EFX MKII AUDIO CONTROLLER

MusicomLAB EFX MKII AUDIO CONTROLLER

MODE — MUTE — DOWN — UP

Quit ● BANK ● Store

L1 L2 L3 L4 L5 L6 L7 L8

BANK / PROGRAM
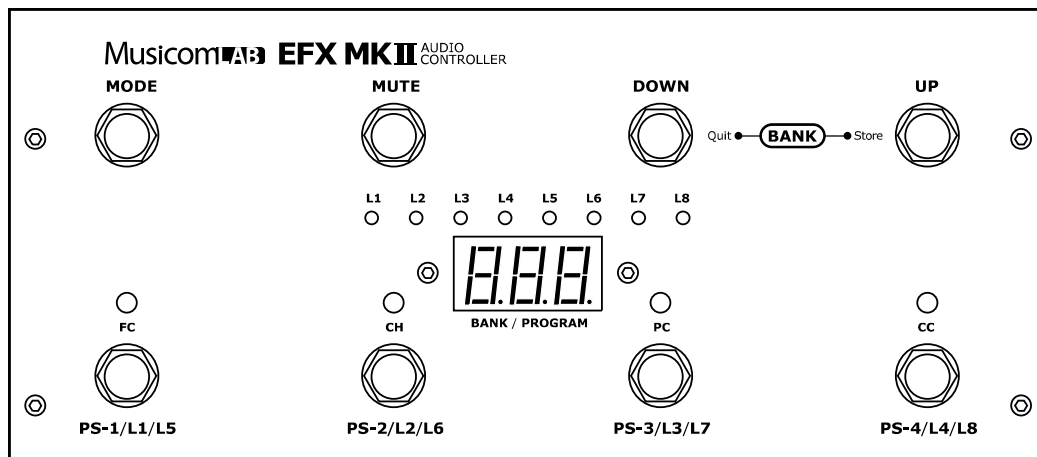
FC — CH — PC — CC

PS-1/L1/L5 — PS-2/L2/L6 — PS-3/L3/L7 — PS-4/L4/L8

USER MANUAL

(Ver *3.0*)

MusicomLAB

Thanks for your purchase of the Musicom Lab EFX MkII Audio Controller. This Manual will introduce you to the EFX MkII and its features. After reading this manual carefully keep it for future reference.

CONTENTS

http://www.musicomlab.co.kr

1. Introduction

The EFX Mk II Audio Controller is the ultimate floor based switching system.
It is a compact, easy to use, fully programmable 8 function(8 loops / 7 loops+1 control function / 6 loops+2 control function) MIDI foot controller.

The EFX Mk II Audio Controller has 100 memory locations, configured as 25 banks of 4 presets, plus a global preset.
It can transmit 5 MIDI Program Changes on 5 MIDI channels and 8 MIDI Control Change on an appointed MIDI channel.
Also one continuous controller port(**XPDL**) is included and can be programmed with designated MIDI channels and control numbers.

The EFX Mk II Audio Controller has two low-noise, high quality buffers to prevent the loss of guitar signal. The input buffer can be bypassed for Hi-Z input pedals such as Fuzzes etc.
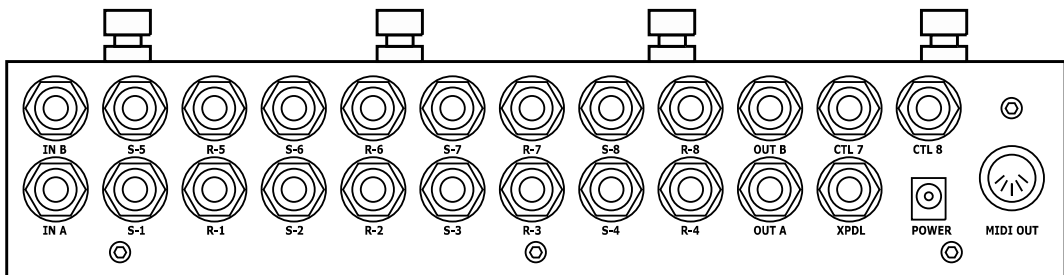
The EFX Mk II Audio Controller is made by high quality parts including heavy-duty stomp switches and gold-plated relays.
It is cased within a compact and rugged aluminium enclosure(11"W x 5.2"D x 1.7"FH x 2.2"RH).
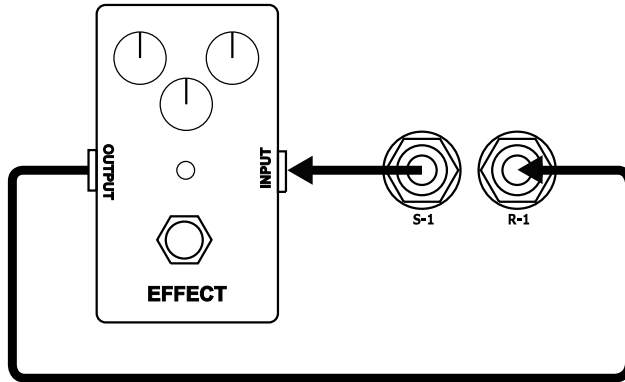
Top Panel View
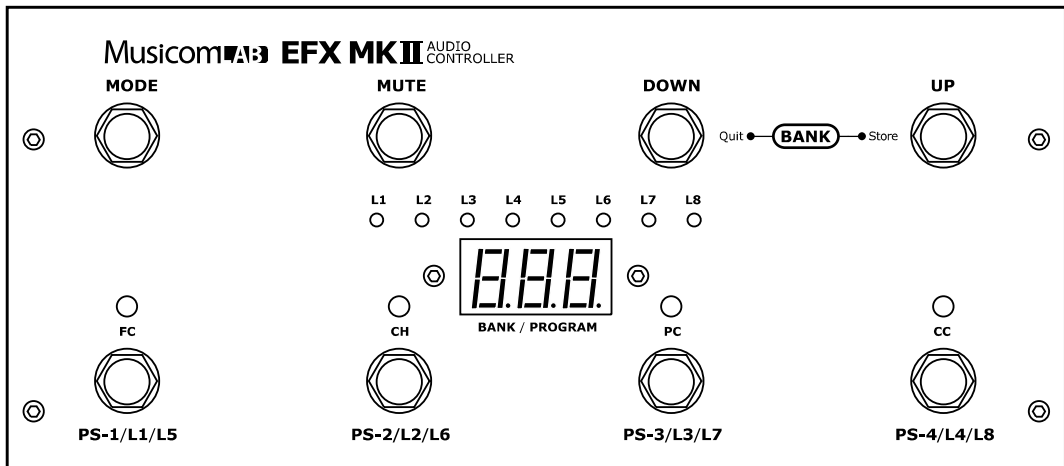
Rear Panel View

