

Clarett+ 2Pre

User Guide

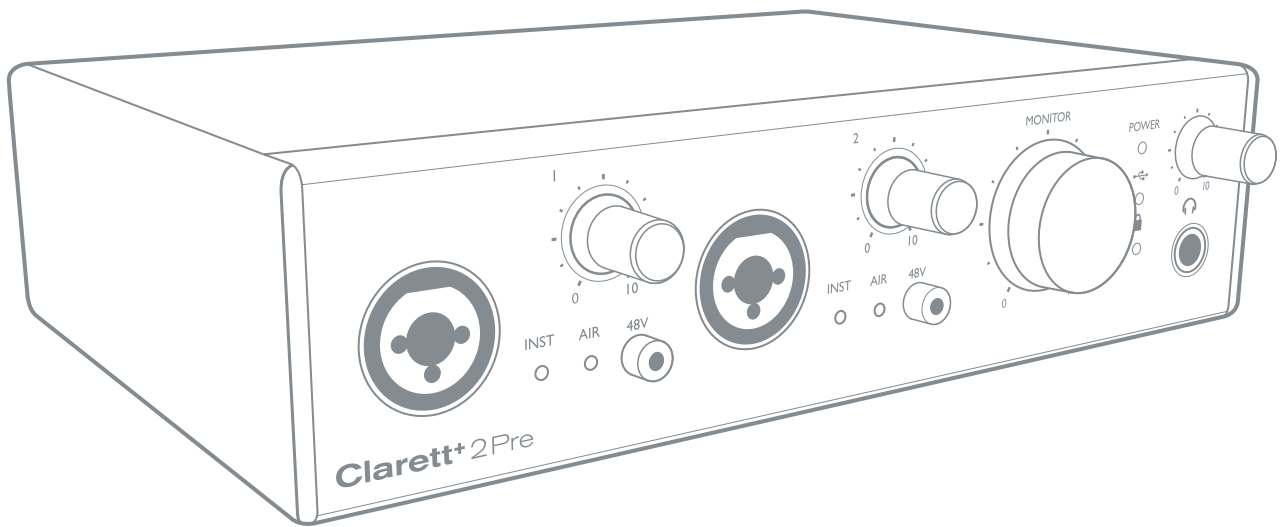


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OVERVIEW

WARNING: Excessive sound pressure levels from earphones and headphones can cause hearing loss.

WARNING: This equipment must only be connected to USB Type 2.0+ or Thunderbolt 3.0+ ports.

Introduction

Thank you for purchasing this Clarett+ 2Pre, an audibly stunning, pure-sounding, bus-powered interface for PC or Mac to take you on your creative journey. Independent A-D and D-A converters bring you closer than ever to your music and improved D-A dynamic range enables you to capture every detail.

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 you take the time to read the Guide, so you are fully aware of all the features Clarett+ 2Pre has to offer.

IMPORTANT: As well as this User Guide, you will need the **Focusrite Control** Software Guide which can be downloaded from focusrite.com/downloads.

This contains full details of **Focusrite Control**, the software application designed specifically for use with the Focusrite Clarett+ range of interfaces.

If either User Guide does not have the information you need, please go to support.focusrite.com, where you can find articles and tutorials beyond the scope of this user guide. A Getting Started video tutorial is also available, at focusrite.com/get-started/ClarettPlus-2Pre.

Features

Clarett+ 2Pre has two next-generation, high-performance Clarett+ preamps with a preamp design that brings masses of headroom, low distortion and low noise. New and improved A-D and D-A converters capture more accurate recordings, and the independent A-D and D-A converters deliver extremely low noise and high dynamic range. Vocals will shine with the All-analogue Air, its circuitry emulating the classic Focusrite ISA 110 preamp. J-FET instrument inputs offer dedicated, ultra-high-impedance, extremely wide audio bandwidth, and mimic guitar amp inputs to preserve the natural tone of guitars.

The accompanying software application, **Focusrite Control**, is designed to let you easily configure the Clarett+ 2Pre with signal routings appropriate for most common recording tasks, and for more complex situations, it provides extensive routing and monitoring options. You can download **Focusrite Control** from focusrite.com/downloads.

iPad and iPhone users can additionally download [Focusrite iOS Control from the App Store®](#). The app communicates via WiFi with **Focusrite Control** running on your computer, and lets you adjust your monitor mixes and input settings from your iOS device. See the **Focusrite Control** User Manual for more information.

Box Contents

Along with your Clarett+ 2Pre you should have:

- External 12 V DC mains Power Supply Unit (PSU)
- USB-C to USB-A cable
- USB-C to USB-C cable

Focusrite Control is available at focusrite.com/downloads. On Windows, **Focusrite Control** will also install the driver required. Mac users: Clarett+ 2Pre is class-compliant on Macs, therefore no drivers are required.

As a Clarett+ owner, you are also entitled to a selection of third-party software. Go to focusrite.com/included_software/ClarettPlus-2Pre to find out what's included.

