PEAK

MIDI SWITCHING PRODUCTS

FCB8N

PROGRAMMABLE MIDI FOOT CONTROLLER

OWNER'S MANUAL

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Contents

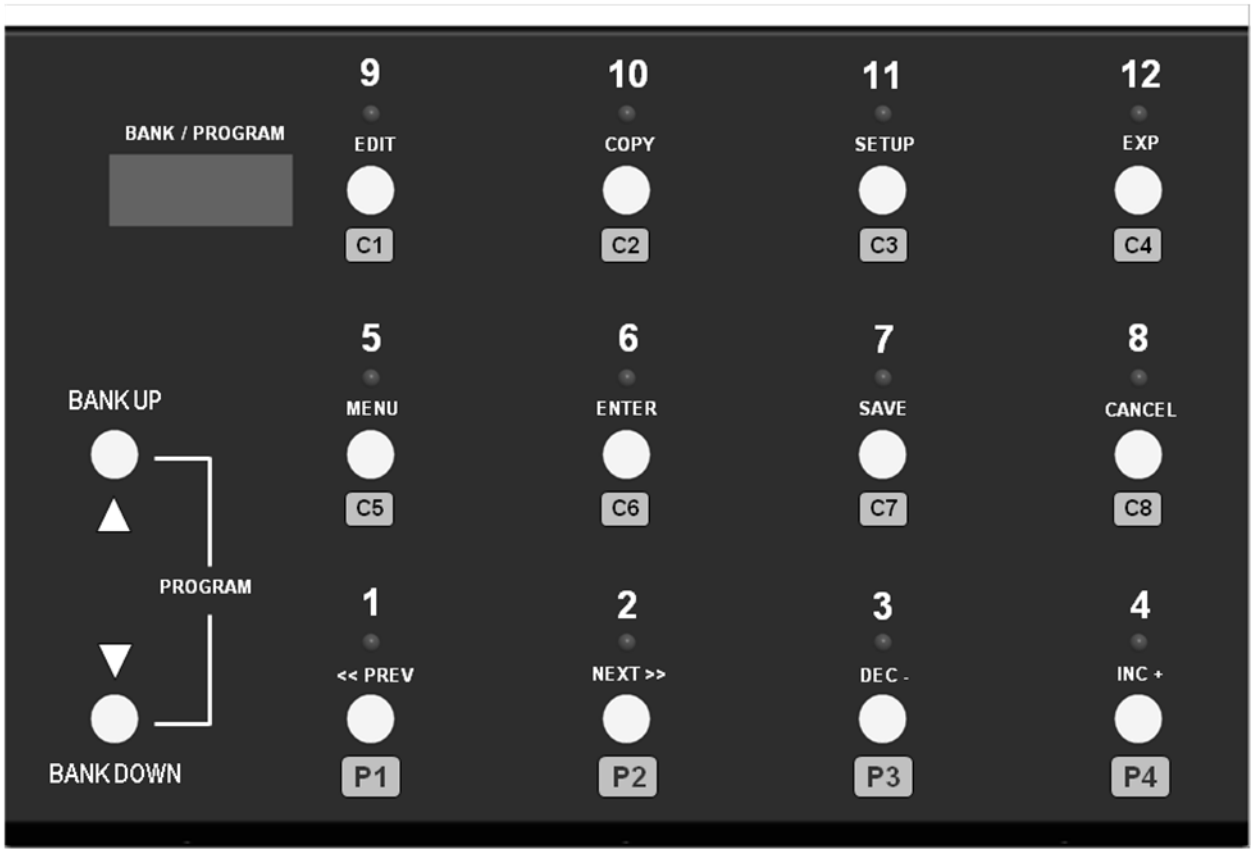
INTRODUCTION

Overview

The FCB8N is a programmable MIDI foot controller that supports all standard MIDI devices. This is an upgraded version of the FCB8 MIDI Foot controller. It can be programmed with MIDI messages and saved to EPROM memory. 128 memory Patches can be arranged in 32 Banks of 4 Patches or 120 memory Patches arranged in 10 Banks of 12 Patches. You can assign 7 MIDI Program Change (PC), each on independent MIDI Channels, and 8 Continuous Controller messages (CC), on any single MIDI Channel, to each PATCH. In 4Pr mode the eight CC messages can be accessed as INSTANT ACCESS controls. The FCB8N also supports 1 expression pedal that can be assigned to any Continuous Controller on any of the 16 MIDI Channels

The FCB8N has 2 up/down BANK and 12 PATCH and INSTANT ACCESS selection, high quality, heavy duty tactile foot switches. The chassis is made of aluminium, manufactured by a CNC laser cutting and folding process and finished with a black anodized, brushed finish, coating. It is a compact, rugged, simple to use, fully programmable MIDI foot controller.

