

# AUDIO INTERFACE

## 2i2

### USER GUIDE



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## **Introduction**

Thank you for purchasing the Audio Interface 2i2, a simple and compact solution to transmit high quality audio to and from your computer using a professional computer audio interface incorporating high quality analogue preamps.

Audio Interface 2i2 devices will provide great audio dynamic range and low noise and distortion. Additionally, the mic preamp now accepts higher input levels. The gain impedance of the preamp on each channel can be individually fine-tuned on each channel, with excellent clarity and definition when recording with good quality microphones to meet the greatest demand for vocals and many acoustic instrumentals. As for the direct monitoring function, you can monitor as you record in either mono or stereo, with zero latency.

Plug-and-play for Mac users, no driver installation required.

This User Guide provides a detailed explanation of the hardware to help you achieve a thorough understanding of the product's operational features. We recommend that both users who are new to computer-based recording, as well as more experienced users, take some time to read through the User Guide to have a full awareness of all the possibilities that the Audio Interface 2i2 and accompanying software can offer. If the main User Guide sections do not provide the information you need, be sure to consult this website <https://aklot.com/>, which contains a comprehensive collection of answers to common technical support queries.

## **Features**

The Audio Interface 2i2 hardware interface provides a means to connect microphones, musical instruments or line level audio signals to a computer running macOS or Windows. The signals at the physical inputs can be routed to your audio recording software / digital audio workstation (referred to throughout this user guide as the "DAW") at up to 24-bit, 192 kHz resolution. Similarly, the DAW's monitor or recorded output will appear at the unit's physical outputs. The physical outputs can be connected to an amplifier and speakers, powered monitors, headphones, analogue mixer or any other analogue audio equipment that you wish to use.

### Features:

- 2 in 2 out USB-C audio interface with a high-headroom , Class A DYNA microphone preamplifier , to give your vocal recordings a brighter and more open sound.
- Instrument/Line input switch to plug in most kind of instruments and play.
- Direct Monitoring feature to hear what you are playing in " real-time" , without the effects of computer latency.
- Studio-grade converters for 24-bit/192 KHz recording and playback.
- Built in headphone amplifier for loud , detailed , low-noise monitoring.
- TRS balanced output for high quality audio output without hum or interference.
- Uncompromising analog design , superior components , and premium build quality.
- No external power required , just plug and play.

### Along with Audio Interface 2i2 you should find:

- USB cable, Type 'A' to Type 'C'
- User guide manual
- Adapters

### System requirements

- Mac OS 10.12, 10.13, 10.14 (latest update) Intel Core i5, 4GB RAM
- Windows 10 (latest update) Intel Core i5, 4GB RAM (6GB recommended)
- USB 2.0 or higher version

All you need to do is to connect your Audio Interface 2i2 to your computer. Once connected, you will see that the device is recognized by your PC or Mac and the Quick Start tool will guide you through the installation process.

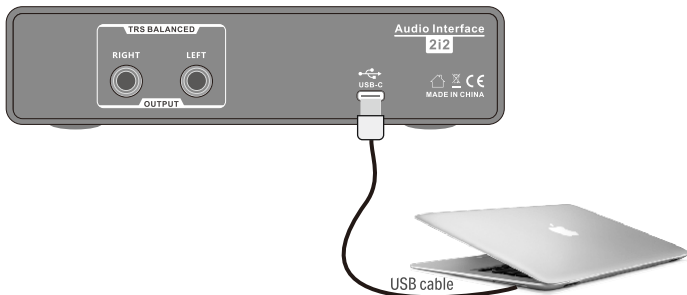
The Audio Interface 2i2 has a single USB 2.0 Type C port (on the rear panel): connect it to your computer using the USB cable provided. Note that Audio Interface 2i2 is a USB 2.0 device, and thus the USB connection requires a USB 2.0+ compatible port on your computer. The Audio Interface 2i2 gets its power from your computer via the USB connection, so separate power supply is not needed. However, we do recommend that when using the device with a laptop, the laptop should be charged with its AC adaptor, or its power will run out quickly as it powers the audio interface at the same time.

