

# EFX - LE

Audio Controller

## **OWNER'S MANUAL**

*Version 1.4x*

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# 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.

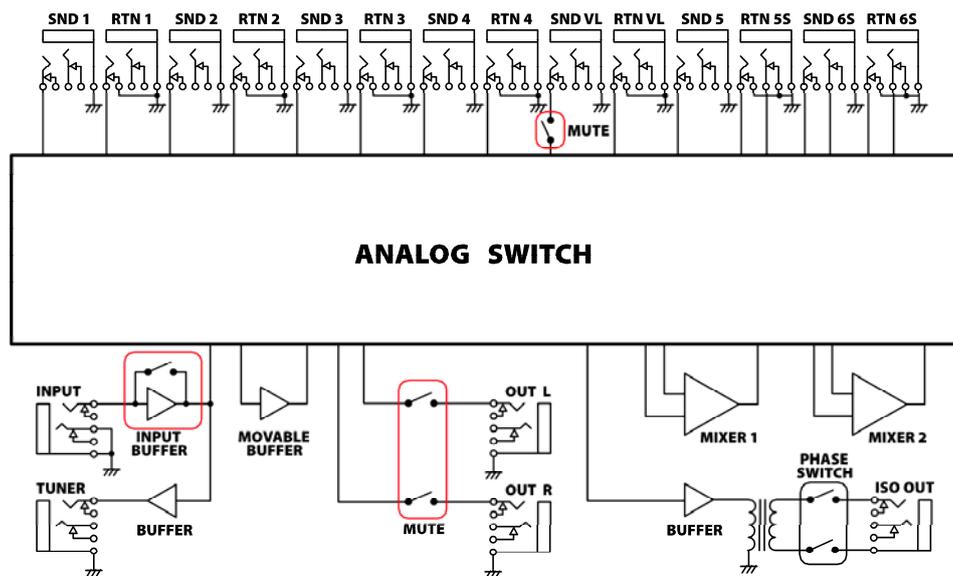
## 1.1 Main Features

- 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.

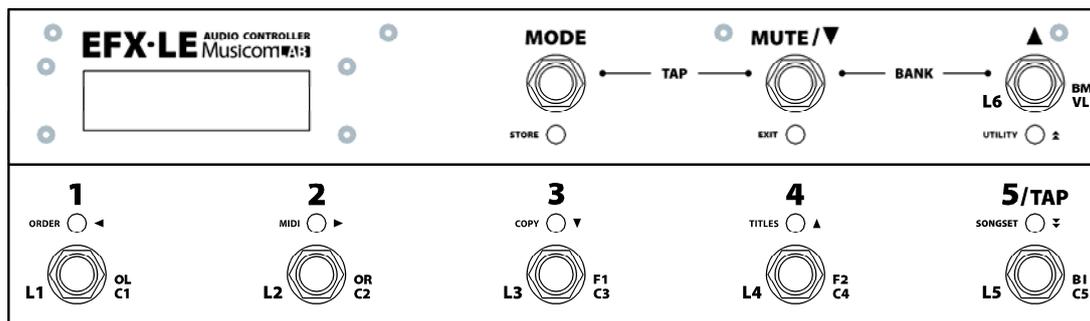
## 1.2 Specifications

- Buffer Input Impedance ..... 2.2 M $\Omega$
- Buffer Output Impedance ..... 100  $\Omega$
- 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 9 of the manual.

### MODE switch

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▲ switch

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 increments the bank number.

### MUTE/BANK▼ switch

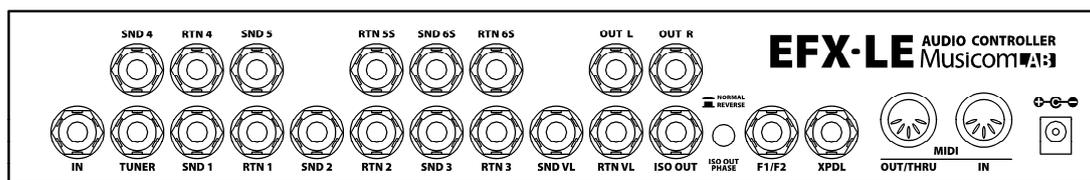
This Switch can have two functions(**MUTE** and **BANK DOWN**). Pressing and holding this switch in Preset mode decrements the bank number. For the other side, pressing this switch will execute the MUTE function.

### 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 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** 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

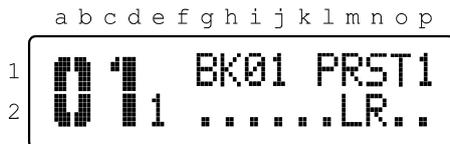


- Line 1 - e to j indicate the serial number of your unit.
- Line 1 - m to p indicate the firmware version of your unit.
- Line 2 - a to h indicate the power test results.
  - TEST OK** : Input Voltage is 11V~13V.
  - Too Low** : Input Voltage is under 11V.
  - Too High** : Input Voltage is over 13V.
- 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 **03** 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.

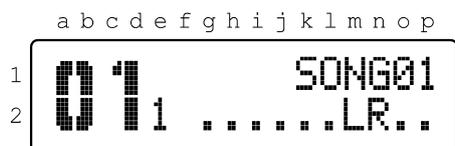
## 3. Song / Set Mode

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 **OPERATING MODE** on the page 26 of the manual.

### 3.1 Song Mode



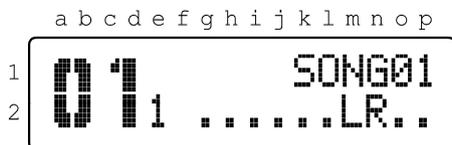
- Line 1 and 2 - a to d indicate a song number.
- Line 1 - e to p indicate a song title.
- Line 2 - e indicates a preset number(1 to 5) within the song.
- Line 2 - g to p indicate the on/off status of loops, outputs and function switches.

- 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 **03** 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 **03** 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

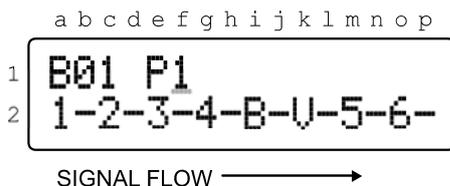
The **ORDER** menu allows changing loop structure you can make the following settings.