2. Basic Connection

① The loop send jacks(S-1 ~ S-8) and return jacks(R-1 ~ R-8) connect to the effects unit's inputs and outputs.

② The guitar connects to IN A jack, and amplifier input connects to OUT B jack.
When there is the Hi-Z input pedal in the loop 1 ~ loop 4, the input buffer must be bypassed. Refer to page 11.

③ The tuner connects to OUT A jack. If this function is used, do not insert any plug to IN B jack.
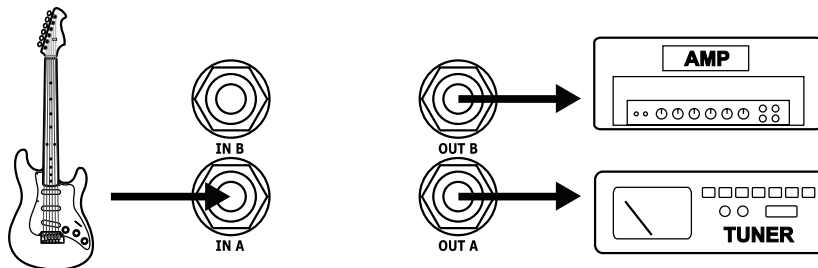
④ The control function plug connects to CTL7 or CTL8 jacks when control function is used for remote amplifier channel switching. Refer to page 10.

3. Mode Description

The EFX Mk II Audio Controller utilizes three modes of operation, Preset Mode, Direct Mode and Edit Mode.
On power-up, the display will show its firmware version, upon which bank *1* and the global preset will be selected.

3.1 Preset Mode

The EFX Mk II Audio Controller has 101 presets, configured as 25 banks of 4 presets, plus a global preset which is common to all banks.
The Preset Mode is automatically selected when the power is initially turns on.

① Press/hold the BANK UP or BANK DOWN switches to scroll through the 25 available banks.
② The display will be flashing.
③ The preset is selected via pressing the PS-1 through PS-4 switches.
④ The display will stop flashing and the LED above the switch turns on.

For example, to select the second preset of the bank 3, press the BANK UP switch until the *3* is shown on the display. And then press the PS-2 switch.

The global preset is a preset with all the capabilities of preset 1 through 4, 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 turn off.

Press the MUTE switch to mute the output. When muted, the three decimal points on the display will turn on and output signal will be mute.

BANK / PROGRAM
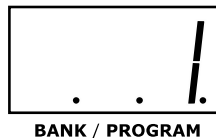
Press the MUTE switch to cancel the mute function. Mute function is available in all mode.

3.2 Direct Access Mode (Programming the Loops)

① Select the preset to be programmed in the Preset Mode.
② Press the MODE switch to enter the Direct Access Mode. The display will show:

BANK / PROGRAM

   And the 4 LEDs above PS-1 ~ PS-4 switches will indicate the respective Loop 1 ~ Loop 4 as on or off.
③ Press the PS-1 through PS-4 switches to turn the respective Loop1 ~ Loop4 on or off. The respective LEDs will go on or off.

