

Scarlett 2i2 Studio 4th Gen

User Guide

The complete studio for the artist

Focusrite

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## Scarlett 2i2 4th Gen Studio Pack User Guide

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## **Overview**

## Introduction

Welcome to the Scarlett 2i2 4th generation.

We've designed the Scarlett 2i2 for the artist who never stops creating. Get studio-quality sound wherever you are with the latest generation of Scarlett:

- Make the most of any mic or guitar with +69dB of gain on each input.
- Set your levels in seconds, and never lose a great take again with Auto Gain and Clip Safe.
- · Re-engineered Air mode with Presence and Harmonic Drive.
- Remote control your preamps using our Focusrite Control 2 software.
- Record straight out of the box with Easy Start and a complete suite of studio software included.

## What's in the Box?

The box for your Scarlett 2i2 includes:

- Scarlett 2i2
- USB-C to A cable
- Getting Started Information (printed inside the box lid)
- · Important Safety Information sheet
- Scarlett CM25 MkIII Microphone and 3m XLR cable
- Scarlett SH-450 Headphones
- · Cardboard microphone stand, integrated into the Scarlett Studio packaging

## **System Requirements**

The easiest way to check your computer's operating system (OS) is compatible with your Scarlett 2i2 is to use our Help Centre's compatibility articles:

#### Focusrite Help Centre: Compatibility

As new OS versions become available, you can check for further compatibility information by searching our Help Centre at:

support.focusrite.com

#### **Software System Requirements**

To check Focusrite Control 2 is supported on your operating system (OS) please use our Help Centre's compatibility articles:

#### Focusrite Help Centre: Compatibility

As new Focusrite Control 2 or OS versions become available, you can check compatibility information by searching our Help Centre at:

support.focusrite.com

## **Getting Started**

## **Powering On your Scarlett**

To power on your Scarlett 2i2, connect a USB cable from your computer to the **USB** port on the back panel.

For a few seconds, the Scarlett goes through its start-up procedure, then the  $\stackrel{\bullet}{\longleftarrow}$  USB icon lights green.



#### **Important**

If your Scarlett powers on but isn't recognised by your computer, the  ${}^{\bullet}$  USB icon lights white. If this happens:

- Make sure you have installed Focusrite Control 2 on your computer
- Check your Scarlett's USB cable is connected to the correct port (USB) on the back of the Scarlett.
- · Test a different USB port on your computer.
- Test a different USB cable.

If the USB icon flashes red, your Scarlett is not getting enough power.

To power on your Scarlett 2i2 without a computer, see Standalone Mode [38].

## **Easy Start**

Easy Start gives you a step-by-step guide to setting up your Scarlett and creates personalised tutorials based on how you plan to use your Scarlett. This online tool also guides you through your Scarlett's registration process and accessing the software bundle.

On both Windows and Mac computers, when you connect your Scarlett to your computer, it first appears as a Mass Storage Device, like a USB drive. Open the drive and double click 'Click Here To Get Started.url'. Click 'Get Started' to open Easy Start in your web browser.

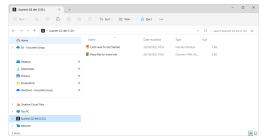
After you've opened Easy Start, please follow the step-by-step guide, to install and use your Scarlett.

#### **Windows**

After you connect your Scarlett 2i2 to your computer, a device appears in File Explorer called Scarlett 2i2 4th Gen, this allows you to access Easy Start.

To access Easy Start:

- 1. Open File Explorer.
- 2. Click on Scarlett 2i2 4th Gen (D:). The letter may be different.



 Double-click Click Here to Get Started. This redirects you to the Focusrite website, where we recommend you register your device:



4. Click Get Started, and we'll take you through a step-by-step setup guide based on how you want to use your Scarlett.

During Easy Start, you'll install Focusrite Control 2 . After you install and open Focusrite Control 2, click 'Update Scarlett 2i2'. Do not disconnect your Scarlett while Focusrite Control 2 updates it. After the Focusrite Control 2 update is complete, the Scarlett no longer appears as a Mass Storage Device on your computer.

Your operating system should change the computer's default audio inputs and outputs to the Scarlett

To verify this, right-click the speaker icon on the Windows taskbar, and make sure Scarlett is your Sound output.

#### Mac

After you connect your Scarlett 2i2 to your computer, a Scarlett icon appears on the desktop or, if you use Chrome, you'll see a pop-up:





#### Scarlett 2i2 4th Gen detected

Go to api.focusrite-novation.com to connect.



X

Scarlett Easy Start icon: Double click and start from step 1 below.

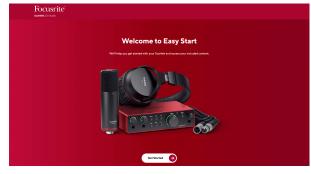
Chrome pop-up: Click and start from step 2 below.

### To access Easy Start:

1. Double-click on the icon to open the Finder window shown below:



2. Double-click Click Here to Get Started. This redirects you to the Focusrite website, where we recommend you register your device:



3. Click Get Started, and we'll take you through a step-by-step setup guide based on how you want to use your Scarlett.

During Easy Start, you'll install Focusrite Control 2 . After you install and open Focusrite Control 2, click 'Update Scarlett 2i2'. Do not disconnect your Scarlett while Focusrite Control 2 updates it. After the Focusrite Control 2 update is complete, the Scarlett no longer appears as a Mass Storage Device on your computer.

Your operating system should change the computer's default audio inputs and outputs to the Scarlett.

To verify this, go to System Settings > Sound, and ensure the input and output are set to Scarlett 2i2

#### All Users

The second file - 'More Info and FAQs' - is also available during the setup process. This file contains some additional information about Easy Start, which you may find helpful if you have any issues with the setup.

Once registered, you have immediate access to the following resources:

- Focusrite Control 2 (Mac and Windows versions available) see note below.
- Multi-language User Guides also always available from downloads.focusrite.com.
- Licence codes and links for the optional bundled software in your Focusrite account. To find out what bundled software is included with Scarlett 2i2, please visit our website: focusrite.com/scarlett.

## What is Focusrite Control 2?

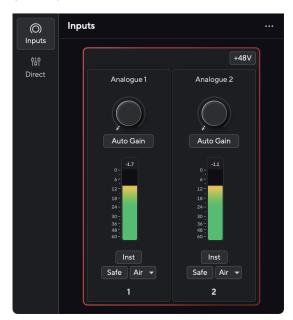
Focusrite Control 2 is the software application you use to control your Scarlett interface.



The Focusrite Control 2 icon

We occasionally update your Scarlett 2i2's firmware with new features and improvements, to make sure you are getting the most from your Scarlett. Your Scarlett 2i2 is updated through Focusrite Control 2.

Depending on your model Focusrite Control 2 allows you to control various features of your Scarlett from your computer.





#### Note

Focusrite Control 2 is compatible with most major screen reader software, allowing you to control the features on your Scarlett.

## **Installing Focusrite Control 2**

You can install Focusrite Control 2 on Windows and Mac. To download and install Focusrite Control 2:

- 1. Go to the Focusrite downloads website: focusrite.com/downloads
- 2. Find your Scarlett on the Downloads website.
- 3. Download Focusrite Control 2 for your operating system (Windows or Mac).
- 4. Open the Downloads folder on your computer and double-click the Focusrite Control 2 installer.
- 5. Follow the on-screen instructions to install Focusrite Control 2.
- 6. If it's not already, connect your Scarlett interface to your computer with the USB cable.
- 7. Open Focusrite Control 2 and it detects your Scarlett automatically.



#### Note

On Windows, installing Focusrite Control 2 also installs the driver. You can download Focusrite Control 2 at any time, even without registering from downloads.focusrite.com. On macOS, you don't need a driver, you only need to install Focusrite Control 2.

## **Manual Registration**

If you decide to register your Scarlett at a later date, you can at: customer.focusrite.com/register

You need to enter the Serial Number manually: you can find this number on the interface's base (the white number below) or the barcode label on the giftbox.



We recommend you download and install Focusrite Control 2. Opening Focusrite Control 2 disables Easy Start and unlocks your Scarlett 2i2's full feature set.

In Easy Start mode, the interface functions at up to 48 kHz sample rate; once you install Focusrite Control 2, you can work at sample rates up to 192 kHz.