Top Panel



BANK UP/DOWN SWITCH: Increments and decrements the BANK selection. In 4Pr mode Banks are numbered from #1 to #32. In 12Pr mode they are numbered from #1 to #10

PATCH SWITCHES: In 4Pr mode the FCB8N has 4 Patches in each BANK labelled as **P1**, **P2**, **P3** and **P4** or 12 Patches per BANK labelled as **1, 2, 3, ..., 12** in 12Pr mode. These switches are also used for INSTANT ACCESS Commands and in edit mode for function selection i.e. edit, enter, save, cancel, copy, etc...

BANK/PROGRAM DISPLAY: The seven segment display has 4 digits displaying mode when editing a program or BANK number when in operating mode.

Back Panel

MIDI OUT: The MIDI out port is used to transmit MIDI messages from the unit to other MIDI device/s. It is a 7 pin MIDI connector with phantom power support on pins 6 & 7. Supplied voltage must be within 9V – 12V DC or 12VAC, at 200mA minimum current. **Voltage over 12VDC or 9VAC will damage the unit**.

9-12V DC/AC In: Power supply input, 5.5mm/2.1mm barrel connector, Supplied voltage must be within 9Vdc – 12Vdc or 12Vac, at 100mA minimum current. **Voltage over 12Vdc or 9Vac will damage the unit**.

EXP1: ¼" (6.35mm) TRS (Tip, Ring, Sleeve) input to suit standard 10K expression pedal or volume pedal.

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

Specifications

• 1 MIDI OUT with 7-pin DIN connector with phantom power support on pin6 and pin7.

• 1 expression pedal programmable for each patch on independent MIDI channels.

• 2 "bank" and 12 "patch" heavy duty foot switches.

• 128 Presets arranged in 32 banks of 4 presets with 8 Instant Access controls in 4pr mode or 120 Presets arranged in 10 banks of 12 presets in 12pr mode.

• Program Change and Continuous Controller Message support (7PC , on independent MIDI channels, and 8CC messages per preset on same MIDI channel) and 8 Global CC on different MIDI channel.

• 8 Instant Access buttons manually toggle the 8 programmable CC Messages On and Off or write a preset value to the controller and support to call 8 Global CC on the instance access buttons.

• Flexible power requirements: 9Vdc-12Vdc or 9Vac, 100mA adapter with a 5.5mm/2.1mm barrel connector. (Adapter is not included)

• Housed in a sleek aluminum, precision laser cut, enclosure coated with a black anodized brushed finish

• Dimensions approx.: 13.0"W x 9.0"D x 2.5"H (33.0cm x 22.90cm x 6.35cm) a little bigger than A4 paper size.

• Weight approx: 3.0lb (1.4kg)

Power Connection

The FCB8N 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 using the FCB8N unit in the basic operation mode. On power up, the last selected PATCH will be loaded and transmitted (Initial value is BANK#1, PATCH#1 in 12Pr mode).

BANK and PATCH Selection

Press the **BANK UP** or **BANK DOWN** switch to move/scroll from the current BANK to another. The **BANK/PROGRAM** display will flash and no MIDI message will be transmitted until a PATCH is selected. Hold the **BANK UP** or **BANK DOWN** switches on to scroll past the current BANK continuously. The **BANK/PROGRAM** display will loop once it reaches BANK#32 if it is operating in 4Pr mode or BANK#10 if it is operating in 12Pr mode.

Select a PATCH by pressing the **P1, P2, P3** or **P4** switch if the unit is operating in 4Pr mode or **1, 2, 3, 4, ..., 12** switch if the unit is operating in 12Pr mode. The LED above the selected PATCH will illuminate and the stored MIDI messages for that PATCH will be transmitted.