④ Press the MODE switch. The display will show:

```
 5 - 8
BANK / PROGRAM
```

And the 4 LEDs above PS-1 ~ PS-4 switches will indicate the respective Loop5 ~ Loop8 as on or off.

⑤ Press the PS-1 through PS-4 switches to turn the respective Loop5 ~ Loop8 on or off. The respective LEDs will go on or off.

⑥ Press the BANK UP switch to store the edit and return to Preset Mode. The other side, press the BANK DOWN switch to return to preset mode without storing the edit.

⑦ Follow the same procedure ①~⑥ for any other presets you want to program the loops.

3.3 Edit Mode

The Edit Mode contains the utility functions. To enter the Edit Mode, you must be in the Preset Mode. Press/hold the MODE switch to enter the Edit Mode for 1 second. The display will show:

```
 PC 1
BANK / PROGRAM
```

Press/hold the PS-1 switch(FS, function select) to scroll the utility functions. Below is a list functions in the order that they are shown.

Function Select Order List

PC1   sets 1st MIDI Program Change
PC2   sets 2st MIDI Program Change
PC3   sets 3st MIDI Program Change
PC4   sets 4st MIDI Program Change
PC5   sets 5st MIDI Program Change
CC1   sets 1st MIDI Control Change for the Loop1 On/Off
CC2   sets 2st MIDI Control Change for the Loop2 On/Off
CC3   sets 3st MIDI Control Change for the Loop3 On/Off
CC4   sets 4st MIDI Control Change for the Loop4 On/Off
CC5   sets 5st MIDI Control Change for the Loop5 On/Off
CC6   sets 6st MIDI Control Change for the Loop6 On/Off
CC7   sets 7st MIDI Control Change for the Loop7 On/Off
CC8   sets 8st MIDI Control Change for the Loop8 On/Off
EPL   sets MIDI Control Change for the continuous control port XPDL
LP7 / Ct7   selects the audio Loop 7 or Control Function 7
LP8 / Ct8   selects the audio Loop 8 or Control Function 8
bon / boF   selects the input buffer on or off
Pr0 ~ Pr9   selects 10-stage popping noise reduction control

3.3.1 Editing MIDI Program Change

① Select the preset to be edited in the Preset Mode
② Press/hold the MODE switch to enter the Edit Mode for 1 second if you are in the Preset Mode. The **PC1** will be automatically selected and the display will show:

```
PC 1
```
BANK / PROGRAM

③ Press the PS-2 switch(CH, channel) to set a **PC1** channel number. The display will show a current **PC1** channel.

```
C 1
```
BANK / PROGRAM

④ Press/hold the BANK UP or BANK DOWN switches to select a channel from 1 through 16.
⑤ Press the PS-2 switch to store a new **PC1** channel in memory. The LED above the PS-2 switch will flash 2 times.

 * The **PCs** channel is global (the same for all banks/presets). you need not edit this for any other banks/presets if you have already done so. In this case, omit the procedure ③~⑤.

⑥ Press the PS-3 switch(PC, program change) to set a **PC1** number. The display will show a current **PC1** number.

```
OFF
```
BANK / PROGRAM

⑦ Press/hold the BANK UP or BANK DOWN switches to select a **PC1** number from 1 through 128 or **OFF**.
⑧ Press the PS-3 switch to store a new **PC1** number in memory. The LED above the PS-3 switch will flash 2 times.
⑨ Press the PS-1 switch(FS, function select) to set other **PCs** and follow the same procedure ③~⑧.

Note
* The **OFF** means no Program Change is transmitted.
* The last decimal point on the display means that the display shows a **PCs** or **CCs** number.
* The Initial default channel setting are **PC1** : 01, **PC2** : 02, **PC3** : 03, **PC4** : 04 and **PC5** : 05.
* The Initial default number settings of the **PC1** and **PC2** are **OFF**.

3.3.2 Editing MIDI Control Change

The MIDI Control Changes are transmitted via MIDI OUT jack when the assigned loops turn on or off. The **CC1** is assigned the Loop1, ... , and the **CC8** is assigned the Loop8. The Control Change Value is 0 or 127 when the assigned loop turns off or on.

* The **CCs** channel and number are global (the same for all banks/presets). you need not edit these for any other banks/presets if you have already done so.

