 2 BARS or CONTINUE
⇕	
XPDL RATE	1ms to 50ms
⇕	
FUNC. SWITCH1 (F1)	LATCHED or MOMENTARY
⇕	
FUNC. SWITCH2 (F2)	LATCHED or MOMENTARY
⇕	
ISO-OUT SOURCE	VL.SEND, OUT.L or OUT.R
⇕	
LP5 RETURN	MONO or STEREO
⇕	
LP6 RETURN	MONO or STEREO
⇕	
LP6 SEND.R SPLIT	OFF or ON
⇕	
GLOBAL PRESET	ENABLE or DISABLE
⇕	
MUTE -> LOOP ON	NO ASSIGN or LOOP1 to LOOP6
⇕	
BPM DISPLAY	OFF or ON
⇕	
MIDI SYSEX DATA	
⇕	
FACTORY RESET	OFF to UTILITY

4.6.1 OPERATING MODE

The sub-menu allows determining the operating mode of the EFX-LE.

1 OPERATING MODE
2 = PRESET

- Line 2 - h to p indicate the operating mode (PRESET, SONG or SET01 to SET40).

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - n : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a Operating Mode.
5/TAP & BANK▲	When the cursor is at the Line 1 - n : Moving a Utility menu by 5. When the cursor is at the Line 2 - p : Scrolling a Operating Mode by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Exiting to the Utility menu.

4.6.2 CLICK-LESS

The CLICK-LESS control is excellent for reducing this a popping noise. The sub-menu allows determining the CLICK-LESS function.

1 CLICK-LESS
2 =BI CHANGE

- Line 2 - h to p indicate the CLICK-LESS status.
OFF - You don't use the CLICK-LESS function.
BI CHANGE - The CLICK-LESS function is performed when input buffer status is changed.
ALWAYS ON - The CLICK-LESS function is performed when a preset or IA status is changed.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - j : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a Click-Less value.
5/TAP & BANK▲	When the cursor is at the Line 1 - j : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Exiting to the Utility menu.

4.6.3 HOLD "BANK DOWN"

This sub-menu allows determining whether the EFX-LE executes BANK DOWN or MUTE function, by pressing & holding the MUTE/▼ switch for 1 second in the Preset mode.

1 HOLD "BANK DOWN"
2 =BANK DOWN

- Line 2 - h to p indicate the **MUTE** or **BANK DOWN**.
MUTE : Pressing & holding the MUTE/▼ switch for 1 second will execute MUTE function. Pressing the MUTE/▼ switch will execute BANK DOWN function.
BANK DOWN : Pressing & holding the MUTE/▼ switch for 1 second will execute BANK DOWN function. Pressing the MUTE/▼ switch will execute MUTE function.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - p : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between MUTE and BANK DOWN .
5/TAP & BANK▲	When the cursor is at the Line 1 - p : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	Exiting to the Utility menu.

4.6.4 MUTE POSITION

This sub-menu allows for the selection of the mute circuit to be activated by turning on the MUTE switch. Refer to the **BLOCK DIAGRAM** on the page 4.

a b c d e f g h i j k l m n o p

```

1 MUTE POSITION
2 = VL.SEND

```

- Line 2 - h to p indicate the MUTE position.
VL.SEND – SEND of Volume Loop
OUT.L/R – OUTPUT Left/Right
NO ASSIGN – Audio signal is not mute

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - m : Moving a Utility menu. When the cursor is at the Line 2 - p : Selecting VL.SEND , OUT.L/R or NO ASSIGN .
5/TAP & BANK▲	When the cursor is at the Line 1 - m : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.5 MAX BANK NUMBER

This menu blocks to access to bank number in the preset mode.

a b c d e f g h i j k l m n o p

```

1 MAX BANK NUMBER
2 = 72

```

- Line 2 - h to p indicate the maximum bank number (**01** to **60**).