### Quick start tool

How to use Audio Interface 2i2 quickly and easily? With detailed descriptions of each step, so you can see how they should appear on a PC or a Mac.

### Mac users ONLY:

Connect the Audio Interface 2i2 to your computer via provided USB cable.

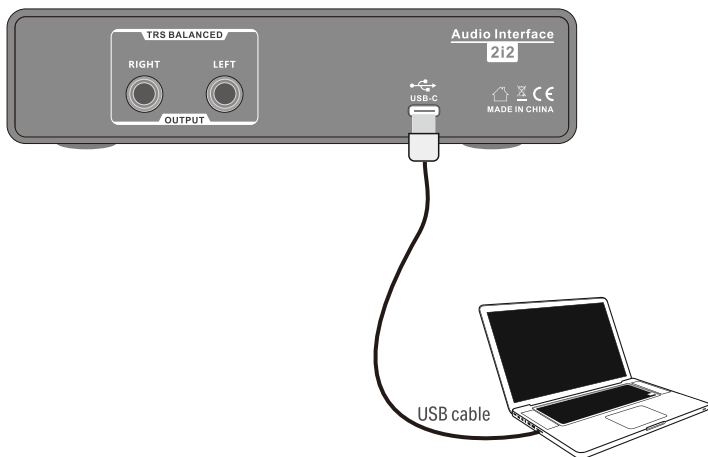


Your OS should automatically switch the computer's default audio inputs and outputs to the Audio Interface 2i2. To verify this, go to **System Preferences > Sound**, and ensure that the input and output are set to Audio Interface 2i2. For more detailed setup options on a Mac, open **Applications > Utilities > Audio MIDI Setup**.

1. Click [www.aklot.com/download-2.html](http://www.aklot.com/download-2.html) to download audio driver for Audio Interface ASIO USB.
2. According to the instructions for installing the ASIO driver and the installation program will guide you through each step of the installation process.

**ATTENTION:** It is recommended that you temporarily disable or close any anti-virus applications to prevent installation problems.

3. Connect the Audio Interface 2i2 to your computer via provided USB cable.

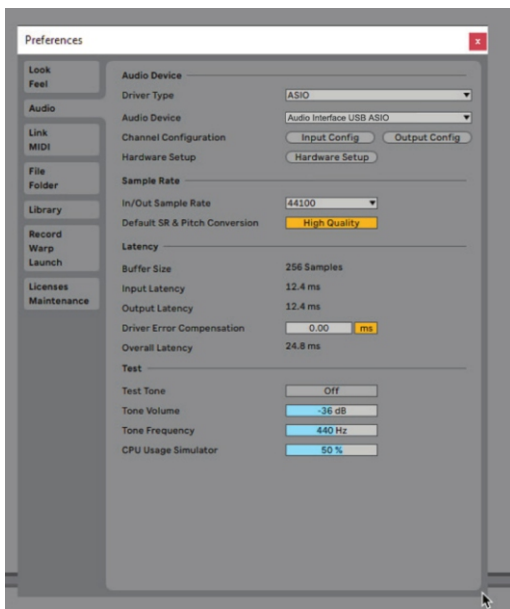


4. Your OS should automatically switch the computer's default audio inputs and outputs to be the Audio Interface. To verify this, right click on the **Sound** icon on the taskbar and select **Sound Settings**, and set the Audio Interface 2i2 as the Input and Output Device.

## Audio setup in your DAW .....7

Audio Interface 2i2 is in compliance with any Windows-based DAW that supports ASIO or WDM, as well as any Mac-based DAW that uses Core Audio. Following the introductory procedures above, you can begin to use Audio Interface 2i2 with the DAW you choose.

