

FCB4X PROGRAMMABLE MIDI FOOT CONTROLLER

OWNER'S MANUAL

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Table of contents

INTRODUCTION	3
Overview	3
Top Panel	3
Back Panel	4
Specification	5
Power Connection	5
BASIC OPERATION	6
Bank and Preset selection	6
SETUP MODE AND PRESET PROGRAMMING	7
Programming Mode Entry	7
Setup Mode	9
LCD Backlight adjustment	9
LED Intensity adjustment	10
Expression pedal calibration	11
Midi device setting	13
Preset programming	15
Copy	15
Midi messages	17
Edit Title	22
LED Color	23
Expression Pedal (Exp1 and Exp2) assignment	25
Expression Pedal Input	26
Factory Restore	27
MIDI Implementation	27
MIDI Cable Support	27

INTRODUCTION

Overview

The FCB4X is a programmable MIDI foot controller that supports all standard MIDI devices. This is a new model with more features that can be programming up to 16 MIDI messages and saved to EPROM memory. Up to 128 memory presets can be arranged in 32 banks of 4 presets. You can assign any MIDI Program Change (PC), Continuous Controller messages (CC) and MIDI Note On/Off messages into each preset (all 16 midi messages on different MIDI channels). Displayed by blue color backlight 16 characters x 2 lines LCD with big character size and RGB colors LED with independent color programmable. The FCB4X has up/down bank and 4 patch selection buttons, all with high quality heavy duty foot switches that you can feel when pressed. The chassis is made of aluminum, folded by a laser cutting process and finished with a black anodized coating. It is a compact, rugged, simple to use, fully programmable MIDI foot controller.

Top Panel



BANK UP/DOWN SWITCH:

This is used to increase the bank up or decrease the bank down from the current state. The current bank starts from bank#1 up to a maximum of bank#32. You also use these switches in programming mode to edit parameter inside the menu selection.

PRESET SWITCH: The FCBX has 4 patches in a bank labeled as **S1**, **S2**, **S3** and **S4**. You

also use these switches in programming mode to edit parameter inside

the menu selection.

BLUE SCREEN LCD: The LCD display has 16 characters x 2 lines showing Bank number, Patch

button and Preset name when you are in operation mode or display

menu when you are in programming mode.

RGB LED DISPLAY: This is Red, Green, Blue LED with programmable to illuminate preset

status.

Back Panel



EXP1, EXP2: Expression Pedal input1 (EXP1) and Expression Pedal input2 (EXP2) for external

pedal control. You can assign any midi control change message and any midi channel to call up both expression pedal inputs arrange 128 presets (32 banks x

4 presets)

MIDI out port is used to transmit MIDI messages from the FCB4X to other MIDI

device/s. It is a 7 pin MIDI connector so you can supply phantom power to the

FCB4X by supply voltage 9V to pin 6, 7 (AC or DC, it does not matter)

9VDC IN: Connect to supply external voltage 9Vdc with current 100mA minimum (Polarity

is not important)

Note: Do not plug into the external power supply socket if you are phantom powering the unit via a MIDI cable.

Specification

- 1 MIDI OUT with 7-pin DIN connector supports phantom power on pin 6, 7. (Polarity is not important)
- Flexible power requirements: 9Vdc-12Vdc, or 9Vac, at 100mA via a 5.5mm/2.1mm barrel connector. (Power Adapter is not included)
- 2 bank switches, 4 patch switches with heavy duty foot switch.
- Programmable mode with 128 presets, arranged in 32 banks of 4 presets.
- Program Change message (PC), Control Change message (CC) and midi Note On/Off messages support (16 midi messages per preset, all on different MIDI channels)
- Blue color LCD display 16 characters x 2 lines with big character size.
- RGB multi colors LED programmable to illuminate preset status.
- 2 Expression pedal inputs EXP1 and EXP2 assignable to any Control Change Number on any MIDI channel for each PATCH (arrange in 128 presets with 32 banks x 4 presets)
- Housed in a sleek aluminum chassis and brushed finish with black anodized coating.
- Dimensions approx.: 10.3"W x 4.7"D x 2.0"H (26.2cm x 12.0cm x 5.0cm)
- Weight approx. : 2.2lb (1.0kg)

Power Connection

The FCB4X has flexible power requirements between 9Vdc-12Vdc, or 9Vac, 100mA. You can plug in your power adapter to the 5.5mm/2.1mm barrel connector.

