USB MIDI Network Box Pro

（UR-1 Pro）
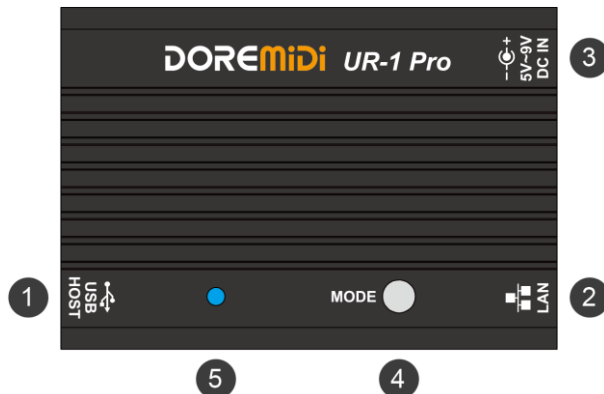
Instructions

1. Introduction

The USB MIDI Network Box Pro (UR-1 Pro) is a RTP-MIDI-based USB MIDI gateway designed by DOREMiDi, which can be used in a local area network to connect multiple USB MIDI devices and computers to each other to complete low-cost Latency, high stability MIDI communication. UR-1 Pro uses a high-speed USB host port and is compatible with a variety of USB MIDI devices.

2. Appearance

❶ USB HOST: USB host interface, through USB-A plug, connect to MIDI device with USB TO HOST, with working indicator.

❷ MIDI LAN: Ethernet interface, connect Ethernet equipment through network cable, such as network router, network switch, etc.

❸ DC IN 5V~9V: Product power supply port, power supply voltage 5~9VDC, use DC5.5*2.1 plug, tip is positive and sleeve is negative.

❹ MODE: Mode switch button, Long press 3 seconds to switch initiator/listener mode, Long press for 10 seconds to restore factory settings (red and blue indicators flash alternately)

❺ LED: Mode indicator, blue is listener mode, red is initiator mode, The red and blue indicators flash alternately to restore factory settings.

(Note: The listener mode can be connected to a terminal with RTP-MIDI function such as a computer, and the initiator mode can be actively connected to the RTP-MIDI device of DOREMiDi.)

3. Product Parameters

Name	Description
Model	UR-1 Pro
Size (L x W x H)	83 x 55 x 30mm
Weight	110g
USB Interface	Standard high-speed USB2.0 MIDI HOST interface
MIDI LAN Interface	Standard Ethernet RTP-MIDI interface
Indicator Light	Network communication indicator, USB working indicator, Network working indicator
POWER Interface	Use DC interface for power supply, power supply voltage 5V~9VDC
USB Compatibility	Compatible with all MIDI devices with MIDI function USB TO HOST interface
Listener Mode	Support up to 5 RTP-MIDI terminals connected at the same time
Initiator Mode	Support up to 3 DOREMiDi RTP-MIDI devices connected at the same time
Power Consumption	About 1W, 105mA (@9VDC), 185mA (@5VDC), When the USB HOST is not connected to the device.
IP Address	By default, the IP address is automatically obtained, and the IP address is assigned through a router with DHCP function. It can also be set as a static IP address

4. Steps for usage

1. Power supply: Use a 5~9VDC adapter to supply power to the product through the "DC IN" interface.

2. Connect a USB MIDI device: Connect a USB MIDI instrument through the "USB HOST" interface. After the connection is successful, the "USB HOST" indicator will light up.

3. Connect to the local area network: Use the RJ45 network cable to connect the "MIDI LAN" interface of the UR-1 Pro to a network router or network switch.

4. Listener Mode: Long press the mode button for 3 seconds, when the indicator light is blue, it indicates the listener mode. The UR-1 Pro can be discovered and connected through a computer or other terminal. The indicator light flashes when it is not connected, and the indicator light is always on after the connection is successful. refer to "DOREMiDi Network MIDI Configuration Manual.pdf" at *www.doremidi.cn*

