

**MOOER**

**STEEP I & II**

**Multi-platform audio interface**

**Owner's Manual**

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# Precautions

**\*Please read carefully before proceeding\***

## **Power Supply**

There is a STEEP sound card that supports USB power supply and a separate power supply adapter if necessary. Adapter output requires 5V, current not less than 1A, otherwise it will be possible Device damage or other problems may occur. Unplug the power supply when not in use or during a thunderstorm.

## **Connections**

Always turn off the power of this and all other equipment before connecting or disconnecting, this will help prevent malfunction and / or damage to other devices. Also make sure to disconnect all connection cables and the power cord before moving this unit.

## **Cleaning**

Clean only with a soft, dry cloth. If necessary, slightly moisten the cloth. Do not use abrasive cleanser, cleaning alcohol, paint thinners, wax, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

## **Interference with other electrical devices**

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

## **Location**

To avoid deformation, discoloration, or other serious damage, do not expose this unit to the following conditions:

- Direct sunlight
- Magnetic fields
- Excessive dusty or dirty location
- Heat sources
- Extreme temperature or humidity
- High humidity or moisture
- Strong vibrations or shocks

## **FCC certification**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

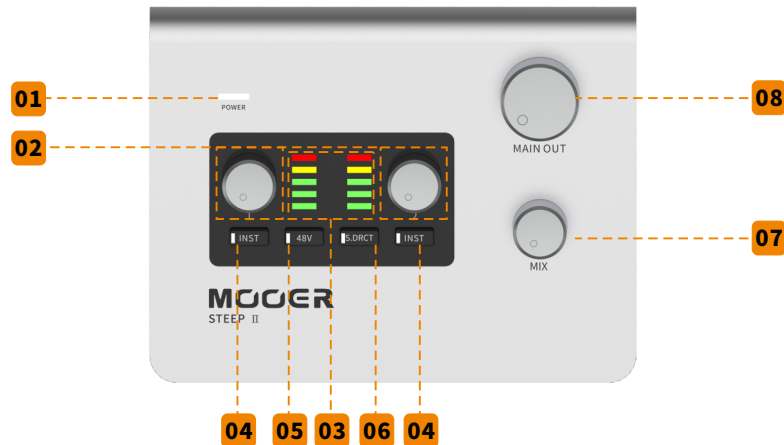
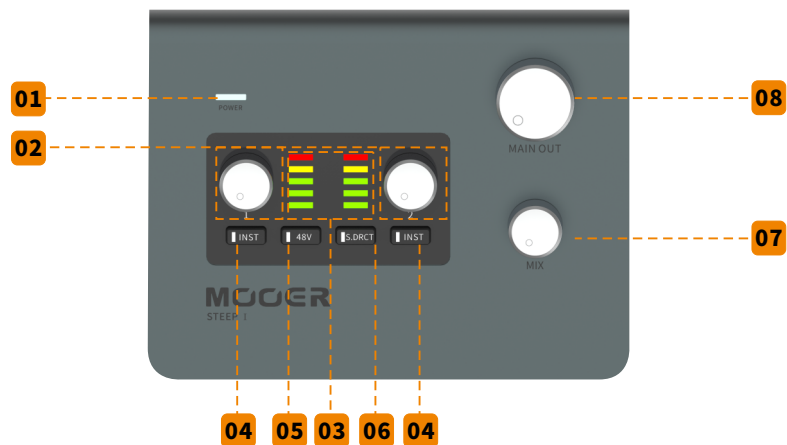
- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

# FEATURES

- Multi-platform audio interface with dual inputs and outputs
- Supports up to 24bit/192kHz high-resolution audio
- Microphone, line-in, and high-impedance value instrument support
- 48V phantom power available for condenser microphone
- Zero-latency direct monitor and DAW monitor can be adjusted individually or mixed
- Switchable stereo/mono direct monitor provides more possibilities for input signal monitor
- Individual adjustment of monitor volume level and headphone output volume level
- MIDI IN/MIDI OUT (STEEP II only)
- Can be powered by via USB port or USB power supply

# HARDWARE FEATURES

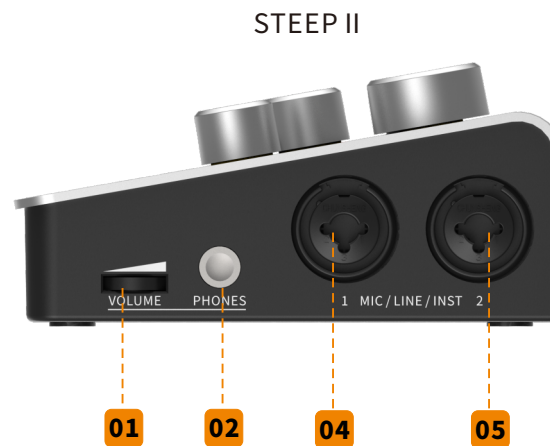
## Front panel



- 01 Power indicator:**  
Indicates power on/off and connection status. LED blinks when disconnected. LED stays on when USB audio is connected properly.
- 02 Input gain knob:**  
Adjust the relevant input gain range from 0 to 50dB.
- 03 Input level indicator:**  
Indicates the input level of corresponding channel. GREEN LED for level ranges from -41dBFS to -6dBFS. ORANGE LED for level ranges from -6dBFS to -1.4dBFS. RED LED for level more than -1.4dbfs, also indicates clipping. Please adjust the input level so that it is only in the ORANGE level at max volume. If RED, reduce the input level to avoid equipment damage or malfunction.