Do not use voltage over 12Vdc or 9Vac otherwise the unit will be damaged.

BASIC OPERATION

Please refer to the text that appears under the switches when you are going to use the FCB4X unit in the basic operation mode. On power up, the latest preset will be selected and transmitted as a MIDI message via MIDI out (Initial value is Bank#1, preset#1 [01-S1]).

BANK: 1 S1
USER PRESET# 000

In the operation mode the LCD will display bank number, patch button and preset name of the selected preset.

Bank and Preset selection

Press the **BANK UP** or **BANK DOWN** button to move/scroll from the current bank to another. The LCD display will flash with the number of bank and no MIDI message will be transmitted until a patch button is selected (**S1**, **S2**, **S3** or **S4** button). You can hold on the **BANK UP** or **BANK DOWN** switches to scroll past the current bank continuously and the LCD display will loop once it reaches bank #32.



You can select a preset by press the **S1**, **S2**, **S3** or **S4** button, The LED above the selected PATCH button will illuminate and the stored MIDI messages for that PATCH will be transmitted.

SETUP MODE AND PRESET PROGRAMMING

Programming Mode Entry

When you supply power to the FCB4X unit it goes in to operating mode automatically. If you want to program a preset then you need to enter programming mode by following these steps:

- Select the preset that you want to configure by using the BANK Up/Down and PATCH S1-S4 buttons. This means you have to select the preset you wish to program before entering to programming mode.
- Press both BANK UP and BANK DOWN buttons together and hold on until the LCD display shows the characters below. Please do not care if the bank number is moving, just simply press BANK UP and BANK DOWN buttons and hold both buttons until the LCD display shows the characters below;

[Sel] to Program
[Bac] to Exit

- 3. The LCD display as shown above means "Programming Mode Entry" then release the BANK UP and BANK DOWN buttons.
- 4. Now, you can program or configure the selected preset. Please refer to the label above each buttons when you have entered to programming mode.

-DEC: Decrease the current value
INC+: Increase the current value

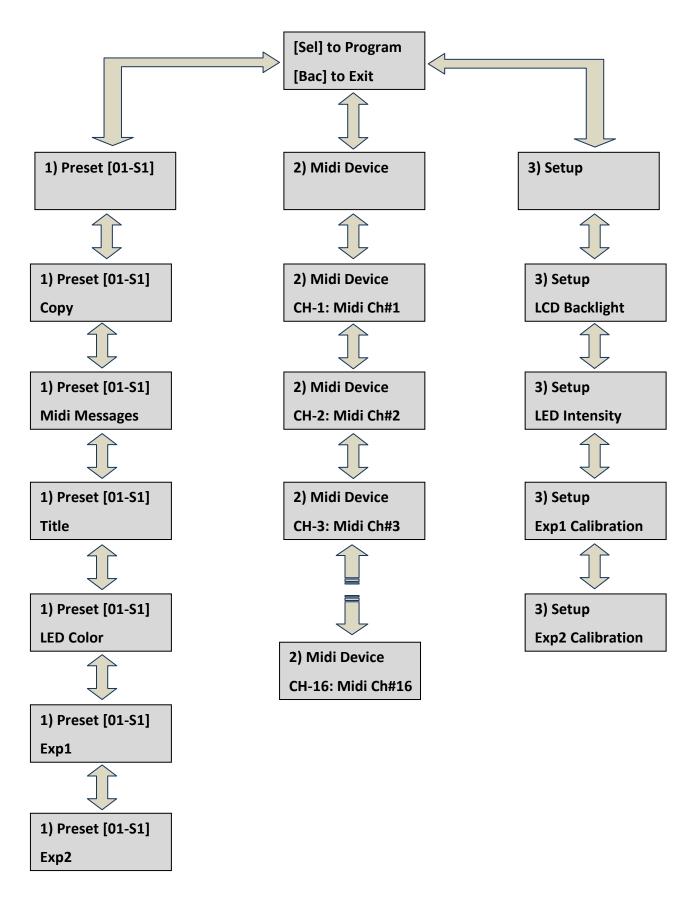
< LEFT: Move menu to left or scroll the cursor to left

RIGHT >: Move menu to right or scroll the cursor to right

SELECT: Select and enter to the selected menu

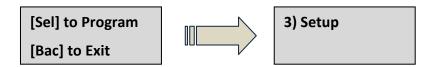
BACK: Move back and exit from the selected menu

- 5. As you selected a preset already now you can enter to programming mode by pressing a "SELECT" button or exit from the programming mode and back to operating mode by pressing a "BACK" button
- 6. In Programming mode, the menu and sub menu items will show you as the following diagram; You can scroll menu to left by pressing "<LEFT" button or scroll menu to right by pressing "RIGHT>" button. If you need to enter to the selected menu, you can press a "SELECT" button to enter to the selected menu.