① Press/hold the PS-1 switch(FS, function select) to edit the **CC1** until the **CC1** is shown on the display if you are already in the Edit Mode.

```
 ___   ___   ___
|     |       |
|___  |___    |
```
BANK / **PROGRAM**

② Press the PS-2 switch(CH, channel) to set a **CC1** channel. The display will show a current **CC1** channel.

```
 ___        ___
|             |
|___          |
```
BANK / **PROGRAM**

③ Press/hold the BANK UP or BANK DOWN switches to select a channel from 1 through 16.
④ Press the PS-2 switch to store a new **CC1** channel in memory. The LED above the PS-2 switch will flash 2 times.
⑤ Press the PS-4 switch(CC, control change) to set **CC1** number. The display will show a current CC1 number.

```
 ___   ___   ___
|  |  |___  |___
|__|  |     |
```
BANK / **PROGRAM**

⑥ Press/hold the BANK UP or BANK DOWN switches to select a **CC1** number from 0 through 127 or **OFF**.
⑦ Press the PS-4 switch to store a new **CC1** number in memory. The LED above the PS-4 switch will flash 2 times.
⑧ Follow the same procedure ①~⑦ to set from **CC2** through **CC8**.

Note
* The **OFF** means no Control Change is transmitted.
* The last decimal point on the display means that the display shows a **PCs** or **CCs** number.
* The Initial default channel settings of the **CCs** are channel 1.
* The Initial default number settings of the **CCs** are **OFF**.

3.3.3 Editng XPDL Port

The EFX Mk II contains a **XPDL** port for expression pedal input. This can be used to alter parameters(via MIDI) in effects device that offer this capability.
The MIDI Control Change Value is transmitted corresponding to the position of expression pedal.
The Control Change value is from 0 through 127 when the position of expression pedal is from minimum through maximum. Any passive volume or expression pedal can be used. Recommended pedals are Boss FV500L/H, FV300L/H, FV200 and FV100.

* The **EPL** channel and number are global (the same for all banks/presets). you need not edit these for any other banks/presets if you have already done so.

① Press/hold the FS-1 switch(FS, function select) to edit the **EPL** for the XPDL port until the **EPL** is shown on the display if you are already in the Edit Mode.

```
 EPL
```
BANK / PROGRAM

② Press the PS-2 switch(CH, channel) to set a **EPL** channel number. The display will show a current **EPL** channel.

```
 C 1
```
BANK / PROGRAM

③ Press/hold the BANK UP or BANK DOWN switches to select a channel from 1 through 16.
④ Press the PS-2 switch to store a new channel in memory. The LED above the PS-2 switch will flash 2 times.
⑤ Press the PS-4 switch(CC, control change) to set a **EPL** number. The display will show a current **EPL** number.

```
 OFF
```
BANK / PROGRAM

⑥ Press/hold the BANK UP or BANK DOWN switches to select a **EPL** number from 0 through 127 or **OFF**.
⑦ Press the PS-4 switch to store a new **EPL** number in memory. The LED above the PS-4 switch will flash 2 times.

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.
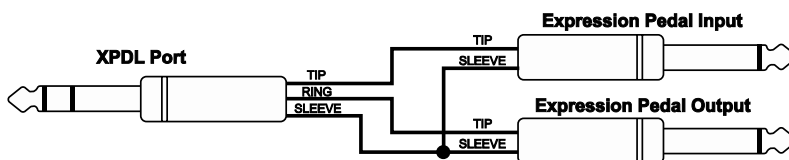
Note
* **OFF** means no Control Change is transmitted.
* The last decimal point on the display means that the display shows a **PCs** or **CCs** number.
* The Initial default channel setting of the **EPL** is channel 1.
* The Initial default number setting of the **EPL** is **OFF**.

* The active pedal(requiring a battery) will NOT work and may damage the EFX Mk II Audio Controller.
* Connect a expression pedal to the XPDL jack before the power applies to EFX MkII Audio Controller.

3.3.4 Conversion of Audio Loop into Control Function

Audio loop function 7 and 8 can be converted into control function 7 and 8.
The CTL7 and CTL8 jacks can be used as latching N.O.(Normally Open) or N.C.(Normally Closed) switches for remote amplifier channel switching.

 * The conversions are global (the same for all banks/presets). you need not edit this for any other banks/presets if you have already done so.

① Press/hold the PS-1 switch(FS, function select) to convert audio loop 7 into control function 7 until the *LP7* is shown on the display if you are already in the Edit Mode.

$$LP7$$

BANK / PROGRAM

② Press the BANK UP switch to convert *LP7* into *Ct7*. The display will show:

$$Ct7$$

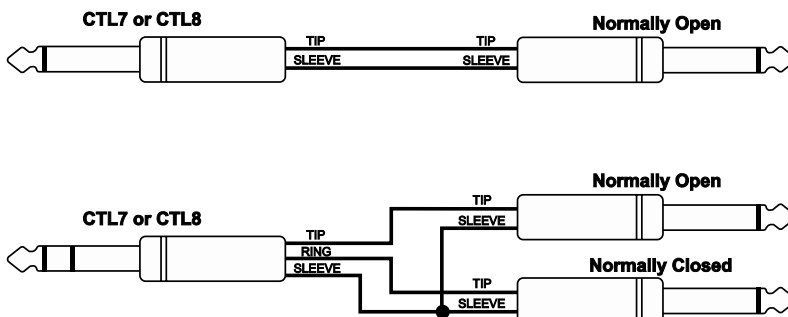**BANK / PROGRAM**

It will automatically be stored in memory.