5. Initiator Mode: Long press the mode button for 3 seconds, when the indicator light is red, it means the initiator mode. In initiator mode, UR-1 Pro will automatically search for DOREMiDi's RTP-MIDI devices in the local area network and actively connect. The indicator light flashes when not connected, and the indicator light is always on when the connection is successful.
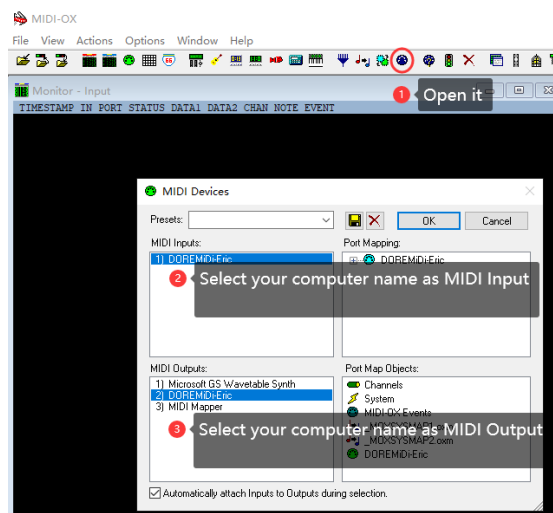
(Note: When an RTP-MIDI device (such as a computer) in the local area network sends a SysEx message to the UR-1 Pro device, the maximum data size of each packet must not exceed 10K bytes.)
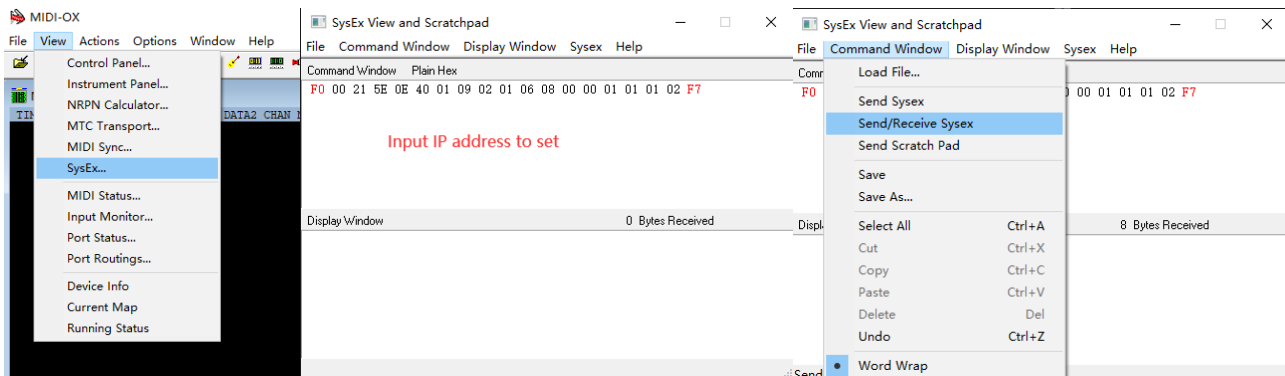
5. Configure the IP address

MR-1 Pro/UR-1 Pro obtains IP address automatically by default, which allows a router with DHCP function to automatically assign an IP address. Users can send SysEx messages through the RTP-MIDI network to configure MR-1 Pro/UR-1 Pro as a static IP address, the configuration steps are as follows:

Environmental requirements: Windows 7 or newer version of Windows system, the computer and the product to be upgraded need to be connected to the same local area network. For example, on a Mac system, you can use software that can send SysEx messages, such as "SysEx Librarian".
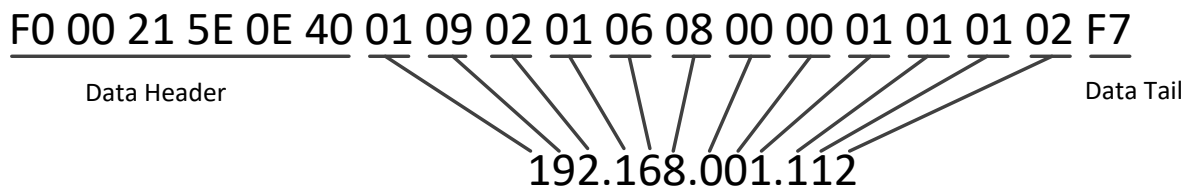
1. Step 1: Refer to "DOREMiDi Network MIDI Configuration Manual.pdf" to connect the RTP MIDI device of DOREMiDi to the LAN.