System Requirements

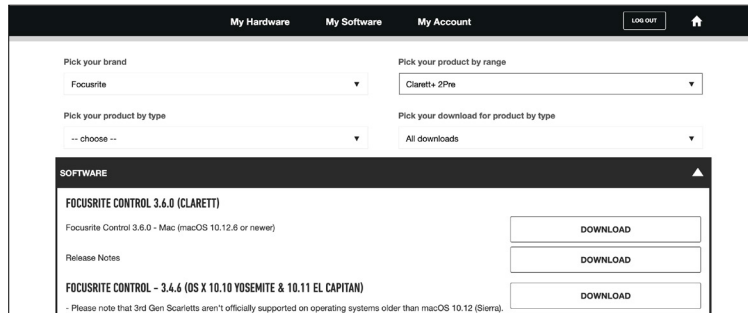
IMPORTANT – Please visit the following link for up-to-date information on computer and operating system compatibility for all Clarett+ products:
support.focusrite.com

GETTING STARTED

Software Installation

Focusrite Control and the driver software needed for the Clarett+ 2Pre are available for download from the Focusrite website: focusrite.com/downloads.

Click **Clarett+ range** on the **Downloads** page. This will take you to a page with all the downloads which are available for the Clarett+ range.



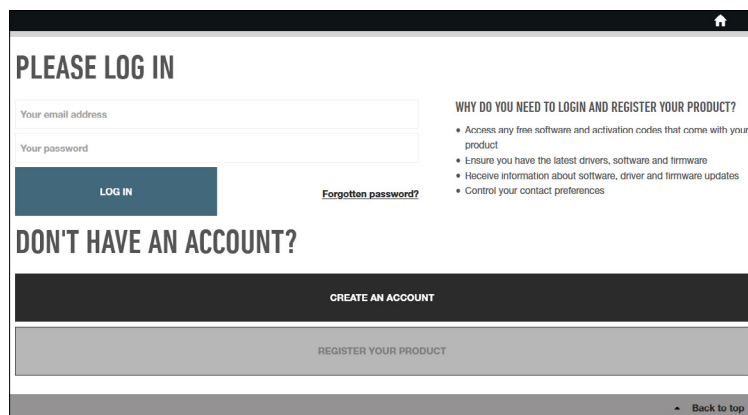
To download the **Focusrite Control** version you need, click the appropriate **Download** button.

Note that the Windows driver is included within the **Focusrite Control** download. No additional driver is needed for Macs.

Registering your Clarett+ 2Pre

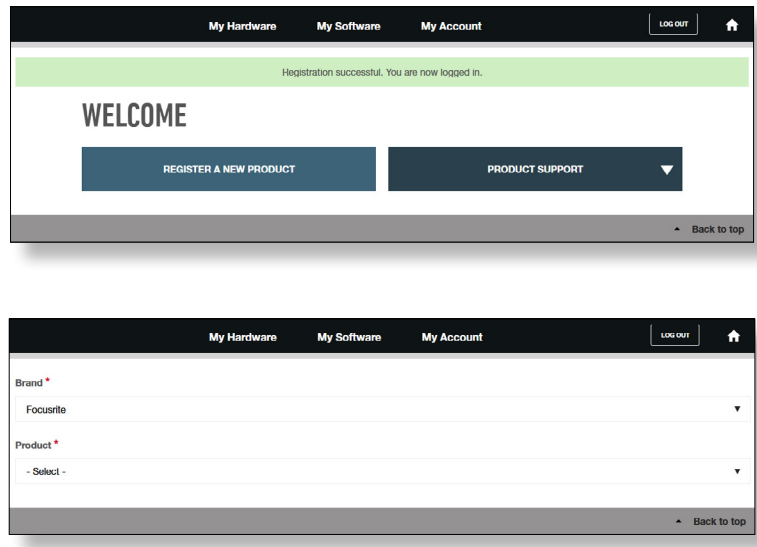
If you are having trouble with the steps below, please watch our video guide here: focusrite.com/get-started/ClarettPlus-2Pre.

1. Go to focusrite.com/register/.



2. If you do not have already have a Focusrite/Novation account, select **CREATE AN ACCOUNT** and follow the on-screen instructions.

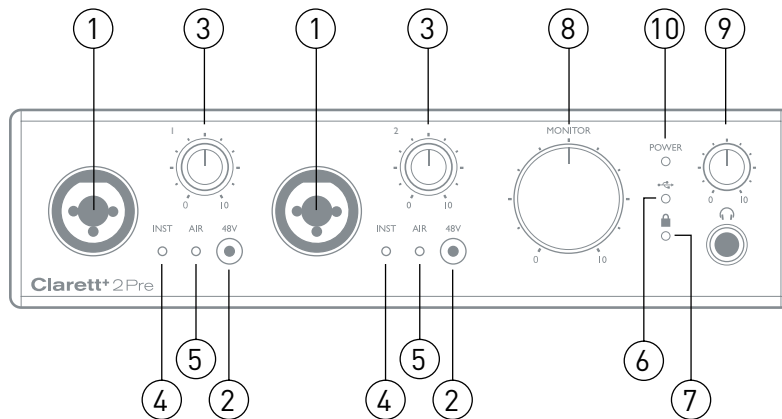
3. If you do have an account, log in and select **REGISTER A NEW PRODUCT**:






4. Select your Clarett+ device from the **Product** drop-down list and enter your device's Serial Number at the bottom of the page. You can find the serial number on the underside of the Clarett+ 2Pre, and also on the gift box. Then click **Set Serial Number**.
5. Follow the rest of the on-screen instructions to finish registering your device.
6. When registration is complete, your Product will appear in your Account under the **My Hardware** tab.
7. All your bundled software can be found under the **My Software** tab in your account

