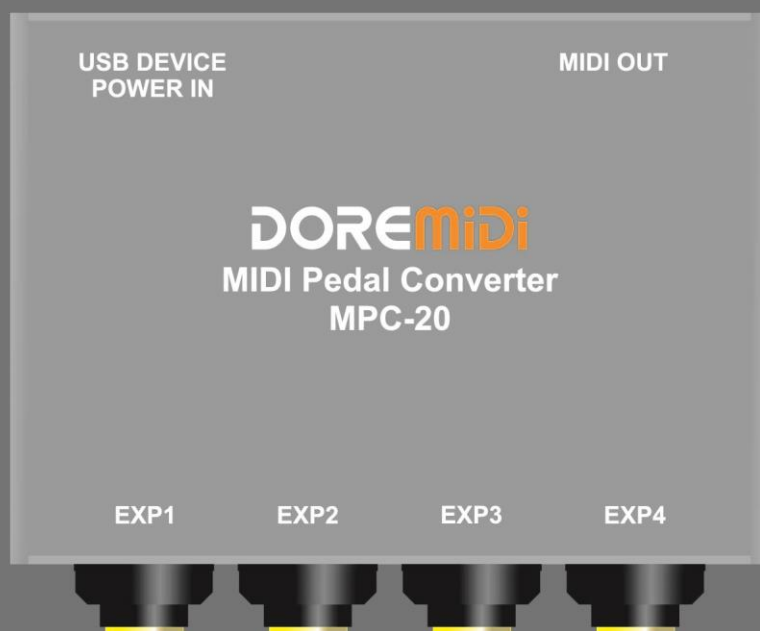


# MIDI Pedal Converter (MPC-20)

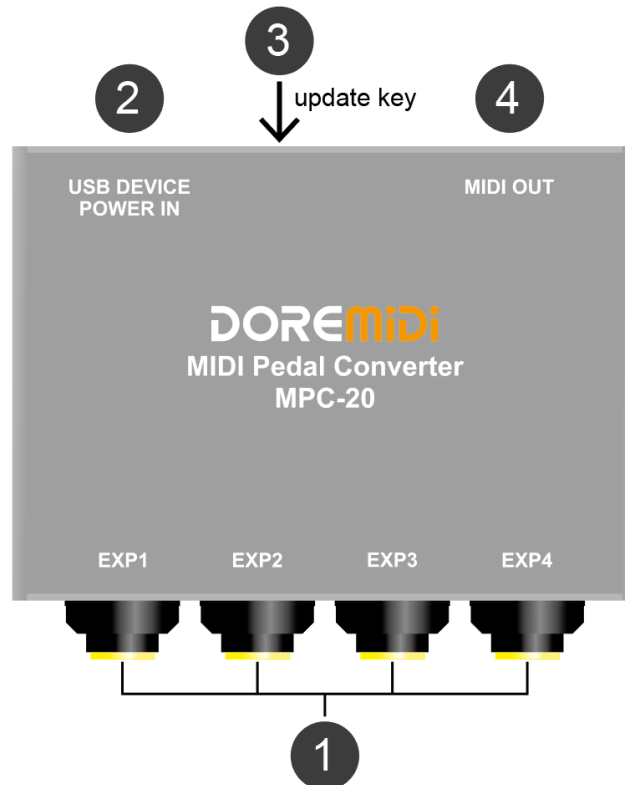


## Instructions

## 1. Introduction

MIDI pedal converter (MPC-20) is a converter designed by DOREMiDi with automatic detection of various types of musical instrument pedals, which is used to solve the situation of insufficient number of pedals during performance. The MPC-20 has 4 pedal connectors that can connect up to 4 expression pedals, or 8 switch pedals (4 dual switch pedals). The MPC-20 is compatible with positive polarity expression pedals, reverse polarity expression pedals, sustain pedals, dual-switch pedals, electronic drum hi-hats, and has MIDI DIN and USB MIDI outputs, suitable for a variety of performance scenarios.

## 2. Appearance



- ① EXP1~EXP4: 6.35 Pedal interface, used to connect external pedals.
- ② USB DEVICE: USB-B interface, with USB MIDI function, used to connect to a computer and supply power to the product at the same time.
- ③ Upgrade Key: Used for product firmware upgrade.
- ④ MIDI OUT: MIDI DIN five-Pin, used to Connect MIDI Device to output MIDI messages.

