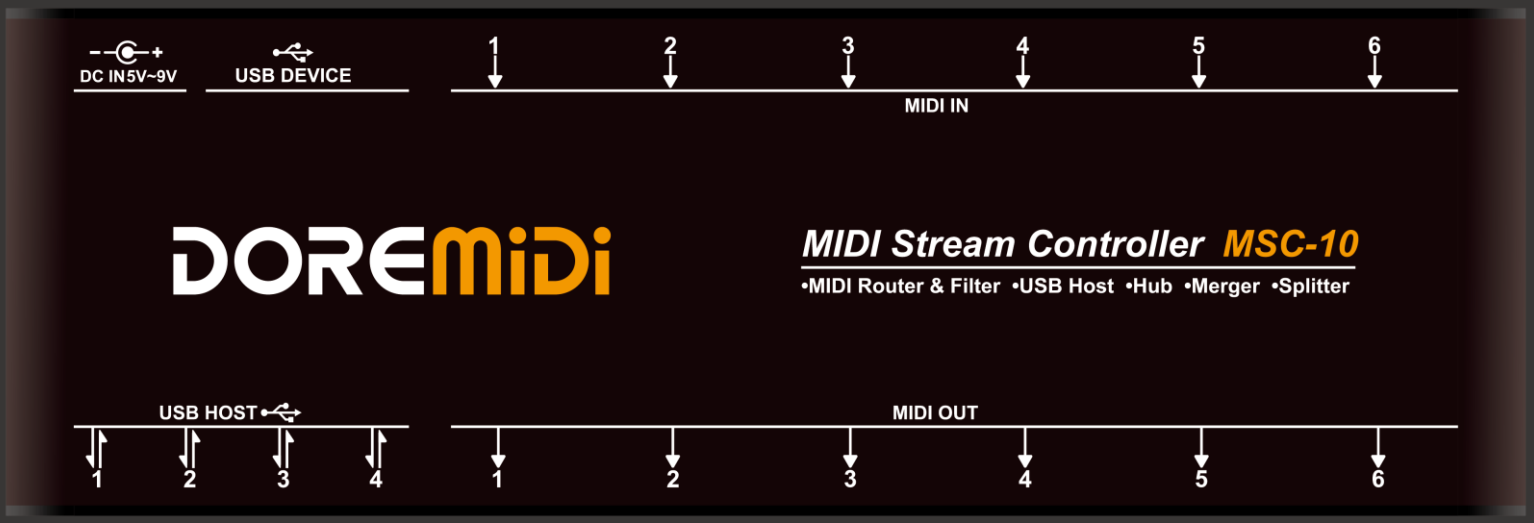
DOREMiDi
www.doremidi.cn

MIDI Stream Controller
MSC-10

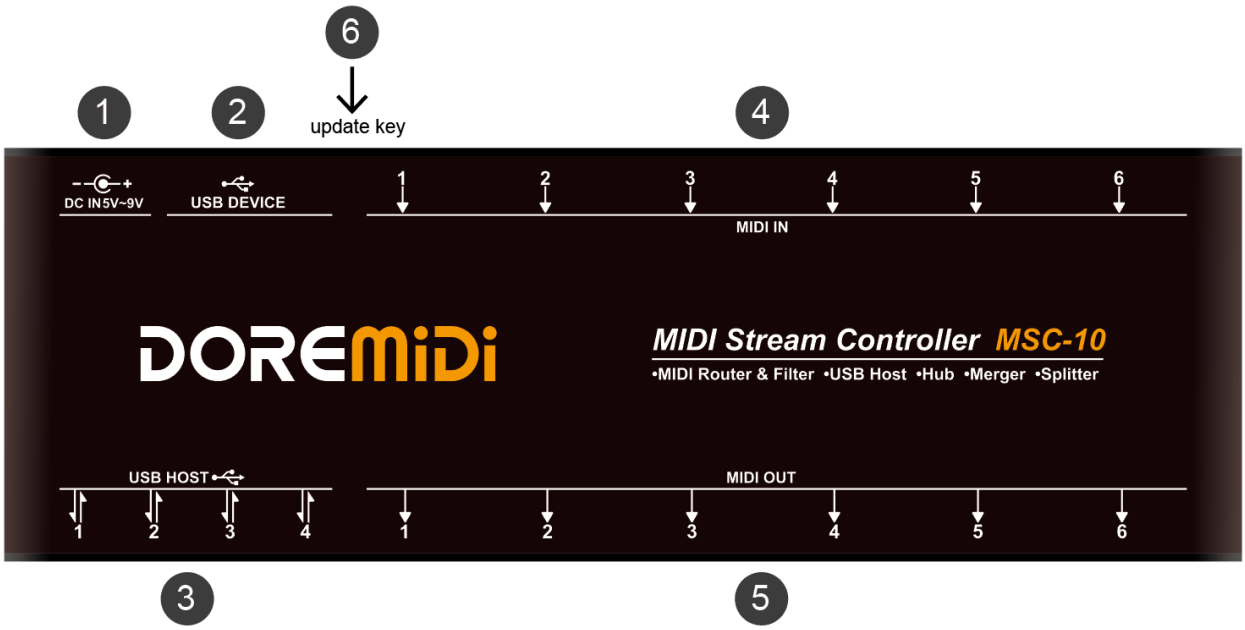


Instructions

1. Introduction

The Stream Controller (MSC-10) is a multifunctional MIDI data stream control system. The MSC-10 has a rich set of MIDI interfaces, such as 4 x USB host ports, USB device ports, 6 MIDI inputs and 6 MIDI outputs. The MSC-10 supports routing and filtering of the USB host port and MIDI DIN port, and can work independently from the computer after setting. In addition, the USB device port of the MSC-10 can also be connected to a computer and used as a USB MIDI hub to connect multiple MIDI devices.

2. Appearance & Parameters



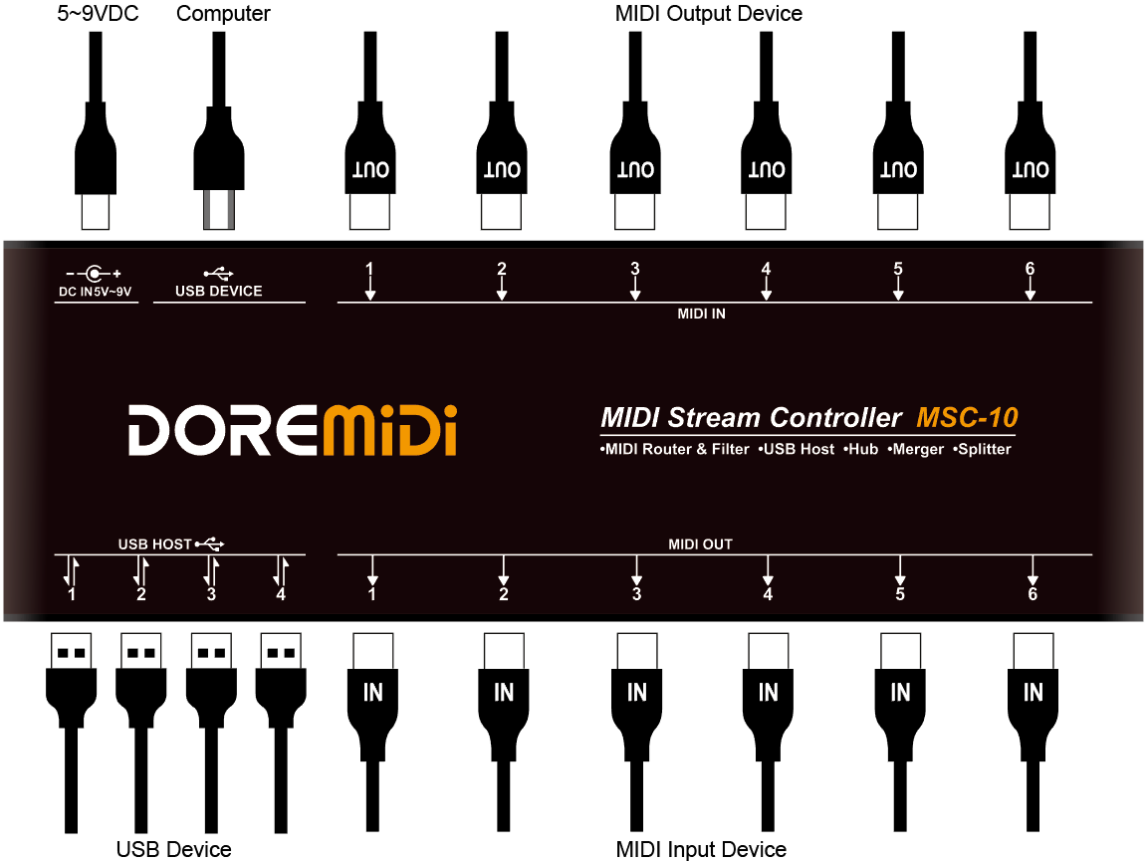
Name	Description
Model	MSC-10
Size (L x W x H)	224*75*35mm
Weight	470g
❶Power supply	DC port power supply: 9V/500mA or 5V/1A power supply. (DC plug specification: 5.5*2.1mm, Tip positive and Ring negative) **(Note: If you need to power the USB MIDI device through the USB host port, select the DC IN power adapter according to the specific situation.)**
❷USB DEVICE	MIDI devices that comply with USB standards, plug and play. Support powering the product through the USB DEVICE port.
❸USB HOST 1~4	● USB MIDI host interface, connect USB MIDI devices to communicate MIDI messages, and perform two-way communication. ● Compatible with USB standard MIDI devices and some known non-USB standard devices. **(Note: Non-USB standard devices require special drivers to be installed when connected to a computer. This product is compatible with some known non-USB compatible devices. For details, please check the official website "www.doremidi.cn")** ● The USB host port can power USB MIDI devices. Each USB host port can provide a maximum of 1A@5V, which also depends on the power supply of DC IN.
❹MIDI IN1~6	Standard MIDI DIN five-pin input port, connected to the MIDI OUT port of the MIDI DIN device.
❺MIDI OUT1~6	Standard MIDI five-pin output port, connected to the MIDI IN port of a MIDI DIN device.
MIDI Compatibility	Compatible with all musical instruments with MIDI standard port, compatible with all MIDI type messages.
❻update key	Firmware upgrade button, press and hold the hidden button to power on the product and enter the upgrade mode. The new firmware will be released on the official website.