Hardware Features

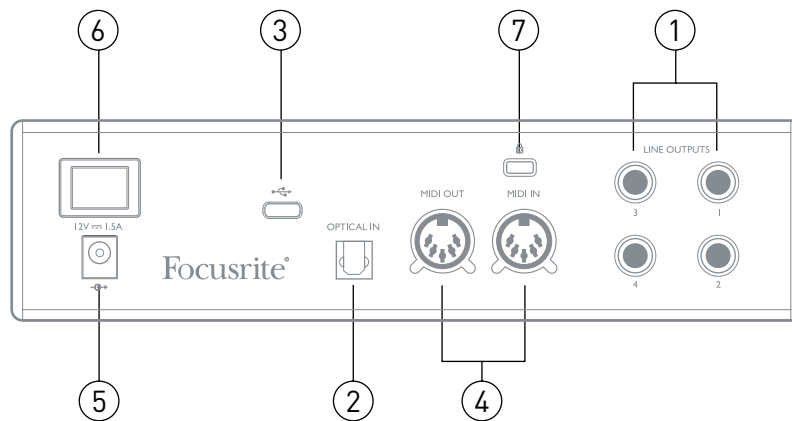
Front Panel




The front panel includes input gain controls and input connectors for Mic, Line and Instrument signals for both channels, and also monitoring controls.

1. **INPUTS 1 & 2** – Combo XLR input sockets for each channel - connect microphones via an XLR connector, or instruments (e.g., guitar) or line level signals via ¼" jacks. Either TRS (balanced) or TS (unbalanced) jack plugs can be used for instruments or line level signals.
2. **48V** – two switches enabling 48 V phantom power at the Combo connectors' XLR contacts for mic inputs 1 and 2. Each switch has a red LED to show when phantom power is enabled. Note that not all microphones require phantom power. If you are unsure whether your microphone needs it to work, please read the microphone documentation.
3. **Gain 1 and 2** – two rotary controls: adjust input gain for signals at Inputs 1 and 2 respectively. The gain controls have LED 'halos' to confirm signal level: green indicates an input level of at least -42 dBFS (i.e., 'signal present'), the ring then turns orange when the signal level reaches -6 dBFS, and red at 0 dBFS.
4. **INST** – two red LEDs which illuminate when Instrument mode is selected for the jack Inputs 1 or 2 from **Focusrite Control** software. When Instrument mode is selected, the line input is converted to a high impedance unbalanced input. You can connect instruments via a 2-pole (TS) jack plug here.
5. **AIR** – two yellow LEDs which illuminate when the AIR function is selected for each input from **Focusrite Control**. AIR modifies the input stage's frequency response to model classic, transformer-based Focusrite ISA microphone preamps.
6.  (USB active) – a green LED which illuminates when the unit has established a connection with the computer to which it is connected.
7.  (Locked) – a green LED which confirms clock synchronisation, either to the Clarett+ 2Pre's internal clock or to the external digital input.
8. **MONITOR** – main monitor output level control – this control will normally control the level at the main monitor outputs on the rear panel, but can be configured in **Focusrite Control** to adjust both pairs of analogue outputs.
9.  (Headphones) – connect a pair of stereo headphones at the ¼" TRS jack socket below the control. The headphone output always carries signals routed to analogue outputs 3 and 4 (as a stereo pair) in **Focusrite Control**.
10. **POWER** – green LED confirming DC power is connected.

Rear Panel



1. **LINE OUTPUTS 1 to 4** – four balanced analogue line outputs on ¼” jack sockets; use TRS jacks for a balanced connection or TS jacks for unbalanced. Line Outputs **1** and **2** will generally be used for driving the main L and R speakers of your monitoring system, while Outputs **3** and **4** can be used for connecting additional line level equipment (e.g., outboard FX processors). Signals routed to all the outputs may be defined in **Focusrite Control**.
2. **OPTICAL INPUT** – a TOSLINK connector carrying eight channels of digital audio in ADAT format at 44.1/48 kHz sample rate or four channels at 88.2/96 kHz. This input is disabled at 176.4/192 kHz sample rates. This input is also capable of accepting a stereo optical S/PDIF source.
3.  – USB-C™ connector; connect the Clarett+ 2Pre to your computer with either the supplied USB-C to USB-C or USB-C to USB-A cable.
4. **MIDI IN** and **MIDI OUT** – standard 5-pin DIN sockets to connect external MIDI equipment. You can send/receive MIDI data between your computer and external MIDI devices.
5. External DC power input – power the Clarett+ 2Pre via the separate AC adaptor (PSU) supplied. The PSU is a 12 V DC unit rated at 1.5 A. The Clarett+ 2Pre can also be powered from a computer via USB connection, provided the computer has a 15 W Type-C™ port. See [Clarett+ 2Pre USB Bus Power Information](#) to check if your computer has this port: if not, please use the supplied AC adaptor.
6. Power On/Off switch.
7. Kensington security slot– secure your Clarett+ 2Pre to a suitable structure if desired.

Connecting your Clarett+ 2Pre

The Clarett+ 2Pre has a USB-C™ port (on the rear panel). Once the software installation is complete, connect the Clarett+ 2Pre to your computer using one of the supplied USB-C cables.