LP7 means that the audio loop 7 is selected.
Ct7 means that the control function 7 is selected.

③ Follow the same procedure ①~② to convert *LP8* into *Ct8*

Cable Wiring
Standard 1/4" stereo or mono plugs connect to the CTL7 and CTL8 jacks.

* When the *Ct7* or *Ct8* are selected, the corresponding loop always turns on.
* The initial default setting is the *LP7* and *LP8*.

3.3.5 Input Buffer On/Off

When you connect Hi-Z stompboxes like a Fuzz to in the loop 1 ~ loop 4, the input buffer must be bypassed.

 * The input buffer On/Off is global (the same for all banks/presets). you need not edit this for any other banks/presets if you have already done so.

① Press/hold the PS-1 switch(FS, function select) to bypass the input buffer until the *bon* is shown on the display if you are already in the Edit Mode.

BANK / PROGRAM

② Press the BANK UP switch to bypass input buffer. The display will show:

BANK / PROGRAM

It will automatically be stored in memory.

bon   means input buffer is active.
boF   means input buffer is bypassed

Note
* The initial default setting is *bon*.

3.3.6 Popping Noise Reduction Control

Ths EFX MkII Audio Controller is based on relay switching. This method is utilized to route the audio signal with absolutely no tone coloration or degradation. But the disadvantage of relays is that they can produce a slight popping noise when they switch on/off. The 10-stage popping noise reduction control is brilliant to reduce this popping noise by muting time control of audio signal and switching order when the relays switch on/off.

 * The popping noise reduction control is global (the same for all banks/presets). you need not edit this for any other banks/presets if you have already done so.

① Press/hold the PS-1 switch(FS, function select) to set the popping noise reduction control until the *Pr0* is shown on the display if you are already in the Edit Mode.

```
Pr4
```
BANK / PROGRAM

② Press/hold the BANK UP switch to set a popping noise reduction control from **Pr0** through **Pr9**. It will automatically be stored in memory when you return to Preset Mode.

    Pr0 means the popping noise reduction control is not used.
    ⋮
    ⋮
    Pr9 means the maximum of the popping noise reduction control.

Note
* The initial default setting is **Pr4**.

4. Power Requirements

The EFX Mk-II Audio Controller requires regulated 12VDC or 9VAC at approximately 400mA. The power jack is a standard 5.5mm/2.1mm barrel.

5. Initial Default Setting

The initial default setting for the EFX Mk II Audio Controller may be reset with the following procedure. This procedure will erase all user data from the EEPROM memory.
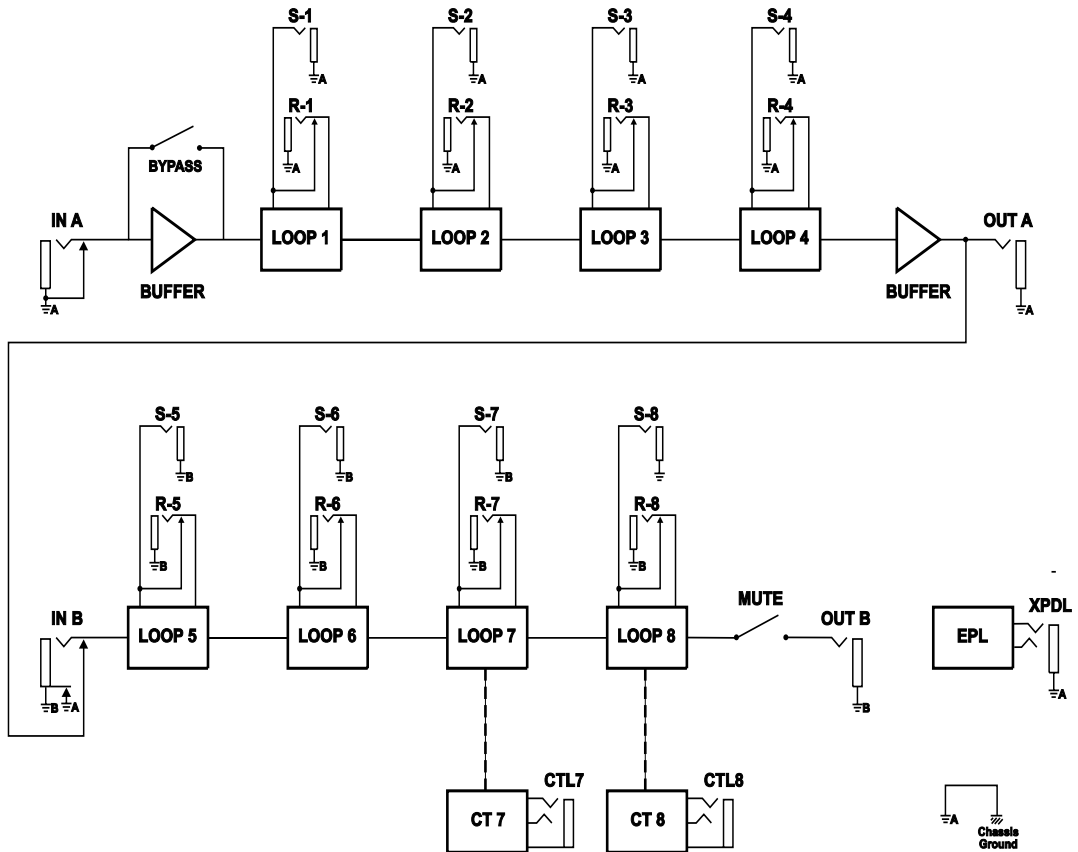Apply power while holding the MODE and PS-1 switches down. The display will show:

```
FAC
```
BANK / PROGRAM