- 04 INST button:**  
Instrument (high impedance value) input switch. Press to activate instrument mode (high impedance value) for electric guitar/bass. When the button is toggled off, the relevant input level will be the line input.
- 05 48V button:**  
48V phantom power switch for microphone input (input 2 of STEEP I, input 1 and 2 of STEEP II). When it is on, a condenser microphone can be powered by phantom power. For other microphones, please turn off the phantom power or refer to the recommendations from the microphone manufacturer.  
**\*Notes:** 48V phantom power is for XLR input jack and it will not affect the 1/4" input jack.
- 06 S.DRCT button:**  
Stereo direct monitor button. When off, the signal from input 1 and input 2 will be mixed and outputs directed to the headphone and main output. When on, the input 1 signal will be separated to the left channel of the audio signal in the headphone output and main output. The Input 2 signal will be channeled to the right channel of the audio signal in the headphone output and the main output. This function only affects the physical input and USB audio recording or USB playback will not be affected.
- 07 MIX knob:**  
Adjust the mix rate for direct monitor and DAW monitor. Rotate counterclockwise to minimum value for 100% direct monitor volume level. This is suited for a zero-latency monitor. Rotate clockwise to the maximum value for 100% DAW monitor, suitable for use with a computer DAW or software effects monitor. Rotate to 12 o'clock for even distribution (1:1) of volume for the direct monitor and DAW monitor.  
**\*Notes:** When the monitor function in your DAW is on, please ensure that the MIX knob is set to the maximum position for the 100% DAW monitor to avoid feedback noise.
- 08 MAIN OUT:**  
Main output level knob. Adjust the volume level of the main output on the back panel.

# Side panel



**01 VOLUME knob:**

Headphone volume knob. Adjust the PHONES output volume level.

**02 PHONES jack:**

¼" TRS stereo headphone jack

**03 STEEP I INPUT 1:**

¼" TRS input jack can be used with a TS cable for an unbalanced signal such as when connecting an electric guitar or bass. You can also use a TRS cable for a balanced signal.

Notice: \*When used with high-impedance value instruments, please use a ¼" TS cable and turn on the INST function for INPUT 2.

\*When used for an unbalanced line signal, please use a ¼" TS cable and turn off the INST function for INPUT 1.

\*When used for balanced line signal, please use a ¼" TRS cable and turn off the INST function for INPUT 1.

**04 STEEP II INPUT 1:**

Combined 1/4" and XLR input jack can be used with a microphone, high impedance value instrument, and/or line in signal.

Notice:\* When used with a microphone, please use an XLR cable and turn off the INST function.

\* When used with a high impedance value instrument like an electric guitar or bass, please use a 1/4" TS cable for connection and turn on INST function of INPUT 1

\* When used for an unbalanced line signal, please use a 1/4" TS cable and turn off INST function of INPUT 1

\* For balanced line signal, please use a 1/4" TRS cable and turn off INST function of INPUT 1

**05 STEEP I & II INPUT 2:**

Combined 1/4" and XLR input jack can be used with a microphone, high impedance value instrument, and/or line in signal.

Notice:\* When used with a microphone, please use an XLR cable and urn off the INST function.