INSTANT ACCESS Control

Available only in 4Pr mode, **C1, C2, C3, ...** to **C8** switches are used to send instant CC On/Off MIDI messages. The LED above the switch will illuminate to indicate the current status, on or off, of each switch.

Each PATCH saves the state of all eight of the INSTANT ACCESS switches. When a PATCH is loaded the state of each of the INSTANT ACCESS switches is recalled and transmitted.

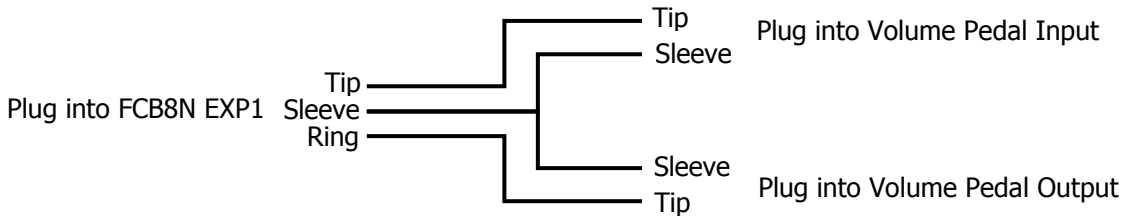
INSTANT ACCESS states are saved to a PATCH by simply switching on or off the required states and holding down the PATCH selection switch for 3 seconds.

When a change is made to the state of an INSTANT ACCESS switch for a PATCH, the LED above that PATCH will flash (indicating that it has changed) until either the PATCH switch is pressed momentarily, returning the PATCH to its original state, or the INSTANT ACCESS state is switched back to its original state or the change is saved by holding down the PATCH switch for 3 seconds.

Expression Pedal Input (EXP1)

Expression pedal input EXP1 available both in 4Pr mode or 12Pr mode. You can enable or disable the expression pedal for each PATCH. The expression pedal can be programmed to send any Control Change on any MIDI channel for each PATCH. Please refer to PATCH Programming Mode for details.

EXP1 Input requires either a standard expression pedal wired directly with a stereo ¼" (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 unit before plugging in the expression pedal. Failure to do so could result in damage to the unit.

SETUP MODE AND PATCH PROGRAMMING

Programming Mode Entry

On power-up the FC8BN defaults to operating mode. To change to edit mode:

1. Select the PATCH that you want to configure by using the BANK and PATCH switchs.
2. Press both **BANK UP** and **BANK DOWN** switches together and hold on until the **BANK/PROGRAM** display shows the following:

PROG

(The **BANK/PROGRAM** display as shown above means *"Programming Mode"*)

3. Release the **BANK UP** and **BANK DOWN** switches.
4. The **BANK/PROGRAM** display and the active LED will be flashing.
5. Flashing LED's indicate programming menu functions that are available for editing. Refer to the text below the flashing LED's.
6. Press the associated switch to enter the required programming menu.

   Programming menus are: **EDIT, COPY, SETUP** and **EXP**. You can exit from programming mode and return to operating mode by pressing the **CANCEL** switch.

Setup Mode

Configure the FCB8N to operate in 4Pr mode or 12Pr mode or adjust LED display contrast:

1. Enter Programming Mode. *(Please see Programming Mode Entry section)*
2. When in Programming Mode press the **SETUP** switch, the **BANK/PROGRAM** display will show the following:

StUP

3. All Programming Menu LED's will be off and the **SETUP LED** will be flashing. This means you are in Setup mode. To see associated sub-menus please press and hold **MENU** switch.
4. Scroll up and down the sub-menus by pressing **NEXT>>** to see the next sub-menu or **<<PREV** to see previous sub-menu. This mode has 2 sub-menus:

   4.1) **PATCH setup:** the **BANK/PROGRAM** display will show the following:

PrSt

To change the PATCH setup, press the **INC+** or **DEC-** switches. The PATCH setup will be changed between 4Pr mode and 12Pr mode. The **BANK/PROGRAM** display will show the following:

4.Pr ←→12.Pr

4.2) **LED display contrast adjustment:** the **BANK/PROGRAM** display will show the following:

Cont.