If you don't install Focusrite Control 2 immediately, you can download it at any time from: downloads.focusrite.com

## **Disabling Easy Start**

After you've been through Easy Start, installed and opened Focusrite Control 2, your Scarlett is no longer in Easy Start mode.

If your Scarlett 2i2 is still in Easy Start mode, or you have chosen not to install Focusrite Control 2 to disable Easy Start Mode:

- 1. Turn off your Scarlett 2i2
- 2. Press and hold the **48V** button.
- 3. Keeping the 48V button held, power on your Scarlett 2i2.
- 4. Wait for the front panel to light up, then release the **48V** button.
- 5. Restart (power off and power on) your Scarlett 2i2.

Your Scarlett powers on with Easy Start disabled.

## **Hardware Features**

#### **Front Panel**



- 1. Input **1** Gain Control and Gain Halo The Gain control sets the input level and the Gain Halo shows you the input and preamp gain levels for either the jack or XLR Mic input 1.
- 2. Input **1** Neutrik® 6.35mm (1/4") jack socket Accepts both unbalanced mono (TS) and balanced Mono (TRS) jack cables at line or instrument-level. Connecting a cable here disables the corresponding XLR input.
- 3. Input **2** Gain Control and Gain Halo The Gain control sets the input level and the Gain Halo shows you the input and preamp gain levels for either the jack or XLR Mic input 2.
- 4. Input **2** Neutrik® 6.35mm (1/4") jack socket Accepts both unbalanced mono (TS) and balanced Mono (TRS) jack cables at line or instrument-level. Connecting a cable here disables the corresponding XLR input.
- Select button Press to move the selection to the next preamp. The other buttons change to control the input you select. The currently selected channel's number lights green.
- 6. **48V** button Press to turn on 48V phantom power at the XLR mic input to power condenser microphones.
  - When 48V is on, the Scarlett 2i2 applies 48V phantom power to both inputs.

- Inst button Press to toggle the selected 6.35mm (1/4") input between Line or Instrument level.
- 8. **Auto** button Press to start the Auto Gain feature (see Auto Gain [16]).
- 9. Safe button Press to turn on the Clip Safe feature for your input (see Safe [18]).
- 10. Air button Press to turn on AIR mode (see AIR [18]).
- 11. Main Speaker **Output** Control and Output Level meter Control the level going to Outputs R and L, the meter shows you the level being sent out.
- 12. USB LED Lights green when the interface is recognised by your computer, white if it is connected but not recognised and off if it is not connected.
- 13. **Direct** <sup>Direct</sup> Monitor Button Press to toggle between three settings, Off (white), On Mono (**Direct** green), and On Stereo ( <sup>Direct</sup> green).
- 14. Headphone Level Control Control the level sent to your headphones.
- 15. Headphone Output Socket Connect your headphones here using a TRS 6.35mm (1/4") jack connector.

#### **Back Panel**



- 1. Kensington Lock, use a lock to secure your Scarlett and deter theft.
- 2. **5V DC** an optional USB-C connector to supply power to your Scarlett 2i2 if your computer can't supply 1.5A USB-C power to your Scarlett 2i2
- USB USB-C connector to connect your Scarlett to your computer.
   With most computers, you can transfer data and power the Scarlett using only this USB port.
- Speaker Outputs R and L 6.35mm (1/4") jack (TS or TRS) sockets to connect your Scarlett to speakers or an amplifier. We recommend you use 6.35mm (1/4") TRS jack cables for balanced connections.
- 5. **Inputs 2** and **1** 3-pin 3-pin Neutrik® XLR connectors to connect your microphones. Connecting something to the corresponding line-level input disables the XLR input.



## Tip

The Scarlett 2i2 has XLR inputs at the back for microphones and 6.35mm (1/4") jack inputs on the front for instruments or line-level devices.

Using the front panel jack input(s) disables the XLR mic input. If you're not getting sound from your XLR input(s), ensure nothing is connected to the front panel jack inputs.

## **Front Panel In Depth**

This section covers all the features on your Scarlett 2i2's front panel, what they do, how you might use them and how they work in Focusrite Control 2.

### **Setting Preamp Input Gain**

The preamp input gain controls how much signal you are sending into your computer and recording software.

It's essential to set a good level for the preamp input gain so you get the best quality recording. If the preamp input gain is too low your signal will be too quiet and when you try and boost its level later you may hear noise in the recording; if the preamp input gain is too high you might 'clip' the input and hear harsh distortion in your recording.

To increase the input gain move the gain control clockwise, as you move the gain control the Gain Halo gradually lights clockwise to show you the gain level. This diagram shows the gain at various levels:

- 1. No input gain
- 2. 25% input gain
- 3. 50% input gain
- 4. 75% input gain
- 5. 100% input gain



When you adjust your input gain while you send a signal into your preamp, the ring lights the same way as above but a colour, green, amber or red, shows how much level is going into your computer. Shortly after you stop adjusting the gain the meters revert to input meters (see Input Metering).

- 1. Gain at 40%, signal good.
- 2. Gain at 40%, signal pre-clip.
- 3. Gain at 40%, signal clipping.



- 1. Green shows your signal level is good.
- 2. Amber shows your signal is pre-clip, any higher and you are likely to clip the input
- 3. Red shows your signal has clipped, you should reduce the gain.

#### **Software Gain Control**

You can also control the preamp gain remotely using Focusrite Control 2.

To adjust the preamp gain in Focusrite Control 2:

- 1. Click the virtual knob for the channel you'd like to adjust or use the tab key to select the preamp gain control.
- 2. Move your mouse up and down or use the arrow keys to increase or decrease the gain (in ±1dB increments).

The following images show the preamp gain at minimum, medium and maximum gain.





No input gain

50% Gain

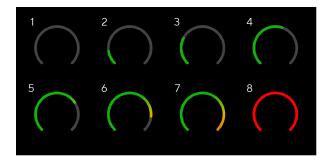


100% Gair

#### **Input Metering**

When you're not moving the input gain control the input metering uses the entire Gain Halo. As the incoming signal gets louder (for example with a higher input gain setting) the Gain Halo lights from green through to amber before the entire Gain Halo flashes red to show you the input has clipped.

This diagram shows the meters at different levels to show the input signal level:



- 1. No input signal
- 2. -42 dBFS
- 3. -36 dBFS
- 4. -24 dBFS
- 5. -18 dBFS
- 6. -12 dBFS
- 7. -6 dBFS
- 8. 0 dBFS, clipping turn down the input gain to avoid distortion and clipping.



#### Tip

If your signal clips the clip indicator at the top of the meter lights red. If this happens, select that channel and reduce the gain.

#### **Software Metering**

In the same way as the input meters on your Scarlett 2i2's front panel, you can see the incoming signal on the meters in Focusrite Control 2 to set the correct preamp gain.

As the signal gets louder the meter in Focusrite Control 2 lights from green to amber (pre-clip).



The indicator above the meter shows you the peak level (in -dBFS), the highest level on this track since you started monitoring the input. When you hover over the Peak level Meter you can click to Reset the value.



#### Tip

When you're recording, it's a good idea to aim for a -12dBFS peak level. This ensures you have enough headroom when you've recorded all your tracks.







The input signal has reached -18dB.



Click to Reset the Peak Level meter.

When you overload the preamp, with too much input signal, or by adding too much gain, the Peak Level Meter lights red. Hover over the Peak Level Meter and click to Reset the value.







Click to Reset the Peak Level Meter after clipping.

#### **Select Button**

Many front panel controls on your Scarlett 2i2 are shared across the preamp inputs. The **Select** button moves the preamp controls to different inputs.

At least one preamp is always selected, to change which preamp(s) the controls are affecting, press the **Select** button. When you do this the newly selected preamp's number lights green and the preamp setting lights change to match the new preamp.

When you turn on your Scarlett 2i2 the last selected preamp before you turned it off remains the selected preamp.

#### **Linking Preamps**

Linking preamps allows you to control two preamps simultaneously using one set of preamp controls. You can match gain controls for two preamps and enable other preamp controls. This is useful for stereo recording, for example, a microphone pair, stereo synthesiser, or keyboard.

To link preamps:

Press and hold the Select button for one second.

When you've made the Preamp Link:

 Both preamp numbers light green and the Gain Halos light temporarily to their preamp level.