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - n : Moving a Utility menu. When the cursor is at the Line 2 - m : Decreasing/increasing a maximum bank.
5/TAP & BANK▲	When the cursor is at the Line 1 - n : Moving a Utility menu by 5. When the cursor is at the Line 2 - m : Decreasing/increasing a maximum bank by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.6 DUPLICATED PC

The sub-menu allows determining the transmission of MIDI Program Change message when current MIDI Program Change number equates with previous one.

a b c d e f g h i j k l m n o p

```

1 DUPLICATED PC
2 = SEND

```

- Line 2 - h to p indicate the **SEND** or **NOT SEND**.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - m : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between SEND and NOT SEND .
5/TAP & BANK▲	When the cursor is at the Line 1 - m : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.7 TEMPO SYNC WITH

This sub-menu allows determining where to send the TAP-TEMPO signal.

a b c d e f g h i j k l m n o p
 1 TEMPO SYNC WITH
 2 = MTC

- Line 2 - h to p indicate the TEMPO SYNC WITH value.
MTC : MIDI TIME CLOCK **F1** : FUNCTION SWITCH 1

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - o : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a TEMPO SYNC WITH value.
5/TAP & BANK▲	When the cursor is at the Line 1 - o : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.8 TEMPO SYNC TIME

This sub-menu allows determining how long the TAP-TEMPO signal outputs.

a b c d e f g h i j k l m n o p
 1 TEMPO SYNC TIME
 2 = 1 BAR

- Line 2 - h to p indicate the TEMPO SYNC WITH value.
(OFF, 1 BAR, 2 BARS or CONTINUE)
 The TAP signal is output to the menu selected in TAP SYNC WITH during the time selected in TAP SYNC TIME.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - o : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a TEMPO SYNC TIME value.
5/TAP & BANK▲	When the cursor is at the Line 1 - o : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.9 XPDL RATE

The XPDL Rate parameter provides a selectable rate at which the EFX-LE will sample the pedal position and send out MIDI Control Change messages. The XPDL Rate parameter is adjustable from 1 to 50ms. The lower the value selected, the faster the transmission. However, the rate may need to be slowed down for devices where an error may occur from receiving MIDI messages faster than a rate that the device can process.

a b c d e f g h i j k l m n o p
 1 XPDL RATE
 2 = 10ms

- Line 2 - h to p indicate the XPDL RATE value (1-50 ms).

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - i : Moving a Utility menu. When the cursor is at the Line 2 - p : Decreasing/increasing a value.
5/TAP & BANK▲	When the cursor is at the Line 1 - i : Moving a Utility menu by 5. When the cursor is at the Line 2 - p : Decreasing/increasing a value by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.10 FUNC. SWITCH 1/2

The FS1 and F2 will act as footswitches like those used for amp channel switching. The EFX-LE supports both standard switch types, latched and momentary. The sub-menu allows the selection of the function switches type.

```

a b c d e f g h i j k l m n o p
1 FUNC. SWITCH1
2 = LATCHED

```

- Line 1 – a to m indicate the function switch 1 or 2.
- Line 2 – h to p indicate the function switch type. (**LATCHED** or **MOMENTARY**).

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - m : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between LATCHED and MOMENTARY .
5/TAP & BANK▲	When the cursor is at the Line 1 - m : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.11 ISO-OUT SOURCE

This sub-menu allows determining which signal is split to the ISO-OUT.

```

a b c d e f g h i j k l m n o p
1 ISO-OUT SOURCE
2 = VL.SEND

```

- Line 2 - h to p indicate which signal is split to the **ISO-OUT**.
VL.SEND : VOLUE LOOP SEND
OUT.L : OUTPUT-LEFT
OUT.R : OUTPUT-RIGHT

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - n : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a ISO-OUT SOURCE value.
5/TAP & BANK▲	When the cursor is at the Line 1 - n : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.12 LP 5/6 RETURN

This sub-menu allows determining whether effect loop 5 and 6 are mono-return or stereo-return.

```

a b c d e f g h i j k l m n o p
1 LP5 RETURN
2 = MONO

```

- Line 1 – a to j indicate the return of loop 5 or 6.
- Line 2 – h to p indicate the **MONO**-return or **STEREO**-return.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - j : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between MONO and STEREO .
5/TAP & BANK▲	When the cursor is at the Line 1 - j : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.13 LP6 SEND.R SPLIT

This sub-menu allows determining whether the SND6-Left signal is split up in to the SND6-Right.

a b c d e f g h i j k l m n o p
1 LP6 SEND.R SPLIT
2 = OFF

• Line 2 - h to p indicate the **OFF** or **ON**.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - p : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between OFF and ON .
5/TAP & BANK▲	When the cursor is at the Line 1 - p : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

Note

When you use a Stereo IN/OUT effect pedal in the Loop 6, this menu must be **ON**.