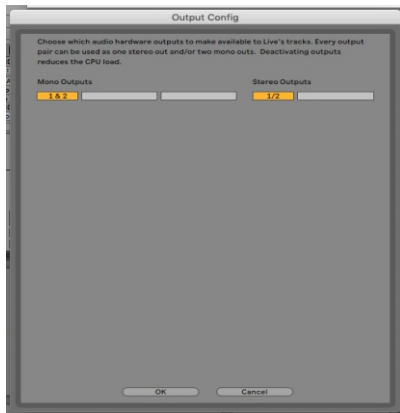
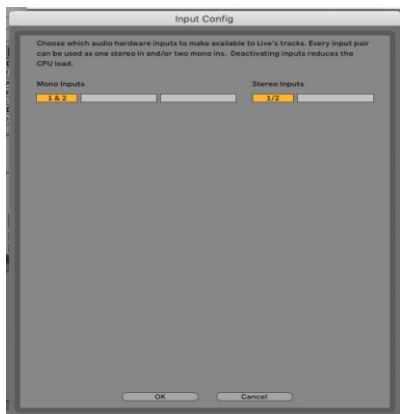
Please NOTE - your DAW may not automatically select the Audio Interface 2i2 as its default I/O device. In this case, you must manually select Audio Interface 2i2 as the driver on your DAW's Audio Setup\* page. Please refer to your DAW's documentation (or Help files) if you are unsure where to select the ASIO or Core Audio driver. The example below shows the correct configuration in the Ableton Live Lite Preferences panel (Windows version shown).



\* Typical names. Terminology may differ slightly between DAWs.

## Audio setup in your DAW ..... 8

Once the Audio Interface 2i2 is set as preferred Audio Device\* in your DAW, Inputs 1 & 2 and Outputs 1 & 2 will appear in your DAW's Audio I/O preferences. Depending on your DAW, you may need to enable certain inputs or outputs before use. The two examples below show Inputs 1 & 2 and Outputs 1 & 2 enabled in the Ableton Live Audio Preferences.



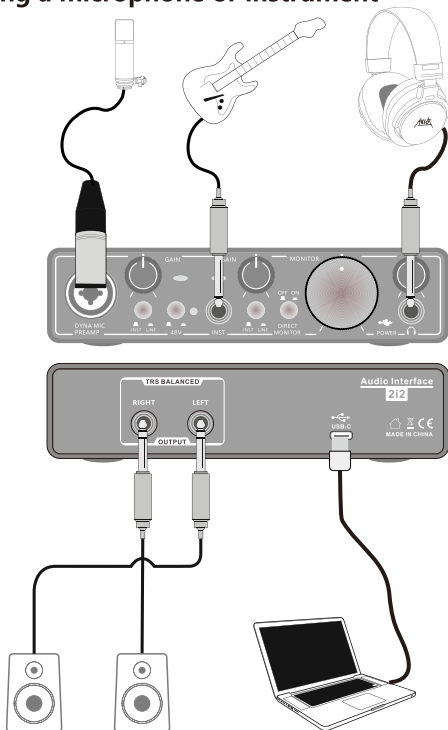
\* Typical names. Terminology may differ slightly between DAWs.



## Examples of usage ..... 9

The Audio Interface 2i2 is an excellent choice for several different recording and monitoring applications. Some typical configurations are shown below.

### Connecting a microphone or instrument



This setup illustrates the most typical configuration for recording with DAW software on your Mac or PC. In this case, you might record guitar through Input 1 and vocals through Input 2 into your DAW, while monitoring the playback from the DAW via headphones (or speakers). The front panel input sockets are "Combo" type, which accept either an XLR male connector or a 1/4" (6.35 mm) jack plug.

## Examples of usage .....10

The full gain range of the microphone preamplifier is only available to a mic connected via the XLR contacts. If your microphone has an XLR plug at the end of the cable, you can simply plug it in. If it is a "condenser" (or "capacitor") microphone, you will need to turn on the 48 volt phantom power for it to let it work. Most modern microphones of other types, e.g., dynamic or ribbon, will not be damaged by the inadvertent application of phantom power, but NOTE that such damage may be occurred on some older mics. If you have any doubt, please check the specification of your mic to ensure that it is safe to use.