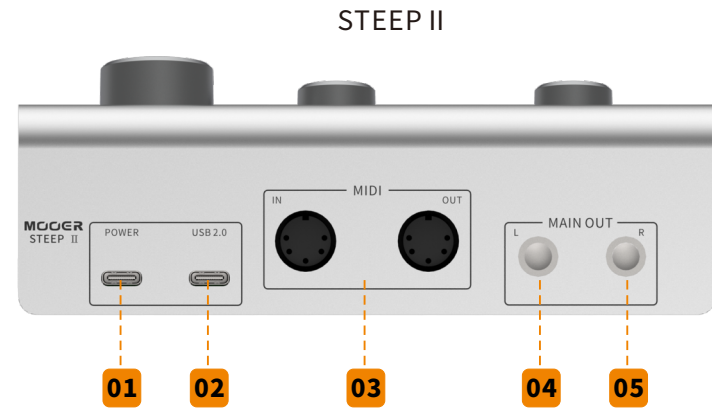
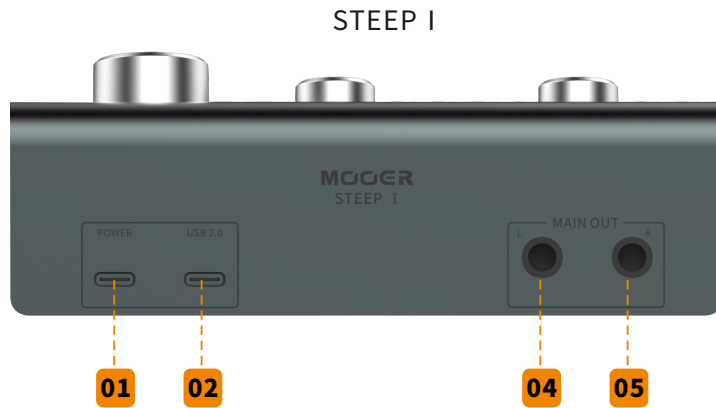
\* When used with a high impedance value instrument like an electric guitar or bass, please use a 1/4" TS cable for connection and turn on INST function of INPUT 2

\* When used for an unbalanced line signal, please use a 1/4" TS cable and turn off INST function of INPUT 2

\* For balanced line signal, please use a 1/4" TRS cable and turn off INST function of INPUT 2



# Back panel



- 01 POWER:**

TYPE-C USB port. If the device cannot be powered by a USB connection, please utilize this port for power. Please use an adaptor rated at 5V and at least 1A current draw.
- 02 USB 2.0 port:**

TYPE-C USB port, STEEP audio interface data transferring port. While it is used with PC or Mac, STEEP I & II can be powered via this port.

Notice: \* When STEEP I/II is connected to a smart phone or tablet, the device might not be powered properly. It is recommended to power the device using the POWER port.

\* When the 48V phantom power is on, the current requirement of the POWER port will increase accordingly.
- 03 MIDI port (STEEP II Only):**

two 5-PIN MIDI port (STEEP II) for MIDI signal input/output. Connect to a MIDI keyboard, effects processor, synthesizer, etc. to send and receive MIDI signal.

- 04 MAIN OUT L:**  
Left 1/4" TRS mono output jack. For balanced signal transfer, please use 1/4" TRS cable. For unbalanced signal transferring, please use 1/4" TS cable.
- 05 MAIN OUT R:**  
Right 1/4" TRS mono output jack. For balanced signal transferring, please use 1/4" TRS cable. For unbalanced signal transferring, please use 1/4" TS cable.

# GETTING STARTED

## 3.1 Computer requirements

**Mac OS:** Version 10.12 or higher. Intel Core i5 or higher. 4GB RAM or more is recommended.

**Windows:** Win10 or higher. Intel Core i5 or higher. 4GB RAM or more is recommended.

**iOS:** iOS 10 or higher. iPad OS 13 or higher.

**Android:** Android 9 or higher. Please check and ensure your device supports USB-OTG (Some Android devices may not support OTG function. For detailed information, please confirm with the manufacturer of your Android device.)

Notes:

- \*To use the OTG function with a mobile device, please use the correct OTG cable. (purchased separately.)
- \*While using STEEP I/II with mobile device, it is recommended to use the POWER port for power.
- \*Computer requirements may change in the future, please refer to the latest manual for detailed information.

## 3.2 Driver download & Installation

ASIO Driver is needed for the STEEP audio interface to run correctly on a Windows computer. Visit <http://www.moeraudio.com/download.html> to download. Mac OS, iOS/iPad OS, or Android devices do not need to install the driver.

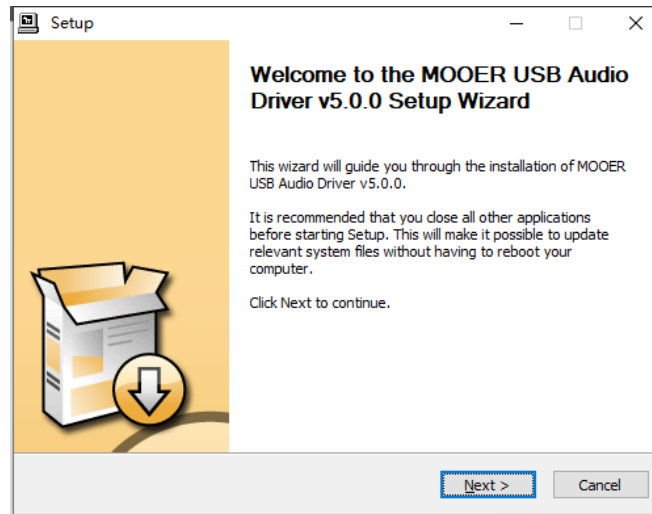
### Windows audio interface installation

