

# MIDI Foot Controller (FC-3)

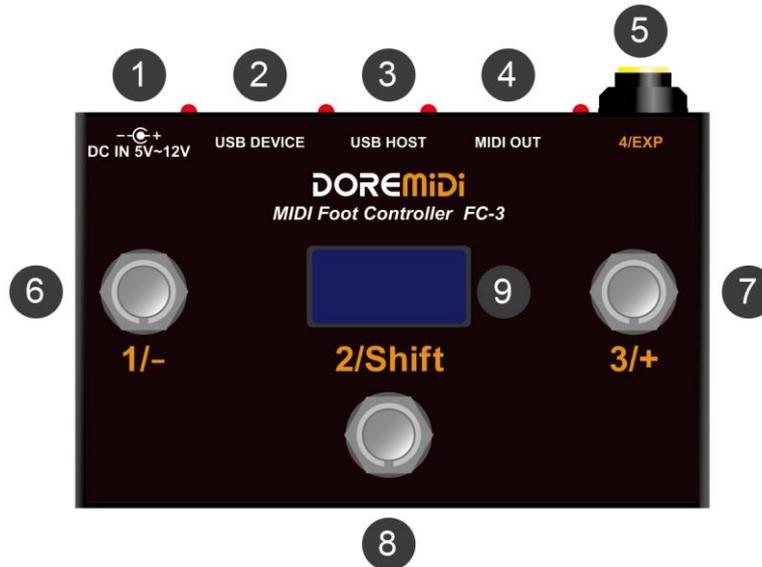


## Instructions

## 1. Introduction

MIDI Foot Controller (FC-3) is a MIDI controller designed by DOREMiDi that can be used for foot control. FC-3 has a variety of MIDI output interfaces, which can be connected to computers, USB MIDI instruments, and MIDI DIN devices. FC-3 has 3 programmable switch pedals and 1 expression pedal interface, all pedals can be customized with MIDI messages, and each pedal can be configured with 16 groups of MIDI. The FC-3 has a display that clearly shows the MIDI messages currently being played.

## 2. Appearance



- ① DC IN: Product power supply interface, use DC plug to supply power to the product, power supply voltage 5V~12V. ( Center-positive power supply)
- ② USB DEVICE: USB device interface, use a USB cable to connect to the computer, you can also supply power to the FC-3 through this interface.
- ③ USB HOST: USB host interface, use a USB cable to connect a device with a USB MIDI interface.
- ④ MIDI OUT: MIDI DIN output interface, use a 5-pin MIDI cable to connect devices with MIDI IN.
- ⑤ 4/EXP: Pedal Number: 4, Expression pedal interface, connect the analog expression pedal through 6.35mm TRS cable.
- ⑥ ⑦ ⑧ 1/-, 2/Shift, 3/+ : Pedal Number: 1~3, Switch Pedal, output MIDI messages by stepping on it.
- ⑨ Display: OLED display, showing the working content of FC-3.

## 3. Product Parameters

Name	Description
Model	FC-3
Size (L x W x H)	115*82*53mm
Weight	240g

Consumption	30mA@5V, 20mA@9V
USB HOST Output Power	Maximum 2A@5V, depends on the input power of DC IN
USB HOST Compatibility	Compatible with USB class compliant MIDI devices Compatible with some known not USB class compliant MIDI devices
MIDI Compatibility	Compatible with all musical instruments with MIDI standard interface, compatible with all MIDI type messages
USB DEVICE Interface	USB class compliant, plug and play
DC In Interface	Powered by DC interface, 5V~12VDC

## 4. Steps for usage

1) Power supply: Use a 5V~12V DC power supply to supply power to the product through the "DC IN", and the indicator lights up after power is supplied.