The Clarett+ 2Pre can be powered either with the supplied AC adaptor (PSU), or via the USB connection, provided your computer has a 15 W Type-C™ port. See [Clarett 2Pre USB Bus Power Information](#) to check whether your computer has a port of this type.

Turn the unit on with the power switch.

Computer audio setup

When you connect your Clarett+ 2Pre to your computer for the first time, you will need to select it as the audio input/output device.

- **MacOS:** selection is made in **System Preferences > Sound:** select the Focusrite device on both the **Input** and **Output** pages.
- **Windows:** selection is made in **Control Panel > Sound:** right-click on the Focusrite device and select **Set as Default Device** in both **Recording** and **Playback** tabs.

If you have any problems, full details of how to select the Clarett+ 2Pre as the audio device can be found at focusrite.com/get-started/ClarettPlus-2Pre.

After the first connection, your OS should automatically select the Clarett+ 2Pre as the default audio device.

Audio Setup in your DAW

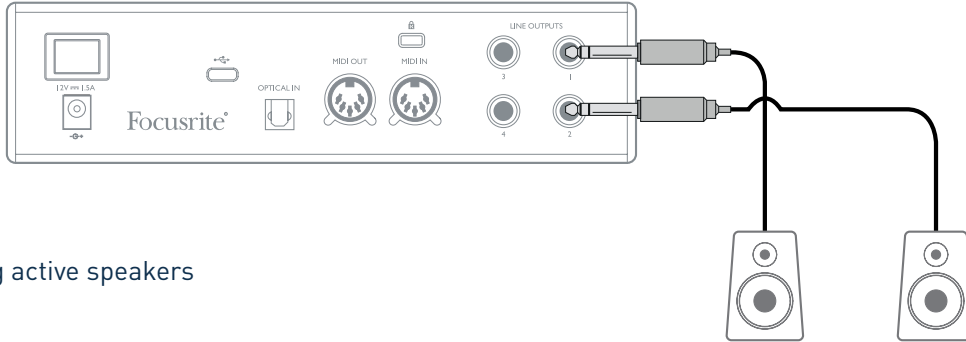
After installing the drivers and connecting the hardware, you can start using the Clarett+ 2Pre with your DAW.

Please note - your DAW may not automatically select the Clarett+ 2Pre as its default I/O device. In this case, you must manually select the driver on your DAW's **Audio Setup*** page, and select **Clarett+ 2Pre** (Mac) or **Focusrite USB ASIO** (Windows). Please refer to your DAW's documentation or Help files if you are unsure where to select the Clarett+ 2Pre as your audio device.

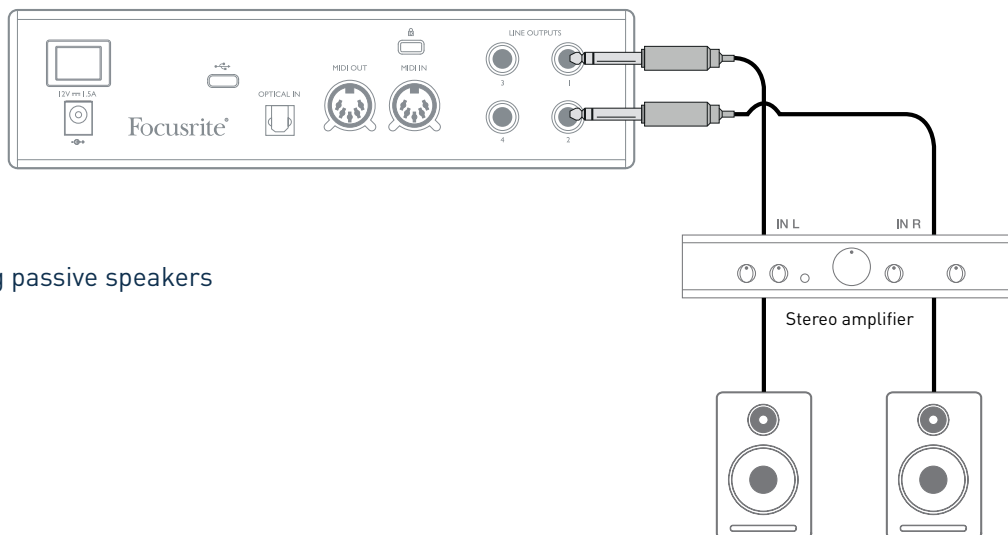
* Typical name – page names may vary with DAW

Connecting Clarett+ 2Pre to loudspeakers

The 1/4" jack **LINE OUTPUTS 1** and **2** on the rear panel will normally be used to drive monitoring speakers. Self-powered monitors have internal amplifiers, 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