- The preamp gain level is set to the lowest value of the newly linked pair.
- The preamp settings are inherited from the currently selected preamp, e.g. preamp 1 is selected, therefore Preamp 2 inherits, **Air**, **Safe** and **Inst** settings from Preamp 1.
- Changing any preamp setting changes the state for both preamps.
- Adjusting either gain control changes the gain level for both preamps and is shown on both Gain Halos.
- 48V disables for both preamps.

#### **Unlinking Preamps**

To unlink preamps, hold the **Select** button for one second. When you unlink a pair:

- The first preamp of the previously linked pair becomes selected and lights green.
- Gain levels and preamp settings stay the same, but you can now change them independently.

#### **Linking Preamps in Focusrite Control 2**

#### **Linking Preamps**

To link preamps from Focusrite Control 2:

- 1. Hover over the preamp you want to link.
- 2. Click the ellipses icon ....
- 3. Click Link with Analogue 2 (or similar depending on the preamp).

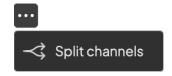


Linked preamps show the  $\mathcal{O}$  icon next to their name.

#### **Unlinking Preamps**

To unlink preamps from Focusrite Control 2:

- 1. Hover over the preamp you want to unlink.
- 2. Click the ellipses icon ...
- 3. Click Split channels.



- The first preamp of the previously linked pair becomes selected and lights green.
- Gain levels and preamp settings stay the same, but you can now change them independently.

#### 48V Button (Phantom Power)

**48V**, also commonly referred to as 'Phantom Power', sends 48 Volts from your interface's XLR connector to devices needing power to work. The most common use is sending power to condenser microphones, but you may also need **48V** for inline mic preamps, active dynamic microphones and active DI boxes.

#### To turn on 48V:

- Connect your microphone, or another powered device, to an XLR input on your interface using an XLR cable. 48V is not sent to the 6.35mm (1/4") jack inputs.
- 2. Turn down that preamp's gain control to avoid any unwanted pops and clicks.
- 3. Press the **48V** button (or the corresponding software button)

The **48V** icon lights green to show it is enabled.

48V phantom power is now being sent to both XLR inputs on your Scarlett 2i2 and to any devices connected to the XLR inputs.

#### **48V (Phantom Power) Software Control**

To enable 48V (Phantom Power) from Focusrite Control 2 click the +48V button. This is the same as pressing the 48V button on the Scarlett 2i2 hardware.





+48V Phantom Power off

+48V Phantom Power on



#### Important

If you accidentally send **48V** phantom power to the wrong input, most modern microphones of other types, e.g., dynamic or ribbon, will not be damaged, but some older microphones may be. If you're unsure, please check your microphone's user guide to ensure it is safe to use with **48V** phantom power.

#### Inst (Instrument) Button and Line Level Inputs

The **Inst** (Instrument) button only affects the 6.35mm (1/4") line input for the selected channel. It changes it from an input suitable for *line-level* devices to an input better suited for instrument-level devices.

To enable, or disable, instrument mode for the 6.35mm (1/4") jack input, press the **Inst** button once. Green shows **Inst** is enabled, and white shows **Inst** is disabled. When you enable Inst and connect a jack to your Scarlett, the minimum gain for the input is changed to +7dB.



#### Note

When the Inst light is white, the 6.35mm jack input is at line level.

When **Inst** is enabled (green) you can connect instrument-level devices to the 1/4" inputs such as, but not limited to:

- Electric or electro-acoustic guitars directly and via effects pedals.
- Electric basses
- · Acoustic instruments with pick-ups such as violins, double-basses etc.

When  ${\bf Inst}$  is disabled (white) you can connect line-level devices to the 6.35mm (1/4") inputs such as, but not limited to:

- Synthesisers
- Keyboards
- · Drum Machines
- · External Microphone Preamps

### Instrument/Line Software Control

To change between instrument and line from Focusrite Control 2 click the **Inst** button once.





Line

Instrument



#### Note

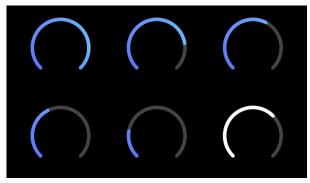
When you switch between **Inst** and Line, the gain remains at the last level you set.

#### **Auto Gain**

Auto Gain allows you to send a signal into your Scarlett 2i2 (for example singing, or playing your instrument) for 10 seconds and let the Scarlett set a good level for your preamps. If you find the levels aren't right, you can adjust the gain controls manually to fine-tune the levels before recording.

To use Auto Gain:

- 1. Press the **Select** button to move your preamp controls to the correct preamp.
- Press the white Auto button on your Scarlett, or the corresponding software button.
   The Auto icon lights green for ten seconds. The corresponding Gain Halo turns into a ten-second countdown timer.



3. Speak or sing into the microphone, or play your instrument during the Auto Gain countdown. Perform as you would while you're recording to make sure Auto Gain sets a good level.

If the Auto Gain was successful, the Gain Halo lights green before the gain value is shown on the Gain Halo for a second. The gain is now set at a good level for your recording.

If Auto Gain fails the Gain Halo lights red. Please see the section, The Gain Halo turned Red [17], for more information.



#### Note

Scarlett's Auto Gain makes sure your levels are set right not only using the input signal but also factors in:

- · The preamp's noise floor.
- · Digital silence.
- · Inter-channel crosstalk.
- Unwanted knocks or bumps on your microphones.

#### **Auto Gain Software Control**

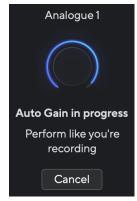
To use Auto Gain in Focusrite Control 2:

1. Click the Auto Gain button in Focusrite Control 2.



2. Speak or sing into the microphone, or play your instrument during the Auto Gain countdown. Perform as you would while you're recording to make sure Auto Gain sets a good level.

The Auto Gain process starts and the software Gain halo turns into a countdown timer.



If the Auto Gain was successful, the Gain Halo lights green before the gain value is shown on the Gain Halo for a second. The gain is now set at a good level for your recording.



#### The Gain Halo turned red

If the input signal is unsuitable for Auto Gain (for example no signal), after ten seconds, Auto Gain stops and the Gain Halo lights red for a second. The gain returns to the value you set before starting Auto Gain.





Hardware Gain Halo

Focusrite Control 2 Auto Gain unsuccessful

Before running Auto Gain again, make sure your input has something connected to it correctly, if you're using a condenser microphone, 48V is on, and you are making sound while Auto Gain runs.



#### Note

To cancel Auto Gain, press the Auto Gain button again at any time during the process. The gain returns to the value you set before starting Auto Gain.

#### **Multichannel Auto Gain**

Auto Gain allows you to send a signal into your Scarlett 2i2 (for example singing, or playing your instrument) for 10 seconds and let the Scarlett set a good level for your preamps. If you find the levels aren't right, you can adjust the gain controls manually to fine-tune the levels before recording.

Multichannel Auto Gain starts the Auto Gain process for all the preamp channels on your interface. This is particularly useful for quickly setting levels for situations where you are using multiple channels simultaneously, for example:

- Setting levels for yourself if you're playing guitar and singing simultaneously.
- Setting levels for a drummer when you have multiple microphones on the drum kit.
- Setting levels for a band recording 'live' together.

To start the multichannel Auto Gain process:

- Hold the **Auto** button for two seconds.
   The **Auto** icon fades between off and Green for ten seconds, and the Gain Halos for all channels turn into ten-second countdown timers.
- Speak or sing into the microphone, or play your instrument during the Auto Gain countdown. Perform as you would while you're recording to make sure Auto Gain sets a good level.

If the Auto Gain was successful, the Gain Halos light green before the gain value is shown on the Gain Halos for a second. The gain is now set at a good level for your recording.



#### Note

To cancel Auto Gain, press the Auto Gain button again at any time during the process. The gain returns to the value you set before starting Auto Gain.

#### **Clip Safe Button**

The Safe button applies Clip Safe which automatically adjusts your preamp gain if you're at risk of clipping.

Clipping happens when your gain is set too high for the sound being recorded and your input overloads the preamp. A clipping symptom is preamp distortion, which is often unpleasant and can ruin a recording. Clip Safe helps you avoid this so if your input gets near to clipping, Clip Safe reduces the preamp gain, so you won't have to re-record your take.



#### Note

Clip Safe is only available at up to 96kHz, you cannot use it at quad-band (176.4kHz and 192 kHz) sample rates. The Safe LED lights red to show when it's unavailable.