2) Configure the pedal's MIDI messages:

Connect the computer via USB DEVICE to configure the MIDI messages of the pedals. For the configuration method, see 4. MIDI message configuration;

If not configured, default parameters are used:

Padal Name	MIDIChannel	MIDI Status	Value	Remark
1/-	1	PC	One click plus 1	
2/Shift	1	CC#64	Press to send 127, release to send 0	Sustain pedal
3/+	1	PC	One click minus 1	
4/EXP	1	CC#11	0~127	

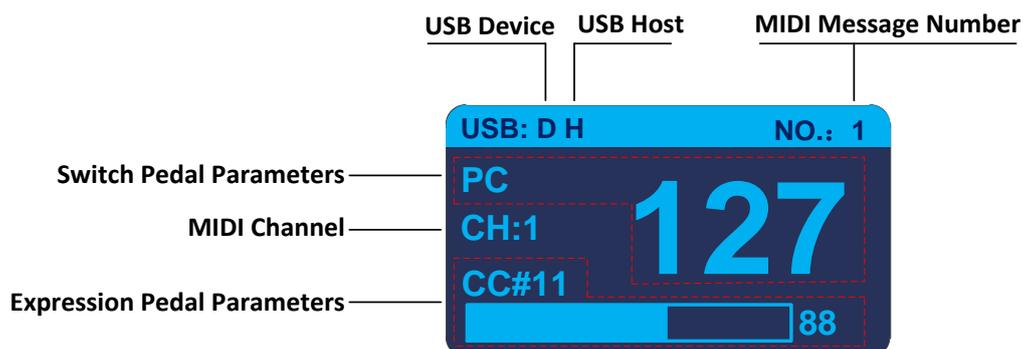
3) Connect MIDI device/computer: Connect an external MIDI device/computer via USB DEVICE/USB HOST/MIDI OUT.

4) Connect the expression pedal: Connect an analog expression pedal via a 6.35 TRS cable.

5) Output MIDI messages: By pressing the footswitch/expression pedal, the configured MIDI messages can be output.

The FC-3 can be configured with up to 16 sets of independent MIDI messages. Hold down "Shift" and click "-"/"+" to switch to select different MIDI message numbers.

6) Screen display description:



- USB connection status: After the USB device is connected, it will display "D", and after the USB HOST is connected, it will display "H".
- Switch pedal parameters: display the MIDI message type (PC/CC/NOTE) of the switch pedal, and display the value after the pedal is pressed.
- Expression pedal parameters: display the MIDI message type (CC/NOTE/PBend/CPress) of the expression pedal, and display the value after the pedal is pressed.
- MIDI message serial number: FC-3 can be configured with 1~16 independent MIDI message groups. Hold down "Shift" and click "-" / "+" to switch to select different MIDI message sequence numbers.

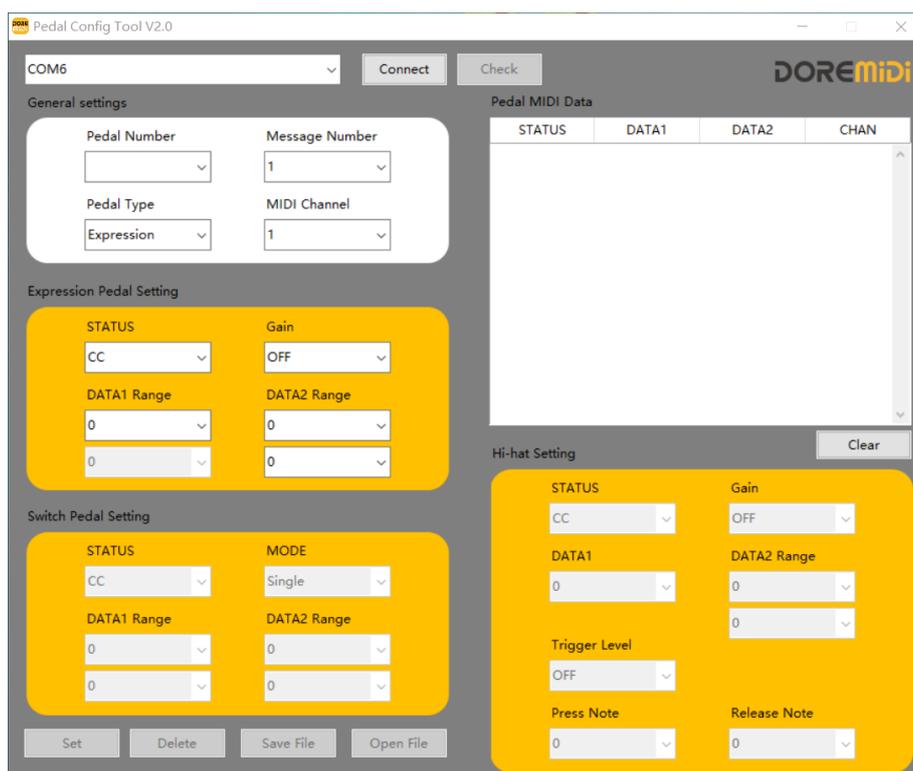
(Note: CC: Continue Control, PC: Program Change, PBend: Pitch Bend, CPress: MIDI Channel Pressure)