- 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)
1-6	A loop for which Spill Over is specified
-	Mono connection
=	Stereo connection

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	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.
<b>5/TAP</b>	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.
<b>BANK▲</b>	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.
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	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.      ② Press **BANK▲** switch to specify the parallel connection.

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

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

- ③ Use the **1** switch to move the cursor to loop 5.      ④ Press **4** switch to move the loop 3 into the parallel connection.

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

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

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

```
B01 P1
1-2-3-4-B-U-5-6̄-
```

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

You can change other Spill Over in the same way.

## 4.2 MIDI Menu

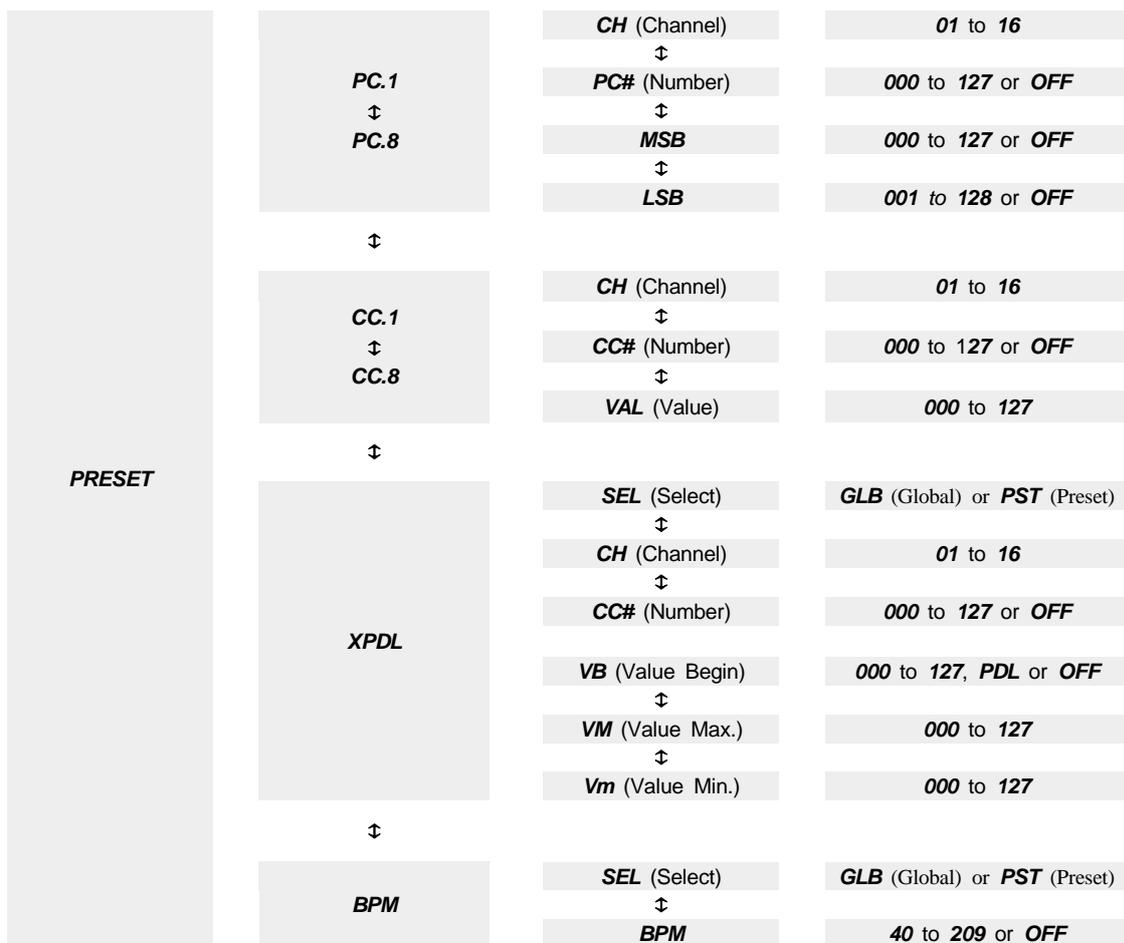
The **MIDI** menu allows accessing to the MIDI features of the EFX-LE.



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

	a b c d e f g h i j k l m n o p	
1	B01 P1 PC.1	• Line 2 - f to h indicate the MIDI Program Change MSB. ( <b>000-127</b> or <b>OFF</b> )
2	«MSB:OFF LSB:OFF	• Line 2 - n to p indicate the MIDI Program Change LSB. ( <b>000-127</b> or <b>OFF</b> )

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - f : Decreasing/increasing a preset number. When the cursor is at the Line 1 - p : Scrolling <b>PC.1</b> to <b>BPM</b> . When the cursor is at the other positions : Decreasing/increasing a value.
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - f : Decreasing/increasing a bank number. When the cursor is at the Line 1 - p : Scrolling <b>PC.1</b> to <b>BPM</b> by 5. When the cursor is at the other positions : Decreasing/increasing a value by 10.
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	Returning to the <b>MIDI</b> 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	• Line 1 - b and c indicate the bank number (01 to 72) that the preset is located in.
2	CH:01 CC#:00F U»	• Line 1 - f indicates the preset number(1 to 5 or 0 for the <b>Global Preset</b> ) that is going to be created/modified.
		• Line 1 - m to p indicate the MIDI Control Change ( <b>CC.1</b> to <b>CC.8</b> ).
		• Line 2 - d and e indicate the MIDI Control Change Channel ( <b>01-16</b> ).
		• Line 2 - k to m indicate the MIDI Control Change Number ( <b>001-128</b> or <b>OFF</b> ).

	a b c d e f g h i j k l m n o p	
1	B01 P1 CC.1	• Line 2 - f to h indicate the MIDI Control Change Value. ( <b>000-127</b> )
2	«VAL:000	