Setup Mode

Once you have entered to programming mode, you can go to setup mode by scroll the menu to "3) **SETUP"** menu, the LCD display shows the characters below;



Now you can enter to setup menu by pressing "SELECT" button, the LCD display will move to sub-menu items. You can scroll sub-menu to left by pressing "<LEFT" button or scroll sub-menu to right by pressing "RIGHT>" button. If you need to enter to the selected sub-menu, you can press a "SELECT" button to enter to the selected sub-menu. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu.

LCD Backlight adjustment

You can go to adjust the LCD display backlight by enter to sub-menu item as following;



Now you can press a "SELECT" button to enter to LCD Backlight sub menu item, the LCD display will show you as the following characters;



You can press "**<LEFT**" to decrease the LCD display backlight or press "**RIGHT>**" to increase the LCD display backlight.



You can exit from the LCD display backlight adjustment by pressing "BACK" button. Your setting will be saved and the LCD display will go back to the setup menu.

LED Intensity adjustment

You can go to adjust the LED intensity by enter to sub-menu item as following;



Now you can press a "SELECT" button to enter to LCD Backlight sub-menu item, the LCD display will show you as the following characters;



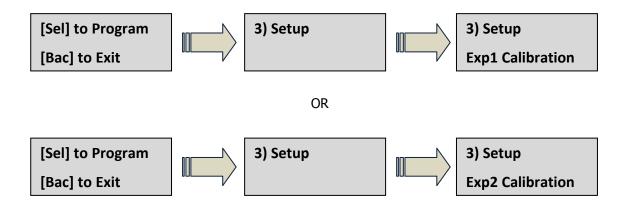
All S1 – S4 LEDs will be light on with mixing Red, Blue and Green colors. You can press "**<LEFT**" button to decrease the LED intensity or press "**RIGHT**>" button to increase the LED intensity.



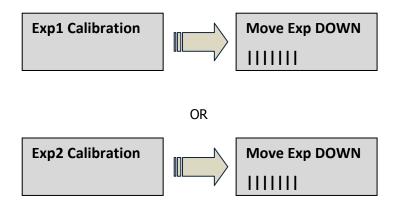
You can change LED color while adjust the intensity level by pressing "+INC" or "DEC-" button. The LED color will be changed by mixing the RGB colors. You can exit from the LED intensity adjustment by pressing "BACK" button. Your setting will be saved and the LCD display will go back to the setup menu.

Expression pedal calibration

You can calibration the Exp#1 or Exp#2 by enter to sub-menu item as following; Please be sure you have inserted expression pedal to the Exp#1 or Exp#2 jack before enter to the calibration process. It will be saved an incorrect calibration data.



You can press a **"SELECT"** button to enter to Exp#1 or Exp#2 Calibration sub-menu item, the LCD display will show you as the following characters;



You have to move the Exp#1 or Exp#2 down (heel down) to the position that you wish to make it as a lowest position and wait moment. The FCB4X will be saved new lowest value as a heel down position.



After the FCB4X has calculated for the heel down position and already saved it the memory, the LCD display will show you as following characters;



You have to move the Exp#1 or Exp#2 up (heel up) to the position that you wish to make it as a highest position and wait moment. The FCB4X will be saved new highest value as a heel up position.

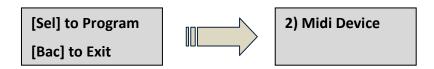


The lowest value is 000 and the highest value is 127. These values will be saved as the heel position that you have been calibrated. The LCD display will go back to the setup menu automatically once the calibration data have been saved to the memory.

If you want to exit or cancel from the calibration process, you can press a "BACK" button. The LCD display will go back to the setup menu without saving calibration data.

Midi device setting

Before programming your preset, you have to add your midi devices first. You can go to midi device setting by scroll the menu to **"2) Midi Device"** menu the LCD display shows the characters below;



Now you can enter to midi device menu by pressing "SELECT" button, the LCD display will move to submenu items. You can scroll sub-menu to left by pressing "<LEFT" button or scroll sub-menu to right by pressing "RIGHT>" button. If you need to enter to the selected sub-menu, you can press a "SELECT" button to enter to the selected sub-menu. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu.



