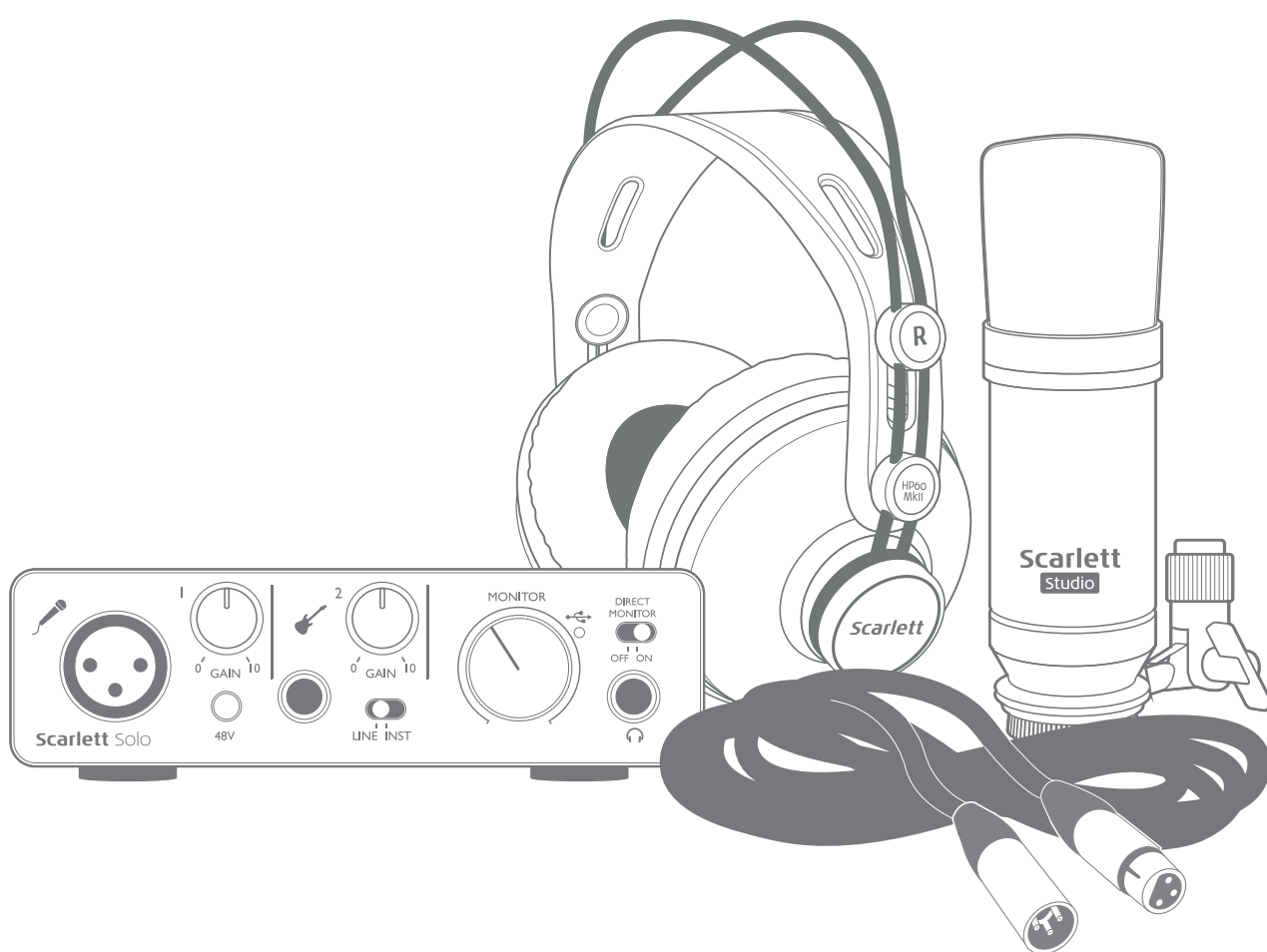


Scarlett Solo Studio

User Guide



Focusrite®
www.focusrite.com

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OVERVIEW

Introduction

Thank you for purchasing this Second Generation Scarlett Solo Studio, one of the family of Focusrite professional audio interfaces incorporating high quality Focusrite analogue pre-amplifiers. You now have a simple, compact and complete solution for recording with a microphone or directly from instruments, by routing high quality audio to and from your computer and you will also be able to download some exciting new software – including the Ableton Live Lite audio recording application - once you've registered the product.