Connecting passive speakers

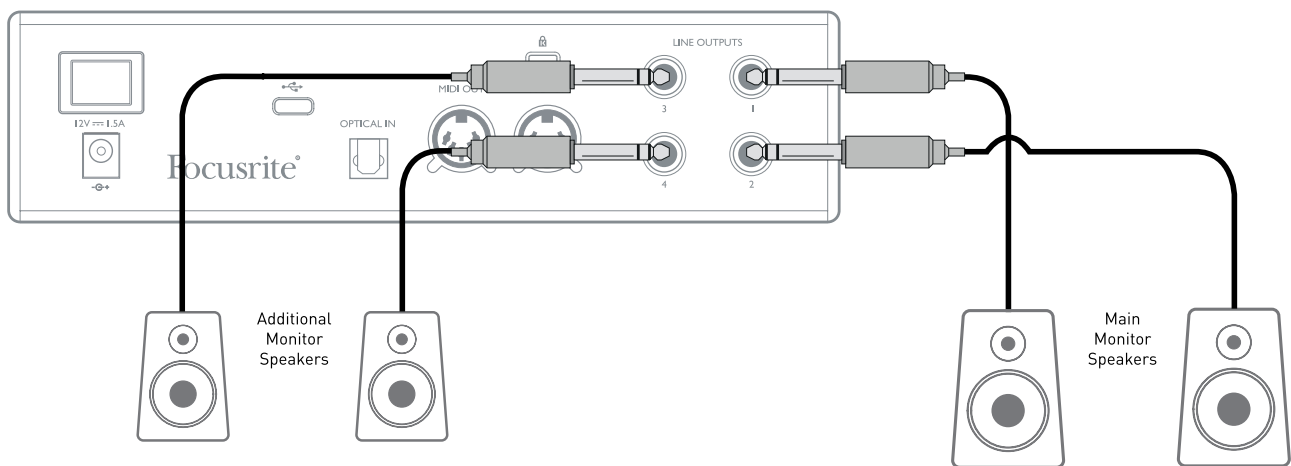
Professional equipment will generally have balanced inputs. If your amplifier or powered speakers have balanced inputs, use 3-pole (TRS) 1/4" jacks to connect them to the Clarett+ 2Pre.

All line output connectors are 3-pole (TRS) 1/4" jack sockets, and are electronically balanced. Typical consumer (hi-fi) amplifiers and small powered monitors will have unbalanced inputs on RCA sockets.

Connecting two pairs of monitors

You can connect two pairs of monitor speakers using the Clarett+ 2Pre's four line outputs. You can adjust the level of each pair independently in software (via **Focusrite Control**), or the level of both pairs together with the hardware monitor knob.

Any mix sent to line outputs 3 and 4 ("Additional monitor speakers" in the diagram below) will also be sent to the headphone output. Please note the Clarett+ 2Pre doesn't include speaker switching; you can purchase third-party hardware for this purpose.



IMPORTANT:

LINE OUTPUTS 1 and 2 have "anti-thump" circuitry that protects your speakers if the Clarett+ 2Pre is turned on while the speakers (and amplifier if used) are connected and active.

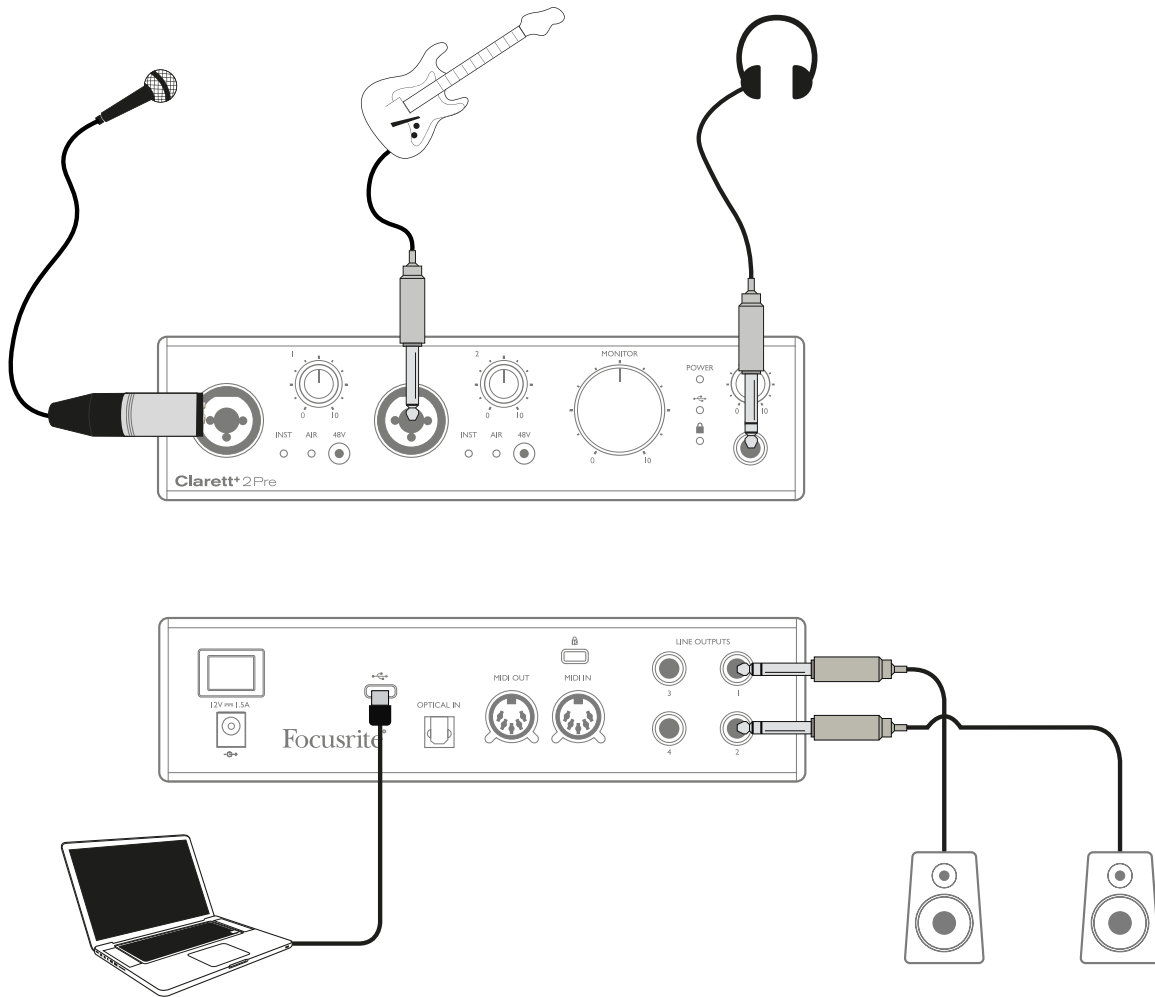
LINE OUTPUTS 3 and 4 do not have this circuitry. If you're using additional speakers connected to these outputs, power your Clarett+ 2Pre on first, then turn on the speakers or power amplifier.