2. Step 2: Use MIDI-OX software to configure MIDI Output and MIDI Input. Mac system can use SysEx Librarian software.
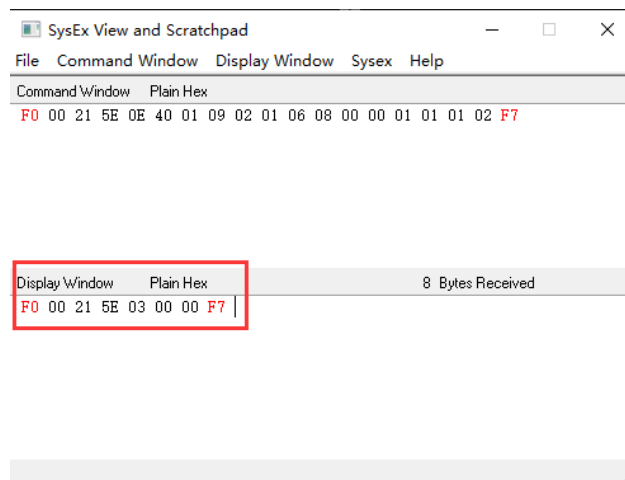
DOREMiDi

3. Step 3: Use to open "SysEx..." → enter the IP setting command → click "Send/Receive Syses" to send the setting command

● Set the IP SysEx format: the data header and tail are fixed, and the data area is the IP address. For example, set the IP address to "192.168.1.112", as shown in the figure:

F0 00 21 5E 0E 40 01 09 02 01 06 08 00 00 01 01 01 02 F7

Data Header   Data Tail

192.168.001.112

● After the setting is successful, software will receive a feedback message, as shown in the figure. Then power on the product again, and the product will use a static IP.

Note:

● In a network of multiple RTP MIDI devices, it is necessary to ensure that the IP addresses of the devices cannot be duplicated, and the network segments of the IP addresses must be the same. for example:

IP-1 : 192 : 168 : 001 : 112
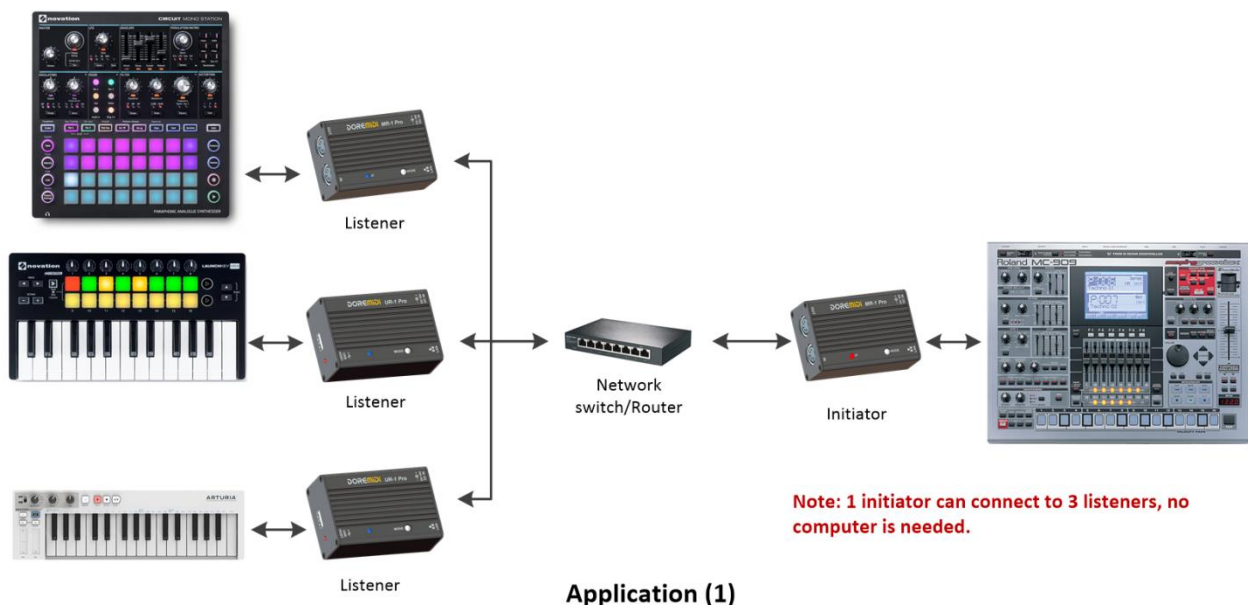
IP-2 : 192 : 168 : 001 : 113

The two IP addresses are different, but the network segment 192: 168: 001 must be the same.