3. Communication limit parameters

Due to the limited communication speed of the MIDI five-pin port, when MSC-10 works on multiple MIDI inputs and merges them into one MIDI output, MIDI messages will be queued and output according to the first-in-first-out principle. In order to prevent the MIDI queue from causing buffer overflow or delay, MSC-10 have made the following restrictions:

Name	Description
MIDI Merge Quantity	MIDI merging means merging multiple MIDI inputs into one MIDI output port. Each MIDI output port of MSC-10 supports up to 6 MIDI input ports at the same time.
Input Buffer	When MSC-10 works on multiple MIDI inputs and merges them into one MIDI output, MIDI messages will be queued and output according to the first-in-first-out principle. MIDI queued messages will be saved in the input buffer. All MIDI ports (including USB HOST/USB DEVICE/MIDI IN) have a 512-byte buffer when used as input.
System Exclusive (ie, SysEx)	SysEx is used to send large amounts of data to MIDI devices and is generally customized by MIDI device manufacturers. MSC-10 supports the transmission of SysEx messages, with a maximum input buffer of 512 bytes. If the buffer is exceeded, the SysEx message will be discarded.

4. Steps for usage



Connection diagram

4.1. Power supply

Power Supply	Description
Powered by DC IN	●5V DC: It is recommended to use a power supply with a current of 1A or above. ●9V DC: It is recommended to use a power supply with a current of 0.5A or above. ●If you need to power other USB MIDI devices through the USB HOST port, please make sure that the the power supply can meet the working needs of these USB MIDI devices.
Powered by USB DEVICE	MSC-10 can also be powered via the USB DEVICE port. **(Note: The USB port of a computer can generally provide 5V/0.5A power. If powered by a USB hub, please ensure that the power is sufficient.)**

4.2. Connect MIDI device

- Use a standard five-pin MIDI DIN cable to connect the MIDI OUT port of the MIDI device to the MIDI IN port of the MSC-10.
- Use a standard five-pin MIDI DIN cable to connect the MIDI OUT port of the HUB-3 Pro to the MIDI IN port of the MIDI device.
- Use a USB cable to connect the USB device port of the USB MIDI device to the USB HOST port of the MSC-10.

4.3. Connect computer as MIDI HUB

After MSC-10 is connected to the computer, you can set the routing and filtering of the MIDI port. For details, see "5. Setting the routing and filtering of the MIDI port". In addition, after MSC-10 is connected to the computer, it can be used as a MIDI hub. MSC-10 has 10 input ports and 10 MIDI output ports. Users can select the MIDI port to be used in the MIDI software. The mapping of the computer's MIDI port to the MSC-10's MIDI port is as follows:

MIDI Input/Output	MIDI Port Names	MSC-10 Ports
MIDI Inputs	DOREMiDi-MSC-10	MIDI IN1
	MIDIIN2 (DOREMiDi-MSC-10)	MIDI IN2
	MIDIIN3 (DOREMiDi-MSC-10)	MIDI IN3
	MIDIIN4 (DOREMiDi-MSC-10)	MIDI IN4
	MIDIIN5 (DOREMiDi-MSC-10)	MIDI IN5
	MIDIIN6 (DOREMiDi-MSC-10)	MIDI IN6
	MIDIIN7 (DOREMiDi-MSC-10)	USB HOST1
	MIDIIN8 (DOREMiDi-MSC-10)	USB HOST2
	MIDIIN9 (DOREMiDi-MSC-10)	USB HOST3
	MIDIIN10 (DOREMiDi-MSC-10)	USB HOST4
MIDI Outputs	DOREMiDi-MSC-10	MIDI OUT1
	MIDIOUT 2 (DOREMiDi-MSC-10)	MIDI OUT2
	MIDIOUT 3 (DOREMiDi-MSC-10)	MIDI OUT3
	MIDI OUT 4 (DOREMiDi-MSC-10)	MIDI OUT4
	MIDI OUT 5 (DOREMiDi-MSC-10)	MIDI OUT5
	MIDI OUT 6 (DOREMiDi-MSC-10)	MIDI OUT6
	MIDI OUT 7 (DOREMiDi-MSC-10)	USB HOST1
	MIDI OUT 8 (DOREMiDi-MSC-10)	USB HOST2
	MIDI OUT 9 (DOREMiDi-MSC-10)	USB HOST3
	MIDI OUT 10 (DOREMiDi-MSC-10)	USB HOST4

(Note: If you use “MIDI Stream Config” to set up MIDI routing, please do not repeat the routing in other software, otherwise it may cause MIDI data looping.)

5. Set the routing and filtering of MIDI ports

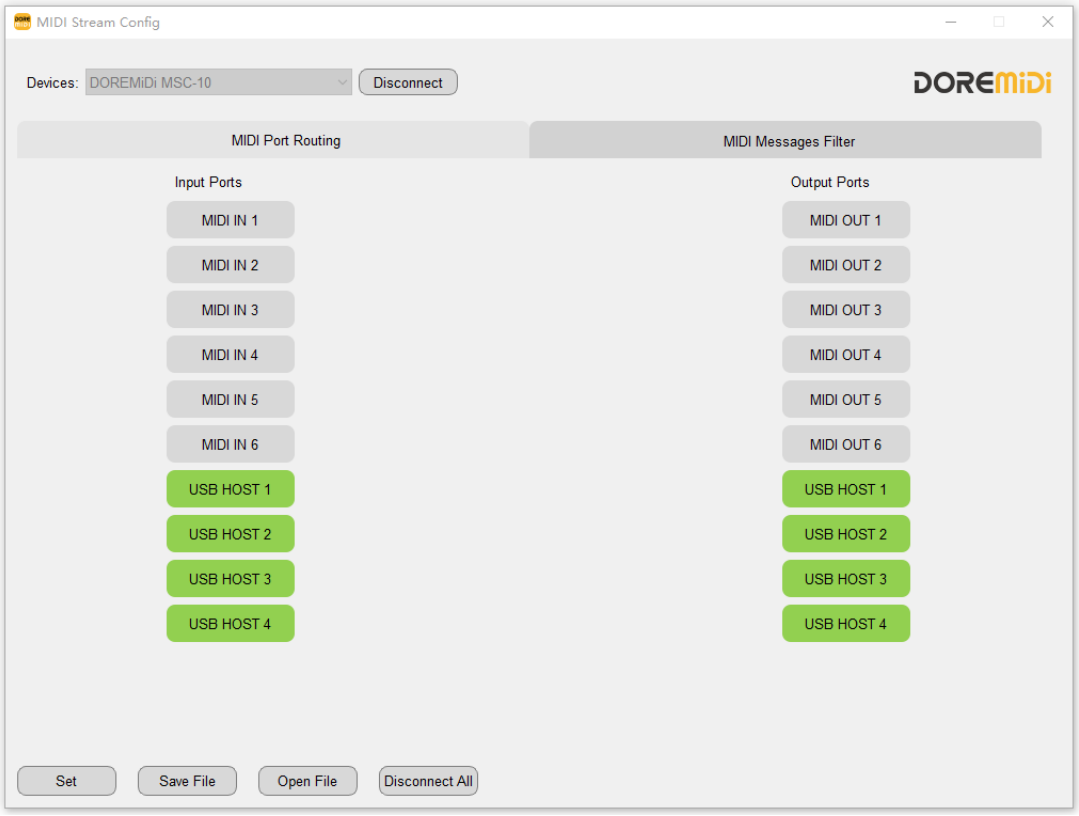
MSC-10 is connected to the computer via USB DEVICE. You can use the "MIDI Stream Config" software to set the routing of each MIDI port of MSC-10 and the filtering of MIDI messages. The “MIDI Stream Config” software can be downloaded from www.doremidi.cn.