You can press "**<LEFT**" button to scroll down the midi channel setting or press "**RIGHT**>" button to scroll up the midi channel setting. This is base on your midi device midi channel setting, you can save the name of your midi device to the midi channel. It defaults as the following table.

Midi Channel	Default name
CH-1	Midi Ch#1
CH-2	Midi Ch#2
CH-3	Midi Ch#3
CH-4	Midi Ch#4
CH-5	Midi Ch#5
CH-6	Midi Ch#6
CH-7	Midi Ch#7
CH-8	Midi Ch#8
CH-9	Midi Ch#9
CH-10	Midi Ch#10
CH-11	Midi Ch#11
CH-12	Midi Ch#12
CH-13	Midi Ch#13
CH-14	Midi Ch#14
CH-15	Midi Ch#15
CH-16	GCX

Regarding to the above table, you can replace name of your midi device by go the midi channel submenu by pressing ""<LEFT"</pre> or "RIGHT>" button then press "SELECT" button to enter to the selected midi channel you wish to set. Below is an example to save new name of midi device to midi channel#1.



Once you have entered to midi channel#1, the cursor will be flashing at the name of midi device (line#2). You can replace a new name of your midi device max to 10 characters. You can move the cursor to left or right by pressing ""<LEFT"</pre> or "RIGHT>" button and you can change character at the cursor position by pressing "+INC" or "DEC-" button.

Below is an example to naming midi device of midi channel#1 to "ABC ch.1"



You can press "BACK" button to save this setting and back to midi device menu. The new name will be saved and shown at the midi device menu.

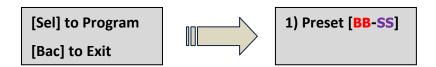
2) Midi Device CH-1: ABC ch.1

In preset programming mode, this name will call as midi channel#1. You can easy to program midi message to send to this midi device base on midi channel#1.

Preset programming

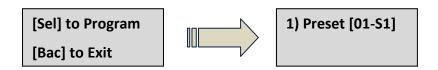
In the preset programming menu, this will explain how to program midi message of the selected preset. This means, you have to select preset of the FCB4X before entering to preset programming mode.

You can go to preset programming menu by scroll the menu to **"1) Preset [BB-SS]"** menu the LCD display shows the characters below;



BB is a selected bank and **SS** is a selected patch button. All are called as a selected preset.

If you came from Bank#1 and S1 patch button, this will show as [01-S1] which is a selected preset. The selected preset [01-S1] will show at the preset menu as following;



Everything you did in the preset programming will be saved only for this preset [01-S1]. This means, all 32 banks x 4 patches = 128 presets can be saved with different programming data.

Copy

Copy sub-menu will be copied all programming data of the selected preset to another preset. The destination preset will be having same programming data as the selected preset. You can enter to Copy sub-menu by pressing "SELECT" button. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu. When you enter to copy sub-menu, the LCD display shows the characters below;



This will copy programming data from a selected preset [01-S1] to another preset.

You can press "BANK UP" or "BANK DOWN" button to move a destination preset to another bank. If the destination preset and the selected preset are the same preset, it will be exit without copying. For the above display, you can press "S1" button to exit without copying.

If you move a destination preset that you wish to copy to bank#2, the LCD display will be flashing as following;

Now you can press a patch button S1 - S4 to be a destination copy preset. Below example to show you the destination preset is **Bank#1 - S4** by pressing "S4" button. The S4 LED will be illuminated when you press "S4" as a destination copy preset.

You have to press "S4" button again to copy data from [01-S1] to [02-S4] preset. The LCD display will show you as following;

Right now, the selected preset is changed to preset [02-S4]. You can go back to operating mode by pressing a "BACK" button. Midi data will be transmitted from the new selected preset [02-S4]

Midi messages

This will explain about midi messages to be programming to the selected preset. You can enter to Midi messages sub-menu by pressing "SELECT" button. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu. When you enter to midi messages sub-menu, the LCD display shows the characters below;



The FCB4X support to send midi messages max to 16 midi messages with different midi channel. The default message has programmed to send only one message on midi program change (PC). Default messages has programmed as following table;