## 5. Configure pedal MIDI messages

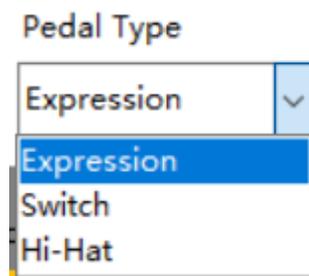
- 1) Connect the Expression Pedal: If you need to configure the Expression Pedal, please connect the Expression Pedal first, and then perform the following operations.
- 2) Connect to the computer: connect to the computer through the USB DEVICE interface, after the connection is successful, the indicator light is always on, and the display shows "D".

(Note: Generally speaking, the computer has its own MIDI driver. If you find that the computer does not have a MIDI driver, you need to install the MIDI driver. Installation method: <https://windowsreport.com/install-midi-drivers-pc/>)

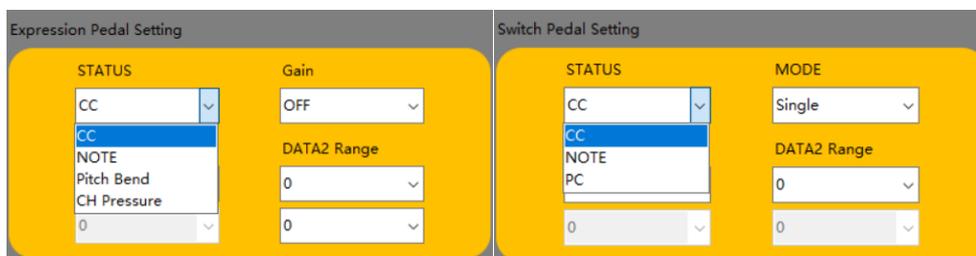
- 3) Open the configuration software (Pedal Config Tool V2.0), the interface is as follows:



- a. Software environment requirements: Windows 7 and above, MacOS.
- b. Select the appropriate serial port number "COMxx" and click "Connect".
- c. Click "CHECK" to get the current pedal settings.
- d. Pedal Number: The number of the current pedal, 1~3 is the switch pedal, 4 is the expression pedal.
- e. Message Number: FC-3 can be configured with 1~16 independent MIDI message groups, each group can be configured with 3 switch pedals and 1 expression pedal.
- f. Pedal Type: Pedal type, there are Expression (Expression), Switch (switch type). After connecting the pedal, click "CHECK" to get the pedal type. If the pedal is not connected, you can also directly select the pedal type to set. **(Note: FC-3 temporarily does not support connecting Hi-Hat pedals)**



- g. MIDI Channel: Set the channel of MIDI messages, there are 1~16 MIDI channels;
- h. STATUS: Set the MIDI status of the pedal. The MIDI status of different pedals is different, as shown in the figure:



Pedal Type \ STATUS	CC	PC	NOTE	Pitch Bend	Channel Pressure
	Expression Pedal	✓		✓	✓
Switch Pedal	✓	✓	✓		

- i. DATA1/DATA2 Range: Set the range of pedal MIDI messages. When the pedal is pressed, FC-3 will send MIDI messages within the range.
- j. Gain: Set the gain of MIDI messages, which can be set to OFF, 1~100. After setting, the MIDI messages will increase in multiples of 1~100%, and the value is still within the range of DATA1/DATA2 Range. **(Note: Gain value is generally used for the expression pedal. After setting the gain, the pedal can reach the maximum value without stepping pedal down to the end)**
- k. MODE: Set the trigger mode of the switch pedal, with Single, Toggle, Reset, Increase, Decrease five trigger modes:

MODE	Description
<b>Single</b>	Each time the pedal is pressed and released, the value of DATA1/DATA2 is sent only once.
<b>Toggle</b>	Each time the pedal is pressed and released, the values of the DATA1/DATA2 Range are sent alternately.
<b>Reset</b>	Press the pedal to send the value of the first data frame of DATA1/DATA2, release the value of the second data frame of DATA1/DATA2.
<b>Increase</b>	Each time the pedal is pressed and released, the value will increment in the DATA1/DATA2 Range.
<b>Decrease</b>	Each time the pedal is pressed and released, the value will decrease in the DATA1/DATA2 Range.