Adjust the **BANK/PROGRAM** display contrast by pressing **INC+** or **DEC-** switches. The contrast has a range of between 0 (minimum) and 15 (maximum).

4.3) **Global CC assignment:** the **BANK/PROGRAM** display will show the following:

A1.CH ←→ A1.CC ←→
A2.CH ←→ A2.CC ←→
A3.CH ←→ A3.CC ←→
A4.CH ←→ A4.CC ←→
A5.CH ←→ A5.CC ←→
A6.CH ←→ A6.CC ←→
A7.CH ←→ A7.CC ←→
A8.CH ←→ A8.CC

Once a global CC has been selected, press the **ENTER** switch to access the value to be changed. Use the **INC+** and **DEC-** switches to increment and decrement the value.

A1.CH: MIDI Channel for 1st Global Control Change Message. Range: **01←→16**

A1.CC: Control Change Number (CC#) for 1st Global Control Change Message. Range: **01←→127**

A2.CH: MIDI Channel for 2nd Global Control Change Message. Range: **01←→16**

A2.CC: Control Change Number (CC#) for 2nd Global Control Change Message. Range: **01←→127**

A3.CH: MIDI Channel for 3rd Global Control Change Message. Range: **01←→16**

A3.CC: Control Change Number (CC#) for 3rd Global Control Change Message. Range: **01←→127**

A4.CH: MIDI Channel for 4th Global Control Change Message. Range: **01←→16**

A4.CC: Control Change Number (CC#) for 4th Global Control Change Message. Range: **01←→127**

A5.CH: MIDI Channel for 5th Global Control Change Message. Range: **01←→16**

A5.CC: Control Change Number (CC#) for 5th Global Control Change Message. Range: **01←→127**

A6.CH: MIDI Channel for 6th Global Control Change Message. Range: **01←→16**

A6.CC: Control Change Number (CC#) for 6th Global Control Change Message. Range: **01←→127**

A7.CH: MIDI Channel for 7th Global Control Change Message. Range: **01←→16**

A7.CC: Control Change Number (CC#) for 7th Global Control Change Message. Range: **01←→127**

A8.CH: MIDI Channel for 8th Global Control Change Message. Range: **01←→16**

A8.CC: Control Change Number (CC#) for 8th Global Control Change Message. Range: **01←→127**

5. To save, press the **SAVE** switch, or to exit without saving press the **CANCEL** switch. The FCB8N will return to operating mode.

Edit Mode

On power-up the FC8BN defaults to operating mode. To change to edit mode:

1. Select the PATCH you want to edit.
2. Enter Programming Mode. *(Please see Programming Mode Entry section)*
3. Press the **EDIT** switch, the **BANK/PROGRAM** display will show the following:

Edit

4. All Programming Menu LED's will be off and the **EDIT LED** will be flashing. This means you are in Edit mode. To see associated sub-menus please press and hold **MENU** switch.
5. Scroll up and down the sub-menus by pressing **NEXT>>** to see the next sub-menu or **<<PREV** to see previous sub-menu.

P1.CH ←→ P1.PC ←→
P2.CH ←→ P2.PC ←→
P3.CH ←→ P3.PC ←→
CC.CH ←→
C1.CC ←→ C1.dt ←→
C2.CC ←→ C2.dt ←→
C3.CC ←→ C3.dt ←→
C4.CC ←→ C4.dt ←→
C5.CC ←→ C5.dt ←→

C6.CC ←→ C6.dt ←→
C7.CC ←→ C7.dt ←→
C8.CC ←→ C8.dt

Once a menu item has been selected, press the **ENTER** switch to access the value to be changed. Use the **INC+** and **DEC-** switches to increment and decrement the value.