Message number	Default midi command
Msg1	MIDI Channel#1, PC000-127
Msg2	Off
Msg3	Off
Msg4	Off
Msg5	Off
Msg6	Off
Msg7	Off
Msg8	Off
Msg9	Off
Msg10	Off
Msg11	Off
Msg12	Off
Msg13	Off
Msg14	Off
Msg15	Off
Msg16	Off

You can program midi command to all 16 midi messages (Msg1 – Msg16) and the midi commands will be transmitted from Msg1 – Msg16 serially. When you have already entered to midi messages menu, you will see the LCD as following characters;

Msg1: <u>M</u>idi Ch#1 PC,000

Note: the display above if you came from preset [01-S1]

The cursor will be flashing in midi channel position. If you have setting midi device, it will show you midi device name as following;

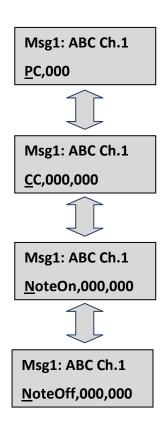
Msg1: <u>A</u>BC Ch.1 PC,000

Note: if you have setting midi channel#1 as ABC ch.1

If the cursor is flashing at midi channel, you can change midi channel to another midi channel by pressing "-DEC" or "INC+" button. You can move the cursor to midi command, midi value and midi channel by pressing "SELECT" button.



You can change midi commands of the Msg1 by moving the cursor to midi command position (2nd line) and press "-DEC" or "INC+" button to change midi command.

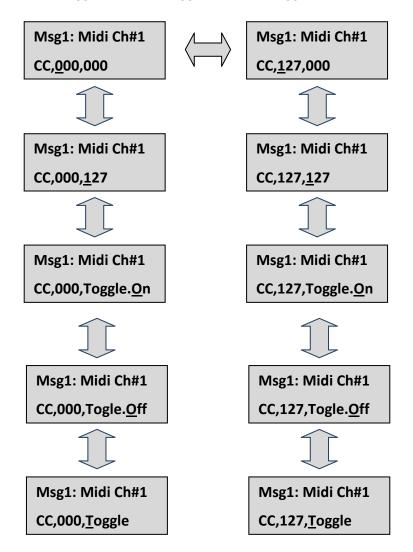


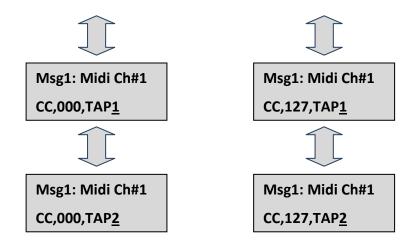
Midi Program Change command (PC)

In midi program change command (PC), you can scroll midi program change number between 000 – 127 by pressing "-DEC" or "INC+" button. When the midi program change number is changing, the midi program change command will be transmitted to your midi device base on the midi channel setting. For the below setting, midi program change command will be transmitted on midi channel#1

Midi Control Change command (CC)

In midi control change command (CC), you can scroll midi control change number between 000 - 127 by pressing "-DEC" or "INC+" button. For the midi control change value, it can be programming to send fix value between 000 - 127, Toggle.On value, Toggle.Off value, Toggle value, TAP1 value or TAP2 value.





You can change the control change value by pressing "-DEC" or "INC+" button. The meaning of control change value is;

000 – 127: midi control change will be transmitted with control change value between 000 –

127.

Toggle.On: midi control change will be transmitted with control change value 127. **Togle.Off:** midi control change will be transmitted with control change value 000.

Toggle: midi control change will be transmitted with control change value 127 for ON

state or 000 for OFF state base on the current status of the control change number in the memory. New control change value will be saved to the memory.

TAP1: midi control change will be transmitted with control change value 127 every time

when the selected preset button is pressed.

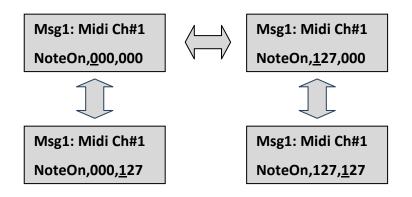
TAP2: midi control change will be transmitted control change value 127 when the

selected preset button is pressed at the $\mathbf{1}^{\text{st}}$ time and transmit control change

value 000 when the selected preset button is pressed at the 2nd time.