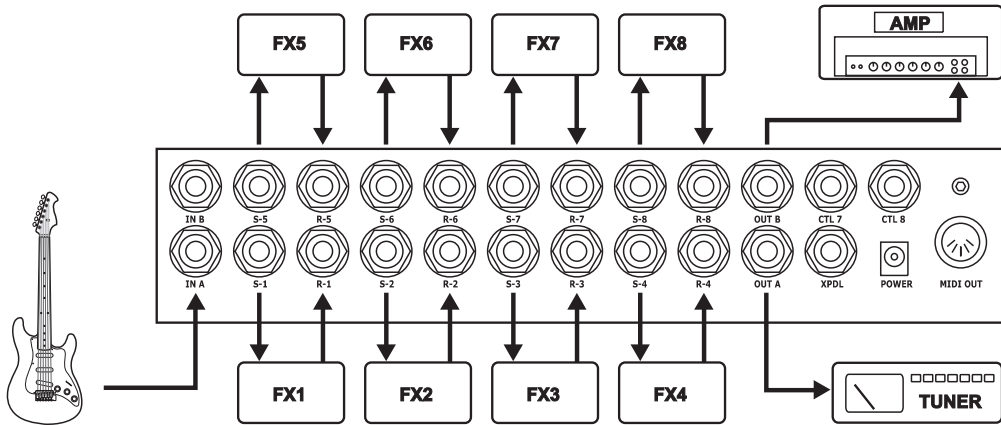The L1~L8 LEDs will turn on, at which point the two switches can be released.
When the initial default setting is successful, the EFX Mk II Audio Controller will automatically restart.
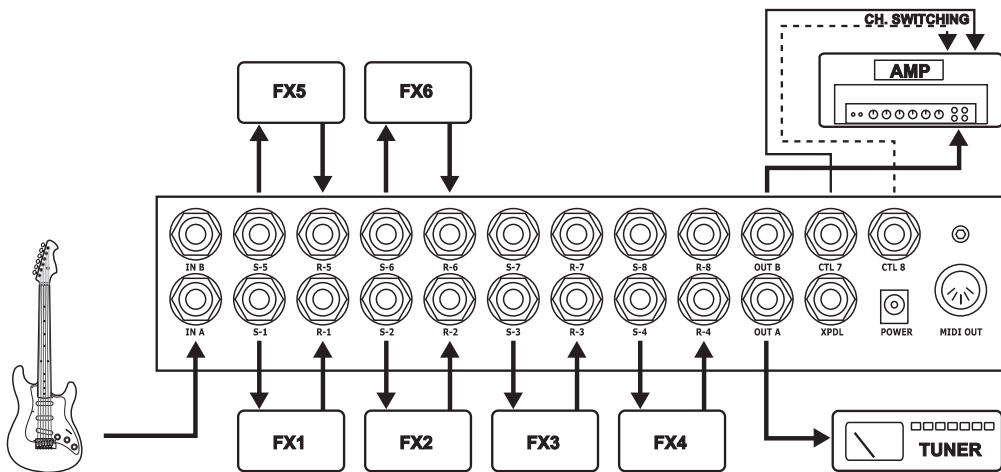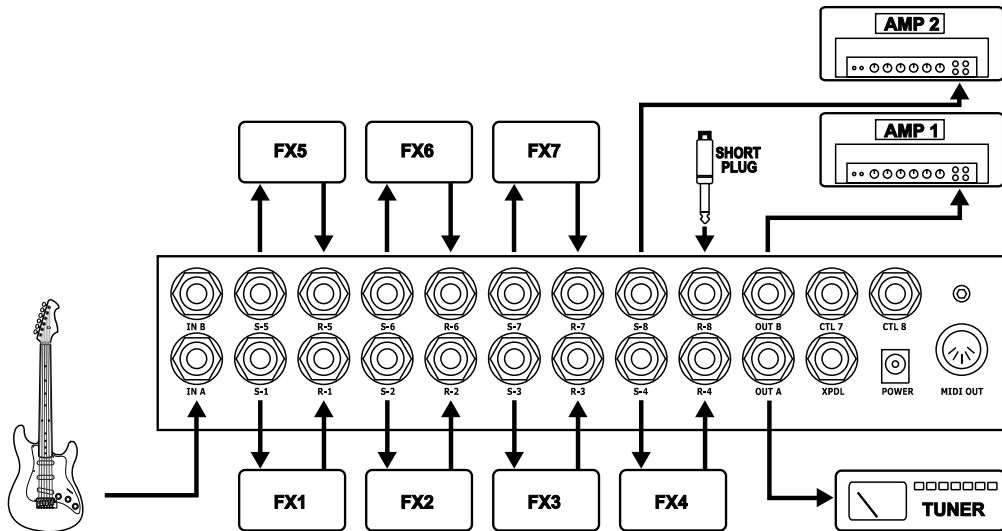
6. Block Diagram
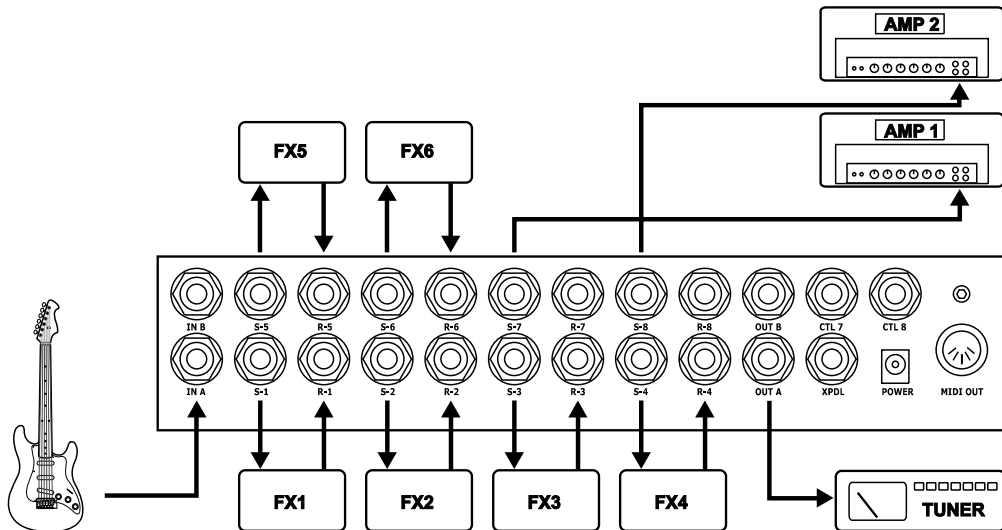
7. System Example