\*

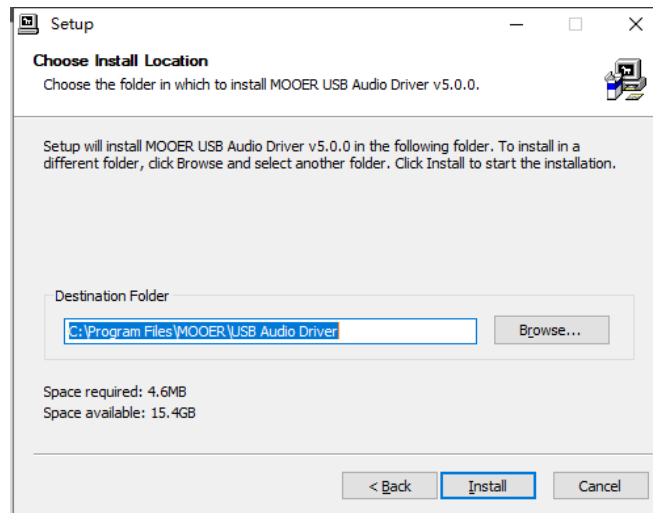
?Unzip the downloaded file and select SETUP to start installation.

Note: Please turn off antivirus programs before installation begins.

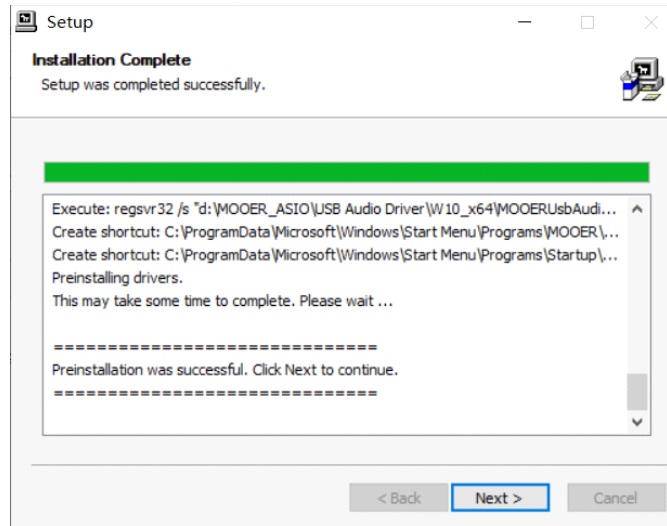
\*Click OK when prompted by the control window and enter the start page.



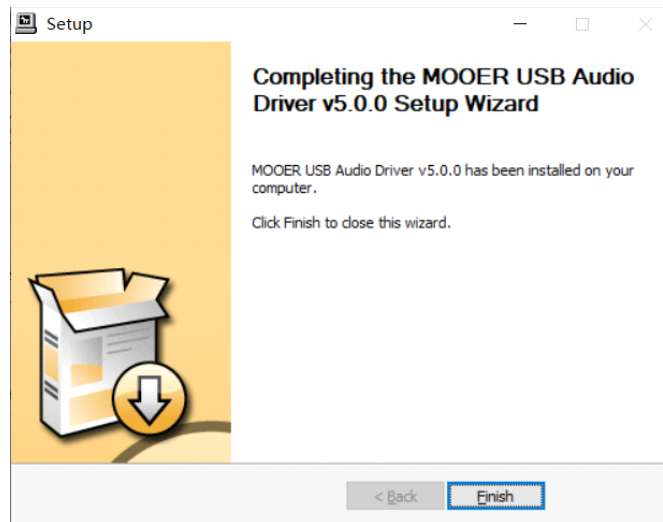
\*Click on Next twice, select a location to install, then click on Install.



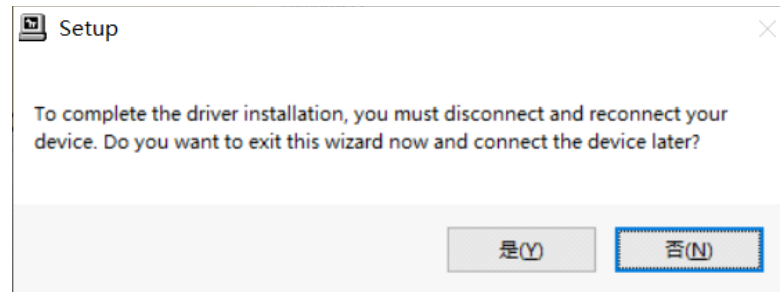
\* Wait until the status bar completes then click on Next for the next step.



\* Click on Finish to complete the installation.