In addition, the MSC-10 has a non-volatile storage function, which will save the parameters after setting the MIDI routing and filtering, and can be used independently without connecting to a computer.

5.1. Set up MIDI routing

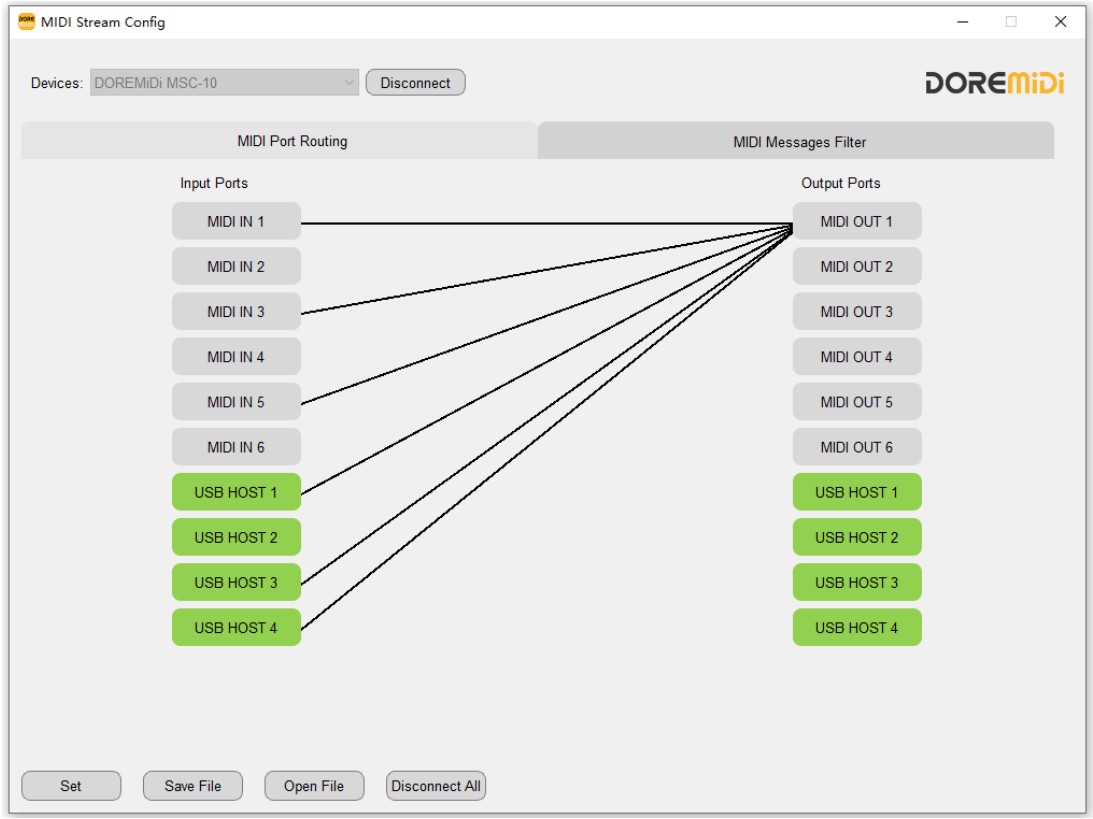
❶ Select the DOREMiDi device and click “Connect”.

❷ Select “MIDI Port Routing”.