## 3. Product Parameters

Name	Description
Model	MPC-20
Size (L x W x H)	88*73*39mm
Weight	180g
Pedal Interface	Four 6.35 MIDI pedal interfaces, support automatic detection of pedal type, including positive polarity expression pedal, reverse polarity expression pedal, sustain pedal, dual switch pedal, FSR Electronic Hi-Hat
USB Interface	Standard USB MIDI interface, plug and play, no need to install drivers;

	And power the product through this interface
USB compatibility	Compatible with Windows, Mac, iOS, Android and other systems
MIDI interface	Standard MIDI DIN Port
Indicator Light	Product power indicator, connected to the computer indicator
Firmware upgrade	Support firmware upgrade
Support MIDI type	CC (continuous controller), PC (program change), Note (note), Pitch Bend, Channel Pressure

#### 4. Steps for usage

##### 1. Connection

- Power supply: Use a 5V USB adapter to power the MPC-20 through the USB interface, or directly connect to the computer through the USB interface, and power the MPC-20 through the computer. The indicator light flashes when the power is only supplied, and the indicator light is always on when it is connected to the computer.
- MIDI DIN connection: Connect the MIDI OUT of the MPC-20 to the MIDI IN interface of the MIDI device through a 3.5 to MIDI DIN 5-pin cable.
- Pedal connection: Connect the pedal to the EXP1~EXP4 interface of the MPC-20 through the 6.35 interface.

##### 2. Set the MIDI message of the pedal

Before using the MPC-20, you need to use the Pedal Config Tool software to set up the pedal's MIDI messages. Once set, the pedal's MIDI messages are output via USB and MIDI OUT. It is recommended to connect the pedals before setting up. Please download the software from the official website: [www.doremidi.cn](http://www.doremidi.cn).

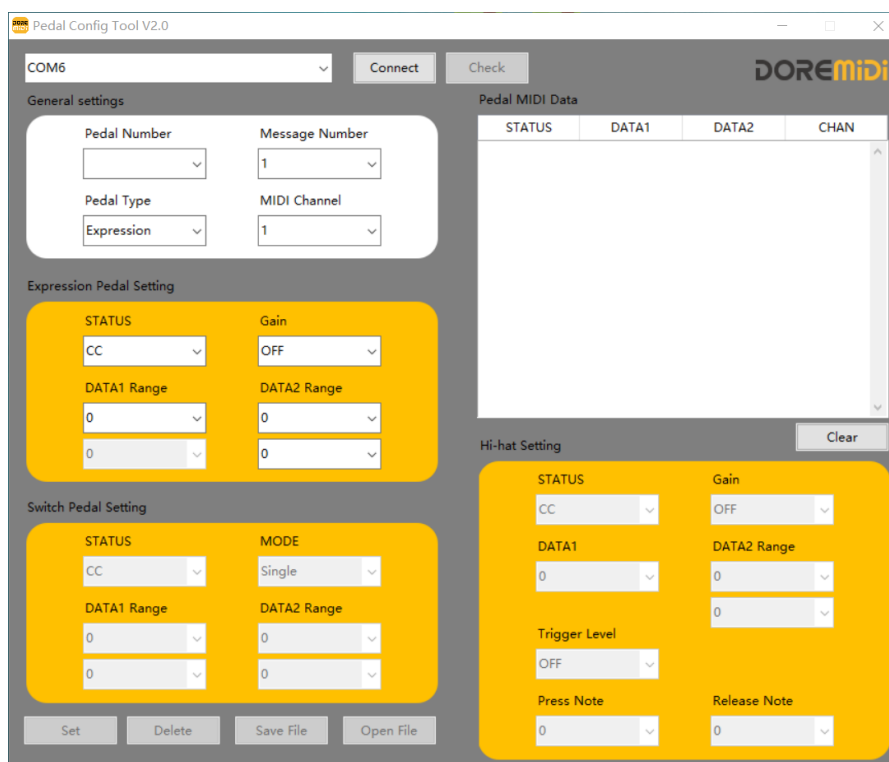
**(Note: If the pedal MIDI message is not set, the MPC-20 adopts the default value, the default value of the expression/hi-hat pedal is MIDI CC = 21. The default value of the single switch type pedal is MIDI CC = 64 (sustain). The double switch pedal Default is MIDI CC = 64 (sustain), MIDI CC = 66 (Sostenuto).)**