If your mic has a jack plug on the end of the cable, it will probably require an adaptor to make it usable with the XLR part of the Combo connector. Insert the jack plug will configure the preamp with reduced gain, which may be insufficient for the mic. Mics intended for use with computer sound cards may also require a much lower phantom power voltage, so an adaptor specific to the mic type should be obtained in this case.

The Audio Interface 2i2 has no "Mic/line" switch - the preamp stage is automatically configured for a microphone when you plug an XLR into the input, and for a line or instrument when you connect to a jack plug. Set the INTS switch to **INTS** if you are connecting with musical instrument, e.g., a guitar in the example, using an ordinary 2-pole (TS) guitar jack. Set the INST switch to **LINNE** if you are connecting a line level source such as a keyboard, synthesiser or the balanced output of an external audio mixer via a 3-pole (TRS) jack.

Note: the Combo connector accepts both TRS and TS types of jack plug.

### Using direct monitoring

In the case of DAW recording application, latency will be the time it takes for your input signals to pass through your computer and audio software. Latency can be a problem for a performer who wishes to record while monitoring their input signals.

Thus, the Audio Interface 2i2 is fit with a "**Direct Monitoring**" option to solve this problem. Set the front panel DIRECT MONITOR control to **ON** will route your input signals directly to the Audio Interface 2i2's headphone and main monitor outputs. This enables you to hear your voice back with zero latency - i.e., in "real time" - along with the computer playback. The input signals to your computer are not affected in any way by this setting.

In MONO mode, Inputs 1 and 2 are routed equally to the two outputs (both the rear panel outputs and headphones) so that they both appear in the centre of the stereo image. This is useful when two signals of the two separate instruments or combination of an instrument & a vocal you are recording are not needed to be specifically located in the stereo image. Further examples would be an acoustic and an electric guitar, a bass which is both mic'd and DI'd or two separate mics differently positioned on a guitar amplifier.

**Examples of usage .....11**

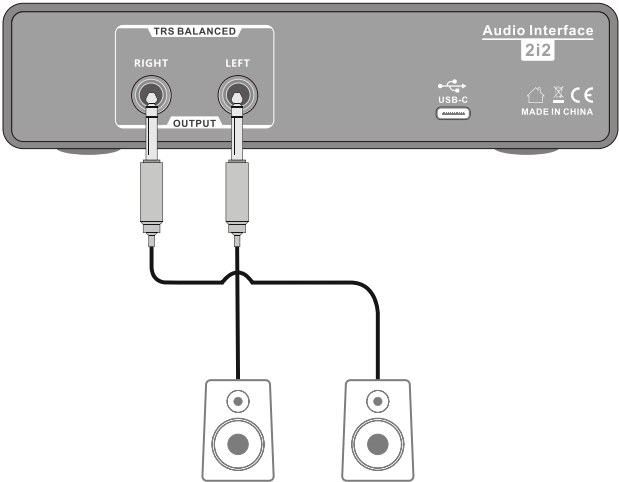
When using Direct Monitoring, please ensure that your DAW software is not set to route its input (what you are currently recording) to its output, otherwise you will hear yourself "twice", with one signal audibly delayed as an echo.