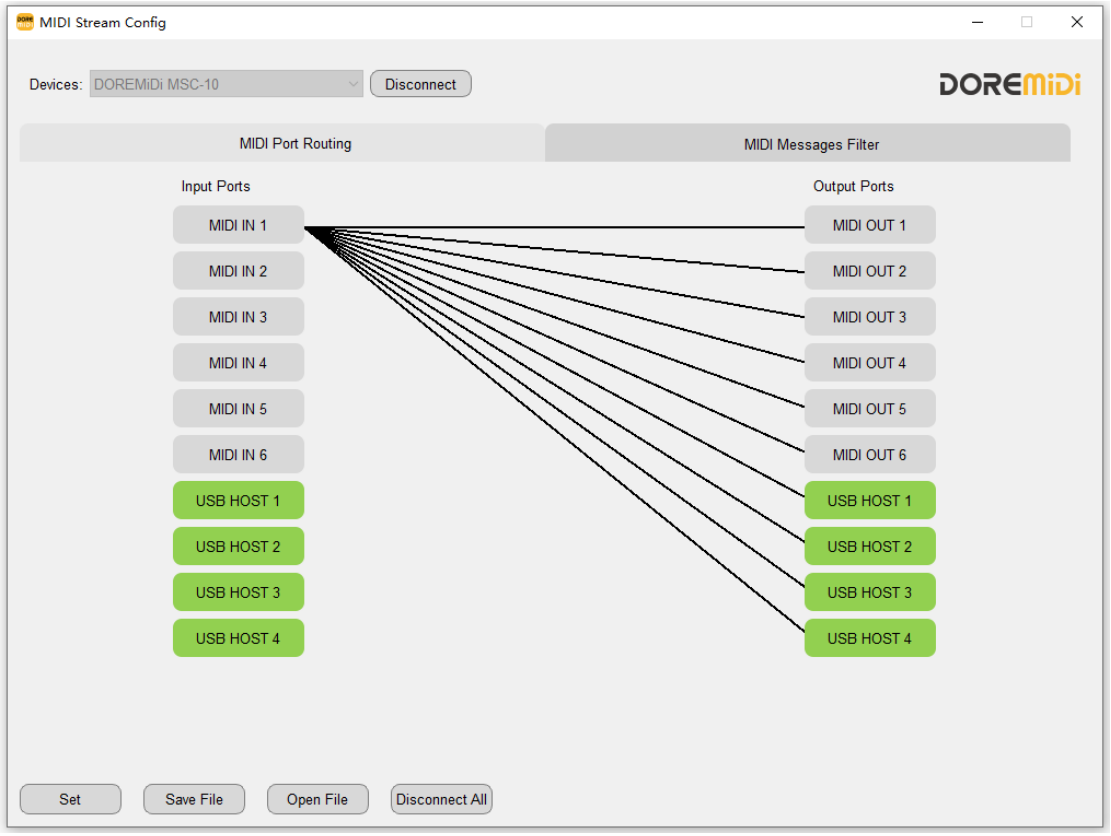


❸ Select and hold the right mouse button on the MIDI IN port in the Input Ports to connect it to the MIDI OUT port in the Output Ports. After setting, the messages from the MIDI IN port will be routed to the MIDI OUT port. **(Note: 1 MIDI output port can connect up to 6 MIDI input ports)**

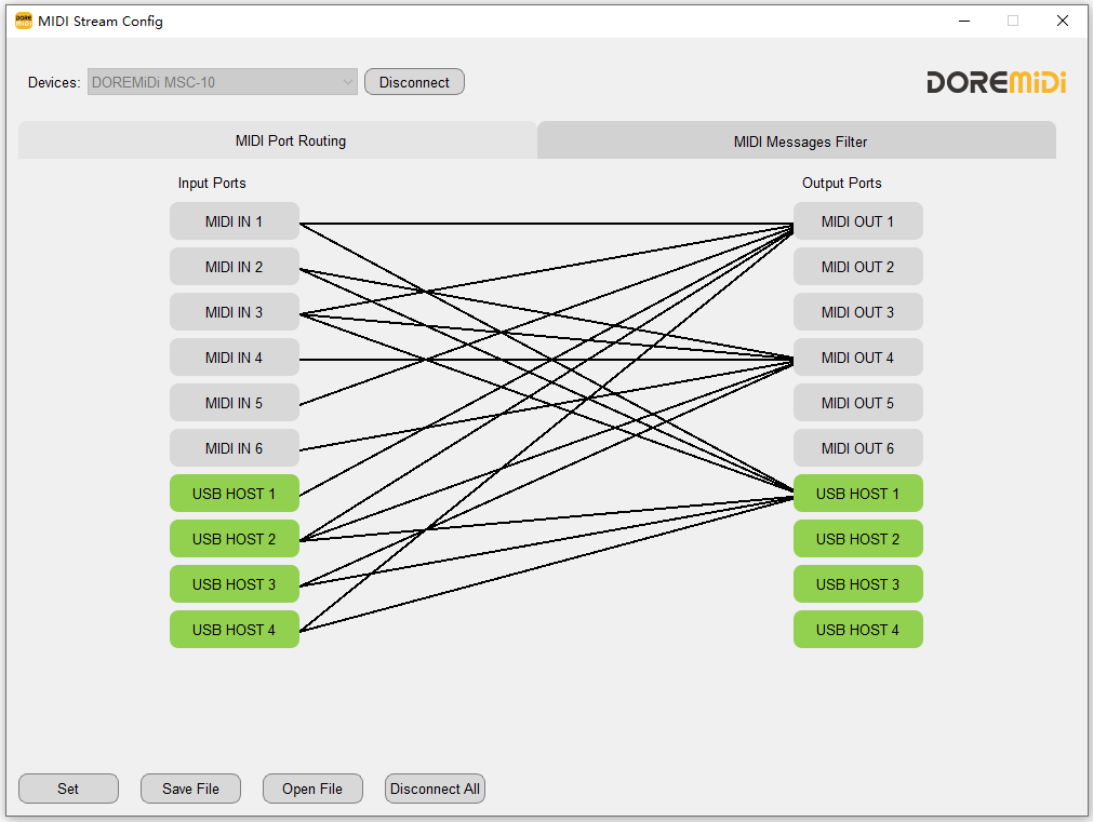
For example, set the MIDI message merge as shown in the figure:



For example, set MIDI split as shown in the figure:



For example, multiple MIDI channels can be merged and separated, as shown in the figure:



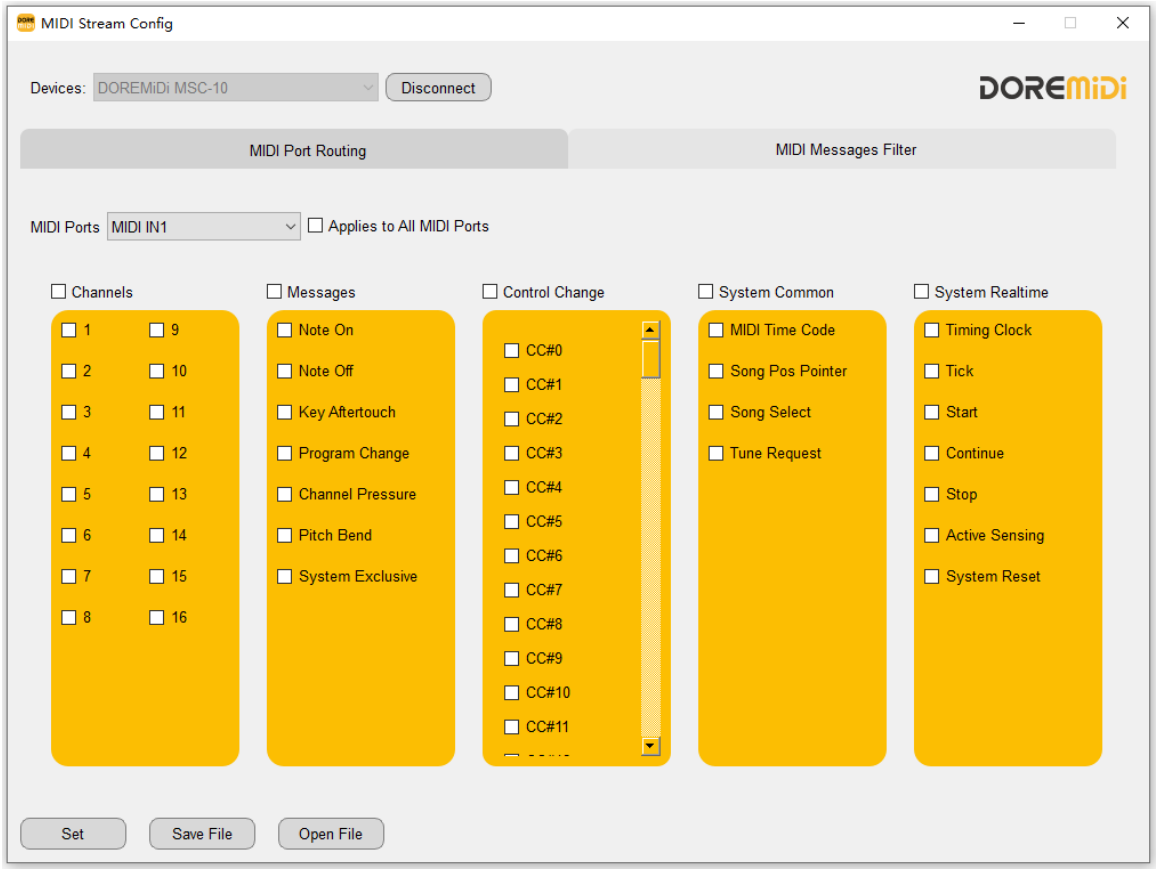
❹ Set, after setting the MIDI routing, you need to click "Set" to complete the MIDI routing setting.