In developing the Second Generation series of Scarlett interfaces, we have enhanced both the performance and feature set including support for sample rates up to 192 kHz, improved mic preamp performance with low noise and plenty of gain, and upgraded instrument inputs with additional headroom for recording the loudest guitar parts without clipping. They are class compliant on Mac, which means they are plug-and-play, so no need to install a driver if you are a Mac user.

This User Guide provides a detailed explanation of the components to help you achieve a thorough understanding of the Scarlett Solo's operational features. We recommend that whether you are new to computer-based recording or a more experienced user, you should take the time to read through the user guide so that you are fully aware of all the possibilities that the Scarlett Solo Studio components and accompanying software has to offer. If the main User Guide sections do not provide the information you need, be sure to consult <https://support.focusrite.com/>, which contains a comprehensive collection of answers to common technical support queries.

Features

The Scarlett Solo Studio comprises a Second Generation Scarlett Solo audio interface, a Scarlett CM25 MKII studio quality condenser microphone, a pair of Scarlett HP60 MKII reference quality headphones and all the necessary software to get you started with recording great audio on your computer as quickly as possible.

The Scarlett Solo hardware interface is the key component in the Scarlett Solo Studio system; this provides the means of connecting the CM25 MkII (or other) microphone, musical instruments or line level audio signals to a computer running Mac OS or Windows. The signals applied at the Scarlett Solo's physical inputs can be routed to your audio recording software / digital audio workstation (referred to throughout this Use Guide as the "DAW") at up to 24-bit, 192 kHz resolution. Similarly, the DAW's monitor or recorded output will appear at the Scarlett Solo's physical outputs.

The Scarlett Solo's various physical outputs can be connected to the HP60 MkII headphones, or if you wish, to an amplifier and speakers, powered monitors, analogue mixer or any other analogue audio equipment that you wish to use. Although all inputs and outputs on the Scarlett Solo are routed directly to and from your DAW for recording and playback, you can configure the routing within your DAW in order to meet your needs.

Box Contents

You should find that your Scarlett Solo Studio package comprises:

- Scarlett Solo (2nd Gen.) audio interface
- Scarlett Studio CM25 MkII condenser microphone and microphone clip
- Scarlett Studio HP60 MkII headphones
- Bundle code* for accessing the following on-line resources:
 - Solo USB Drivers for Windows
 - Focusrite Red 2 & 3 Plug-in Suite
 - Softube Time and Tone bundle
 - Pro Tools | First
 - Ableton Live Lite
 - LoopMasters sample library
 - Novation Bass station
 - Multi-language User Guides
- Red XLR microphone cable (3 m)
- USB cable
- Getting Started Guide and Important Safety Information*

* information printed on the inside of the gift box

System requirements

Mac OS

Apple Macintosh with a USB 2.0 or 3.0-compliant USB port and an Internet connection*
OS: Mac OS X 10.10 (Yosemite) or OS X 10.11 (El Capitan)

Windows

Windows compatible computer with a USB 2.0 or 3.0-compliant USB port and an Internet connection*
OS: Windows 7 (32- or 64-bit), 8.1 and 10

* Internet connection required for downloading on-line resources.

GETTING STARTED

IMPORTANT: WINDOWS USERS - PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING THE SCARLETT SOLO TO YOUR COMPUTER.

THE SECOND GENERATION SCARLETT SOLO IS CLASS COMPLIANT FOR MACS, THEREFORE DRIVER INSTALLATION IS NOT NECESSARY.