Here are the steps to set up the pedal's MIDI messages:

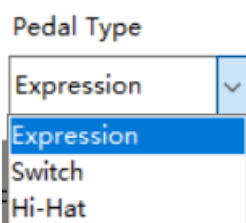
- Connect the pedal: Connect the pedal to the EXP1~EXP4 interface of MPC-20 through the 6.35mm interface.
- Connect to a computer: Connect to a computer through a USB interface. After the connection is successful, the indicator light is always on.

**(Note: Generally speaking, computers come with MIDI drivers. If you find that your computer does not have MIDI drivers, you need to install MIDI drivers. Installation method: <https://windowsreport.com/install-midi-drivers-pc/>)**

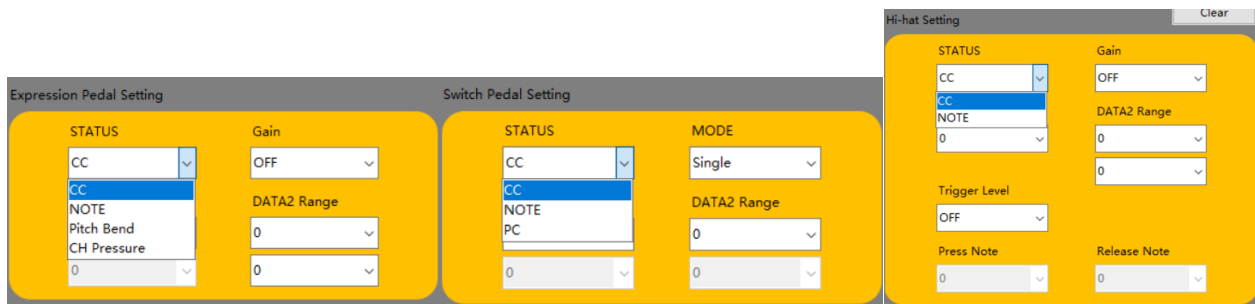
- Open the configuration software (Pedal Config Tool V2.0) , as follows:



- a. Software environment requirements: Windows 7 and above systems, MacOS.
- b. Select the serial port number "COMxx" and click "Connect".
- c. Click "CHECK" to get the current pedal settings.
- d. Pedal Number: The serial number of the current pedal, which is selected according to the interface that the pedal is inserted into, and displayed after connection. If a dual-switch pedal is connected, the serial number will increase.
- e. Message Number: One pedal can set 1~16 independent MIDI messages, which will be sent out when the pedal is pressed.
- f. Pedal Type: There are Expression pedal, Switch pedal, Hi-Hai pedal. 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.



- g. MIDI Channel: Set the channel of MIDI messages. There are 16 MIDI channels.
- h. STATUS: Set the MIDI message type of the pedal. Different pedals have different MIDI message types, such as:

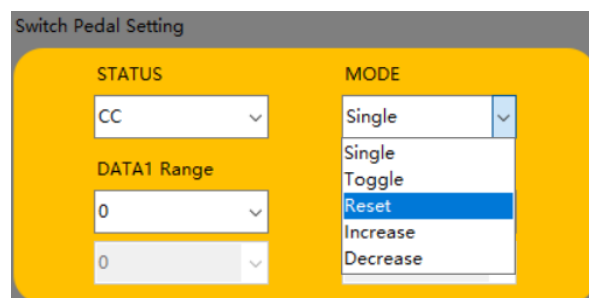


STATUS Pedal Type	CC	PC	NOTE	Pitch Bend	Channel Pressure
Expression Pedal	✓		✓	✓	✓
Switch Pedal	✓	✓	✓		
Hi-Hat Pedal	✓		✓		

- i. DATA1/DATA2 Range: Set the range of pedal MIDI messages. When the pedal is pressed, the product 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: This parameter is generally used for the expression pedal/hi-hat pedal. After setting the gain, the pedal can reach the maximum value without stepping 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
Single	Each time the pedal is pressed and released, the value of DATA1/DATA2 is sent only once
Toggle	Each time the pedal is pressed and released, the values of the DATA1/DATA2 Range are sent alternately
Reset	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
Increase	Each time the pedal is pressed and released, the value will increment in the DATA1/DATA2 Range
Decrease	Each time the pedal is pressed and released, the value will decrease in the DATA1/DATA2 Range

- l. Trigger Level: It is used to set the velocity level that the hi-hat pedal is quickly stepped on. It

can be set to OFF, 1~127.