P1.CH: MIDI Channel for 1st Program Change Message. Range: **Off**, **01←→16**

P1.PC: Program Change Number (PC#) for 1st Program Change Message. Range: **01←→127**

P2.CH: MIDI Channel for 2nd Program Change Message. Range: **Off**, **01←→16**

P2.PC: Program Change Number (PC#) for 2nd Program Change Message. Range: **01←→127**

P3.CH: MIDI Channel for 3rd Program Change Message. Range: **Off**, **01←→16**

P3.PC: Program Change Number (PC#) for 3rd Program Change Message. Range: **01←→127**

P4.CH: MIDI Channel for 4th Program Change Message. Range: **Off**, **01←→16**

P4.PC: Program Change Number (PC#) for 4th Program Change Message. Range: **01←→127**

P5.CH: MIDI Channel for 5th Program Change Message. Range: **Off**, **01←→16**

P5.PC: Program Change Number (PC#) for 5th Program Change Message. Range: **01←→127**

P6.CH: MIDI Channel for 6th Program Change Message. Range: **Off**, **01←→16**

P6.PC: Program Change Number (PC#) for 6th Program Change Message. Range: **01←→127**

P7.CH: MIDI Channel for 7th Program Change Message. Range: **Off**, **01←→16**

P7.PC: Program Change Number (PC#) for 7th Program Change Message. Range: **01←→127**

CC.CH: MIDI Channel for Control Change Messages. Range: **01←→16**

C1.CC, C2.CC, C3.CC, C4.CC, C5.CC, C6.CC, C7.CC, C8.CC:
Control Change Numbers (CC#) for associated Control Change Messages. Range: **Off**, **01←→127**, **Go.A1 ←→ Go.A8 (Global CC A1 ←→ Global CC A8)**

C1.dt, C2.dt, C3.dt, C4.dt, C5.dt, C6.dt, C7.dt, C8.dt
Control Change Values (CC# Value) for associated Control Change Messages.

- 4Pr Mode Range: **0, 127, tAP1, tAP2**

  0, 127: Toggles the value between 0 and 127 on each successive press of the INSTANT ACCESS switch.

  tAP1: Momentary operation sets the value to 127 when switch is pushed and returns it to 0 when the INSTANT ACCESS switch is released.

  tAP2: Sets the value to 127 when the INSTANT ACCESS switch is pushed (no action on release).

- 12Pr Mode Range: **0←→127, t.gLE**

  0←→127: Sets the value entered when the PATCH is loaded.

  t.gLE: Toggles the value between 0 and 127 on each successive press of the PATCH switch.

6. To save please press **SAVE** switch or to exit without saving please press **CANCEL** switch. The FCB8N will return to operating mode.

Copy Mode

Copy mode allows you to copy the current PATCH to any other PATCH. All the settings for the PATCH are copied to the new PATCH. To copy a PATCH:

1. Select the PATCH that you want to copy.
2. Enter to Programming Mode. *(Please see Programming Mode Entry section)*
3. Press the **COPY** switch, the **BANK/PROGRAM** display will show the following:

CoPY

3. All Programming Menu LED's will be off and the source PATCH LED will be flashing.
4. If the destination PATCH is in the same BANK as the source PATCH then push the PATCH switch for the required PATCH twice
   If the destination PATCH is in a different BANK, select the required BANK by using the **BANK UP** and **BANK DOWN** switches (the **BANK/PROGRAM** display will flash) and then press the PATCH switch for the required PATCH.

5. Save the copied PATCH by pressing the **SAVE** switch or exit from COPY mode by pressing the flashing LED switch.

EXP Mode

The expression pedal can be assigned to any Control Change Number on any MIDI channel for each individual PATCH. To assign the expression pedal:

1. Select the PATCH you want to assign expression pedal to.
2. Enter to Programming Mode. *(Please see Programming Mode Entry section)*
3. Press **EXP** switch, the **BANK/PROGRAM** display will show the following:

ExP

4. All Programming Menu LED's will be off and the **EXP** LED will be flashing.
5. Press and hold the **MENU** switch.
6. Scroll up and down the sub-menus by pressing **NEXT>>** to see the next sub-menu or **<<PREV** to see previous sub-menu:

E1.CH ←→ E1.CC ←→ dAtA

Once a menu item has been selected, press the **ENTER** switch to access the value to be changed. Use the **INC+** and **DEC-** switches to increment and decrement the value.

0←→ 127: Toggles the value between 0 and 127 on each successive press of the INSTANT ACCESS switch.

E1.CH: MIDI Channel for expression pedal messages.
Range: **01←→16**

E1.CC: Control Change Numbers (CC#) for expression pedal Control Change Messages.
Range: **01←→127**

dAtA: Data display for testing your expression pedal (Input signal checking). If your expression pedal works with the FCB8N then the **BANK/PROGRAM** display will show the pedal position value between **0←→127**

7. To save press the **SAVE** switch or to exit without saving press the **CANCEL** switch. The FCB8N will return to operating mode.