But get into the habit of following this general rule in any case - it is good audio practice to turn on any speaker system *after* turning on the equipment feeding it.

EXAMPLES OF USAGE

The Clarett+ 2Pre is an excellent choice for many recording and monitoring applications. Some typical configurations are shown below.

1. Recording a solo artist



This setup illustrates a typical configuration for multitrack recording with DAW software on your computer.

In this case, two sources – a microphone and a guitar – are connected to the Clarett+ 2Pre’s inputs. As the guitar is connected to Input 2, ensure Instrument mode is selected for Input 2 from **Focusrite Control**, and the **INST** LED is illuminated.

The connection to the computer running DAW software is via a USB cable. This will carry all input and output signals between the DAW and the Clarett+ 2Pre. Once the audio setup is correctly configured in the DAW, each input source will be available for recording.

A mix of the recorded tracks will be available at Line Outputs 1 and 2, so you can hear the results in the speakers.

It is possible the performer may prefer to hear a monitor mix of voice and instruments adjusted to their taste. **Focusrite Control** lets you define a custom monitor mix for the artist and this mix may include the current input signals as well as previously recorded DAW tracks.

You can route a musician's stereo monitor mix to Outputs 3 and 4, and it will then be available at the Clarett+ 2Pre's headphone socket. If you need to send the monitor mix to more than one musician, you can use the rear panel line outputs to send the mix to a headphone amplifier.

When you monitor inputs directly, make sure you mute any DAW channels you record to. If the DAW channels are not muted, the musician will hear two signals: one direct, and one delayed via the DAW.

Please refer to the **Focusrite Control** User Guide (download from focusrite.com/downloads) for more details on setting up monitor mixes.

A note about latency

You will probably have heard the term "latency" used in connection with digital audio systems. In the DAW recording application described above, latency is the time it takes for your input signals to pass through your computer and audio software, and back to you.

While not an issue for most recording situations, latency can be a problem for a performer who wishes to record while monitoring their input signals. This might be the case if you need to increase your buffer size, which could be needed when you record overdubs on a large project using many DAW tracks, software instruments and FX plug-ins.

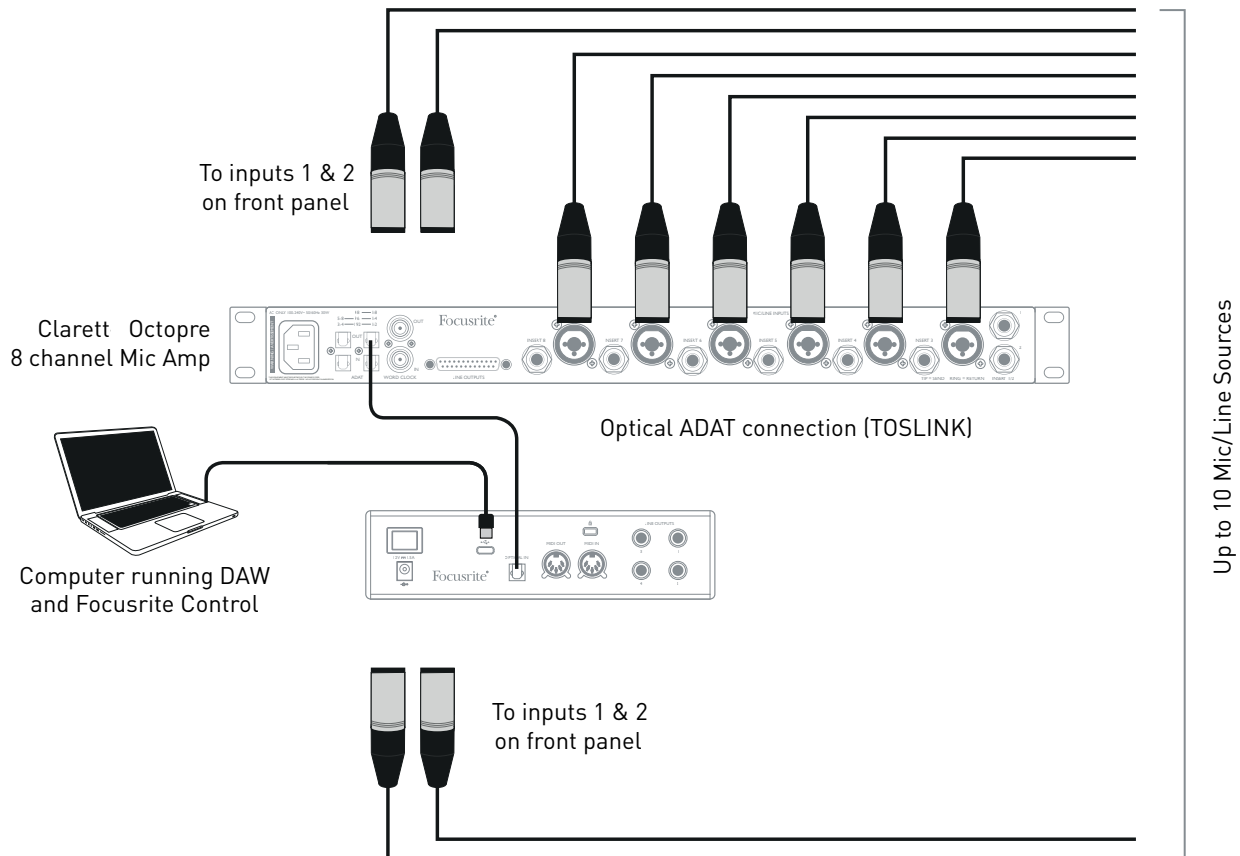
Common symptoms of a buffer setting that is too low could be glitching audio (clicks and pops), or a particularly high CPU load within your DAW (most DAWs have CPU readouts). If you experience this on a Mac, you can raise the buffer size from the DAW application itself; on a Windows PC you will need to change this from the **ASIO ControlPanel** which can usually be accessed from your DAW **Setup Preferences***.