Software Installation

All software required by the Scarlett Solo - and several powerful and useful extras - is available for download from the Focusrite website www.focusrite.com/register. You will find a “Bundle Code” printed on the inside of the gift box your Scarlett Solo comes in, and the Serial number can be found on the underside of the unit. You will need to enter these when you access the downloads area of the website; this procedure ensures that you will have the most up-to-date software versions.

DOWNLOADING THE INCLUDED SOFTWARE

To download the included software, you will need to register your Scarlett Solo at focusrite.com/register and enter BUNDLE CODE below when prompted.

PRODUCT BUNDLE CODE

For an in depth video tutorial, please go to focusrite.com/get-started

Pour obtenir des instructions en Français sur la façon de commencer, veuillez-vous rendre sur focusrite.com/downloads

Für eine Kurzanleitung zum schnellen Start in deutscher Sprache besuche bitte focusrite.com/downloads

Para la guía de inicio en Español, dirijase a focusrite.com/downloads

所有使用说明中文版,请上网站:focusrite.com/downloads

日本語での説明書はこちら: focusrite.com/downloads

시작 방법에 관한 한국어 가이드는 focusrite.com/downloads 에서 찾으실 수 있습니다.

1. Using your usual browser, go to www.focusrite.com/register/.
2. Follow the on-screen instructions, entering the Serial number and then the Bundle Code (XXXXXX-XXXXXX-XXXXXX) into the form where prompted. Your Bundle Code is printed on the inside of the gift box.
3. You will then be able to access the “My Products” page, where the software products to which your registration entitles you are available for download, complete with activation codes where applicable.
4. Download and install the Scarlett Solo drivers (Windows only). Follow all on-screen instructions.
 - When the installation is complete, restart your computer.
 - After restart, connect the Scarlett Solo to your computer with the USB cable supplied.

This information is accurate as of May 2016, however we are constantly striving to improve the customer experience and as a result this process is subject to change. If anything appears to have changed please refer to www.focusrite.com/get-started for the latest info.

Mac OS only:

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

Windows only:

Your OS should automatically switch the computer's default audio inputs & outputs to the Scarlett Solo. To verify this go to: **Start > Control Panel > Hardware and Sound > Sound > Manage Audio Devices** and ensure that 'Default Playback' and 'Recording' are set to 'Scarlett Solo'

Powering your Scarlett Solo

The Scarlett Solo is an active device, and needs a DC power source to operate. This will be supplied by the Mac or PC to which it is connected, via the single USB connection. Note that an external power supply is not required.

You should experience no problems in powering the Scarlett Solo from the USB ports on any compatible Mac or PC. However, please be aware that USB ports on some laptops may not be able to deliver the same current to externally-connected devices when they are running off their internal batteries, compared to their current capability when running from AC mains. We therefore recommend strongly that if you are using Scarlett Solo with a laptop, please power the laptop from the mains with its supplied AC adaptor.

Connecting your Scarlett Solo

IMPORTANT - WINDOWS USERS: Before you connect the Scarlett Solo to your computer, please complete the software installation according to the instructions on page 5. This will ensure that the hardware uses the correct drivers, and will prevent unexpected behaviour.

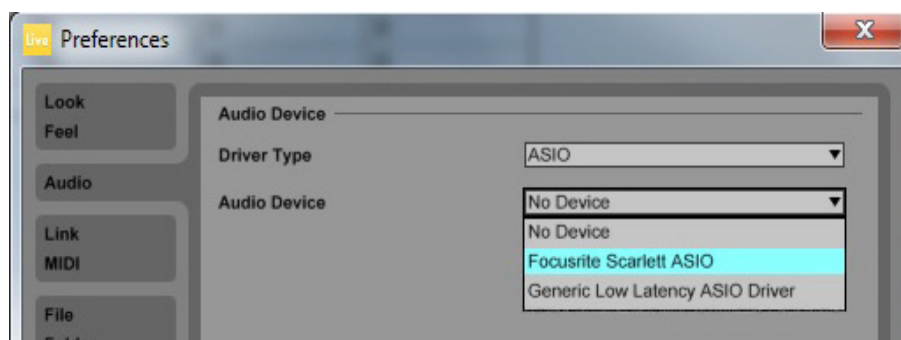
Your Scarlett Solo has a single USB 2.0 port (on the rear panel). Once the software installation is complete, simply connect it to your computer; we recommend you use the USB cable provided. (Note that Scarlett Solo is a USB 2.0 device, and thus the USB connection requires a USB 2.0-compliant port on your computer. It will not operate correctly with USB 1.0/1.1 ports.)