#### To enable Clip Safe:

- 1. Press the **Select** button to move your preamp controls to the correct preamp.
- 2. Press the **Safe** button on the interface or the corresponding software button.

When you enable Safe, the Safe icon lights green. The Safe icon lights white when it is disabled and available.

When you have two inputs selected using Preamp Link, **Safe** is applied to both preamps.



#### Tip

When you enable Clip Safe, your Scarlett continuously monitors your input signals, up to 96,000 times a second, and through a combination of analogue preamp adjustment and DSP, Clip Safe significantly reduces the risk of clipping.

## **Clip Safe Focusrite Control 2**

To enable Clip Safe from Focusrite Control 2, click the Safe button:







Safe on

#### **Air Modes**

Air lets you change your Scarlett's preamp sound with two different modes; Air Presence or Air Presence and Harmonic Drive.

Air affects the mic, line and instrument inputs.

To enable Air, select your input, press the Air button once for Air Presence, again for Air Presence and Harmonic drive and again to turn off. The Air LED changes colour to show which mode you have selected:

Mode	Description	AIR LED	Notes
Off	The preamp is clean	White	
Air Presence	An analogue circuit gives a presence boost to your sources.	Green	
Air Presence and Harmonic Drive	Adds harmonics, in addition to the analogue Air circuit.	Amber	Only available at up to 96kHz

#### **Air Software Control**

To enable AIR from Focusrite Control 2 click the Air button. This is the same as pressing the Air button on the Scarlett 2i2 hardware.



Air Off



Air Presence selected



Air Presence and Drive selected

When you click Focusrite Control 2's Air button the last selected Air mode becomes activated. To change the selected Air mode (Presence or Presence and Drive) click the arrow to show the dropdown menu.



Air Presence selected



Air Presence and Drive selected



Air Presence & Drive is only available at up to 96kHz, you cannot use it at quad-band (176.4kHz and 192 kHz) sample rates.

#### **Output Control and Level Meter**



The **Output** control and Output level meter are related to the signals going to Outputs 1 and 2 on the back of your Scarlett 2i2, the outputs you'd most often connect to monitor speakers.

The **Output** control sets the level at the outputs from nothing (fully anti-clockwise) to full-scale output (fully clockwise).

The Output Level meter around the Output level control is a pre-fade meter (it is not affected by the control's position) showing you the signal level coming from your computer.



#### Note

On some occasions you may still hear sound from your monitors when the **Output** control is fully anti-clockwise, you can adjust your monitor levels to resolve this:

- 1. Turn down your interface's **Output** control and your monitors' level control.
- 2. Turn the **Output** control to maximum (or just below maximum).
- 3. Play sound from your system.
- 4. Turn up your monitors' level controls until the level is the loudest you need.

You should no longer hear sound when the **Output** control is at its minimum. You also have more control over the level with the full range of the **Output** control. By setting it at just below the maximum, you also have a little extra volume if you need it, or want to listen to sounds at a louder-than-normal level.

#### **Direct Monitor Button**

**Direct** Monitor ® allows you to hear the signals coming into your interface's inputs without them going through your computer. This means you hear the inputs without any latency and without effects.

You might want to use Direct Monitoring for two reasons:

- You're experiencing latency or a delay between making a sound and hearing it back from your software. By muting your software inputs and turning on Direct Monitor, you no longer hear latency.
- You want to hear the clean unaffected signal going into your Scarlett, instead of listening to the software output, which may have effects and plugins changing the way your source sounds.

When Direct Monitor is off, the ocion lights white. The Scarlett 2i2 has two different Direct Monitor settings, mono, and stereo, to enable Direct Monitor:

Press the button once for mono direct monitoring, signals present at input 1 and input 2 will both be in the centre of the stereo image. This is useful for recording two mono sources, for example, a guitar and a voice.



Press the <sup>Direct</sup> button for a second time for **stereo** direct monitoring, input 1 is panned left, input 2 is panned right. This is useful for recording a stereo device, for example, a stereo microphone pair, a stereo synthesiser, or a keyboard.





#### Note

If you're hearing your signal twice or getting a doubling or slightly phased sound, it's likely you've got Direct Monitor switched on, and you're hearing the sound back from software. You can either:

- Mute the track you're recording to in your DAW software.
- Turn off Direct Monitor and only listen to the sound coming from your DAW software.

## **Direct Monitor Adjustment**

From Focusrite Control 2 you can enable and adjust the Direct Monitor mix to balance your inputs with the Playback channels from your software.

To enable Direct Monitor click on the Direct tab in Focusrite Control 2 and click the Direct Monitor software switch at the top of the tab. The switch lights green and Direct lights green on your Scarlett 2i2's front panel.





Direct Monitor Off

Direct Monitor on

## To adjust your Direct Monitor mix:

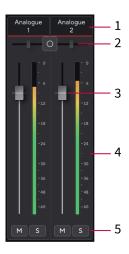
- 1. Open Focusrite Control 2.
- 2. Click on the Direct tab.



- 3. Use the Mixer Channels, (faders, Mute and Solo buttons) to adjust the levels for Analogue 1, Analogue 2 and Playback 1-2.
  - The final meter under **Direct Monitor** shows the combined level going to your monitor and headphone outputs.

#### **Using the Mixer Channels**

Each mixer channel has a number of functions.



#### 1. Mix Channel Name

This shows the name of the mixer input.

#### 2. Stereo/Mono Switch and Pan

The Direct Monitor Mode button between the channels changes the direct monitor mode between mono and stereo.

The Pan indicators on either side show where that channel is panned in the direct monitor mix. The pan is not editable and has two states depending on the Direct Monitor you select, centre (mono) hard-left and hard-right (stereo).

#### 3. Fader

The Fader adjusts the level going to your Mix destination. Alt, option imes or double-click to reset.

The faders have no effect on the sources you are currently recording.

#### 4. Meter

This shows you the channel's level, in dBFS. Green shows a good level and amber means the level is very high.

You'll see two meters for stereo channels, one for each left and right side. The meter shows the level post-fader, the fader setting will affect the meter.

#### 5. Mute and Solo

Mute - Click the Mute button to silence the channel in the Mix. The Mute button lights blue when enabled. You can Mute multiple channels simultaneously.

Solo - Click the Solo button story to solo the track by silencing all other channels in the Mix. The Solo button lights yellow swhen enabled. Enabling Solo on multiple channels silences any channels without Solo enabled, i.e. you will hear all the Solo'd channels.

If you enable both Mute and Solo, the last clicked option takes priority.

### **Headphone Output**



The headphone output is a 6.35mm (¼") TRS jack. Many headphones have a 3.5mm TRS jack, to connect them to your Scarlett 2i2 you must use a TRS 6.35mm to 3.5mm adaptor.

The control above the headphone output controls the level going to your headphones.

Some higher impedance headphones may be quiet using them with a Scarlett 2i2, we recommend using headphones with an impedance up to  $300\Omega$ .



#### Note

Some headphones and jack adaptors may have TS or TRRS connectors, for example, if they have a microphone or volume control built into the cable. It's unlikely these headphones will work properly. If you're having issues, use headphones and a jack adaptor with TRS jack connectors.

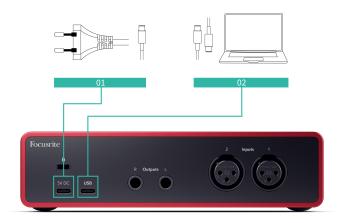
## **Back Panel In Depth**

This section covers all the features on your Scarlett 2i2's back panel, what they do, how you might use them and how they work in Focusrite Control 2.

## **USB Connections**

**USB Port** 

The USB Type-C port labelled **USB** is to connect your Scarlett to your computer.U



The connection to your computer provides USB power, two-way audio communication, and a connection to Focusrite Control 2.

#### 5V DC Port

With most computers, you won't need to use the **5V DC** port. However, if your computer's USB ports can't provide 900mA, we've included a **5V DC** port so your Scarlett can be powered from the mains using a USB PSU.

The Scarlett 2i2 consumes a large amount of power. In some high-power situations, such as playing headphones at a high volume, some computers' USB ports may not be able to provide enough power and your Scarlett 2i2 may disconnect or the USB icon • • flashes red.

If you experience this behaviour, we recommend you use a mains PSU to power your Scarlett via the **5V DC** port.



#### The USB Icon Flashes Red

If the USB icon flashes red this means your Scarlett 2i2 isn't getting enough power.