For the other side, when you use a Mono IN/Stereo OUT or Mono IN/OUT effect pedal in the Loop 6, this menu must be **OFF**.

4.6.14 GLOBAL PRESET

This sub-menu allows determining whether you to use the Global Preset or not.

a b c d e f g h i j k l m n o p
1 GLOBAL PRESET
2 = ENABLE

• Line 2 - h to p indicate the **ENABLE** or **DISABLE**.

1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - m : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between ENABLE or DISABLE .
5/TAP & BANK▲	When the cursor is at the Line 1 - m : Moving a Utility menu by 5.
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.15 MUTE -> LOOP ON

This sub-menu allows you to turn on a specific loop when activating the mute function.

This function is useful when using the Eventide H9 tuning function in the loop.

a b c d e f g h i j k l m n o p
1 MUTE → LOOP ON
2 =NO ASSIGN

• Line 2 - h to p indicate the **NO ASSIGN** or **LOOP1** to **LOOP6**.

1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - n : Moving a Utility menu. When the cursor is at the Line 2 - p : Selecting NO ASSIGN or LOOP1 to LOOP6.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - k : Moving a Utility menu by 5.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

4.6.16 BPM DISPLAY

This sub-menu allows determining whether BMP is displayed on the LCD display in Preset or IA mode.



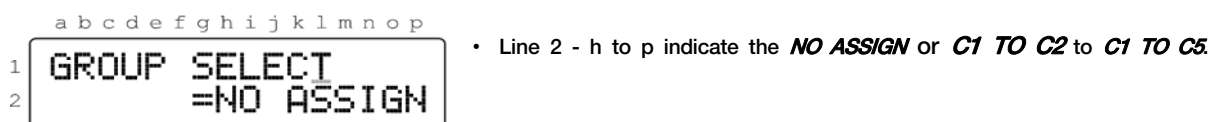
1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - k : Moving a Utility menu. When the cursor is at the Line 2 - p : Switching between OFF or ON.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - k : Moving a Utility menu by 5.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

Note

When this menu is **ON** or the **5/TAP** switch is activated as tap-tempo, the LCD display will show BPM.

4.6.17 GROUP SELECT

This sub-menu allows you define a group of IA Switches where pressing one IA Switch of the group turns that IA switch on and turns all other IA switches in the group off. Only **CC.C1** through **CC.C5** switches can be set as a group. This feature is useful when you control the looper function of a device that can receive MIDI, or when you can scroll through a bank or preset.



1 & 2	Press to move cursor.
3 & 4	<i>When the cursor is at the Line 1 - k : Moving a Utility menu. When the cursor is at the Line 2 - p : Selecting NO ASSIGN or C1 TO C2 to C1 TO C5.</i>
5/TAP & BANK▲	<i>When the cursor is at the Line 1 - k : Moving a Utility menu by 5.</i>
STORE (MODE)	Storing any changes made while in this menu.
EXIT (MUTE/▼)	exiting to the Utility menu.

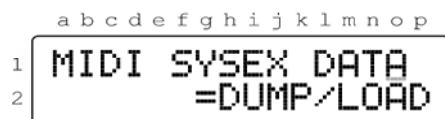
Note

When the corresponding IA switches are grouped, the ON/OFF combination of these switches is not stored into internal memory and is used only for MIDI transmission through IA3 page.

The switches specified in groups only transfer MIDI CC On Value, The MIDI CC Off Value is not sent.

4.6.17 MIDI SYSEX DATA

This sub-menu allows the EFX-LE user data to be dumped (transmitted) to a computer or another EFX-LE, via this unit's MIDI OUT/THRU jack. User data will be transmitted as a MIDI sysex (system exclusive) message. Also this sub-menu allows the EFX-LE user data to be loaded (received) from a computer or another EFX-LE, via this unit's MIDI IN jack. User data will be received as a MIDI sysex (system exclusive) message.



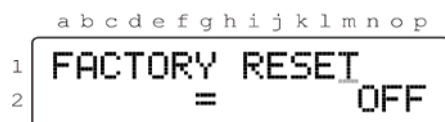
3 & 4	When the cursor is at the Line 1 - o : Moving a Utility menu.
5/TAP & BANK▲	When the cursor is at the Line 1 - o : Moving a Utility menu by 5.
STORE (MODE)	When the DUMP is selected : Starting dumping.
EXIT (MUTE/▼)	exiting to the Utility menu.