Audio Setup in your DAW

The Scarlett Solo is compatible with any Windows-based DAW that supports ASIO or WDM and any Mac-based DAW that uses Core Audio. After installing the drivers (Windows only) and connecting the hardware, you can start using the Scarlett Solo with the DAW of your choice. To allow you to get started if you do not already have a DAW application installed on your computer, both Pro Tools | First and Ableton Live Lite are included; these will be available to you once you've downloaded and activated your software on-line. To install either DAW, download and save the desired installer file from your registered Focusrite "My Products" page as described on page 5, and then run it, following all on-screen instructions.

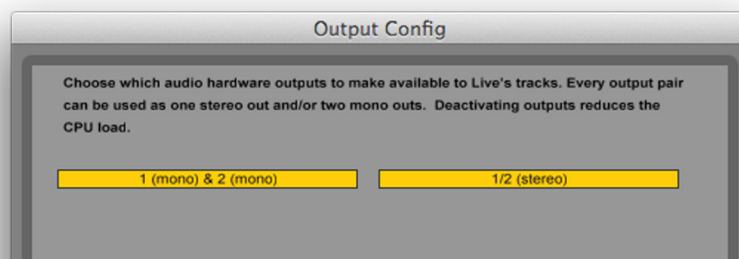
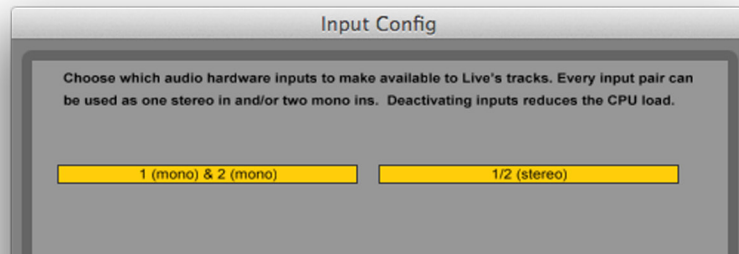
Operating instructions for both Pro Tools | First and Ableton Live Lite are beyond the scope of this User Guide, but both applications include a full set of Help files. You can also find additional resources (including a video tutorial on getting started with Ableton Live Lite) at www.focusrite.com/getting-started.

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



*Typical name. Terminology may differ slightly between DAWs.

Once the Scarlett Solo driver is selected as the preferred Audio Device*, its inputs and outputs will appear in your DAW's Audio I/O preferences. Depending on your DAW, you may need to enable certain inputs or outputs before use. The two examples below show two inputs and two outputs enabled in the Ableton Live Lite Audio Preferences.