To resolve this issue:

- Make sure you are using the original USB cable provided with your Scarlett.
- Test a different USB port on your computer, make sure you're connecting directly to your computer and not via a USB hub.
- If needed use the second 5V DC port on the back of the Scarlett 2i2. Connect a second USB cable from a separate USB PSU. Make sure you don't connect the power adaptor while you're playing audio.

### **Speaker Outputs**

**Outputs L** and **R** are line-level outputs to connect your Scarlett 2i2 to an amplifier or active monitors. The outputs are balanced 1/4" TRS jack outputs, you can use them with either unbalanced TS or balanced TRS jack cables.

Your Scarlett 2i2's front panel **Output** dial controls the level sent to **Outputs L** and **R**.

### Microphone Inputs

The 3-pin XLR connector **Input** is at microphone level and designed for you to connect your microphones.

You can control your microphone level using the corresponding input gain control on the front panel. 48V phantom power is also available if you are using a condenser mic, you can enable phantom power using the front panel 48V button.



#### Tip

The Scarlett 2i2 has XLR inputs at the back for microphones and 6.35mm (1/4") jack inputs on the front for instruments or line-level devices.

Using the front panel jack input(s) disables the XLR mic input. If you're not getting sound from your XLR input(s), ensure nothing is connected to the front panel jack inputs.

## **Studio Pack Accessories**

## **CM25 MkIII Microphone**

The Scarlett CM25 MkIII microphone with the Scarlett Studio pack is a condenser mic ideal for recording studio-quality vocals and most acoustic instruments.

You can use the CM25 MKIII to record almost anything, but you'll love how it sounds on vocals and guitar thanks to its bright, clear, detailed character.

We've also included a windscreen for the CM25 MKIII to reduce plosives and wind noise when you're recording vocals or spoken word.

To use the CM25 MkIII with your Scarlett 2i2:

- 1. Turn the input gain for the channel to minimum and turn off 48V.
- 2. Connect the CM25 MkIII to an XLR input on your Scarlett 2i2 using the included XLR to XLR cable.
- 3. Press the 48V button to turn on 48V phantom power.
- 4. Set your input gain as per the steps in the section Setting Preamp Input Gain [11].

We know you'll want to start recording straight away, so we've included a simple (yet clever) mic stand to make sure you can get up and running even if you don't have a full set-up for your studio yet.

We want to ensure we aren't being wasteful with our product design, so challenged ourselves to create a mic stand from the packaging we were already using.

We've reused the cardboard sheet inside the box, needed to protect your Scarlett in transit, to create a mic stand to get you recording straight out of the box.





## **SH-450 Headphones**

The SH-450 headphones come bundled with the Scarlett 2i2 Studio Pack. We've designed these headphones to provide you with professional-quality sound, whether you're recording, mixing, DJing, or need honest monitor headphones.

The SH-450 headphones have a durable frame that is comfortable to wear for extended time periods. The closed-back design helps block out outside noise, so you can focus on your recordings.



## **DAW (Recording Software) Setup**

The Scarlett is compatible with any ASIO-supported DAW on Windows and any Core Audio-supported DAW on macOS.

To help you get started, we've put together steps to set up your interface and start recording in the most common DAWs. If you need any more information, please see the user guide for your DAW.

If you don't already have a DAW installed on your computer to help get you started, the Scarlett comes with Ableton Live Lite and a version of Pro Tools. You can access these in Easy Start [5], or from your Focusrite account.



#### Tip What is a DAW?

DAW stands for 'Digital Audio Workstation' and is the term given to any software you use to record arrange or make music.

## Logic and GarageBand

To get set up in Logic Pro and GarageBand follow these steps:

- 1. Open Logic Pro or GarageBand on your computer (you may be prompted to Choose a project, you can choose an Empty Project or use a template).
- 2. Select Audio in the **Choose a track type** window.
- 3. Set the **Audio Input** to Input 1.

If you don't see any inputs, make sure the **Device:** is set to your Scarlett 2i2.

- a. Click the arrow to the right of the Device section.
- b. In the preferences window, set the **Output Device** and **Input Device** to Scarlett 2i2 4th Gen.





Logic Pro X

GarageBand

- c. Click **Apply** (Logic Pro only).
- d. Close the **Preferences or Settings** window.
- 4. Logic Pro: Tick Input Monitoring and Record Enable.
  GarageBand: Tick I want to hear my instrument as I play and record.
  This allows you to hear sound coming in from your Scarlett's input.
- 5. Click Create.





Logic Pro

GarageBand

6. When you're ready to record, click the record button at the top of Logic/GarageBand.

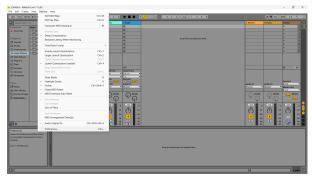


## **III** Ableton Live

To get set up in Ableton Live follow these steps:

#### Windows

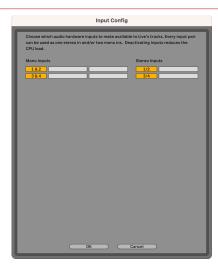
- 1. Open Ableton Live on your computer.
- 2. Click Options > Preferences....



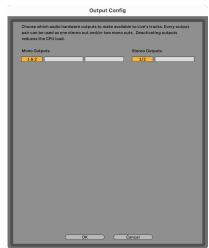
- 3. Go to the **Audio** tab on the left-hand side of the Preferences window.
- 4. Set the **Driver Type** to ASIO, and **Audio Device** to Focusrite USB ASIO.



- Click Input Config.
   The next step is to make all the inputs on your device appear as input options in Ableton.
- 6. Click to highlight each set of **Mono** and **Stereo Inputs** to make sure they appear as selectable in Live.



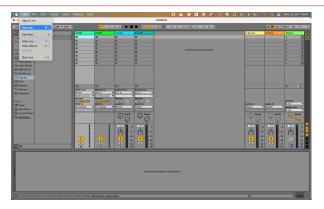
- 7. Click OK.
- 8. Do the same for the **Output Config**, if you are using multiple outputs from your Scarlett 2i2.



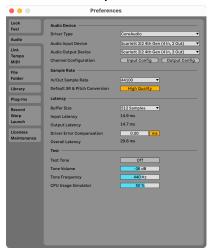
9. Close the Preferences Window.

#### Mac

- 1. Open Ableton Live on your computer.
- 2. Click **Live** in the top menu bar.



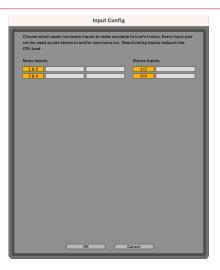
- 3. Click **Settings**.
- 4. Go to the **Audio** tab on the left-hand side of the Preferences window.
- 5. Set the **Audio Input Device** and **Audio Output Device** to Scarlett 2i2 4th Gen.



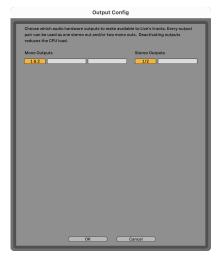
6. Click Input Config.

The next step is to make all the inputs on your device appear as input options in Ableton.

7. Click to highlight each set of **Mono** and **Stereo Inputs** to make sure they appear as selectable in Live. You will see up to four channels.



- 8. Click OK.
- 9. Do the same for the **Output Config**, if you are using multiple outputs from your Scarlett 2i2.



10. Close the Preferences Window.

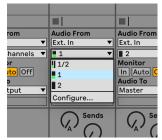
## **Getting sound into Ableton**

 Click to highlight an **Audio** Track in Live's main window. Live had two views (Session and Arrangement), so depending on which view you are in, please see the following screenshots.





2. Set the **Audio From** to **Ext. In** and the input drop-down to the interface input you are using, e.g. **1**.



3. Set the Monitor to Auto.

This allows you to hear sound coming in from your Scarlett's input.



4. Click the record arm button beneath the track. It lights red when record arm is on. Send a signal to the input on your Scarlett and you should see the meter in Ableton move.



5. When you're ready to record, click the record \( \) button in Ableton's transport bar.

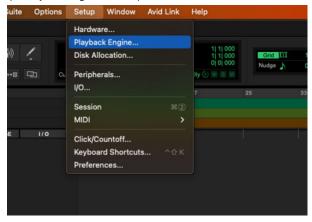


## **Pro Tools**

To get set up in Pro Tools, follow these steps:

#### **Mac and Windows**

- 1. Open Pro Tools on your computer.
- 2. Click Setup > Playback Engine in the top menu bar.