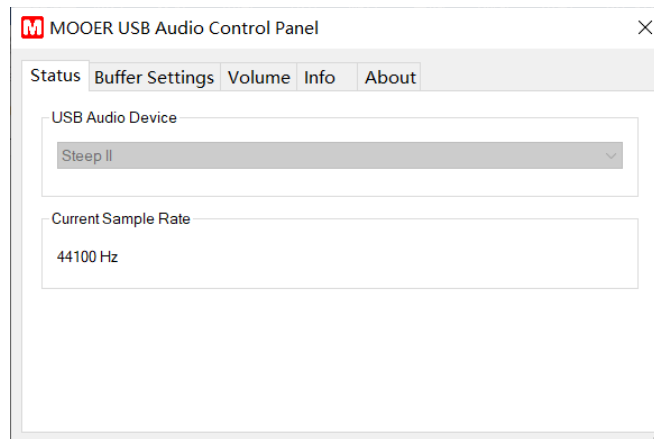
\*Click on (Y) if this window pops up then reconnect the audio interface with the computer.



Windows driver installation is complete.

Note: If computer requests reboot after installation, please reboot the computer before using the audio interface with the computer. The audio interface driver will be activated after reboot.

After installation is complete, you can find the  icon in the right bottom corner of your desktop. Double-click on the icon to open the driver interface. If the STEEP I/II is shown in the USB Audio Device block, it means the Steep I/II is working properly and the driver is working properly.



Current Sample Rate is shown below. STEEP audio interface supports up to 192kHz sample rate, which can be adjusted in the DAW settings. When the sample rate is changed in the DAW, it will be changed in the Current Sample Rate.


In the Buffer Setting menu, you can set the desired buffer size ranging from 8 samples to 2048 samples. The size of the buffer will affect the latency between input signals and output signals from the DAW. If the computer hardware is not changed, the smaller the buffer size, the smaller latency you will get, but noise might appear if buffer size is too small. The larger the buffer size, the larger the latency you will get but it could be more stable. Please choose a proper buffer size according to the recording and hardware situation.

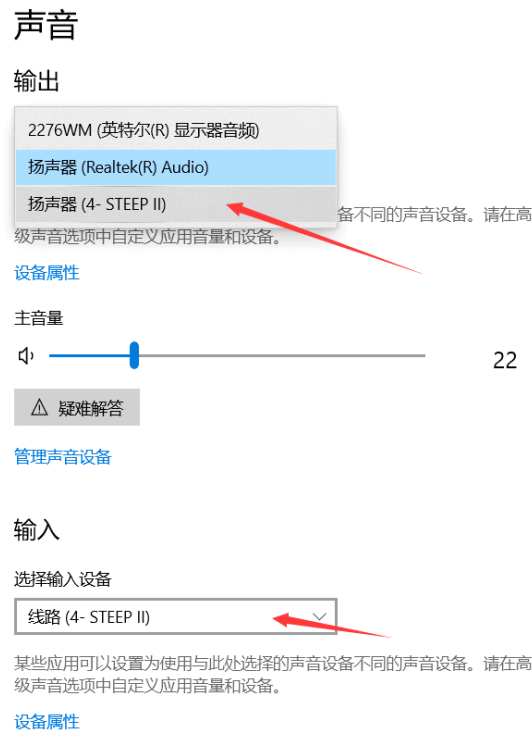
For example, while the DAW is recording and the DAW monitor is on, if you wish to get less latency, please turn down the buffer size as small as possible (without any noise). If the audio project has many tracks, software effects, and/or virtual instruments for mixing, set the buffer size to as large as possible to maintain the stability of the project. (This project does not require low latency setting)

### 3.3 Set up the audio interface in the OS

Set up the input and output of your audio interface in Windows.

Usually, if the ASIO Driver is installed properly and the STEEP is connected to computer, the operating system will set the audio input/output signal as STEEP. If not, please set it manually according to the procedure below.

- \* Right click the  icon on the right bottom corner.
- \* Select the Audio Setting.
- \* Select the STEEP in the INPUT/OUTPUT device.
- \* When setup correctly, the input/output signal will be processed by STEEP.

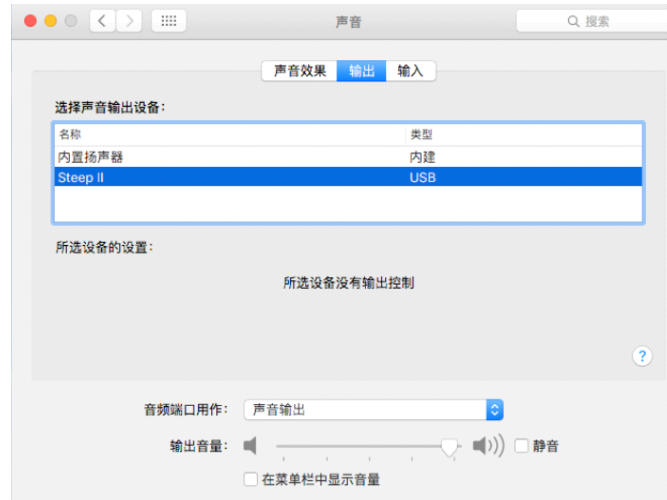




### 3.3.2. Set up audio interface on Mac

STEEP does not need the ASIO Driver installed separately when used with a Mac computer. Connect STEEP to Mac and set up the input/output manually according to the follow procedure.