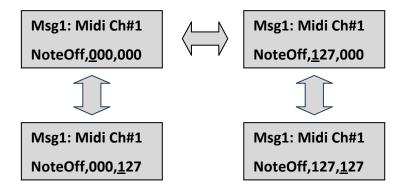
Midi Note On command

You can scroll midi note on number between 000 - 127 by pressing "-DEC" or "INC+" button. For the midi note on value, it can be programming to send fix value between 000 - 127.



Midi Note Off command

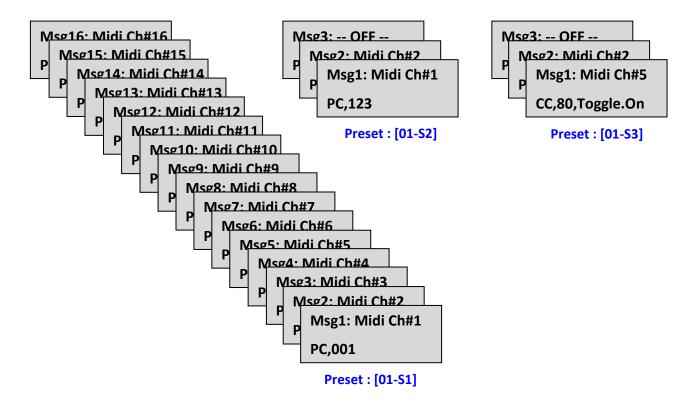
Same as the mido note on command, you can scroll midi note on number between 000 – 127 by pressing "-DEC" or "INC+" button. For the midi note off value, it can be programming to send fix value between 000 – 127.



16 midi messages

You can scroll up/down to all 16 midi messages by pressing "<LEFT" or "RIGHT>" button. Next midi message will default setting to OFF then you have to turn it on by entering midi command.

Example below is data programming of preset [01-S1], [01-S2] and [01-S3]



Edit Title

All preset can be naming title max to 16 characters. You can edit title of the selected preset by going to title sub-menu, the LCD display shows the characters below. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu.



Default title name of all presets are showing as below table;

Preset [Bank:Patch button]	Title (name)
000 [01:S1]	User Preset# 000
001 [01:S2]	User Preset# 001
002 [01:S3]	User Preset# 002
003 [01:S4]	User Preset# 003
004 [02:S1]	User Preset# 004
005 [02:S2]	User Preset# 005
006 [02:S3]	User Preset# 006
007 [02:S4]	User Preset# 007
008 [03:S1]	User Preset# 008
009 [03:S2]	User Preset# 009
010 [03:S3]	User Preset# 010
011 [03:S4]	User Preset# 011
012 [04:S1]	User Preset# 012
013 [04:S2]	User Preset# 013
014 [04:S3]	User Preset# 014
015 [04:S4]	User Preset# 015
124 [32:S1]	User Preset# 124
125 [32:S2]	User Preset# 125
126 [32:S3]	User Preset# 126
127 [32:S4]	User Preset# 127

Below is an example to edit title of preset [01-S1]



Once you have entered to edit title of preset [01:S1], the cursor will be flashing at the title name of preset [01:S1] (line#2). You can replace a new title name max to 16 characters. You can move the cursor to left side or right side by pressing "LEFT" or "RIGHT>" button and you can change character at the cursor position by pressing "+INC" or "DEC-" button. You can press "SELECT" button to add a space character.

Below is an example to edit title of preset [01-S1] to "My Clean Channel"



You can press "BACK" button to save this title and back to preset menu. The new title will be saved and shown when you back to operation mode.



LED Color

You can program LED display of each preset by going to LED Color sub-menu, the LCD display shows the characters below. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu.



Default LED Color is setting to Blue color.

The LED is RGB color, it can be mixed between all colors as showing in below table;

RGB Color mixing	Color name
Red	Blue
Green	Green
Blue	Blue
Red + Green	Yellow
Red + Blue	Purple
Green + Blue	Cyan
Red + Green + Blue	White

Below is an example to edit LED color of preset [01-S1]



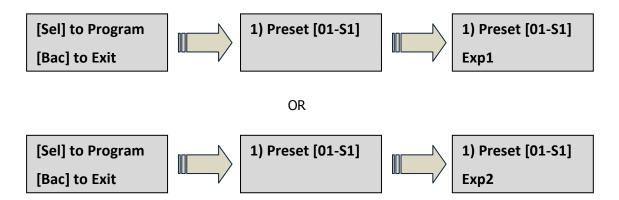
Once you have entered to edit LED Color of preset [01:S1], the cursor will be flashing at color of preset [01:S1] (line#1). You can change color by pressing "+INC" or "DEC-" button.