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

## XPDL in PRESET.MIDI

a b c d e f g h i j k l m n o p	
<pre> 1 B01 P1      XPDL 2 SEL:GLB CH:01 C* </pre>	<ul style="list-style-type: none"> <li>Line 1 - b and c indicate the bank number (<b>01</b> to <b>72</b>) that the preset is located in.</li> <li>Line 1 - f indicates the preset number(<b>1</b> to <b>5</b> or <b>0</b> for the <b>Global Preset</b>) that is going to be created/modified.</li> <li>Line 1 - m to p indicate that you are in the XPDL.</li> <li>Line 2 - e to g indicate whether the XPDL is configured as Preset(<b>PST</b>) or Global (<b>GLB</b>).</li> <li>Line 2 - l and m indicate the MIDI Control Change Channel (<b>01-16</b>).</li> </ul>
a b c d e f g h i j k l m n o p	
<pre> 1 B01 P1      XPDL 2 «CC#:OFF VB:OFF» </pre>	<ul style="list-style-type: none"> <li>Line 2 - f to h indicate the MIDI Control Change Number (<b>001-128</b> or <b>OFF</b>).</li> <li>Line 2 - m to o indicate the initial XPDL value that the expression pedal port will transmit when the preset is selected.</li> </ul>
a b c d e f g h i j k l m n o p	
<pre> 1 B01 P1      XPDL 2 «UM: 127 Um:000 </pre>	<ul style="list-style-type: none"> <li>Line 2 - e to g indicate the highest XPDL value that the expression pedal port can transmit when its pedal is moved.</li> <li>Line 2 - l to m indicate the lowest XPDL value that the expression pedal port can transmit when its pedal is moved.</li> </ul>

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

## BPM in PRESET.MIDI

a b c d e f g h i j k l m n o p	
<pre> 1 B01 P1      BPM 2 SEL:GLB J:120 </pre>	<ul style="list-style-type: none"> <li>Line 1 - b and c indicate the bank number (<b>01</b> to <b>72</b>) that the preset is located in.</li> <li>Line 1 - f indicates the preset number(<b>1</b> to <b>5</b> or <b>0</b> for the <b>Global Preset</b>) that is going to be created/modified.</li> <li>Line 1 - n to p indicate that you are in the BPM.</li> <li>Line 2 - e to g indicate whether the XPDL is configured as Preset(<b>PST</b>) or Global (<b>GLB</b>).</li> <li>Line 2 - k to m indicate the BPM of current preset.</li> </ul>

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

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

### 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*	<ul style="list-style-type: none"> <li>Line 1 - l to p indicate the you are in the <b>CC.L1</b> to <b>CC.MT</b>.</li> <li>Line 2 - d and e indicate the MIDI Control Change Channel (<b>01-16</b>).</li> <li>Line 2 - k to m indicate the MIDI Control Change Number (<b>001-128</b> or <b>OFF</b>).</li> </ul>
a b c d e f g h i j k l m n o p 1 CC.L1 2 «VN:127 VF:000	<ul style="list-style-type: none"> <li>Line 2 - e to g indicate the MIDI Control Change Value when a instant access switch will be '<b>ON</b>'.</li> <li>Line 2 - l to n indicate the MIDI Control Change Value when a instant access switch will be '<b>OFF</b>'.</li> </ul>

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

<p>a b c d e f g h i j k l m n o p</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>1 XPDL</p> <p>2 CH:01 CC#:00F U*</p> </div>	<ul style="list-style-type: none"> <li>• Line 1 - m to p indicate the you are in the <b>GLOBAL XPDL</b>.</li> <li>• Line 2 - d and e indicate the MIDI Control Change Channel (<b>01-16</b>).</li> <li>• Line 2 - k to m indicate the MIDI Control Change Number (<b>001-128</b> or <b>OFF</b>).</li> </ul>
<p>a b c d e f g h i j k l m n o p</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>1 XPDL</p> <p>2 «UM:127 Um:000</p> </div>	<ul style="list-style-type: none"> <li>• Line 2 - e to g indicate the highest XPDL value that the expression pedal port can transmit when its pedal is moved.</li> <li>• Line 2 - l to m indicate the lowest XPDL value that the expression pedal port can transmit when its pedal is moved.</li> </ul>

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

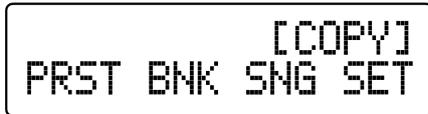
## IN/OUT (RECEIVE CHANNEL & MIDI OUT/THRU)

<p>a b c d e f g h i j k l m n o p</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>1 IN/OUT</p> <p>2 RCH:01 MIDI:OUT</p> </div>	<ul style="list-style-type: none"> <li>• Line 1 - k to p indicate the you are in the <b>IN/OUT</b>.</li> <li>• Line 2 - e and f indicate the MIDI Channel that the EFX-LE will receive.</li> <li>• Line 2 - m to p indicate the <b>MIDI OUT</b> or <b>MIDI THRU</b>.</li> </ul>
---	---

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

## 4.3 COPY Menu

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



- 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.

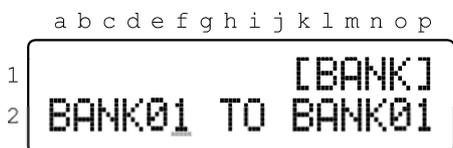


- Line 2 - a to f indicate the preset that is going to be copied.
- Line 2 - k to p indicate the destination preset location to copy to.

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



- 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.

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

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

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

## 4.4 TITLES Menu

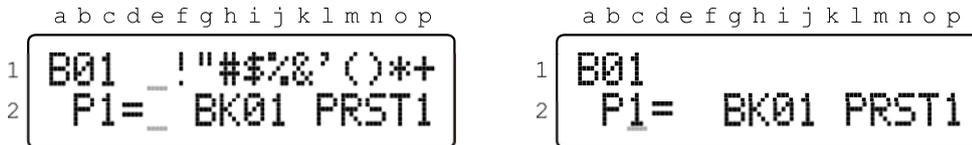
The **TITLES** Menu allows custom titles to be entered for each presets and songs. Each custom preset and song title can be up to 12 characters in length.



- 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.