- \*Find the system setting  in Finder or Dock.
- \*Select AUDIO and open it
- \*Set the audio effect/output/input as STEEP



\*When setup correctly, the input/output signal will be processed by STEEP.

Set up the audio interface in mobile device

When the STEEP is connected to iOS/iPad OS device or Android device, the mobile device will set STEEP as the audio input/output device automatically.

Notes: For both computer and mobile device platforms, you can check the power indicator of the STEEP for connection status. The power indicator blinks when disconnected and stays lit with a proper connection.

### **3.4. Setup the INPUT/OUTPUT in DAW**

Below are some DAW software setting procedures for reference. Different software versions, different OS versions, or different system settings might have some variance from the shown procedure.

#### **3.4.1. Studio One**

- \*Connect STEEP to your computer and open the Studio One software.
- \*From the start page, find “Configure Audio Device” and select it. In the next menu page, select “Audio Setup”.
- \*Find and select Audio Device then select “MOOER USB Audio”.
- \*Click on YES to finish setting up.

#### **3.4.2. Cubase**

- \*Connect STEEP to your computer and open the Cubase software.
- \*In the top menu area, select “Studio”.
- \*In the pop-up menu page, select “Studio Setup”.
- \*Select “VST Audio System”. Select the ASIO Driver, and then select “MOOER USB Audio” in the drop-down menu.

#### **3.4.3. Ableton Live**

- \*Connect STEEP to the computer and open the Ableton Live software.
- \*In the top menu area, select the “Live” or “Options” tab.
- \*Find the “Preferences” option and select it. (Mac users can select it with “Command+,”)
- \*Select “Audio” in the pop-up menu.
- \*Select “MOOER USB Audio” from the drop-down menu from the “Audio input/output” menu on the right.

#### **3.4.4. Logic Pro**

- \* Connect STEEP to computer and open the Logic Pro software.
- \* In the top menu area, select “Logic Pro”.
- \* Select the “Preferences” from the pop-up menu.
- \* Select “Audio”.
- \* Select the “Device” from the pop-up menu.
- \* Select “MOOER USB Audio” in both the “Output Device” and the “Input Device”.
- \* Click on “Apply Changes” to finish setup.

#### **3.4.5. Pro Tools**

- \* Connect STEEP to a computer and open the Pro Tools software
- \* In the top menu area, select the “Setup”.
- \* Find the “Playback Engine”, select it.
- \* Select the “Current Engine” in the pop-up menu, select the “MOOER USB Audio”.
- \* Click on “OK” to finish setting.

#### **3.5. Set up MIDI IN/MIDI OUT (STEEP II)**

STEEP II audio interface has 2 5-pin MIDI ports which can be used for sending or receiving MIDI signals. In the following example, we introduce the MIDI setting procedure in Studio One and Cubase for reference. Different software versions, OS versions, or different system settings might have some difference than the shown procedure.

### **3.5.1. Studio One**

- \*Connect STEEP to computer, open the Studio One software.
- \*In the top menu area, select “Configure External Devices” or you can also click on Studio One - Option - External Device
- \*Select “Add” at the left bottom corner of the pop-up menu
- \*Select New Keyboard or New Instrument from the left menu according to your device.

Note: The “Keyboard” is a device that transfers MIDI into the DAW as a MIDI IN device, like a MIDI controller, or a MIDI keyboard. “Instrument” is a device that transfers MIDI from DAW to another external device such as a MIDI OUT device, like hardware audio source, synthesizer, hardware effects.

- \*In the Keyboard page or Instrument page, set the “Receive from” and the “Sent to” as the “Steep II MIDI in” or “Steep II MIDI out” .
- \*It is recommended to select all the MIDI channel 1-16.
- \*Name the device and confirm.
- \*When the keyboard or instrument is set up properly, you can select them from the track of the current project.