Note

When connecting the EFX-LE to a PC, the **Roland UM-ONE** and the **M-Audio USB UNO 1x1** are recommended. These MIDI interfaces have been tested for compatibility with the EFX-LE. The SYX file size should be **70,656 bytes**.

4.6.18 FACTORY RESET

This sub-menu allows erasing selected data area in the internal EEPROM memory.



- Line 2 - h to p indicate the data area in which Factort Reset is executed and erased.
- **ALL DATA** -> All memory
- **PRESET** -> Preset Combination, Order, Preset Title and Preset MIDI
- **SONG** -> Song and Song Title
- **SET** -> Set
- **GLB.MIDI** -> Global MIDI
- **UTILITY** -> Utility

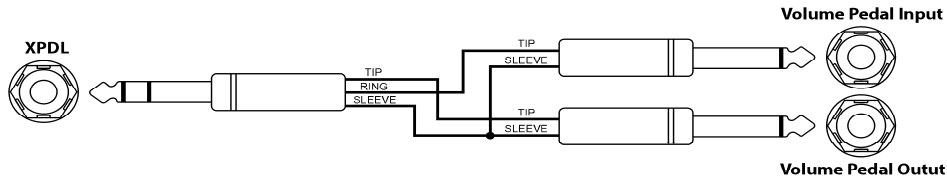
1 & 2	Press to move cursor.
3 & 4	When the cursor is at the Line 1 - m : Moving a Utility menu. When the cursor is at the Line 2 - p : Scrolling a Factory Reset Area.
5/TAP & BANK▲	When the cursor is at the Line 1 - m : Moving a Utility menu by 5.
STORE (MODE)	Starting the factory default setting.
EXIT (MUTE/▼)	exiting to the Utility menu.

5. Cables

5.1 XPDL

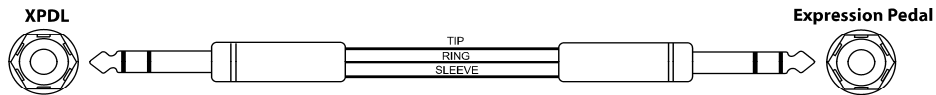
XPDL & Volume Pedal

The cable required is a stereo (TRS) to two mono 1/4" phone plugs. Connect the tip(stereo plug) to the pedal output, ring to the pedal input and sleeve to ground on all 3 plugs.

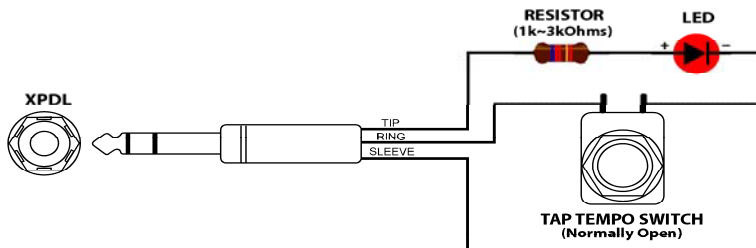


XPDL & Expression Pedal

The cable required is a stereo (TRS) to a stereo (TRS) 1/4" phone plugs.



XPDL & External Tap-Tempo Switch and LED

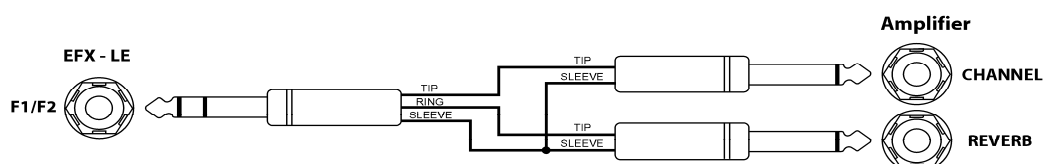


Note

The TRS cable must be connected before supplying power to the EFX-LE.

5.2 Functions Switches

The cable required is a stereo (TRS) to two mono 1/4" phone plugs. Connect the tip(stereo plug) to the pedal input, ring to the pedal output and sleeve to ground on all 3 plugs.