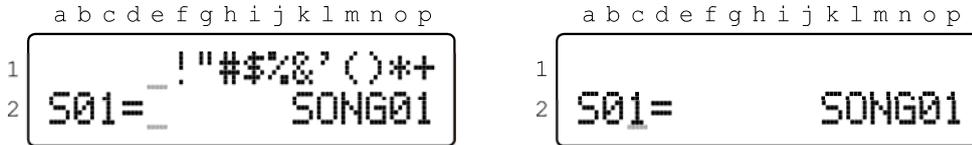


- Line 1 - a to c and Line 2 - a to c indicate the preset that is going to be created/modified.
- Line 1 - e to p indicate the available characters.
- Line 2 - e to p indicate the preset title.

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 2 - c : Decreasing/increasing a preset number. When the cursor is at the other positions : Moving through the available characters.
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 2 - c : Decreasing/increasing a bank number. When the cursor is at the other positions : Moving through the available other characters. !"#\$%&'()*+ , - . / 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 {   } ~
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	Returning to the <b>TITLES</b> 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.

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 2 - c : Decreasing/increasing a song number. When the cursor is at the other positions : Moving through the available characters.
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 2 - c : Decreasing/increasing a song number by 5. When the cursor is at the other positions : Moving through the available other characters. <pre> !"#%&amp;'()*+ ,-./01234567 89:;&lt;=&gt;?@ABC DEFGHIJKLMNO PQRSTUVWXYZ[ ^\_`abcdefg hijklmnopqrs tuvwxyz{ } </pre>
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	Returning to the <b>TITLES</b> menu.

## 4.5 SONG/SET Menu

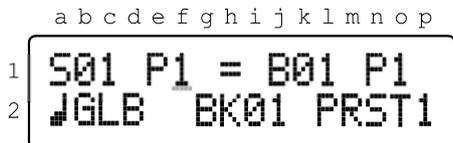
The **SONG/SET** Menu allows for the EFX-LE's regular presets to be organized in a custom bank to create a song (or custom bank of presets). Multiple songs can then be arranged in a bank in order to create a set.



- 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.

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

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

<b>OPERATING MODE</b>	---	<b>PRESET, SONG or SET01 to SET40</b>
⇕		
<b>CLICK-LESS</b>	---	<b>OFF, BI CHANGE or ALWAYS ON</b>
⇕		
<b>HOLD "BANK DOWN"</b>	---	<b>MUTE or BANK DOWN</b>
⇕		
<b>MUTE POSITION</b>	---	<b>VL.SEND, OUT.L/R or NO ASSIGN</b>
⇕		
<b>MAX BANK NUMBER</b>	---	<b>1 to 72</b>
⇕		
<b>DUPLICATED PC</b>	---	<b>SEND or NOT SEND</b>
⇕		
<b>TEMPO SYNC WITH</b>	---	<b>OFF, MTC, F1 or MTC+F1</b>
⇕		
<b>TEMPO SYNC TIME</b>	---	<b>1 BAR, 2 BARS or CONTINUE</b>
⇕		
<b>XPDL RATE</b>	---	<b>1ms to 50ms</b>
⇕		
<b>FUNC. SWITCH1 (F1)</b>	---	<b>LATCHED, MOMENTARY or REV LATCH</b>
⇕		
<b>FUNC. SWITCH2 (F2)</b>	---	<b>LATCHED, MOMENTARY or REV LATCH</b>
⇕		
<b>ISO-OUT SOURCE</b>	---	<b>VL.SEND, OUT.L, OUT.R or POST.VL</b>
⇕		
<b>LP5 RETURN</b>	---	<b>MONO or STEREO</b>
⇕		
<b>LP6 RETURN</b>	---	<b>MONO or STEREO</b>
⇕		
<b>LP6 SEND.R SPLIT</b>	---	<b>OFF or ON</b>
⇕		
<b>GLOBAL PRESET</b>	---	<b>ENABLE or DISABLE</b>
⇕		
<b>MUTE -&gt; LOOP ON</b>	---	<b>NO ASSIGN or LOOP1 to LOOP6</b>
⇕		
<b>BPM DISPLAY</b>	---	<b>OFF or ON</b>
⇕		
<b>GROUP SELECT</b>	---	<b>NO ASSIGN or C1 TO C2 to C1 TO C5</b>
⇕		
<b>MIDI SYSEX DATA</b>	---	
⇕		
<b>FACTORY RESET</b>	---	<b>OFF to UTILITY</b>

### 4.6.1 OPERATING MODE

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



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

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



- 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.

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



- 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.

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

<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;">1 MUTE POSITION</div> <div style="margin-bottom: 5px;">2 = VL.SEND</div> </div>	<ul style="list-style-type: none"> <li>• Line 2 - h to p indicate the MUTE position.</li> <li><b>VL.SEND</b> – SEND of Volume Loop</li> <li><b>OUT.L/R</b> – OUTPUT Left/Right</li> <li><b>NO ASSIGN</b> – Audio signal is not mute</li> </ul>
--	--

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

<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;">1 MAX BANK NUMBER</div> <div style="margin-bottom: 5px;">2 = 72</div> </div>	<ul style="list-style-type: none"> <li>• Line 2 - h to p indicate the maximum bank number (<b>01</b> to <b>72</b>).</li> </ul>
---	--

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

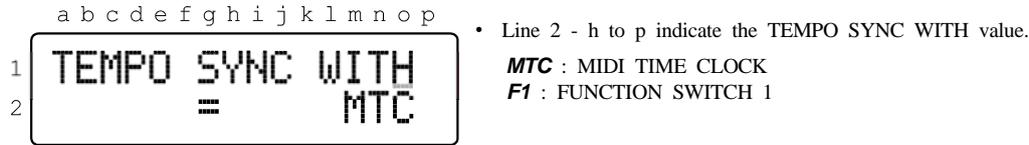
a b c d e f g h i j k l m n o p

<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;">1 DUPLICATED PC</div> <div style="margin-bottom: 5px;">2 = SEND</div> </div>	<ul style="list-style-type: none"> <li>• Line 2 - h to p indicate the <b>SEND</b> or <b>NOT SEND</b>.</li> </ul>
---	--

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

### 4.6.7 TEMPO SYNC WITH

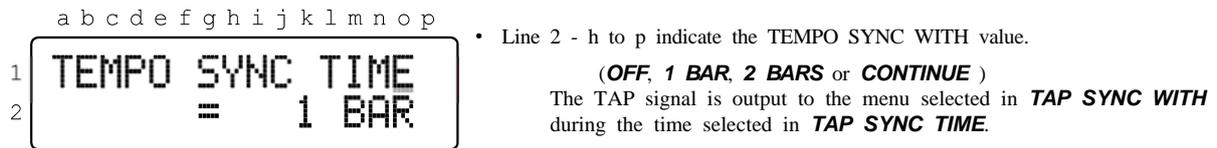
This sub-menu allows determining where to send the TAP-TEMPO signal.