- If you forget the IP address set by the product, you can press and hold the product button for more than 10 seconds until the red light and blue light flash alternately, indicating that the factory settings have been successfully restored. After the factory settings, the product will automatically obtain an IP address and use the DHCP function A router can assign an IP address to the product.
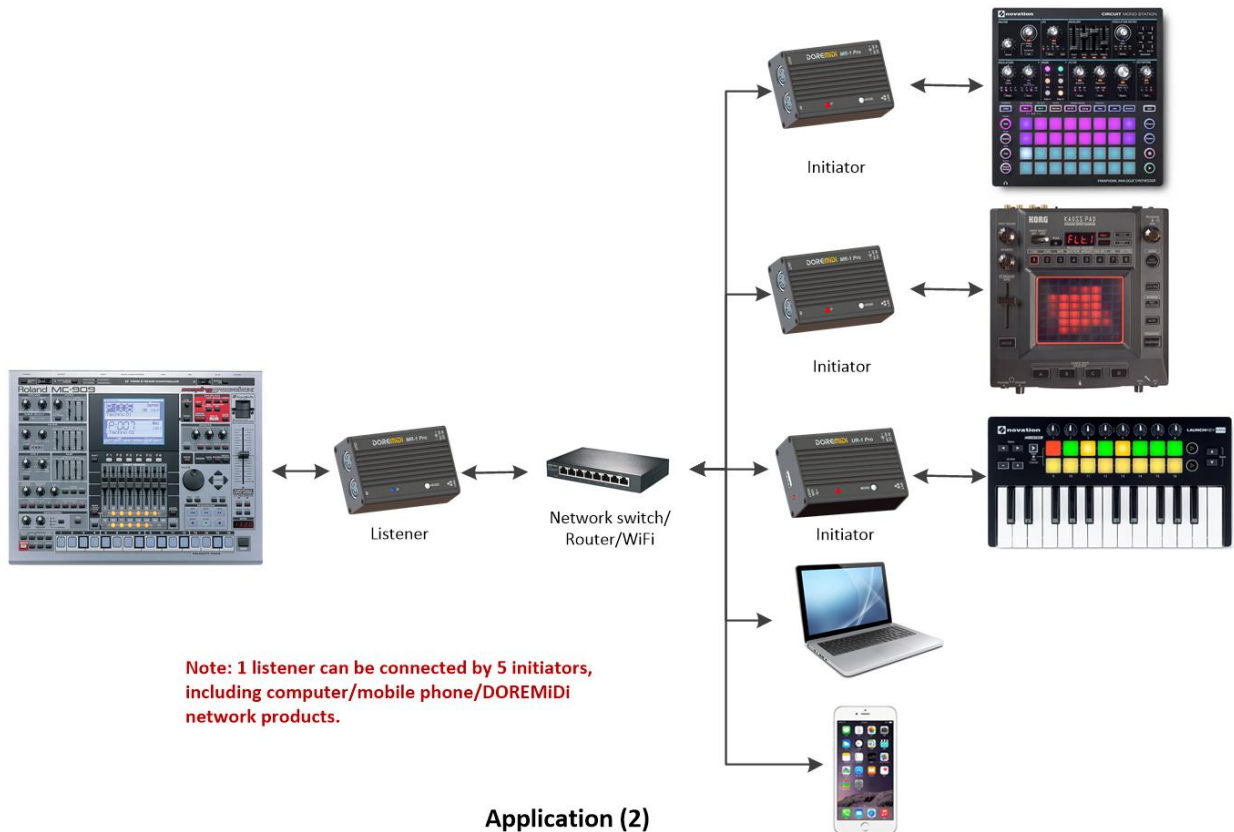
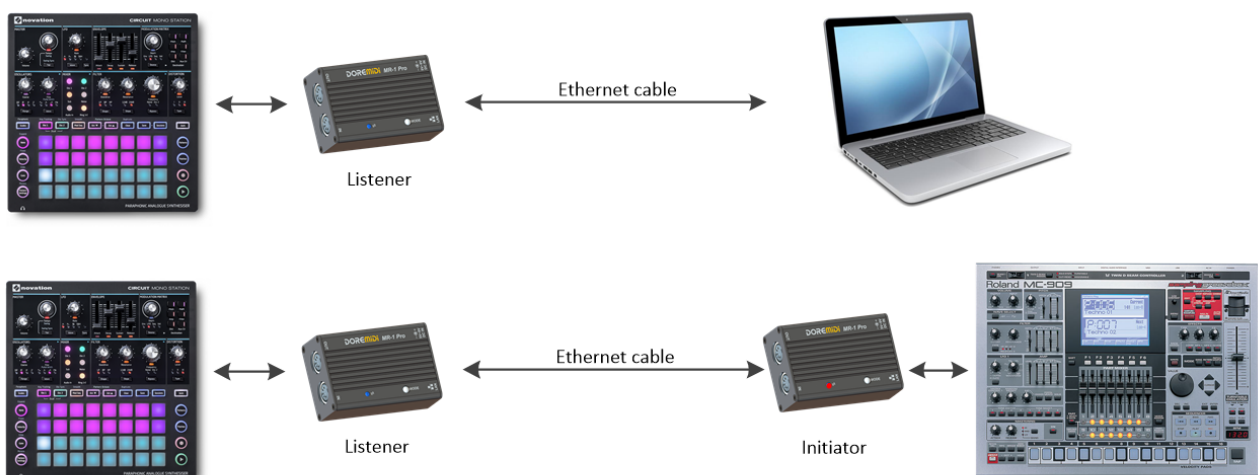