The LED display will show status of the midi message base on the preset you have programmed. You can press "SELECT" button to choose midi message of the selected preset. The LED will illuminate status of the selected midi message. Below is showing LED illuminate status;

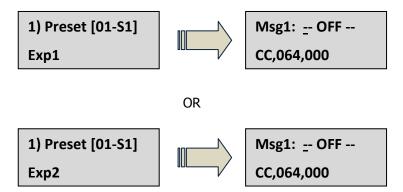
LED status
ON when midi PC command is transmitted.OFF when midi PC command of another preset is transmitted.
 Always ON when midi CC value is setting to Toggle.On. Always OFF when midi CC value is setting to Togle.Off. ON or OFF if midi CC value is setting to Toggle. (Base on toggle CC value in memory) ON then OFF when midi CC value is setting to TAP1 or TAP2. Note:
 LED status of another preset will not change if setting to midi PC command. LED status of another preset will be changed if setting to midi CC command.
OFF when midi Note command is transmitted. LED status of another preset will not change

Expression Pedal (Exp1 and Exp2) assignment

Exp1 or Exp2 sub-menu, the LCD display shows the characters below. If you want to go back to main menu, you can press "BACK" button. It will move back to main menu.



Press "SELECT" button to enter to edit expression pedal midi control change data.



Once you have entered to expression pedal programming, the cursor will be flashing at midi channel position. You can scroll up/down to change midi channel by pressing "-DEC" or "INC+" button. You can move to select control change number by pressing "SELECT" button.

Example below is turning on expression pedal to send midi control change on midi channel#1

Example below is setting control change number to CC#123



If you move up/down the expression pedal that has been inserted to the exp port. Midi control change value will be changed.

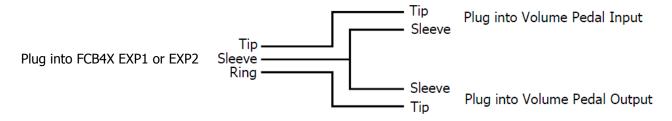


Press "BACK" button to save this setting and move back to preset menu. For this example, this expression pedal setting will be saved only for the selected preset [01-S1]. You can assign any midi control change number with different midi channel to all presets.

Expression Pedal Input

Expression pedal input EXP1 and EXP2 available to call in all preset arrange 128 presets (32 Banks x 4 Presets) You can enable or disable the expression pedal for each PATCH. The expression pedal inputs can be programmed to send any Control Change on any MIDI channel for each PATCH. Please refer to Preset Programming Mode for details.

EXP1 and EXP2 Inputs require either a standard expression pedal wired directly with a stereo $\frac{1}{4}$ " (6.35mm) TRS cable or a volume pedal using a Y insert cable. The stereo end of the Y-cable plugs into the EXP1 and the two mono ends plug into the input and output of the volume pedal as showing in below diagram.



NOTE: Disconnect the power from the FCB4X before plugging in the expression pedal EXP1 or EXP2. Failure to do so could result in damage to the unit.

Factory Restore

You can reset the FCB4X to the factory default settings. The data that you saved in the EEPROM memory will be erased and the unit returned back the factory default settings. You can restore the factory default by following these steps:

- 1. Unplug the power from the FCB4X unit.
- Press and hold S4 button if you want to start from MIDI PC#0 at first in the Bank1-S1 or press and hold S3 button if you want to start from MIDI PC#1 at first in the Bank1-S1 (ie: POD2.0 needed).
- 3. Plug the power into the FCB4X unit.
- 4. The LCD display will be flashing with characters below, it is processing a restore.

Factory Restore...

- 5. Once you see the LCD display on the unit is processing, now you can release your finger from the \$4 button (or \$3 button).
- 6. Wait for a moment until restore process has completed. The FCB4X will be rebooted and initialized with the factory default settings.

MIDI Implementation

MIDI Channel: Default: 1 (Transmitted) Changed: 1 - 16

Program Change#: 0-127Controller#: 0-127Control Change Value: 0-127Note On/Off: 0-127

MIDI Cable Support

The FCB4X is a standard MIDI foot controller that can be connected to any MIDI equipment via a standard 5 pin MIDI cable. Phantom power into the FCB4X unit via a standard 7 pin midi cable requires pins 6 and 7 for the power supply. The polarity is not important.