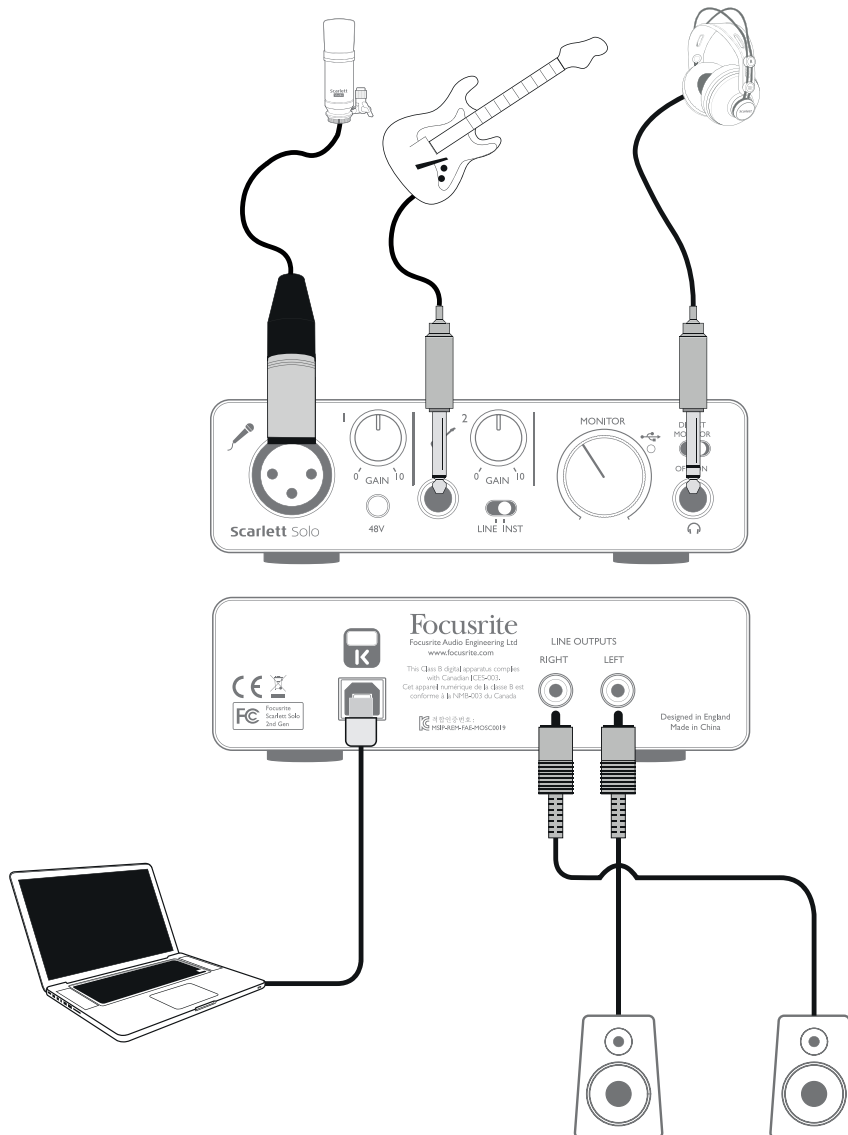
*Typical name. Terminology may differ slightly between DAWs.

Examples of Usage

The Scarlett Solo is an ideal audio interface for many DAW applications running on a laptop or other computer, PC or Mac.

A typical set of connections is illustrated below:

Connecting a microphone or instrument



This setup illustrates a typical configuration for recording using DAW software on your Mac or PC. In this case, you might record vocals through Input 1 and guitar through Input 2 into your recording application, while monitoring the playback from the DAW via headphones.

Scarlett Solo's inputs are on the front panel; Input 1 uses a standard 3-pin XLR socket, and is configured to work with microphones of most types; you will find a mating XLR male connector on the end of the mic cable supplied. Input 2 uses a ¼" (6.35 mm) jack socket (2-pole when in instrument mode and 3-pole when used as a line input), and is intended to accept higher level signals from a guitar or bass.

Recording with a microphone

The Scarlett CM25 MkII microphone supplied with the Scarlett Solo Studio package is a studio quality condenser mic which is ideal for recording vocals and most acoustic instruments. Connect the CM25 MkII to the Scarlett Solo's Input 1 with the cable supplied. Note that the cable has a male and a female connector; the female end connects to the microphone and the male end into the Scarlett Solo.

Condenser microphones (also sometimes referred to as "capacitor" microphones) require a source of DC power to operate. This is almost always supplied by "phantom" powering from the mic pre-amp to which the mic is connected (early and special-purpose condenser mics might have a separate power supply). For the CM25 MkII (or any other condenser mic) to work with the Scarlett Solo, press the **48V** button on the front panel (see front panel diagram on page 14, item [3]). We recommend that you follow the following sequence:

- Turn the input gain [2] to minimum
- Connect the microphone
- Press the **48V** button
- Increase the input gain to the required level