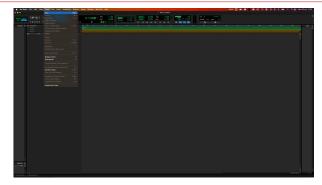


3. Select Focusrite USB ASIO (Windows) or Scarlett 2i2 4th Gen in the **Playback Engine** dropdown.





4. Click Track > New in the top menu bar.



5. Set the number of tracks you need and set the type to Audio Track.



- 6. Click Create
- 7. Click the record arm and input enable buttons on the track.
  This allows you to hear sound coming in from your Scarlett's input.
- 8. Click the main Record Enable button at the top of the Pro Tools window, it turns red when enabled.
- 9. Click the Play button to begin recording.

## **Reaper**

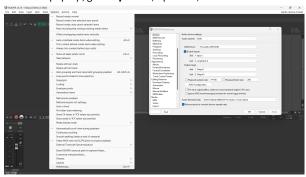
To get set up in Reaper, follow these steps:

#### Windows

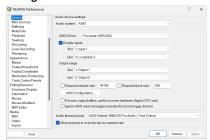
- 1. Open Reaper on your computer.
- 2. If you see a pop-up window, asking you to select your audio device driver, click Yes



If you don't see the pop-up, go to **Options** (top menu) > **Preferences** > **Device** 



3. In the Audio device settings.



- a. Select ASIO in the **Audio system:** dropdown.
- b. Select Focusrite USB ASIO in the **ASIO Driver:** dropdown.
- 4. Click OK.
- 5. Click **Track** (top menu) > **Insert New Track**.



6. Click the red record-armed button.



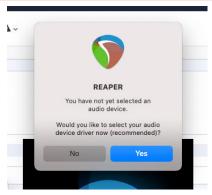
7. Click the **Input 1** box to select your input on your Scarlett 2i2.



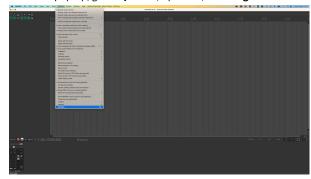
8. When you're ready to record, click the record button in the bottom section of Reaper.

#### Mac

- 1. Open Reaper on your computer.
- 2. If you see a pop-up window, asking you to select your audio device driver, click **Yes**



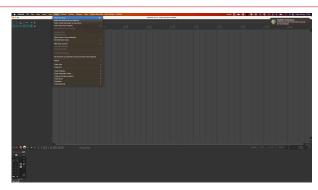
If you don't see the pop-up, go to **Options** (top menu) > **Settings** > **Device** 



3. Choose Scarlett 2i2 in the Audio Device dropdown menu.



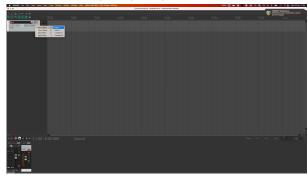
- 4. Click OK.
- 5. Click Track (top menu) > Insert New Track.



6. Click the red record-armed button.



7. Click the **Input 1** box to select your input on your Scarlett 2i2.

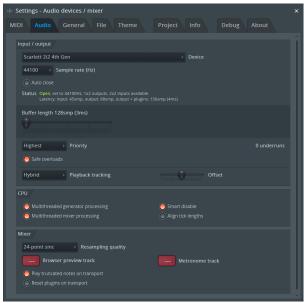


8. When you're ready to record, click the record button in the bottom section of Reaper.

## FL Studio

To get set up in FL Studio follow these steps:

- 1. Open FL Studio on your computer.
- 2. Go to Options > Audio Settings.
- 3. Set the Device to Scarlett 2i2 4th Gen (or Focusrite USB ASIO on Windows) in the **Input / output** section.



- 4. Close the Settings window.
- 5. In the **Mixer** click on the insert you want to record in to.
- 6. Set the external input drop-down from **(none)** to the interface input you are using, e.g. **Input 1** for input mono, or **Input 1 Input 2** for both inputs 1 and 2 in stereo.



7. Click the main record button in the transport section.



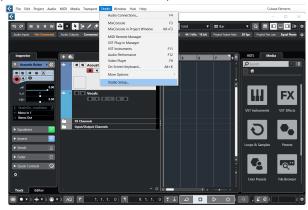
- Choose an option in the What would you like to record? window.
   If you're not sure which option to choose, please see FL Studio's help files.
- 8. When you're ready to record, press the play button in the transport section.



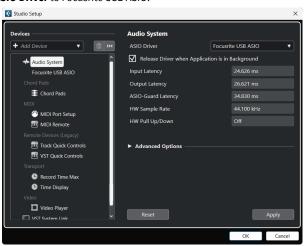
## Cubase

#### Windows

- 1. Open Cubase on your computer.
- 2. In the top menu bar click Studio > Studio Setup...



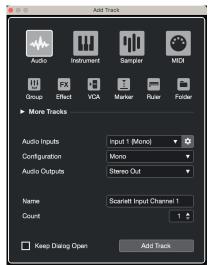
- 3. Click Audio System on the left-hand side.
- 4. Set the ASIO Driver to Focusrite USB ASIO.



- 5. Click OK.
- 6. Right-click in the MixConsole.
- 7. Click Add Audio Track.



8. Configure the track type as Audio and set the **Audio Input** to the channel you're using on your interface.



- 9. Click Add Track.
- 10. Click the Record Enable and Monitor buttons (off) on the Cubase channel to enable the track for recording and so you can hear it using input monitoring (on)
- 11. Click Transport Record in Cubase's transport to start recording.

#### Mac

- 1. Open Cubase on your computer.
- 2. In the top menu bar click Studio > Studio Setup...



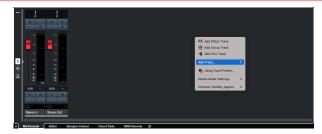
3. Change the **ASIO Driver** to Scarlett 2i2 4th Gen.



4. Click Switch.



- 5. Click OK.
- 6. Right-click in the MixConsole.
- 7. Click Add Track.



8. Configure the track type as Audio and set the **Audio Input** to the channel you're using on your interface.



- 9. Click Add Track.
- 10. Click the Record Enable and Monitor buttons (off) on the Cubase channel to enable the track for recording and so you can hear it using input monitoring (on).
- 11. Click Transport Record in Cubase's transport to start recording.

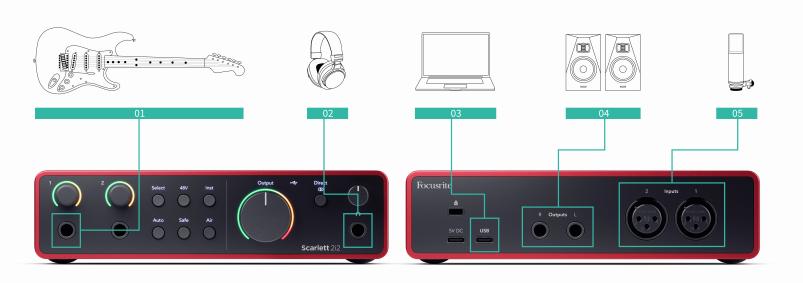


## **Examples of Use**

## **Connecting Inputs and Outputs**

The following diagram shows how to connect a range of inputs and outputs to the Scarlett 2i2.

To connect external processors, synthesisers or keyboards see Connecting Line-Level Devices [37].



- Connect instruments such as guitars, bass, electro-acoustic guitars and other
  instruments with pickups to Input 1 or 2 the 6.35mm jack input on the front panel.
  When you connect an instrument use a 6.35mm to 6.35mm TS mono jack cable and set
  the input to 'instrument' using the Inst button.
- Connect your headphones (e.g. the Scarlett SH-450 headphones) via a 6.35mm jack to the headphone output. You must use a 6.35mm TRS jack connector to connect your headphones. If your headphone jack connector is smaller you need a headphone jack adaptor.
- 3. Connect a microphone (e.g. the CM25 MkIII) to **Input 1** or **2** using an XLR to XLR cable. You must connect a microphone via an XLR cable, other microphones may not work, or you may have problems. Enable 48V if your microphone needs it.
- Connect monitor speakers (also called Monitors) to Outputs R and L (right and left).
   Use 6.35mm balanced TRS jack cables to connect monitors. If your monitors have different connections please see the monitor's user guide.