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

### 4.6.8 TEMPO SYNC TIME

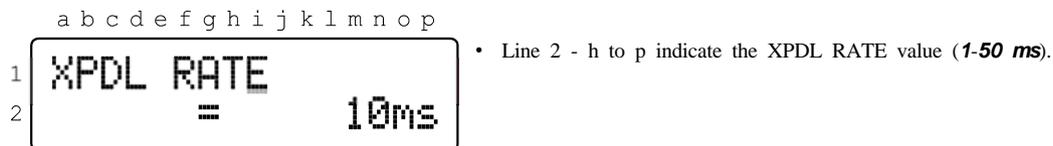
This sub-menu allows determining how long the TAP-TEMPO signal outputs.



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



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

#### 4.6.10 FUNC. SWITCH 1/2

The **F1** and **F2** will act as footswitches like those used for amp channel switching. The EFX-LE supports three types of switch. Latched, momentary and reverse latched.

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	<ul style="list-style-type: none"> <li>• Line 1 - a to m indicate the function switch 1 or 2.</li> <li>• Line 2 - h to p indicate the function switch type. (<b>LATCHED</b>, <b>MOMENTARY</b> or <b>REV LATCH</b>).</li> </ul>

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b> menu. When the cursor is at the Line 2 - p : Selecting <b>LATCHED</b> , <b>MOMENTARY</b> or <b>REV LATCH</b> .
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b> menu by 5.
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	exiting to the <b>UTILITY</b> 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	<ul style="list-style-type: none"> <li>• Line 2 - h to p indicate which signal is split to the <b>ISO-OUT</b> .  <b>VL.SEND</b> : VOLUME LOOP SEND  <b>OUT.L</b> : OUTPUT-LEFT  <b>OUT.R</b> : OUTPUT-RIGHT  <b>POST.VL</b> : Between VOLUME and NEXT LOOP</li> </ul>

<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - n : Moving a <b>UTILITY</b> menu. When the cursor is at the Line 2 - p : Scrolling a <b>ISO-OUT SOURCE</b> value.
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - n : Moving a <b>UTILITY</b> menu by 5.
<b>STORE (MODE)</b>	Storing any changes made while in this menu.
<b>EXIT (MUTE/▼)</b>	exiting to the <b>UTILITY</b> 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	<ul style="list-style-type: none"> <li>• Line 1 - a to j indicate the return of loop 5 or 6.</li> <li>• Line 2 - h to p indicate the <b>MONO-Return</b> or <b>STEREO-Return</b>.</li> </ul>

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



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

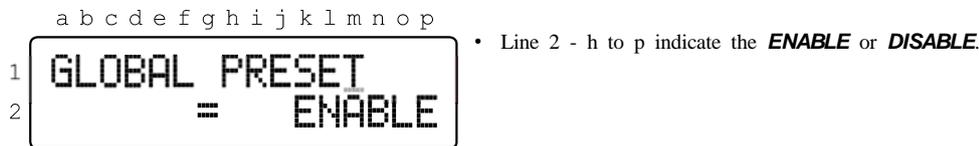
#### **Note :**

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.

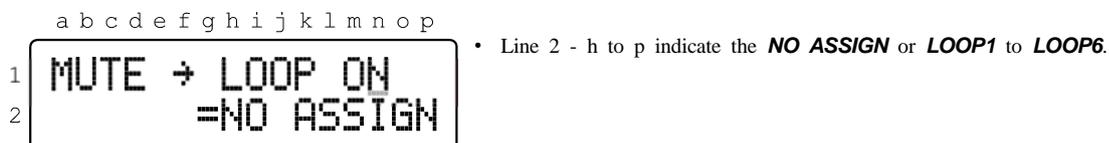


<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b> menu. When the cursor is at the Line 2 - p : Switching between <b>ENABLE</b> or <b>DISABLE</b> .
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b>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

#### 4.6.15 MUTE -> LOOP ON

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

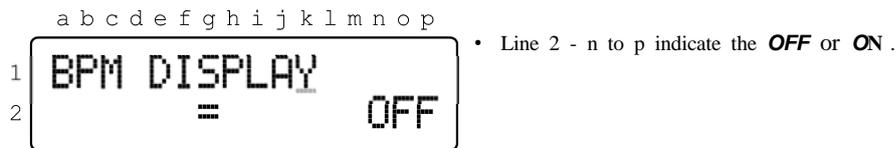
This function is useful when using the **Eventide H9** tuning function in the loop.



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

#### 4.6.16 BPM DISPLAY

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



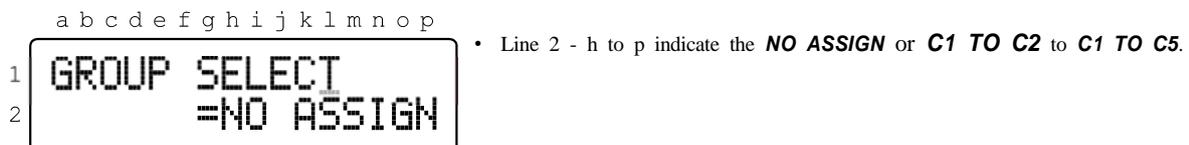
<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - k : Moving a <b>UTILITY</b> menu. When the cursor is at the Line 2 - p : Switching between <b>OFF</b> or <b>ON</b> .
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - k : Moving a <b>UTILITY</b> menu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



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

#### 4.6.18 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.



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

#### 4.6.19 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 Factory 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