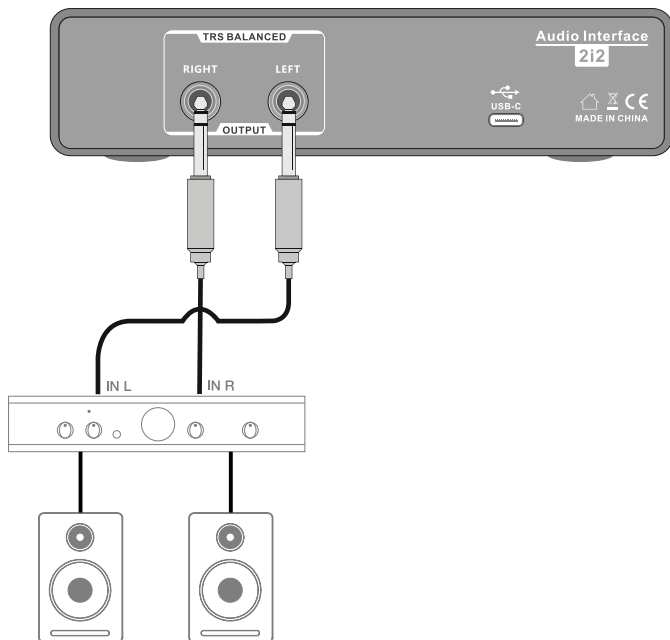
Monitoring with DIRECT MONITOR set to **OFF** can be useful when using an FX plug-in to your DAW to create a stereo effect which contributes to the live performance. In this way, you will be able to hear clearly what is being recorded, complete with the FX. However, some latency may be produced, the amount depends on the DAW's buffer size and processing power of the computer.

**Connecting Audio Interface 2i2 to loudspeakers**

The ¼" jack outputs on the rear panel can be used to connect monitoring speakers. Self-powered active monitors incorporate internal amplifiers with a volume control, and may be connected directly. Passive loudspeakers will require a separate stereo amplifier. In this case, the outputs should be connected to the amplifier's inputs.

**Connecting active speakers**



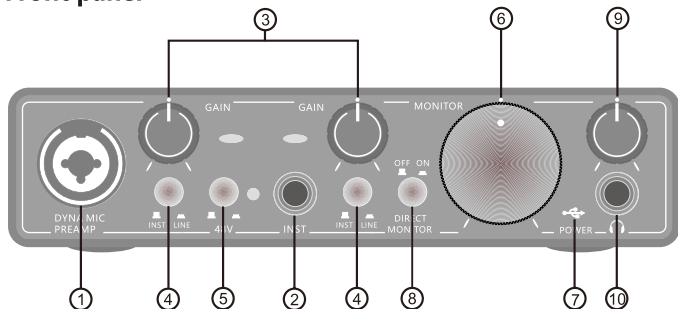


The line outputs are 3-pole (TRS) ¼" (6.35 mm) jack sockets, and they are electronically balanced. Typical consumer (Hi-Fi) amplifiers and small powered monitors will have unbalanced inputs, either on phono (RCA) sockets, or via a 3.5 mm 3-pole jack plug intended for direct connection to a computer. In either case, use a suitable connecting cable with jack plugs at one end.

Professional power amplifiers will generally have balanced inputs. We highly recommend using balanced cables to connect these to the outputs of the Audio Interface 2i2.




**Note:** You run the risk of creating an audio feedback loop if loudspeakers are active when you are monitoring a microphone! We recommend that you'd better turn off (or turn down) monitoring loudspeakers while recording, and use headphones when overdubbing.

## Front panel

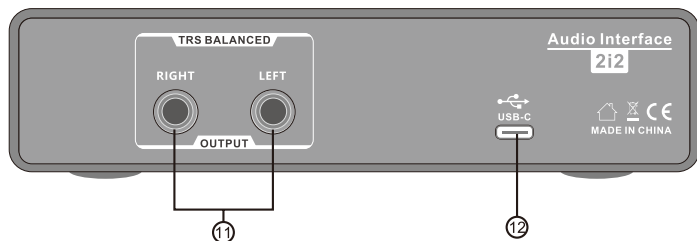



**The Front Panel includes the input connectors for Mic, Line and Instrument signals, as well as the input gain and monitoring controls.**