- m. Press Note: When the pedal is pressed quickly and reaches the Trigger Level, the product sends a Press Note.
- n. Release Note: When the pedal is released quickly, the product will send a Release Note.
- o. Set: After Set the parameters, click "Set" to set the pedal MIDI message.
- p. Save File: Save the current pedal configuration content.
- q. Open File: Load the configuration content of the pedal.
- r. 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

### 3. Example of pedal setting

- Set expression pedal

Set the No. 2 pedal as an expression pedal, channel 1, and the CC controller is 21, as shown in the figure:


Pedal Config Tool V2.0

COM6

Disconnect

Check

DOREMIDI

General settings

Pedal Number

2

Message Number

1

Pedal Type

Expression

MIDI Channel

1

Expression Pedal Setting

STATUS

CC

Gain

OFF

DATA1 Range

21

DATA2 Range

0

0

127

Switch Pedal Setting

STATUS

CC

MODE

Single

DATA1 Range

0

DATA2 Range

0

0

0

Set

Delete

Save File

Open File

Pedal MIDI Data

STATUS	DATA1	DATA2	CHAN
B0	21	34	1
B0	21	36	1
B0	21	37	1
B0	21	38	1
B0	21	36	1
B0	21	34	1
B0	21	35	1
B0	21	37	1
B0	21	38	1
B0	21	40	1
B0	21	43	1
B0	21	41	1
B0	21	43	1
B0	21	45	1
B0	21	46	1
B0	21	49	1
B0	21	51	1
B0	21	53	1
B0	21	54	1
B0	21	55	1
B0	21	54	1

Hi-hat Setting

STATUS

CC

Gain

OFF

DATA1

0

DATA2 Range

0

0

0

Trigger Level

OFF

Press Note

0

Release Note

0

Clear

- Set the single switch type pedal

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

**Pedal Config Tool V2.0**

COM6 Disconnect Check DOREmidi

**General settings**

Pedal Number: 2 Message Number: 1

Pedal Type: Switch MIDI Channel: 1

**Expression Pedal Setting**

STATUS: CC Gain: OFF

DATA1 Range: 0 DATA2 Range: 0

**Switch Pedal Setting**

STATUS: CC MODE: Reset

DATA1 Range: 64 DATA2 Range: 127

**Pedal MIDI Data**

STATUS	DATA1	DATA2	CHAN
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1
B0	64	127	1
B0	64	0	1

**Hi-hat Setting** Clear

STATUS: CC Gain: OFF

DATA1: 0 DATA2 Range: 0

Trigger Level: OFF

Press Note: 0 Release Note: 0

Set Delete Save File Open File

- Set the dual switch pedal

When setting up a dual switch type pedal, you need to connect the pedal to the product first, and then click Connect. At this time, the product will detect the number of connected pedals, select the corresponding pedal serial number to set.

Set the third pedal as a Sostenuto pedal, channel 1, the CC controller is 66, the CC controller is 127, and the MODE is Reset, as shown in the figure:

The screenshot shows the DOREmidi Pedal Config Tool V2.0 interface. The 'General settings' section shows Pedal Number 3, Message Number 1, Pedal Type Switch, and MIDI Channel 1. The 'Expression Pedal Setting' section shows STATUS CC, Gain OFF, DATA1 Range 0-0, and DATA2 Range 0-0. The 'Switch Pedal Setting' section shows STATUS CC, MODE Reset, DATA1 Range 66-0, and DATA2 Range 0-127. The 'Hi-hat Setting' section shows STATUS CC, Gain OFF, DATA1 0, DATA2 Range 0-0, Trigger Level OFF, Press Note 0, and Release Note 0. The 'Pedal MIDI Data' table shows the following data:

STATUS	DATA1	DATA2	CHAN
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1
B0	66	127	1
B0	66	0	1

- Set the Hi-hat pedal

Set the No. 2 pedal as a hi-hat pedal, channel 1, CC controller is 21, DATA2 Range is 0~127, as shown in the figure:

The screenshot shows the DOREmidi Pedal Config Tool V2.0 interface. The 'General settings' section shows Pedal Number 2, Message Number 1, Pedal Type Hi-Hat, and MIDI Channel 1. The 'Expression Pedal Setting' section shows STATUS CC, Gain OFF, DATA1 Range 0-0, and DATA2 Range 0-0. The 'Switch Pedal Setting' section shows STATUS CC, MODE Single, DATA1 Range 0-0, and DATA2 Range 0-0. The 'Hi-hat Setting' section shows STATUS CC, Gain OFF, DATA1 21, DATA2 Range 0-127, Trigger Level OFF, Press Note 0, and Release Note 0. The 'Pedal MIDI Data' table shows the following data:

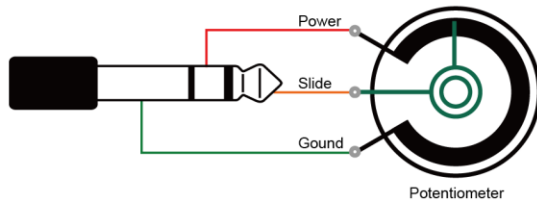
STATUS	DATA1	DATA2	CHAN
B0	21	16	1
B0	21	21	1
B0	21	23	1
B0	21	22	1
B0	21	23	1
B0	21	27	1
B0	21	24	1
B0	21	22	1
B0	21	25	1
B0	21	27	1
B0	21	30	1
B0	21	31	1
B0	21	34	1
B0	21	31	1
B0	21	28	1
B0	21	34	1
B0	21	36	1
B0	21	37	1
B0	21	40	1
B0	21	41	1
Rn	21	39	1



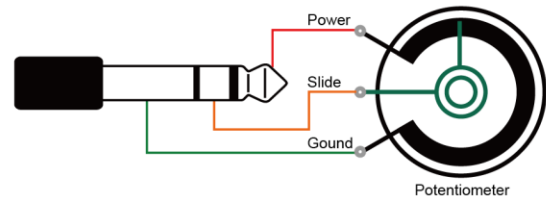
## 5. Plug type of pedal

MPC-20 supports a 6.35mm plug, which can be connected to a positive expression pedal, a reverse polarity expression pedal, a sustain pedal, a dual-switch pedal, and an electronic drum hi-hat. The pedal plug is shown in the figure:

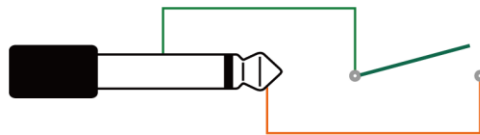
Expression Pedal (Positive Polarity)



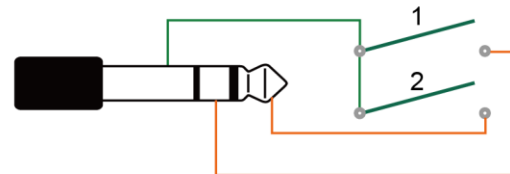
Expression Pedal (Reverse Polarity)



Sustain Pedal (Switch Pedal)



Dual-Switch Pedal



FSR Electronic Hi-Hat



## 6. Precautions

1. This product contains a circuit board.
2. Rain or immersion in water may cause the product to malfunction.
3. Do not heat, press, or damage internal components.
4. Non-professional maintenance personnel are not allowed to disassemble the product.
5. The working voltage of the product is 5VDC, using a voltage lower or exceeding this voltage may cause the product to fail to work or be damaged.

## 6. Q&A

Question: The pedal type detected on the configuration software is incorrect.

Answer:

- Please make sure that the pedal has been connected to MPC-20 normally.
- If you are connecting an expression pedal, please try to place the pedal in the middle range, and then click "CHECK" to detect.

Question: Is it possible to set MIDI messages if no pedal is connected?

Answer: Yes, but only the expression pedal and sustain pedal can be set, and the dual pedal function cannot be set. After setting, you must ensure that the corresponding pedal type is connected correctly during use. (It is recommended to connect the pedal before setting, so as to avoid setting errors)

Question: The USB cannot be connected to the computer.

- After confirming the connection, whether the indicator light flashes;
- Confirm whether the computer has a MIDI driver. Generally speaking, the computer comes with a 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/>

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

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