* **Basic system**
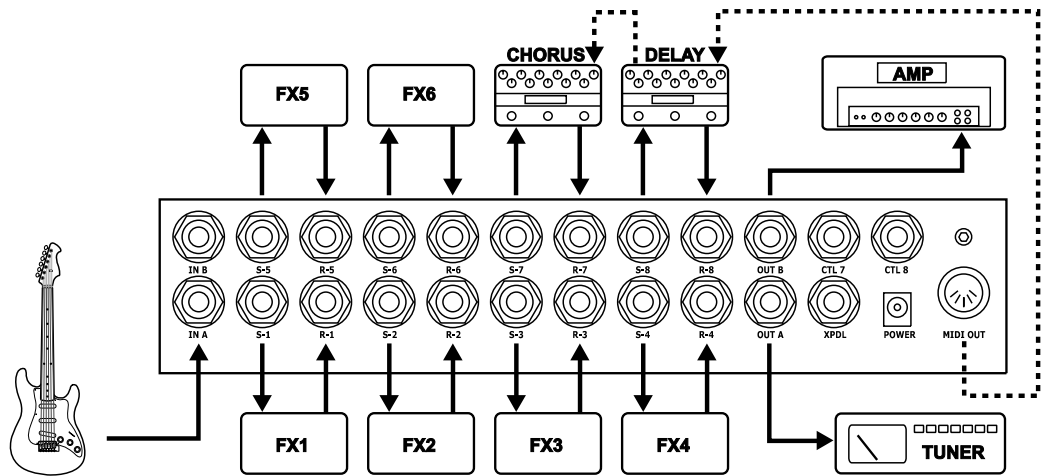

* **Amp channel switching via CTL7 and CTL8**

* System with output switchable to either of two amplifiers used
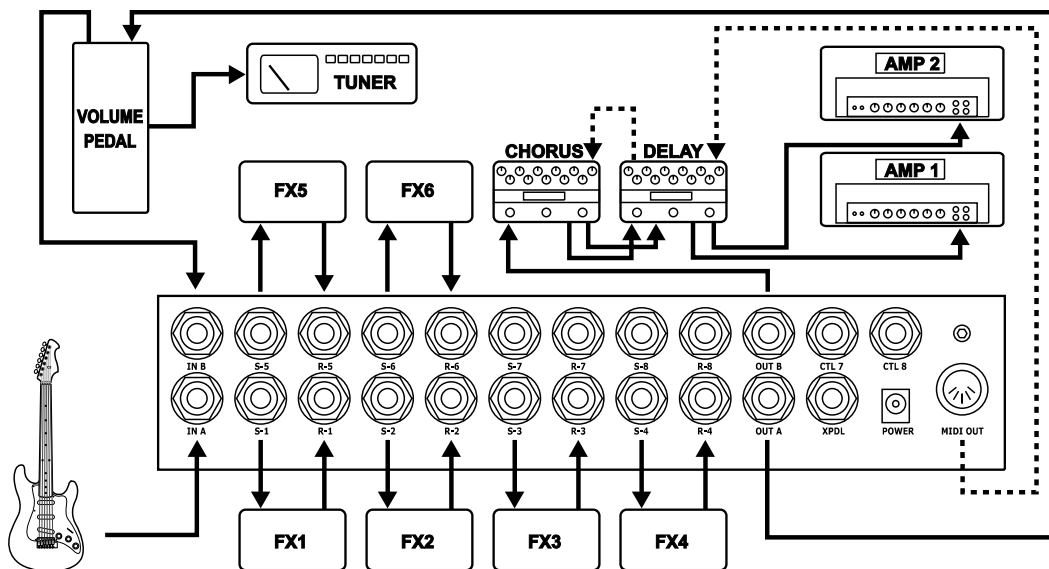

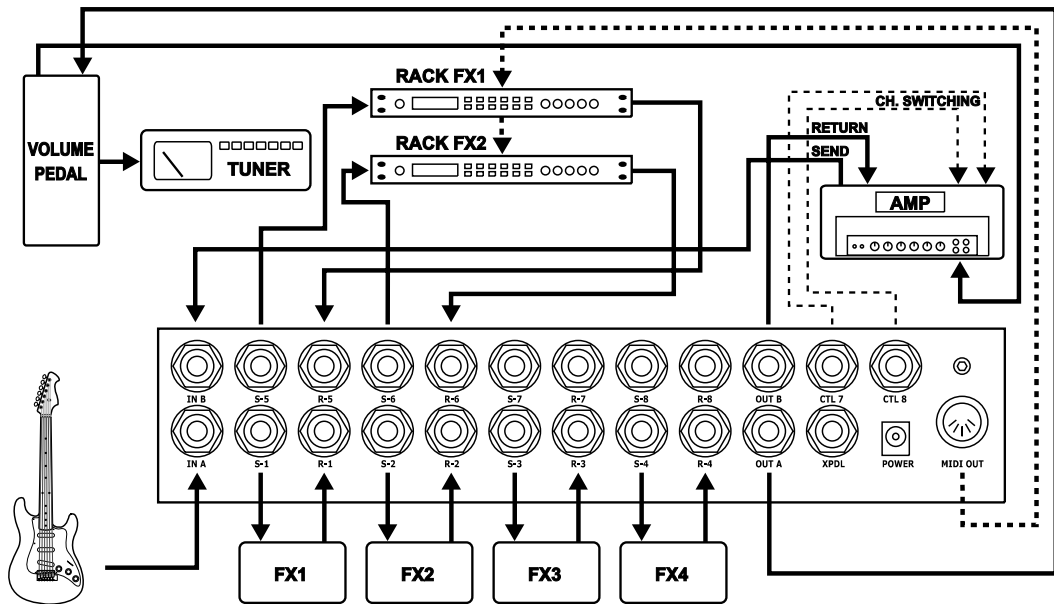*** System with output switchable to either or both of two amplifiers used**

* Chorus / delay patch change via MIDI PCs

* Stereo system with MIDI controllable FXs via MIDI PCs(Patch change) and CCs(On/Off)

* **Rack system**

VOLUME PEDAL — TUNER — RACK FX1 — RACK FX2 — CH. SWITCHING — RETURN — SEND — AMP

IN B — S-5 — R-5 — S-6 — R-6 — S-7 — R-7 — S-8 — R-8 — OUT B — CTL 7 — CTL 8

IN A — S-1 — R-1 — S-2 — R-2 — S-3 — R-3 — S-4 — R-4 — OUT A — XPDL — POWER — MIDI OUT

FX1 — FX2 — FX3 — FX4

* **Rack system with Mixer**

VOLUME PEDAL — TUNER — RACK FX1 — RACK FX2 — MIX — CH. SWITCHING — RETURN — SEND — AMP

IN B — S-5 — R-5 — S-6 — R-6 — S-7 — R-7 — S-8 — R-8 — OUT B — CTL 7 — CTL 8

IN A — S-1 — R-1 — S-2 — R-2 — S-3 — R-3 — S-4 — R-4 — OUT A — XPDL — POWER — MIDI OUT

FX1 — FX2 — FX3 — FX4