6. Introduction of typical application cases

1. Application 1: Before the computer is not needed, MR-1 Pro/UR-1 Pro can connect and communicate through the network, set one product of them as the "Initiator", and the initiator can connect up to 3 listeners. As shown in the picture:

Application (1)

2. Application 2: One listener can communicate with multiple initiators at the same time, and can support up to 5 initiators, as shown in the figure:

Initiator

Initiator

Initiator

Listener

Network switch/
Router/WiFi

Note: 1 listener can be connected by 5 initiators, including computer/mobile phone/DOREMiDi network products.

Application (2)

3. Application 3: After configuring the MR-1 Pro/UR-1 Pro as a static IP, you can connect the MIDI device to the computer via an Ethernet cable, or connect two MIDI devices. It is suitable for applications that need to extend MIDI communication. The communication distance of the Ethernet cable can reach more than 100 meters, which is stable and has no delay.

Ethernet cable

Listener

Ethernet cable

Listener

Initiator

Note: Longer communication distance via Ethernet cable, more suitable for stage applications

Application (3)

7. 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.

8. Q&A

Question: Can the USB HOST interface provide power to USB MIDI instruments?
Answer: You can supply power, but pay attention to whether the power input of the "DC IN" can meet the working requirements of the musical instrument.

Question: The USB HOST interface does not work.
Answer: Please follow the steps below:
- Ensure that the "DC IN" power supply is normal.
- Confirm that the instrument can work normally and that the instrument's USB interface is equipped with MIDI functions (for example, it can recognize MIDI devices when connected to a computer).
- Try to power the UR-1 Pro through "DC IN" first, and then connect to the instrument through "USB HOST", and see if the indicator light of "USB HOST" lights up.
- If the "USB HOST" indicator still doesn't light up, or MIDI messages cannot be transmitted after it's on, please contact customer service to solve it.
- If the USB interface of your instrument requires a USB driver to be used on the computer, please contact customer service to update the UR-1 Pro firmware.

Question: In the slave mode, the computer does not find the UR-1 Pro.
Answer: Please make sure that the computer and UR-1 Pro are in the same local area network.
If it is not resolved, please refer to "**DOREMiDi Network MIDI Configuration Manual.pdf**" at
www.doremidi.cn.

Question: In the main mode, the UR-1 Pro cannot connect to RTP MIDI devices.
Answer: Please make sure that it is the RTP MIDI device of DOREMiDi; in addition, please make sure that the RTP MIDI device and UR-1 Pro are in the same local area network.

Question: iPhone cannot be connected, but other devices can be connected.
Answer: Please turn off the private address switch in the mobile network settings.

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

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