5. Connect the Scarlett to your computer using a **USB** cable.



#### Tip

The Scarlett 2i2 has XLR inputs at the back for microphones and 6.35mm (1/4") jack inputs on the front for instruments or line-level devices.

Using the front panel jack input(s) disables the XLR mic input. If you're not getting sound from your XLR input(s), ensure nothing is connected to the front panel jack inputs.

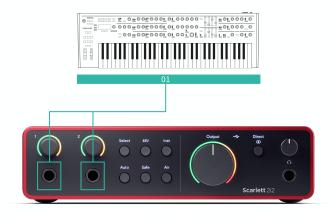
## **Connecting Line-Level Devices**

The following diagram shows how to connect a line-level device to the line input on the Scarlett 2i2.

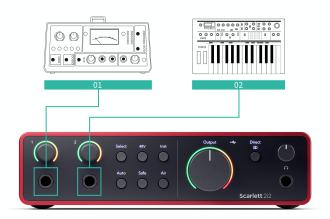
Connect line-level devices such as synthesisers, keyboards or mic preamps to either input using a 6.35mm jack input on the front panel.

When you connect a line-level device use a 6.35mm to 6.35mm TRS jack cable but note each 6.35mm input is a mono input. Turn off **Inst** when you connect line-level devices to the Scarlett 2i2.

1. This shows a stereo synthesiser connected using two 6.35mm TRS jack cables going from the synthesiser's left and right outputs to the Scarlett 2i2's inputs 1 and 2.



This shows two mono sources connected to each input on the Scarlett 2i2. Input 1 has
a microphone preamp connected, the microphone preamp boosts the signal level to
line level, if your microphone preamp has an XLR (M) output you still need to go into
the Scarlett using a 6.35mm TRS jack, for example using an XLR (F) to 6.35mm TRS jack
cable. Input 2 has a mono synthesiser connected using a 6.35mm TRS jack cable.



## Loopback

With Loopback, you can capture computer audio and record it into your recording software on separate channels alongside your connected mics or instruments.

To use Loopback select inputs channels 3-4 in your DAW software.

Loopback works by 'looping back' audio outputs from your computer to virtual input channels within your Scarlett. Any computer audio can be recorded into a DAW (Digital Audio Workstation).



#### Important

When you're using Loopback, mute the channels in your recording software so you don't cause a feedback loop.

## **Standalone Mode**

The Scarlett 2i2 has a standalone mode; this mode allows your interface to pass audio when it's not connected to a computer. This can be useful for:

- Increasing the number of preamps on another interface or mixer that only has line-level inputs left.
- To use your studio setup without having your computer turned on or plugged in, for example, to use your guitar through your speakers, or any electronic music equipment connected.

## To setup Standalone mode:

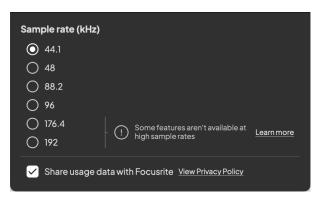
- Connect your Scarlett's power socket to mains power.
   This can be a USB wall plug, similar to what you may use to charge your phone.
   You can use either the USB or the 5V DC connection to use your Scarlett in standalone mode.
- 2. Connect your inputs and outputs to your interface as usual (see Examples of Use).
- 3. Turn on Direct Monitor to make sure the input signals are being sent to the outputs (headphones and line).
  - If you're using one, or two, mono sources make sure Direct is set to mono on, or if you're using a stereo source, make sure Direct is set to stereo (see Direct Monitor Button [19]).

## **Focusrite Control 2**

## **Focusrite Control 2 Settings**

Click the ellipsis in Focusrite Control 2's top right corner and click references to open the Settings page.

The settings page has the following options:



## Sample Rate (kHz)

Sample rate refers to the samples per second your computer is recording. The higher the value, the higher the quality; however the higher the value the more hard drive space your recordings take up.

Often, using 44.1kHz is more than enough for recording.



#### Note

Some features, listed below, are not available at quad-band sample rates (176.4 and 192kHz).

- · Air Harmonic Drive
- Clip Safe

## **Analytics**

Use this tick box to opt into usage analytics to help us make Focusrite Control 2 better. Please see our Privacy Policy for more information.

## **Updating**

## **Updating Focusrite Control 2**

We update Focusrite Control 2 occasionally with new features and improvements to make sure you are getting the most from your Scarlett 2i2.

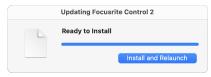
There are two ways to make sure you have the latest Focusrite Control 2 version:

- 1. Use the updater in Focusrite Control 2:
  - 1. Open Focusrite Control 2.
  - 2. There are two options in the Focusrite Control 2.
    - a. If an update is available, a dialogue window automatically appears. Click Install Update to start the update.



- b. To check you are using the latest version, click the ellipses in Focusrite Control 2's top right corner and click Check for updates.
- 3. Click Install and Relaunch in the prompt that appears after the update has been downloaded.

Focusrite Control 2 updates, the following update screen shows before the software resets.



- 2. Install Focusrite Control 2 from our Downloads page:
  - Go to the Focusrite downloads website:
     focusrite.com/downloads
  - 2. Find your Scarlett on the Downloads website.
  - 3. Download Focusrite Control 2 for your operating system (Windows or Mac).
  - 4. Open the Downloads folder on your computer and double-click the Focusrite Control 2 installer.
  - 5. Follow the on-screen instructions to install Focusrite Control 2.
  - If it's not already, connect your Scarlett interface to your computer with the USB cable.
  - 7. Open Focusrite Control 2 and it detects your Scarlett automatically.

## **Updating your Scarlett**

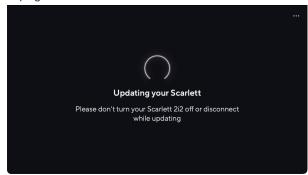
We occasionally update your Scarlett 2i2's firmware with new features and improvements, to make sure you are getting the most from your Scarlett. Your Scarlett 2i2 is updated through Focusrite Control 2.

## To update your Scarlett:

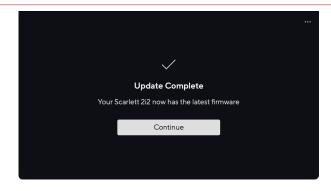
Open Focusrite Control 2.
 If there is an update available, Focusrite Control 2 tells you when you open it.



Click Update Scarlett 2i2.
 Focusrite Control 2 starts the update, do not disconnect your Scarlett 2i2 while the update is in progress.



3. Click Continue after the update has finished.



Your Scarlett 2i2 is now up to date and you can continue to use it as normal.

## **Specifications**

These specifications allow you to compare your Scarlett 2i2 with other devices and make sure they'll work together. If you're not familiar with these specifications, don't worry you don't need to know this information to use your Scarlett 2i2 with most devices

## **Performance Specifications**

Where possible we measure all performance figures following AES17.

Recording		
Supported Sample Rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz	
Bit Depth	24-bit	

Microphone Inputs	
Frequency Response	20Hz - 20kHz ± 0.06dB
Dynamic Range (A-weighted)	116dB
THD+N	-100dB (-1dBFS @ 8dB Gain)
Noise EIN (A-Weighted)	-127dBu
Maximum Input Level (at minimum gain)	16dBu
Gain Range	69dB
Input Impedance	3kΩ

Frequency Response 20Hz - 20kHz ± 0.05dB  Dynamic Range (A-weighted) 115.5dB	
Dynamic Range (A-weighted) 115.5dB	
THD+N -100dB (-1dBFS @ 8dB Gain)	
Maximum Input Level (at minimum gain) 22dBu	
Gain Range 69dB	
Input Impedance $60k\Omega$	

Instrument Inputs	
Frequency Response	$20Hz - 20kHz \pm 0.15dB$
Dynamic Range (A-weighted)	113dB
THD+N	-80dB (-1dBFS @ 8dB Gain)
Maximum Input Level (at minimum gain)	12dBu
Gain Range	62dB
Input Impedance	1ΜΩ

Line Outputs 1 and 2 (balanced)	
Frequency Response	20Hz - 20kHz ± 0.02dB
Dynamic Range (A-weighted)	120dB
THD+N	-109dB