- l. Set: After Set the parameters, click "Set" to set the FC-3.
- m. Save File: Save the current pedal configuration content.
- n. Open File: Load the configuration content of the pedal.
- o. Pedal MIDI Data: MIDI message display box, after triggering the pedal, the pedal's MIDI message will be displayed in the display box. STATUS are displayed in hexadecimal notation, and CHAN, DATA1, DATA2 is displayed in decimal notation.

Pedal MIDI Data			
STATUS	DATA1	DATA2	CHAN
B0	21	51	1
B0	21	54	1
B0	21	57	1
B0	21	52	1
B0	21	56	1
B0	21	58	1
B0	21	57	1
B0	21	54	1
B0	21	55	1
B0	21	56	1

#### 4) Example of pedal setting

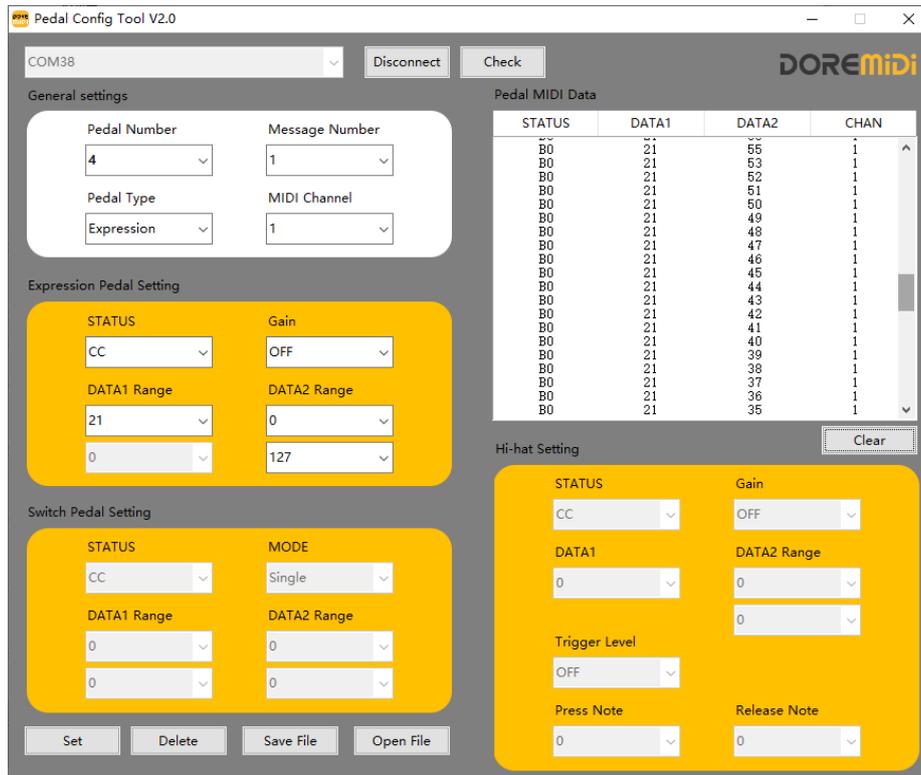
- Set the single switch type pedal

Set the No. 2 pedal as sustain pedal, channel 1, the CC controller is 64, and the CC controller value is 127, MODE = Reset, as shown in the figure:

The screenshot shows the 'Pedal Config Tool V2.0' interface. At the top, it displays 'COM6' and buttons for 'Disconnect' and 'Check'. The 'General settings' section includes 'Pedal Number' (2), 'Message Number' (1), 'Pedal Type' (Switch), and 'MIDI Channel' (1). The 'Expression Pedal Setting' section has 'STATUS' (CC), 'Gain' (OFF), 'DATA1 Range' (0), and 'DATA2 Range' (0). The 'Switch Pedal Setting' section has 'STATUS' (CC), 'MODE' (Reset), 'DATA1 Range' (64), and 'DATA2 Range' (127). The 'Hi-hat Setting' section has 'STATUS' (CC), 'Gain' (OFF), 'DATA1' (0), 'DATA2 Range' (0), 'Trigger Level' (OFF), 'Press Note' (0), and 'Release Note' (0). At the bottom, there are buttons for 'Set', 'Delete', 'Save File', and 'Open File'. On the right side, the 'Pedal MIDI Data' window shows a table with columns for STATUS, DATA1, DATA2, and CHAN, displaying hexadecimal status values and decimal data values.

- Set expression pedal

Set the No. 4 pedal as an expression pedal, channel 1, and the CC controller is 21, as shown in the figure:



- Set pedal 1 and pedal 3 to control PC together

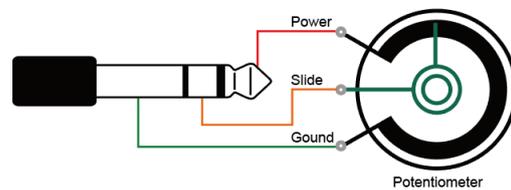
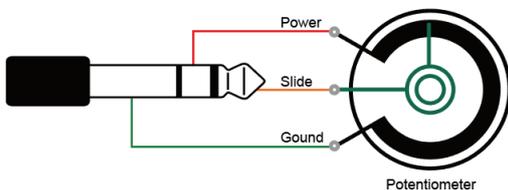
If the switch pedal 1 is set to PC, MODE = Decrease, and the switch pedal 3 is set to PC, MODE = Increase; then the two pedals will share a PC value, and the range of the PC value is based on the DATA1 Range of pedal 1.

## 6. Types of Expression Pedal Supported

The FC-3 supports 6.35mm TRS plug, which can be connected to a positive-polarity or a reverse-polarity expression pedal. The pedal plug is shown in the picture:

Expression Pedal (Positive Polarity)

Expression Pedal (Reverse Polarity)



## 7. Precautions

- 1) This product contains a circuit board.
- 2) Rain or immersion in water will cause the product to malfunction.
- 3) Do not heat, press, or damage internal components.
- 4) Non-professional maintenance personnel shall not disassemble the product.
- 5) If the product is disassembled or damaged by improper use, the warranty is not available.

## 8. Questions & Answers

1) Question: Incorrect pedal type detected on configuration software.

Answer: Please make sure that the pedal has been connected to the FC-3 normally; if it is an expression pedal, please try to place the pedal in the middle range, and then click "CHECK" to detect.

2) Question: The USB cannot connect to the computer.

Answer: After confirming the connection, whether the USB indicator is on; confirm whether the computer has a MIDI driver. Generally speaking, the computer comes with a MIDI driver. If it is found that the computer does not have a MIDI driver, you need to install the MIDI driver. Installation method:  
<https://windowsreport.com/install-midi-drivers-pc/>

3) Question: Can the USB HOST interface supply power to USB MIDI instruments?

Answer: It can supply power, but pay attention to whether the power input power of "DC IN" can meet the working requirements of USB MIDI instruments.

4) Question: The USB HOST interface does not work.

Answer: Please follow the steps below:

- Make sure the power indicator of "DC IN" is on.
- Confirm that the instrument can work normally and that the USB interface of the instrument has MIDI function (for example, the connection can recognize the MIDI device).
- Try to supply power to the product through "DC IN" first, and then connect to the instrument through "USB HOST" to see if the indicator light of "USB HOST" lights up; If the "USB HOST" indicator is still not on, or the MIDI message cannot be transmitted after it is on, please contact customer service to solve it.

5) Question: The MIDI OUT connector does not work.

Answer: Please follow the steps below:

- Make sure that the "MIDI OUT" of the product is connected to the "MIDI IN" of the instrument.
- When MIDI OUT has MIDI message output, the indicator light will flash.

If the problem is not resolved, please contact customer service.

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