The Clarett+ 2Pre, in conjunction with **Focusrite Control**, allows "low latency monitoring", which overcomes this problem. You can route your input signals directly to the Clarett+ 2Pre's headphone and line outputs. This enables the musicians to hear themselves with ultra-low latency – i.e., effectively in "real time" – along with computer playback. The input signals to the computer are not affected in any way by this setting. However, note that any effects being added to the live instruments by software plug-ins will not be heard in the headphones in this case, although the FX will still be present on the recording.

* Typical name – page names may vary with DAW

2. Using the optical connections

In addition to two analogue inputs, the Clarett+ 2Pre has an ADAT input port (**OPTICAL IN**) which can provide eight additional audio inputs at 44.1/48 kHz sample rate or four at 88.2/96 kHz. Using a separate 8-channel microphone preamplifier equipped with an ADAT output – such as the Clarett OctoPre – provides a simple method of expanding the Clarett+ 2Pre's input capability.

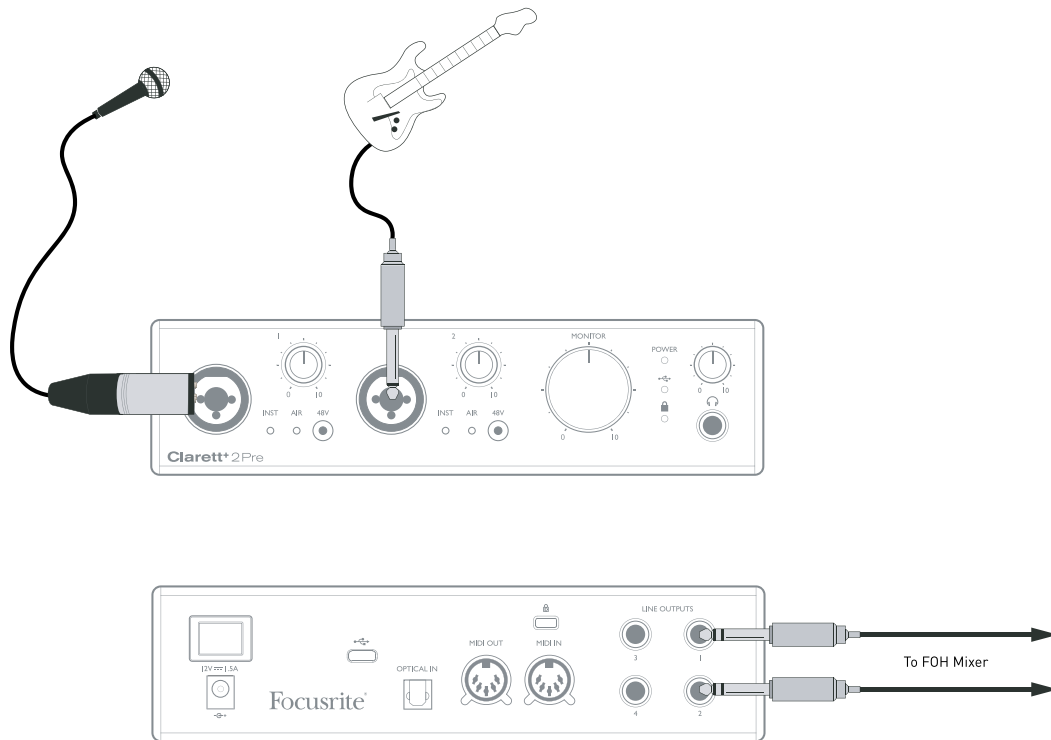


The Clarett OctoPre's **OPTICAL OUT** port is connected to the Clarett+ 2Pre's **OPTICAL IN** port with a single TOSLINK optical cable. The two devices must be synchronised to ensure audio passes cleanly, without clicks and pops. To do this in **Focusrite Control** go to **Device Settings** and set the **clock Source** to **ADAT**. Both devices must be set to the same sample rate.