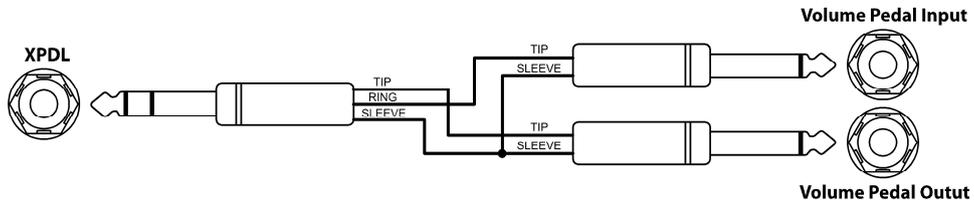
<b>1 &amp; 2</b>	Press to move cursor.
<b>3 &amp; 4</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b> menu. When the cursor is at the Line 2 - p : Scrolling a <b>FACTORY RESET</b> Area.
<b>5/TAP &amp; BANK▲</b>	When the cursor is at the Line 1 - m : Moving a <b>UTILITY</b> menu by 5.
<b>STORE (MODE)</b>	Starting the factory default setting.
<b>EXIT (MUTE/▼)</b>	exiting to the <b>UTILITY</b> menu.

# 5. Cables

## 5.1 XPDL

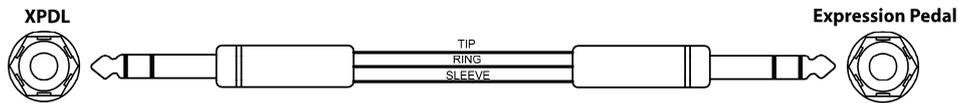
### XPDL & Volume Pedal

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.

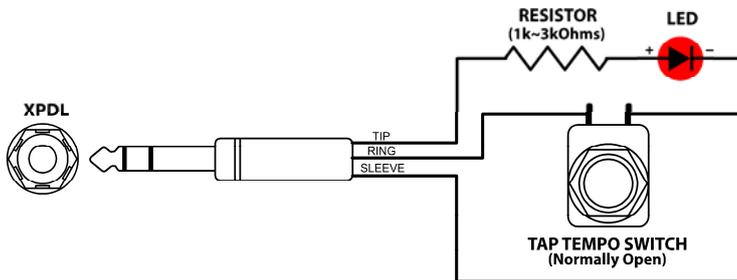


### XPDL & Expression Pedal

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



### XPDL & External Tap-Tempo Switch and LED

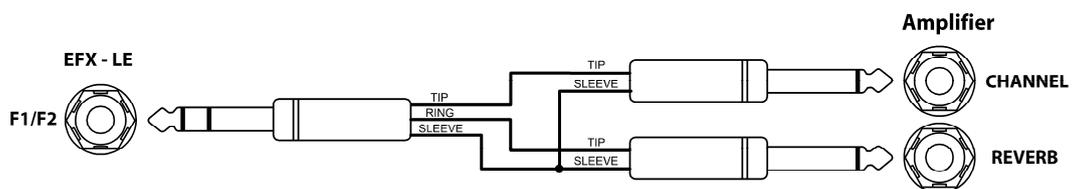


### Note

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.

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

**Note**

CC#0 is the **MIDI BANK SELECT MSB** message.