6. MIDI IN Specification

6.1 MIDI Preset Changes

MIDI access to these presets is available as MIDI program change messages. Via MIDI, the presets are numbered sequentially.

PRESET MODE			SONG MODE			SET MODE		
	CC#0 VALUE:0			CC#0 VALUE:0			CC#0 VALUE:0	
BANK01 - P1	PC # 001		SONG01 - P1	PC # 001		SONG01 - P1	PC # 001	
BANK01 - P1	PC # 002		SONG01 - P2	PC # 002		SONG01 - P2	PC # 002	
BANK01 - P1	PC # 003		SONG01 - P3	PC # 003		SONG01 - P3	PC # 003	
BANK01 - P1	PC # 004		SONG01 - P4	PC # 004		SONG01 - P4	PC # 004	
...	...		SONG01 - P5	PC # 005		SONG01 - P5	PC # 005	
BANK26 - P2	PC # 127							
BANK26 - P3	PC # 128							
	CC#0 VALUE:1			CC#0 VALUE:1			CC#0 VALUE:1	
BANK26 - P4	PC # 001		SONG02 - P1	PC # 001		SONG02 - P1	PC # 001	
BANK26 - P5	PC # 002		SONG02 - P2	PC # 002		SONG02 - P2	PC # 002	
...	...		SONG02 - P3	PC # 003		SONG02 - P3	PC # 003	
BANK51 - P5	PC # 127		SONG02 - P4	PC # 004		SONG02 - P4	PC # 004	
BANK52 - P1	PC # 128		SONG02 - P5	PC # 005		SONG02 - P5	PC # 005	
			
	CC#0 VALUE:2			CC#0 VALUE:98			CC#0 VALUE:39	
BANK52 - P2	PC # 000		SONG99 - P1	PC # 002		SONG40 - P1	PC # 001	
BANK52 - P3	PC # 001		SONG99 - P2	PC # 003		SONG40 - P2	PC # 002	
...	...		SONG99 - P3	PC # 004		SONG40 - P3	PC # 003	
BANK72 - P4	PC # 103		SONG99 - P4	PC # 005		SONG40 - P4	PC # 004	
BANK72 - P5	PC # 104		SONG99 - P5	PC # 006		SONG40 - P5	PC # 005	

Note : CC#0 is the MIDI BANK SELECT MSB message.

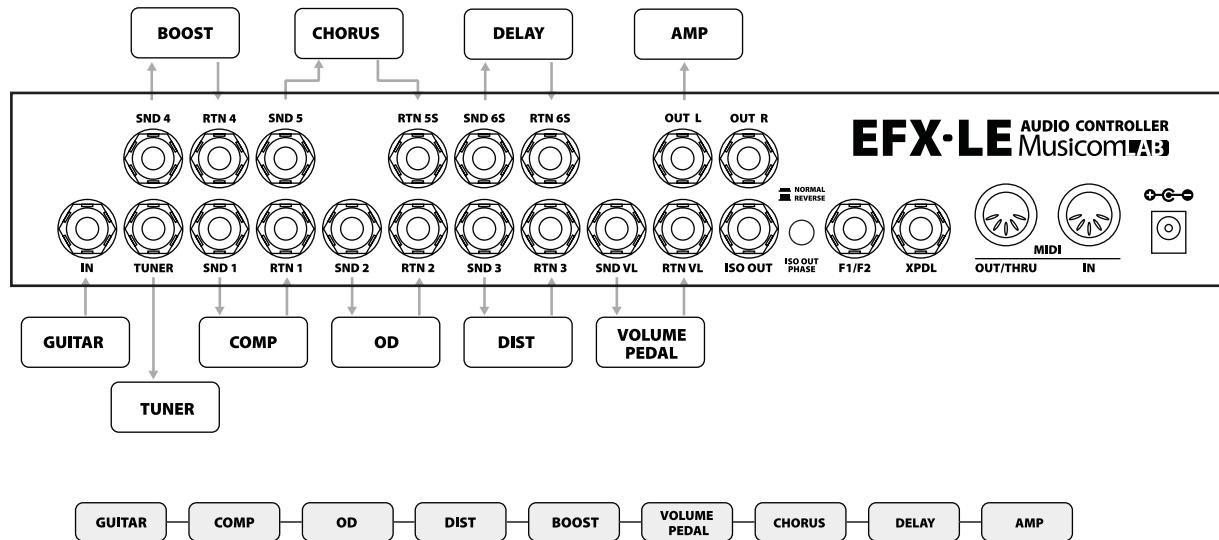
6.2 Individual Loop Controls

The individual Loops, outputs and Function switches can be controlled with MIDI Control Change messages.