Factory Restore

You can reset the FCB8N 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.

There are two different numbering systems used by various MIDI equipment manufacturers, either **0 ←→ 127** or **1 ←→ 128, 0**. The FCB8N can be configured to use either system (for example the POD2.0 uses **1 ←→ 127, 0**).

To restore the factory defaults:

1. Unplug the power from the FCB8N unit.
2. To restore to factory default settings to 12Pr mode:
   - Press and hold **P4** switch if you want to use **0 ←→ 127**
   - Press and hold **P3** switch if you want to use **1 ←→ 127, 0**
3. To restore to factory default settings to 4Pr mode:
   - Press and hold **P8** switch if you want to use **0 ←→ 127**
   - Press and hold **P7** switch if you want to use **1 ←→ 127, 0**
4. Plug the power into the FCB8N unit.
5. The **BANK/PROGRAM** display will show the characters below while it is processing a restore.
6. When the **BANK/PROGRAM** display indicates that the unit has returned to operating mode, release the switch.
7. Wait a moment until restore process has completed. The FCB8N will be initialized with the factory default settings.

MIDI Implementation

MIDI Channels:	**1 – 16**	Default = 1 (MIDI Channel#1)
Program Change#:	**0 – 127**	7 Program Change Messages transmitted per PATCH. (On independent MIDI channels)
Controller#:	**0 – 127**	8 Control Change Messages transmitted per PATCH. (On a single MIDI channel)
Control Change Value:	**0 – 127**	Set value in each controller.
:	**tr, tAP1,tAP2**	- Momentary and Toggle control of the value - Value 0-63 = OFF (momentary off value = 0) - Value 64-127 = ON (momentary on value = 127)

The FCB8N can transmit 3 Program Change Messages (PC#) and 8 Control Change Messages (CC#) per PATCH. The default is as follows:

PC1 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is CH#1)*
PC1 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC2 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC2 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC3 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC3 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC4 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC4 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC5 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC5 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC6 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC6 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
PC7 MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
PC7 Program Change#:	PC#0 – PC#127	*(selectable but default is PC#0)*
CC MIDI Channel#:	CH#1 – CH#16	*(selectable but default is OFF)*
CC1 Controller#:	CC#0 – CC#127	*(selectable but default is 80)*
CC1 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC2 Controller#:	CC#0 – CC#127	*(selectable but default is 81)*
CC2 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC3 Controller#:	CC#0 – CC#127	*(selectable but default is 82)*
CC3 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC4 Controller#:	CC#0 – CC#127	*(selectable but default is 83)*
CC4 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC5 Controller#:	CC#0 – CC#127	*(selectable but default is 84)*
CC5 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC6 Controller#:	CC#0 – CC#127	*(selectable but default is 85)*
CC6 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC7 Controller#:	CC#0 – CC#127	*(selectable but default is 86)*
CC7 Control Value#:	0 – 127	*(selectable but default value is 127)*
CC8 Controller#:	CC#0 – CC#127	*(selectable but default is 87)*
CC8 Control Value#:	0 – 127	*(selectable but default value is 127)*
BANK rank:	BANK#1 – BANK#32 in 4Pr mode Or BANK#1 – BANK#10 in 12Pr mode	
Total Patches:	128 Patches in 4Pr mode Or 120 Patches in 12Pr mode	

MIDI Cable Support

The FCB8N 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 FCB8N unit via a 7 pin midi cable requires pins 6 and 7 for the power supply. The polarity is not important.

Phantom power into the FCB8N unit via a 5 pin midi cable requires pins 2 (ground) and 3 (positive) for the power supply. NOTE: A PCB Jumper must be moved to enable this.

Please read your MIDI device's instructions before enabling the phantom power.

TIP

In 4Pr Mode, the C1 button to C8 button are instance access buttons. If one of those buttons has pressed, the selected preset button (P1 button – P4 button) led will be flashing. This means the instance access data is changed. You can press the flashing led button for 3 seconds, the selected preset will be replaced with new instance access data to the memory.