### **3.5.2. Cubase**

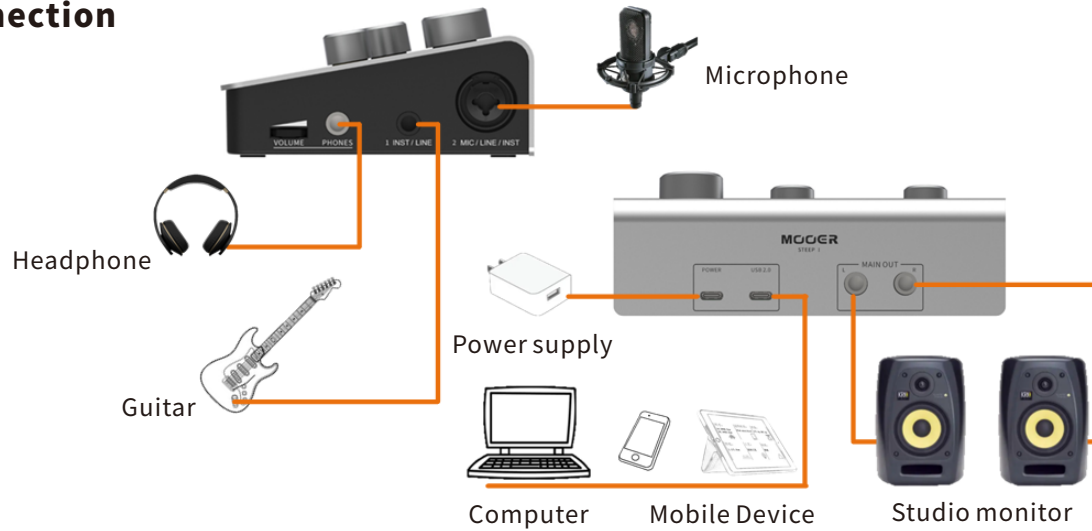
- \*Connect STEEP to computer, open the Cubase software.
- \*Create a new project and open it.
- \*Create a new MIDI track or instrument track according to your demand.

Note: MIDI tracks can edit, record MIDI commands, or send commands during project playback. If you only want to have the MIDI IN/OUT (controlling external device, or controlled by an external device), you can create a MIDI track. Instrument tracks can be used to add an instrument source, get sound activated by the edited MIDI track, or get sound activated by the MIDI IN of the STEEP from an external device.

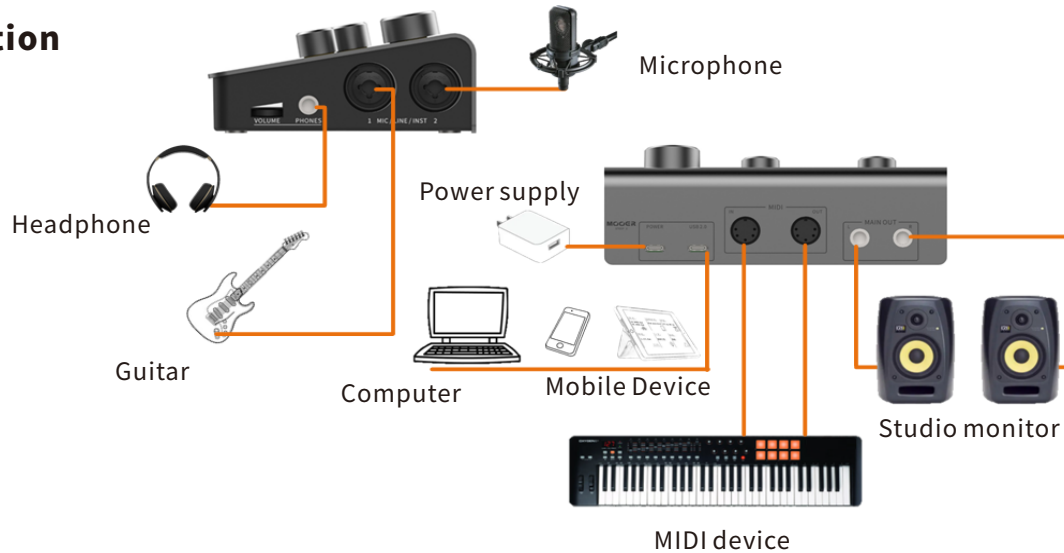
- \*In the MIDI IN/OUT menu which is at the left side of the selected track, you can set the “STEEP II MIDI in” or “STEEP II MIDI out”.

# CONNECTION

## STEEP I connection



## STEEP II connection



# START RECORDING

Set up the connections according to the recording situation.

## 5.1. Set up input mode

- a. When connecting a microphone, please use an XLR cable and ensure the INST button is off.
- b. When connecting an electric guitar, bass, or similar instrument, please use a 1/4" TS cable and ensure the INST button is on.
- c. When connecting an unbalanced line signal, please use 1/4" TS cable and ensure the INST button is off.
- d. For connecting to a balanced line signal, please use 1/4" TRS cable and ensure the INST button is off.

## 5.2. Input gain level adjustment

Please adjust the input gain level via the GAIN knob according to the actual recording input level (Confirm the distance between microphone and target or the output level of instrument). Make sure the input level indicator is ORANGE. If the input level indicator turns RED, meaning that the input level is too high, please rotate the GAIN knob anticlockwise to turn down the input level. If the input level indicator turns GREEN, meaning that the input level is too low, please rotate the GAIN clockwise to turn up the input level.

## 5.3. Open recording software

Follow the procedure above to set up the input, output as STEEP and create a new recording track in DAW.

## 5.4. Adjust the monitor volume level

Adjust the monitor volume level via rotating the PHONES or MAIN OUT knobs.