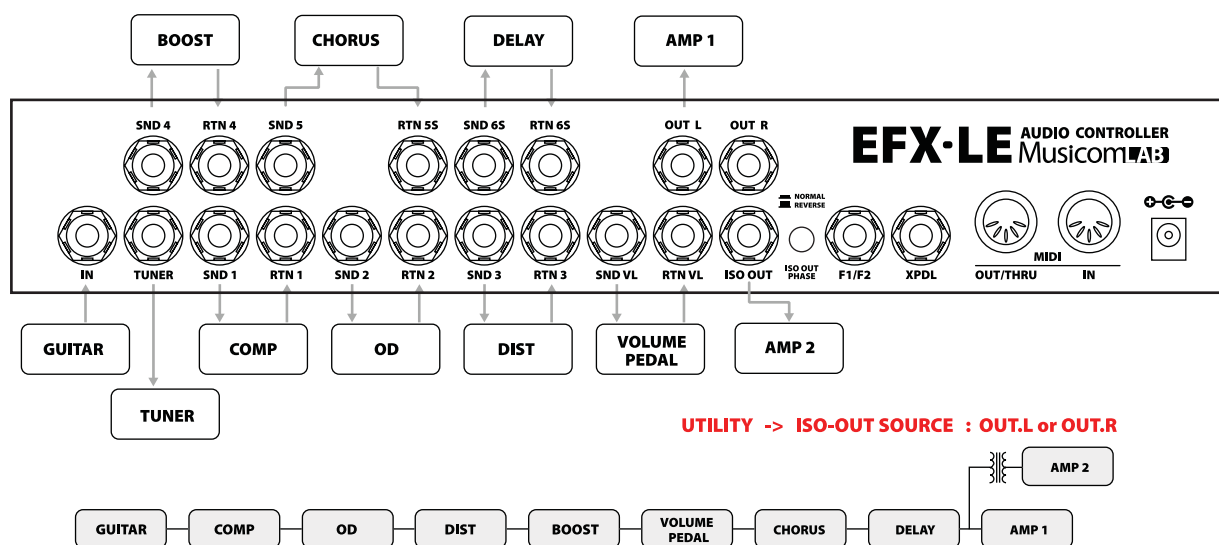
CC # VALUE RANGE			CC # VALUE RANGE		
LOOP1	64	OFF(000-063) ON(064-127)	OUT-L	71	OFF(0-63) ON(64-127)
LOOP2	65	OFF(0-63) ON(64-127)	OUT-R	72	
LOOP3	66	OFF(0-63) ON(64-127)			
LOOP4	67	OFF(0-63) ON(64-127)	FUNC.SWITCH1	73	OFF(0-63) ON(64-127)
LOOP5	68	OFF(0-63) ON(64-127)	FUNC.SWITCH2	74	OFF(0-63) ON(64-127)
LOOP6	69	OFF(0-63) ON(64-127)			
VOL. LOOP	70	OFF(0-63) ON(64-127)			