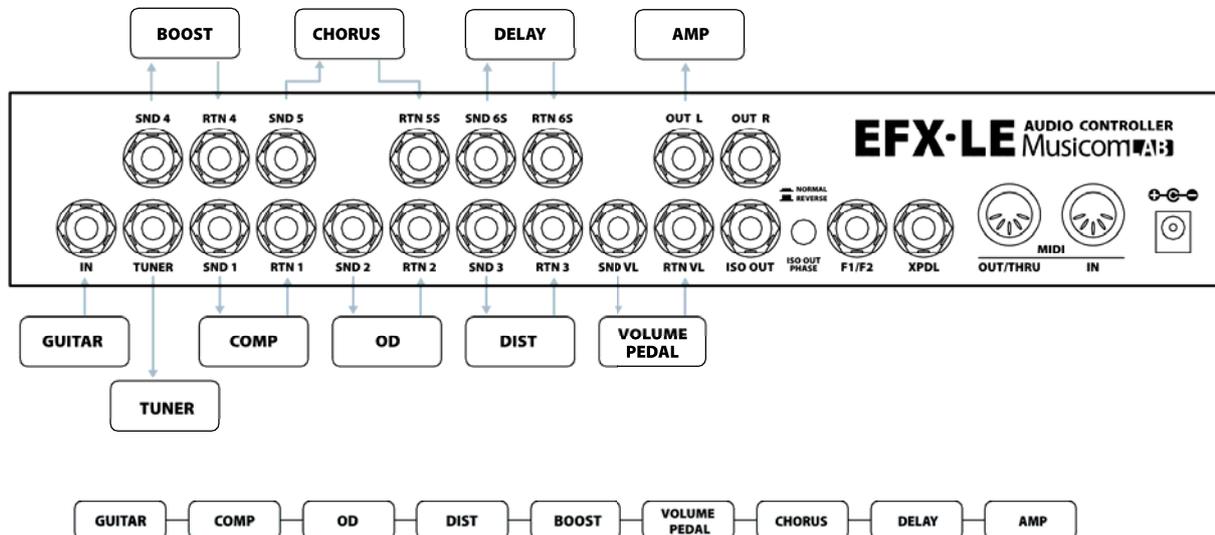
## 6.2 Individual Loop Controls

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

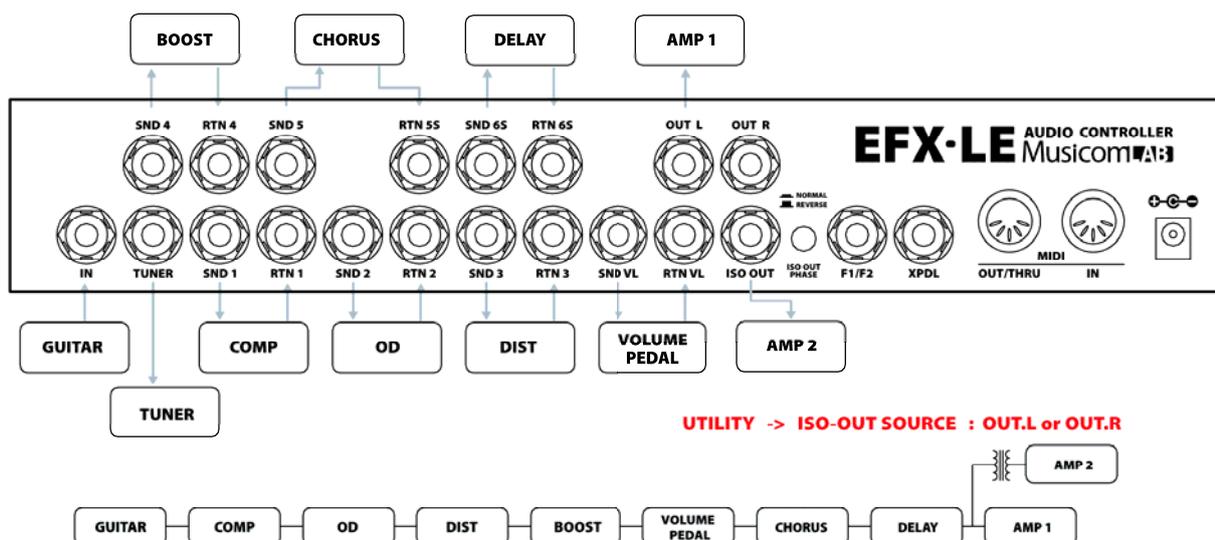
<b>CC#</b>	<b>VALUE RANGE</b>	<b>CC#</b>	<b>VALUE RANGE</b>
LOOP1	64 OFF(0-63) ON(64-127)	OUT-L	71 OFF(0-63) ON(64-127)
LOOP2	65 OFF(0-63) ON(64-127)	OUT-R	72 OFF(0-63) ON(64-127)
LOOP3	66 OFF(0-63) ON(64-127)		
LOOP4	67 OFF(0-63) ON(64-127)	FUNC.SWITCH1	73 OFF(0-63) ON(64-127)
LOOP5	68 OFF(0-63) ON(64-127)	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