- Input 1:** "Combo" type input sockets - connect microphones, instruments (e.g., guitar), or line level signals here. Combo sockets accept both XLR and ¼" (6.35 mm) jacks. Microphones will normally be connected by using XLR plugs: instruments and line level signals should be connected via ¼" (6.35 mm) jack plugs of either TS or TRS type. The preamp gain is appropriate for microphones when an XLR plug is inserted, and for higher level signals when a jack plug is the inserted. Do NOT connect anything other than a microphone - e.g., output of a sound module or FX unit - via an XLR plug, as the signal level will overload the preamp, and result in distortion. Also, if phantom power is enabled, the equipment may be damaged.
- Input 2:** The socket is suitable for ¼" (6.35mm) jacks in which to connect an instrument (e.g. guitar) or a line level signal.
- GAIN1 and GAIN2:** Adjust the preamp gain for signals on inputs 1 and 2 respectively. Gain control with indicator to confirm signal level: Green light indicates input level -30dBFS to -1dBFS, Red light indicates the signal is close to clipping (when the input level is 0dBFS).
- INST/LINE:** Line/Instrument level switches for each input which alter gain and input impedance to suit either instrument or line level signals. Applies to (TS) or (TRS) for selecting instrument mode.
- 48V:** Phantom power switch for mic inputs - enables 48 V phantom power at XLR contacts of both Combo connectors.

6. **MONITOR:** Main monitor output level control - sets the output level at the main (rear panel) outputs LEFT and RIGHT.
7. : The USB indicator illuminates when the unit receives USB bus power and is confirmed by the computer as connected and operating correctly.
8. **DIRECT MONITOR:** Use this button to turn on/off the direct monitoring mode.
9.  **Headphone level:** Adjusts the output level at the front panel stereo headphone output.
10.  **Headphone socket:** ¼" TRS output jack. If your headphones have a ¼" TRS jack plug, connect them directly. If they have a 3.5 mm TRS "mini jack", use a TRS ¼"-to-3.5 mm jack adaptor. Note that headphones fitted with 4-pole TRRS plugs will not operate correctly.

### Back panel



11. **TRS BALANCED:** LEFT and RIGHT: 2 × ¼" (6.35mm) TRS jack sockets, balanced output. Either ¼" TRS (balanced connection) or TS (unbalanced connection) jack plugs can be used.
12.  **USB 2.0 port:** Type C connector, connect to your computer with cable supplied.

## Performance specifications

Clock Source	Specifications
ADC/DAC /Sampling Rate	
ADC Dynamic Range	107dB (A-weighted)
DAC Dynamic Range	112dB (A-weighted)
Supported Sample Rates	44.1KHz-192KHz
Microphone INPUT	
Frequency	20Hz-20KHz
Gain Range	10dB to 55dB
THD	-98dB
Noise (EIN)	-120dB
Dynamic Range	103dB
Max Input Level	4dBu
Instrument INPUT	
Frequency Response	20Hz-20KHz
Gain Range	-10dB to 35dB
THD	-94dB
Noise (EIN)	-94dB
Dynamic Range	100dB (A-weighted)
Max Input Level	16dBu
Line INPUT	
Frequency Response	20Hz-20KHz
Gain Range	-10dB to 35dB
THD	-94dB
Noise (EIN)	-100dB
Dynamic Range	100dB
Max Input Level	16dBu
Line Output	
THD	-94dB
Noise	-100dB
Dynamic Range	104dB
Max Output Level	20dBu
Headphone Output	
THD	-94dB
Dynamic Range	98dB
Max Output Level	20dBu (no load)

Analogue Inputs	
Connectors	XLR "Combo" type: Mic/Line/Inst (Inputs 1-2) on front panel
Mic/Line switching	Automatic
Line/Instrument switching	2 × front panel switches
Phantom power	Shared 48V phantom power switch (XLR connections only)
Analogue Outputs	
Balanced outputs	2× ¼" TRS jacks on rear panel
Stereo headphone output	¼" TRS jack on front panel
Main output level control	On front panel
Headphones level control	
Other I/O	
USB	1 × USB 2.0 Type C connector
Front Panel Indicators	
USB power	Blue LED
Gain indicator	Red and Green LED
Phantom power	Red LED
Weight and Dimensions	
W×H×D	165 mm x 40mm x135mm 6.49 in x 1.57 in x 5.31 in
Weight	560 g 1.23lb