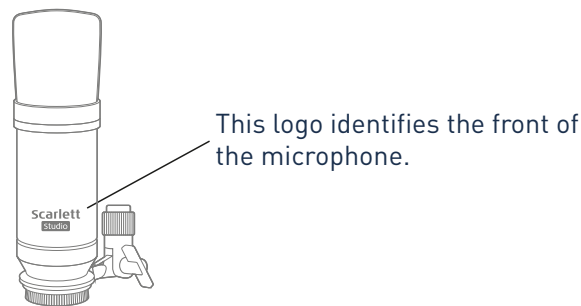
Other types of microphone (including the common dynamic type) do not require phantom power, and may suffer damaged if phantom power is applied. Some cheaper condenser microphones are able to operate from a lower phantom power voltage – typically 15 V. You should check the mic spec to see if it is safe to operate it from 48 V; if not, obtain a suitable external phantom power supply.

Microphone Dos and Don'ts

A guide to microphone technique is beyond the scope of this User Guide (though many excellent books on the subject are available), but if you are new to recording with a studio quality microphone, you need to observe a few golden rules.

DO use a mic stand. The CM25 MkII has an industry-standard 5/8" threaded insert which allows it to be mounted on most mic stands. An 3/8" adaptor is included to allow it to be fitted to mic stands that have this thread size. Inexpensive short, long and boom stands are readily available from music stores.

DO observe the microphone's orientation. The CM25 MkII has a cardioid response pattern; this basically means that it has a "front" and a "back", and if you point it the wrong way round, it will sound odd. The front of the CM25 MkII can be identified by the CM25 MkII logo.



DON'T ignore the room acoustics. You probably won't have the luxury of a recording studio's perfect acoustics. Be aware of how reverberant the room is. Reverberation is neither good nor bad, but frequently inappropriate! Some instruments will benefit from being recorded in a reverberant space, others won't. A "dead" acoustic is generally better than a "live" one, because reverberation can be added electronically in the recording process, but room reverberation on the recording can't be removed.

DON'T blow into a microphone to test it! Lightly rub or scratch the grille instead.

DO experiment with microphone placement. Remember you will not only be recording the vocal or instrument, but the effect of the microphone position relative to the voice or instrument as well, and this will be affected by the room acoustics. Moving the mic around, and trying recordings at different distances and angles to the source will produce different sounding results, some of which will be better than others.

DO use the CM25 MkII to mic up a guitar amplifier if you want to include the contribution to the sound that the amplifier makes. But be aware that very high sound levels can be produced very close to the loudspeaker, and if you need high volume, you may get a better result by moving the mic away from the amplifier. Also, be aware that you will get a subtly different sound if you point the mic at the centre of the loudspeaker cone compared to the edge.

DON'T forget that a microphone is utterly unforgiving – it will not only pick up what you are trying to record, but any other sound source in the room, like a clock, the aircon, heating, or a chair creaking. You know how you take those holiday photos of a great bit of scenery and it's only when you look at the pictures later that you see the power cables right across the view? It's the same with recording. You might not notice extraneous sounds at the time, but the mic will and you'll hear them on the recording. To remove any unwanted low frequency rumble, it is advisable that the High Pass Filter (HPF) on the mic's DAW channel is enabled.

Using Direct Monitoring


You will frequently hear the term “latency” used in connection with digital audio systems. In the case of the simple recording application described above, latency will be the time it takes for your input signals to pass through your recording device (your Mac or PC) and the associated software. Latency can be a problem for a performer who wishes to record while monitoring their input signals.

Scarlett Solo is fitted with a “Direct Monitoring” option, which overcomes this problem. Setting the front panel **DIRECT MONITOR** switch to ON will route your input signals directly to Scarlett Solo’s headphone and main monitor outputs. This enables you to hear yourself with zero latency – i.e., in “real time” – along with the computer playback. The input signals to your computer are not affected in any way by this setting.

When “Direct Monitoring” is set to ON, ensure that your recording software is not set to route its input (what you are currently recording) to its output. If it is, you will hear yourself twice, with one signal audibly delayed as an echo.

Headphone monitoring

The Scarlett Solo Studio package includes a pair of high quality headphones, the Scarlett HP60 MkII. They are lightweight and durable, and should prove comfortable to wear for extended periods. The headband is adjustable.