❺ Save File, after setting the routing, you can save it as a file for quick access later.

❻ Open File, open the file with filter settings.

❼ Disconnect All, click to quickly disconnect all routing cables.

5.2. Set up MIDI filtering



❶ Select the DOREMiDi device and click "Connect".

❷ Select "MIDI Messages Filter".

❸ Select the MIDI port to be filtered. If the content filtered for all MIDI ports is the same, you can select "Applies to All MIDI Ports".

❹ Select the content to be filtered, please refer to the following:

Filter Type	Description
Channels	MIDI channel, filter all messages of this MIDI channel.
Messages	MIDI message type, filter MIDI messages of this type in all MIDI channels.
Control Change	MIDI CC controller, filter the messages of this MIDI CC controller in all MIDI channels.
System Common	MIDI system messages, filter MIDI messages of this type.
System Realtime	MIDI system real-time time message, will filter this type of MIDI message.

❺ Set, after selecting the filter item, you need to click "Set" to complete the filter configuration.

❻ Save File, after configuration and filtering, it can be saved as a file for quick recall in the future.

❼ Open File, open the filter configuration file.

(Notice:

① After the configured MIDI routing, MSC-10 can be used alone without connecting to the computer.

② If you use MIDI Stream Config software to configure MIDI routing, please do not use other software to configure routing repeatedly, otherwise it may cause MIDI data loop.

③ For the USB DEVICE port, MSC-10 will maintain the MIDI HUB function, that is, the MIDI messages of MIDI IN x 6 will be input to USB DEVICE (MIDI IN→USB DEVICE), and the messages of USB DEVICE can be output to MIDI OUT x 6 (USB DEVICE→MIDI OUT), USB HOST x 4 will communicate with USB DEVICE.

④ After configuring MIDI filtering, MIDI filtering also works on the USB Device port.)

6. 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.

7. Questions & Answers

1) Question: USB cannot connect to computer.

Answer: MSC-10 is a MIDI device that complies with USB standards. It can be plug-and-play on general computers without installing drivers. If your computer lacks MIDI drivers, please try to install the MIDI drivers. Installation method: https://windowsreport.com/install-midi-drivers-pc/

2) Question: After MSC-10 is connected to the computer, the MIDI Stream Config software does not recognize it.

Answer: Please install the driver "Virtual COM Port Driver V1.5.0.zip", which can be downloaded from the official website: www.doremidi.cn

3) Question: USB HOST interface, can it power USB MIDI devices?

Answer: It can power. The USB HOST port of MSC-10 can output a maximum power of 5V/1A, but pay attention to whether the input power of the power adapter of "DC IN" can meet the working requirements of USB MIDI devices.

4) Question: USB HOST port does not work.

Answer: Please follow the steps below:

- Make sure that the MSC-10 is powered normally. If you use the USB HOST port to power the USB device, please make sure that the DC IN power can meet the working requirements of the USB device.
- Confirm that the USB MIDI device can work normally and the USB interface has MIDI function (for example, the device can edit MIDI normally after connecting to the computer);
- Confirm whether the USB MIDI device is a standard USB class compliant device. Such devices do not need to install drivers when connected to the computer. If it is not a USB class compliant device, it may not be compatible with this product.
- Confirm that the display shows "H" after the USB port is connected to the USB MIDI device. If "H" is not displayed, or MIDI messages cannot be transmitted after "H" is displayed, please contact customer service for resolution.

5) Question: The MIDI OUT/IN interface does not work.

Answer: Please check whether the MIDI OUT/IN is connected correctly. MIDI IN is connected to the MIDI OUT of the MIDI device, and MIDI OUT is connected to the MIDI IN of the MIDI device.

6) Question: After the MSC-10 is configured, the data output by MIDI OUT is disordered, lost, delayed, etc.

Answer: Please check as follows:

- Check the power supply: Please check whether the power supply of MSC-10 is normal, and whether the power supply of external MIDI input and output devices is normal.
- Please check whether a large number of MIDI SysEx messages are generated. A large number of SysEx will hinder the transmission of other MIDI messages, causing note delay.
- Please check whether the MIDI message filtering configuration is correct and whether the required MIDI messages are filtered.

- Check the MIDI channel: Please check the device connected to MIDI IN and whether the MIDI channel conflicts. If the MIDI channels are the same and contain the same MIDI messages, it is possible that notes are superimposed and lost.

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

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