	Line Outputs 1 and 2 (balanced)
Maximum Output Level	16dBu
Output impedance	100Ω

Headphone Outputs	
Frequency Response	$20 \text{Hz}$ - $20 \text{kHz} \pm 0.1 \text{dB}$ @ $33 \Omega$ / $300 \Omega$
Dynamic Range (A-weighted)	112dB @ 33Ω
	115dB @ 300Ω
Maximum Output Level	$2.5 dBu$ into $33\Omega$
	$10 dBu$ into $300\Omega$
Maximum Output Power	$32\text{mW}$ into $33\Omega$
	22mW into $300\Omega$
THD+N	-99dB @ 33Ω (Minimum)
	-108dB @ 300Ω (Minimum)
Output impedance	50Ω

## **Physical and Electrical Characteristics**

Analogue Inputs		
Two rear panel Neutrik® XLR connectors		
Two front panel Neutrik® 6.35mm (1/4") jack sockets		
Automatic		
Connecting a 6.35mm jack to the front panel disables microphone input.		
Front panel 48V (phantom power) button or switch in software		
Front panel Inst button or switch in software		
Front panel <b>Auto</b> button or switch in software		
Front panel <b>Safe</b> button.		
Front panel <b>Air</b> button or switch in software		

Analogue Outputs		
Balanced Outputs	Two rear-panel Neutrik®6.35mm (1.4") TRS jack sockets	
Headphone Output	Front panel stereo 6.35mm (1.4") TRS jack socket	
Main Output Level Control	Front panel analogue control with pre-fade output level meter	
Headphones Level Control	Front panel analogue control	

	Other I/O
USB	One USB 2.0 Type-C connector for data and power -
	900mA
	One USB Type-C power connector - <b>5V DC</b>
	4.5W

	Front Panel Indicators
Channel Selection	White/Green LEDs for channels 1 and 2
Select button	White/Green Select LED
48V	White/Green 48V LED (depending on the selected channel)
Inst	White/Green Inst LED (depending on the selected channel)
Auto	White <b>Auto</b> LED to initiate Auto Gain
Clip Safe	White/Green <b>Safe</b> LED (depending on the selected channel)
Air Mode	White/Green Air LED (depending on the selected channel)
Output Level Meter	Three-colour LED ring around <b>Output</b> control.
USB	Green USB €← LED
Direct Monitor	Three-state occupation LED

	Weight and Dimensions
Weight	595g (1.31lbs)
Height	47.5mm (1.87")
Width	180mm (7.09")
Depth	117mm (4.60")

Environmental	
Operating Temperature	$40^{\circ}\text{C}/104^{\circ}\text{F}$ Maximum ambient operating temperature

## **Channel Order**

## **Input Channels**

	Input	Channel
1		Input 1 (Mic/Line/Inst)
2		Input 2 (Mic/Line/Inst)
3		Loopback 1
4		Loopback 2

## **Output Channels**

	Output	Channel
1		Output Left (Headphones Left)
2		Output Right (Headphones Right)



#### Note

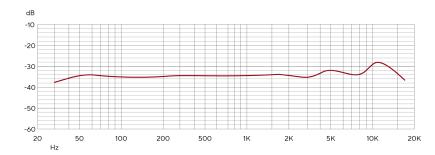
Outputs 1 and 2 share the same feed as the Headphone Output. Whatever signal is present at the line outputs you will also hear from the headphone output.

## **CM25 Mk III Microphone Specifications**

	Capsule
Element	Electret Condenser
Capsule Diameter	20mm
Polar Pattern	Unidirectional (cardioid)

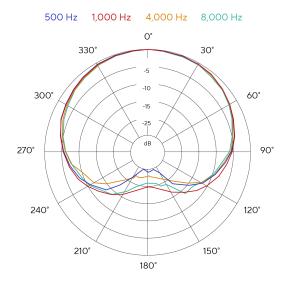
Performance and Electrical Characteristics		
Sensitivity	-36dB ±2dB (0dB = 1V/Pa @ 1kHz)	
Frequency Response	30Hz - 18kHz	
Impedance	100Ω ±30% (@ 1kHz)	
Equivalent Noise Level	16dBA (A-weighted IEC651)	
S/N Ratio	74dB	
Power Requirement	48V phantom power	
Current	3mA	

## **Frequency Response Chart**



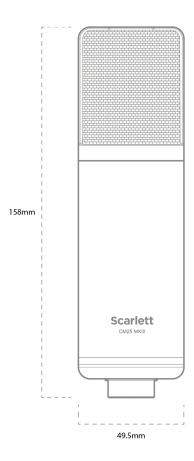
Microphone frequency response charts show how a microphone captures different frequencies. A flat chart means the microphone captures all frequencies equally, charts with peaks or dips mean the microphone is more or less sensitive to some frequencies. We've designed the CM25 MkIII as an all-around microphone but it works especially well for vocals and acoustic instrument recording.

### **Polar Pattern Chart**



Microphone polar pattern charts show how a microphone picks up sound from different directions and at different frequencies. There are several polar pattern types, the CM25 MkIII has a cardioid pattern. This heart-shaped pattern picks up sound mainly from the front (0°) while rejecting sound from the sides (270° and 90°) and rear (180°). This is useful for recording while minimizing background noise.

## **Dimensions**



	Physical Characteristics
Mounting	5/8" mic clip with 3/8" thread adaptor included
Net Weight	388g without mic clip
	496g with mic clip
Dimensions	Diameter: 49.5mm (1.95")
	Length: 158mm (6.22")

## **SH-450 Headphones Specifications**

	Specifications
Туре	Closed-back
Ear pad Contact	Circumaural (over-ear)
Impedance	32Ω
Sensitivity	96dB±3
Frequency Response	15Hz - 30kHz
Power Rating	350mW
Maximum Power	1800mW
Cable Length	≈3m
Connector	3.5mm TRS jack plug
	Screw-on 3.5mm to 6.35mm adaptor included
Weight	300g (including adaptor)

## **Dimensions**



## **Notices**

## **Troubleshooting**

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

## **Copyright & Legal Notices**

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## **Credits**

Focusrite would like to thank the following Scarlett 4th Gen team members for their hard work in bringing you this product:

Aarron Beveridge, Adam Watson, Adrian Dyer, Adrien Fauconnet, Alex Middleton-Dalby, Alice Rizzo, Alistair Smith, Andy Normington, Andy Poole, Andy West, Arne Gödeke, Bailey Dayson, Bamber Haworth, Bash Ahmed, Ben Bates, Ben Cochrane, Ben Dandy, Benjamin Dunn, Bran Searle, Callum Denton, Carey Chen, Cerys Williams, Chris Graves, Dan Clarke, Dan Stephens, Dan Weston, Daniel Hughley, Daniel Johnson, Danny Nugent, Dave Curtis, David Marston, Derek Orr, Ed Fry, Ed Reason, Eddie Judd, Ellen Dawes, Emma Davies, Flavia Ferreira, Greg Westall, Greg Zielinski, Guillem Allepuz, Hannah Williams, Harry Morley, Ian Hadaway, Isaac Harding, Jack Cole, Jake Wignall, James Hallowell, James Otter, Jason Cheung, Jed Fulwell, Jerome Noel, Jesse Mancia, Joe Crook, Joe Deller, Josh Wilkinson, Joe Munday, Joe Noel, Jon Jannaway, Julia Laeger, Kai Van Dongen, Keith Burton, Kiara Holm, Kieran Rigby, Krischa Tobias, Lars Henning, Laurence Clarke, Loz Jackson, Luke Piotrak, Luke Mason, Marc Smith, Mark Greenwood, Martin Dewhirst, Martin Haynes, Mary Browning, Massimo Bottaro, Matt Morton, Matt Richardson, Max Bailey, Michalis Fragkiadakis, Mick Gilbert, Mike Richardson, Nicholas Howlett, Nick Lyon, Nick Thomson, Oliver Tapley, Olly Stephenson, Paul Chana, Paul Shufflebotham, Pete Carss, Pierre Ruiz, Richard Carvalho, Richard Walters, Robert Blaauboer, Robert Mitsakov, Ross Chisholm, Sam Lewis, Samuel Price, Sandor Zsuga, Sebastian Heinz, Simon Burges, Stefan Archer, Stefan Elmes, Steve Bush, Stratis Sofianos, Taavi Bonny, Taren Gopinathan, Tom Carter, Tom Haines, Tony Pow, Valeria Cirillo, Will Hoult, Will Munn, Will Thomas, Vidur Dahiya, Wade Dawson, Zih-Syuan Yang.

Authored by Ed Fry.