## 5.5. Adjust the MIX knob

Rotate the MIX knob to adjust the mix rate of the analog input signal and the USB playback signal. When MIX is set to far left, it is 100% of the analog input signal. When MIX is set to 12 o'clock, it is 50% of the analog input signal and 50% of the USB playback signal. When MIX is set to far right, it is 100% of USB playback signal.

For example:

- a. Voice recording. If you would like to monitor the voice and backing track without latency, you can set MIX to 12 o'clock. You can then monitor the voice captured via microphone and the vocals can hear the backing track during recording.
- b. DAW effect. When the DAW plugin effects are used and you wish to monitor it, it is recommended to set the MIX to the far-right position, turn on the monitor function of the relevant track in your DAW. You can get 100% of the DAW effect signal in this setting. In this situation, please do not set MIX to any other position to avoid the feedback noise caused by the dry signal and the effected signal.
- c. If you wish to monitor the input signal only, you can set the MIX to the far-left position. Then you can get 100% input dry signal. The signal of USB audio playback cannot be monitored in this setting.

Notes: If you want to monitor the analog input signal and the USB playback signal simultaneously, you can get the desired mix rate by adjusting the MIX knob as you wish.

## **5.6. Stereo Direct Monitor or Mixed Mono Monitor**

You can turn on the stereo direct monitor function via the S.DRCT button.

S.DRCT off: INPUT 1 signal and INPUT 2 signal will be mixed through the headphone output and the main output. In other words, the signal from both INPUT 1 and INPUT 2 can be heard from the left channel and right channel with pan at the center. This mode is suitable for the monitoring of a mono recording. For example, one input for an instrument, the other for the vocals.

S. DRCT on: INPUT 1 and INPUT 2 will be processed as the left channel and right channel respectively to the headphone output and the main output. This mode is for monitoring stereo input signal. For example, monitoring the stereo output of external hardware effect connected to an audio interface, dual microphone recording monitoring.

Notes: This option only affect the headphone output and main output, which means it will not affect the USB audio recording or USB audio playback.



# SPECIFICATIONS

Product Name	STEEP I	STEEP II
Sample Rate/Depth	192kHz/24bit	192kHz/24bit
USB Audio	2 inputs and 2 outputs	2 inputs and 2 outputs
<b>Microphone Inputs</b>		
Input Jack	1/4"&XLR jack *1	1/4"&XLR jack*2
Dynamic Range	>111dB (A-weighted)	>111dB (A-weighted)
Frequency Response (20 Hz to 20kHz)	< ±0.138dB	< ±0.138dB
THD+N	<0.0016% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)	<0.0016% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level (minimum gain level)	+3dBu	+3dBu
Gain Range	50dB	50dB
Input impedance	3k ohm	3k ohm

<b>Line Inputs</b>		
Input Jack	1/4" TRS jack*1 (support balanced signal) 1/4"&XLR jack*1	1/4"&XLR jack*2 (support balanced signal)
Dynamic Range	>108dB (A-weighted)	>108dB (A-weighted)
Frequency Response (20 Hz to 20kHz)	< ±0.075dB	< ±0.075dB
THD+N	<0.0083 (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)	<0.0083% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level (minimum gain level)	+20 dBu	+20 dBu
Gain Range	50dB	50dB
Input impedance	60k ohm	60k ohm
<b>Instrument Inputs</b>		
Input Jack	1/4" TRS jack*1 1/4"&XLR jack*1	1/4"&XLR jack*2
Dynamic Range	>108dB (A-weighted)	>108dB (A-weighted)
Frequency Response (20 Hz to 20kHz)	< ±0.07dB	< ±0.07dB
THD+N	<0.0094% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)	<0.0094% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level (minimum gain level)	+11 dBu	+11 dBu
Gain Range	50dB	50dB
Input impedance	1.5M ohm	1.5M ohm

<b>Line Outputs</b>		
Output Jack	1/4" TRS jack*2 (support balanced signal)	1/4" TRS jack*2 (support balanced signal)
Dynamic Range	>108dB (A-weighted)	>108dB (A-weighted)
Maximum Input Level (minimum gain level)	+5.746 dBu	+5.746 dBu
THD+N	<0.019% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)	<0.019% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Input impedance	430 ohm	430 ohm
<b>Headphone Outputs</b>		
Output Jack	1/4" TRS jack*1	1/4" TRS jack*1
Dynamic Range	>104.9dB	>104.9dB
Maximum Input Level (minimum gain level)	+9.738 dBu	+9.738 dBu
THD+N	<0.002% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)	<0.002% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Output impedance	<1 ohm	<1 ohm
<b>PACKAGE</b>		
Type-C USB to Type-A USB cable Owner's Manual.		

**MOOER**

[www.moeraudio.com](http://www.moeraudio.com)

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