7. CONNECTION EXAMPLES

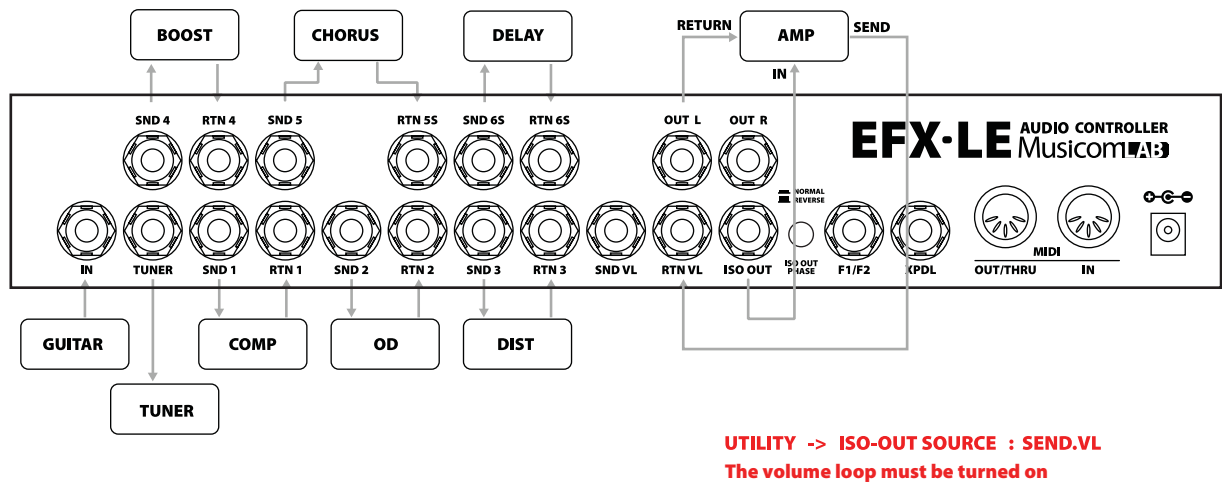
Basic Mono Connection



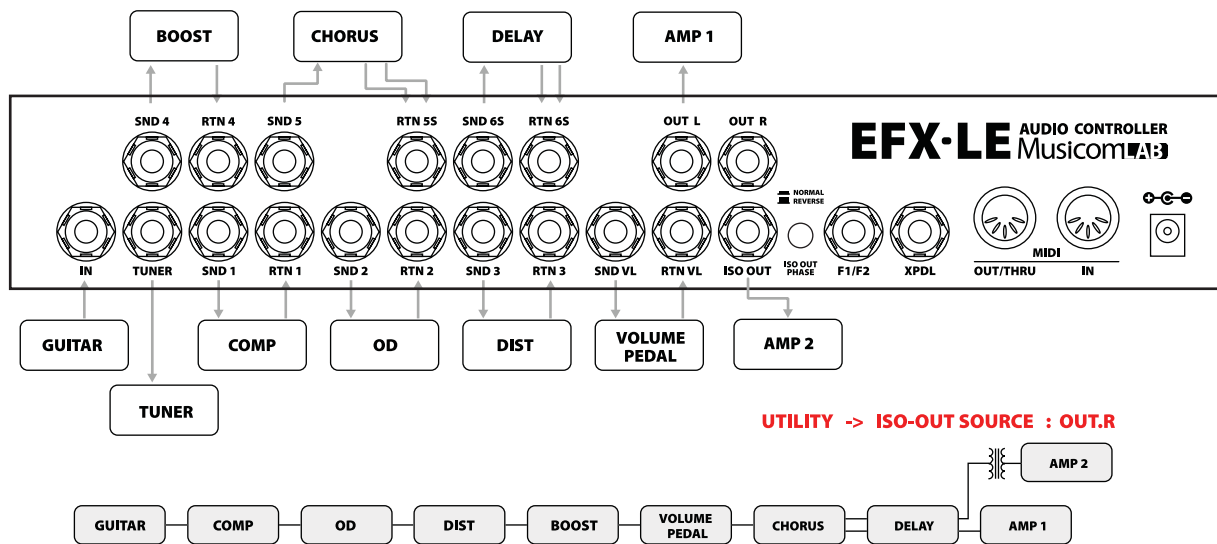
Mono Connection for 2 Amps



Mono Connection for 4CM



Basic Stereo Connection



SAFETY PRECAUTIONS



WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION

To reduce the risk of fire or electric shock, do not remove screws. There are no user serviceable parts inside.

Refer servicing to qualified service personnel

WARRANTY

Musicom Lab warrants this product against any defects that are due to defective parts or faulty workmanship for a period of one year from the date of original retail purchase. During this one year period, Musicom Lab will repair it without charge for parts or labor. However shipping charges to and from the repair location must be paid by the owner.

- This warranty does not include damage to the product resulting from accident or misuse.
- This warranty shall not apply to any goods that have been repaired or altered by anyone other than the manufacturer.

Contact the following for support and/or repair service.

Mail : Musicom Lab
15-4, Seooreung-ro 15-gil, Eunpyeong-gu, Seoul, 03426, South Korea
Website : <http://www.musicomlab.com>
Email : support@musicomlab.com
Facebook : www.facebook.com/musicomlab