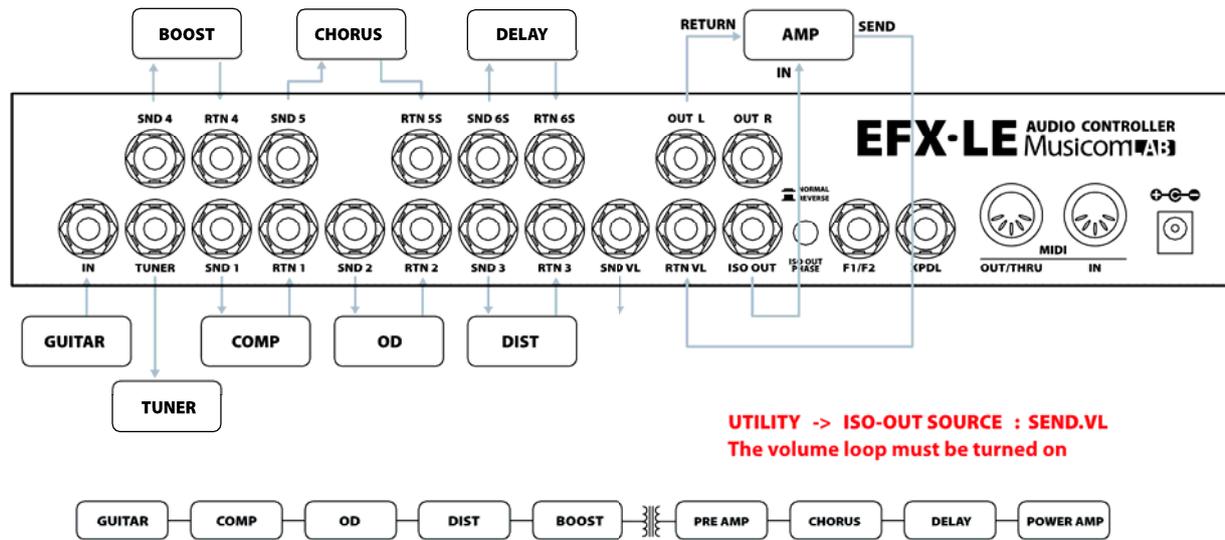
## Basic Mono Connection



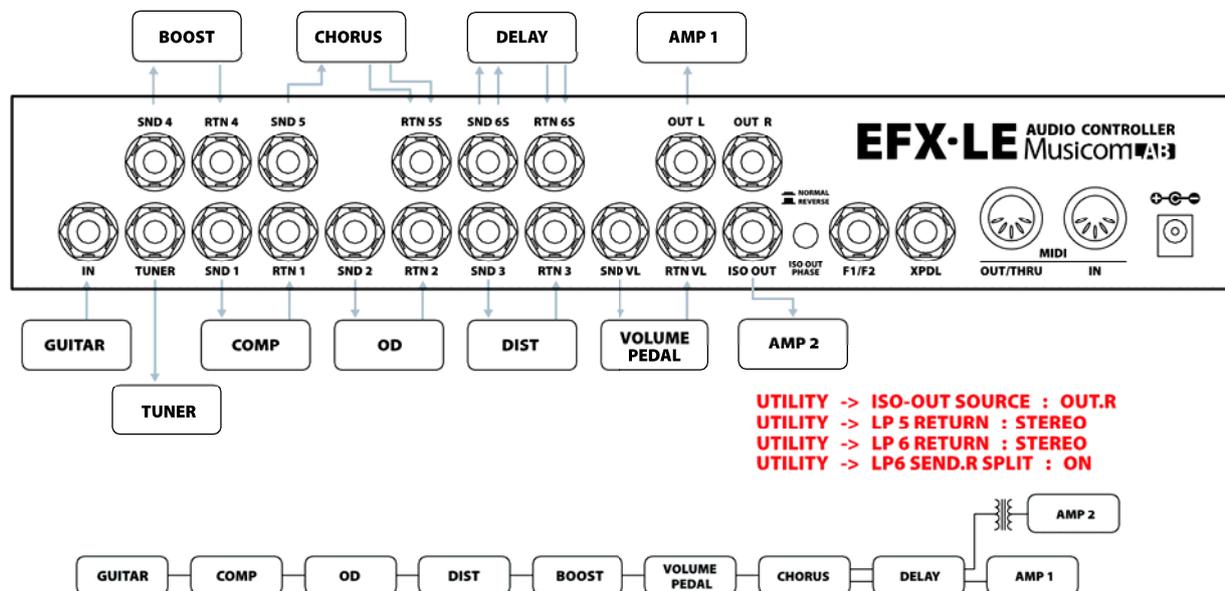
## Mono Connection for 2 Amps



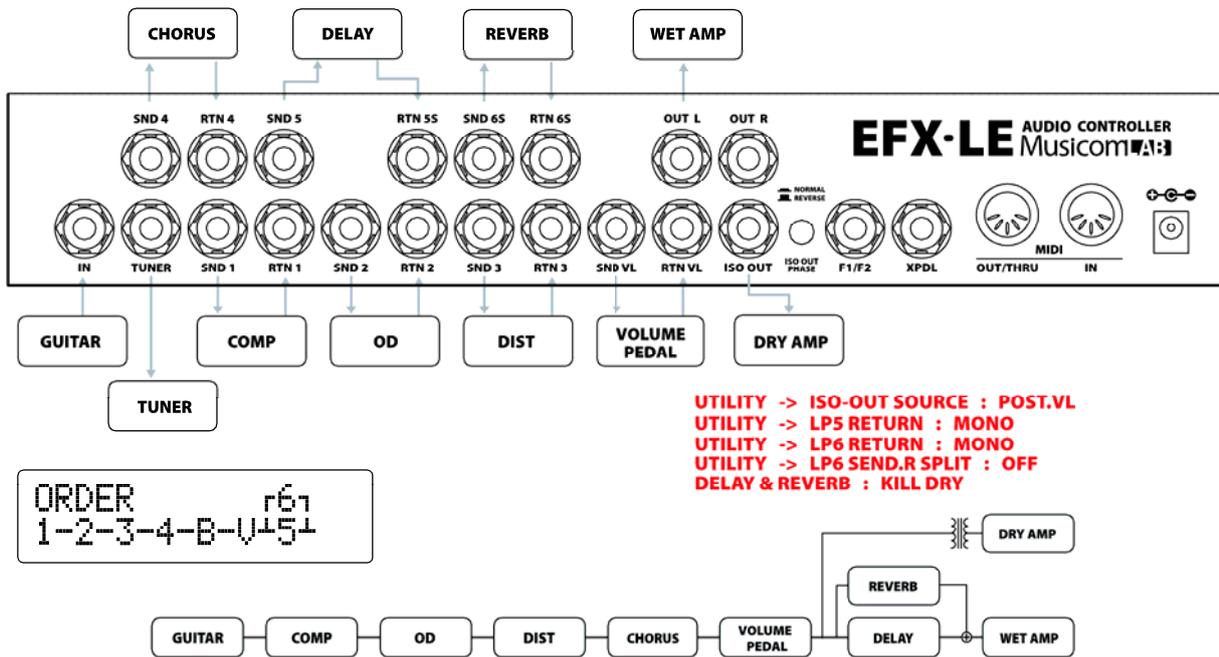
## Mono Connection for 4CM



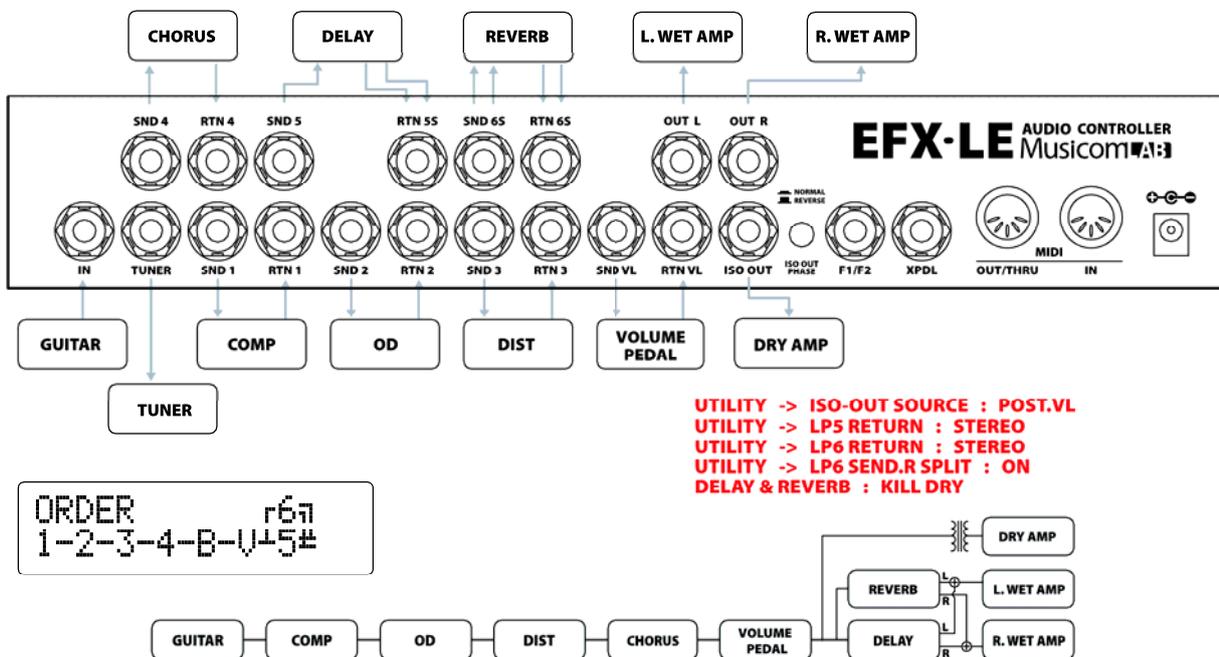
## Basic Stereo Connection



## Wet/Dry Connection



## Wet/Dry/Wet Connection



# SAFETY PRECAUTIONS



## *WARNING*

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
- Do not cause electrostatic discharge to the device.

## *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 applies only to the original owner and is not transferable.
- 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](mailto:support@musicomlab.com)

Facebook : [www.facebook.com/musicomlab](http://www.facebook.com/musicomlab)