You can route the additional ADAT inputs in the same way as other inputs in **Focusrite Control**. The ADAT inputs can form part of any musician's headphone mix, as needed.

3. Using the Clarett+ 2Pre as an on-stage mic pre-amp

The Clarett+ 2Pre automatically stores **Focusrite Control** settings within the hardware. This feature lets you configure it as a pair of inputs – mic, line or instrument – for use as a stand-alone device. This allows you to use it on stage in a live environment where no computer connection is needed, for example.



In the example illustrated, a mic and a guitar are connected to the Clarett+ 2Pre's inputs; Outputs 1 and 2 go to the main PA system. The performer can adjust the mic and guitar volume separately from the front panel.

FOCUSRITE CONTROL - OVERVIEW

Focusrite Control is the software application used with the Clarett+ 2Pre, which can be downloaded from focusrite.com/downloads. An iOS app allowing WiFi control of **Focusrite Control** is available, from the Apple App Store.

Focusrite Control allows you to create a custom monitor mix for each musician, and specify the routing of all audio signals to the physical audio outputs. Sample rate and clock source selection are also available from **Focusrite Control**.

Focusrite Control has its own, dedicated User Guide, which has detailed operating instructions for all aspects of the software. This may be downloaded from focusrite.com/downloads.

CLARETT+ 2PRE TECHNICAL SPECIFICATIONS

Performance Specifications

Where possible, specifications are measured to AES17. Unless stated, all specification measurements are unweighted.

Configuration	
Inputs	10: analogue (2), ADAT (8)
Outputs	4: analogue
Mixer	Fully assignable 14-in/4-out mixer
Custom mixes	10 mono
Maximum custom mix inputs	18 mono
Digital Performance	
Supported sample rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Microphone Inputs	
Frequency Response	20 Hz – 20 kHz, +/-<0.03 dB; 20 Hz – 35 kHz, +/-<0.15 dB
Dynamic Range	118 dB at minimum gain (A-Weighted)
THD+N	-110 dB @ -1 dBFS and 20 dB gain (A-Weighted)
Noise EIN	-129 dBu
Maximum input level	18 dBu
Gain Range	57 dB
Impedance	AIR off: 6.2K Ω AIR on: 2.2K Ω
Line Inputs	
Frequency Response	20 Hz – 20 kHz, +/-<0.05 dB; 20 Hz – 35 kHz, +/-<0.15 dB
Dynamic Range	118 dB at minimum gain (A-Weighted)
THD+N	-100 dB @ -1 dBFS and minimum gain
Maximum input level	26 dBu
Gain Range	57 dB
Impedance	66K Ω
Instrument Inputs	
Frequency Response	20 Hz – 20 kHz, +/-<0.04 dB; 20 Hz – 35 kHz, +/-<0.15 dB
Dynamic Range	116 dB (A-Weighted)
THD+N	-96.5 dB @ -1 dBFS and minimum gain
Maximum input level	15 dBu
Gain Range	57 dB

Impedance	2.3M Ω
Line and Monitor Outputs	
Frequency Response	20 Hz – 20 kHz, +/-<0.02 dB; 20 Hz – 35 kHz, +/-<0.02 dB
Dynamic Range Outputs (1-2)	124 dB (A-Weighted)
THD+N Outputs (1-2)	-106 dB
Maximum Output Level (0 dBFS) Balanced Line/TRS Outputs	18 dBu
Impedance	68 Ω
Headphone Outputs	
Frequency Response	20 Hz – 20 kHz, +/-<0.06 dB; 20 Hz – 35 kHz, +/-<0.07 dB
Dynamic Range	118 dB (A-Weighted)
THD+N	-104 dB
Maximum Output Level	16 dBu
Impedance	5 Ω

Physical and Electrical Characteristics

Analogue Inputs	
Connectors	Combo XLR sockets: Mic/Line/Inst, on front panel
Mic/Line switching	Automatic
Line/Instrument switching	via Focusrite Control
Phantom power	+48 V switches for each input
Analogue Outputs	
Main outputs	4 x balanced 1/4" TRS jacks on rear panel
Stereo headphone output	1/4" TRS jack on front panel
Main monitor output level control	On front panel
Headphones level control	
Other I/O	
ADAT INPUT	TOSLINK optical connector: 8 channels at 44.1/48 kHz 4 channels at 88.2/96 kHz
USB	1 x USB 2.0 using Type C connector
MIDI INPUT	2 x 5-pin DIN sockets
Weight and Dimensions	
W x D x H	210 mm x 161 mm x 55 mm / 8.27" x 6.34" x 2.17"
Weight	1.11 kg (2.45 lb)

TROUBLESHOOTING

For all troubleshooting queries, please visit the Focusrite Help Centre at support.focusrite.com.

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