The HP60 MkII has a low noise, oxygen-free copper cable, fitted with a ¼” (6.35 mm) 3-pole (TRS) jack plug. This should be connected to the socket at the right hand side of the Scarlett Solo’s front panel (indicated by a  symbol). The Scarlett Solo’s headphone output is, of course, suitable for use with other models of headphones.

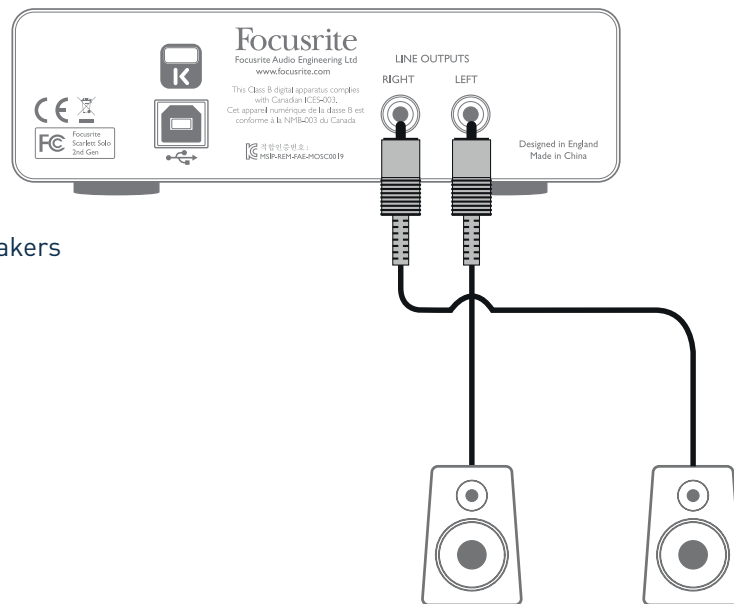
The volume in the headphones can be adjusted by the rotary **MONITOR** control.



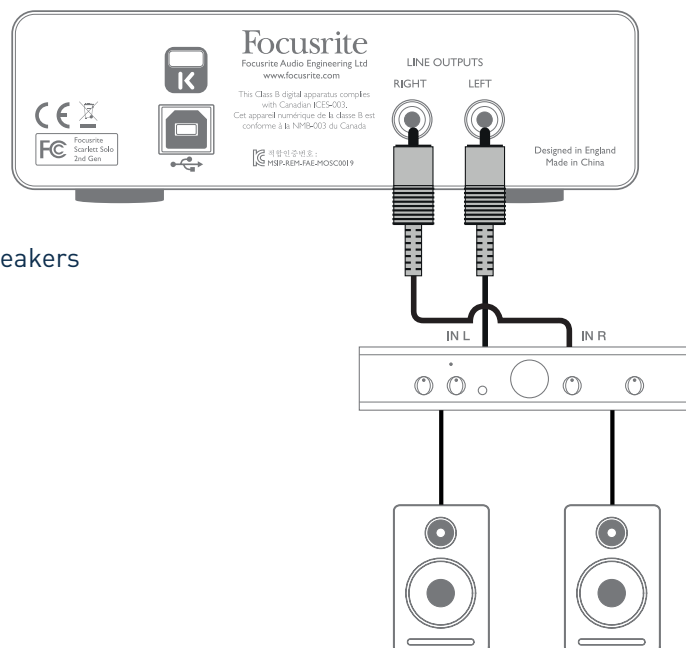
Please be aware that headphones are capable of generating very high sound pressure levels at the ear; prolonged exposure to high sound levels may impair your hearing. Never turn headphones volume up any further than necessary.

Connecting Scarlett Solo to loudspeakers

The phono (RCA) outputs on the rear panel can be used to connect monitoring speakers. Self-powered speakers (e.g., typical computer speakers or active monitors) incorporate internal amplifiers, and may be connected directly. Larger, passive loudspeakers will require a separate stereo amplifier; in this case, the rear panel outputs should be connected to the amplifier's inputs.



Connecting active speakers



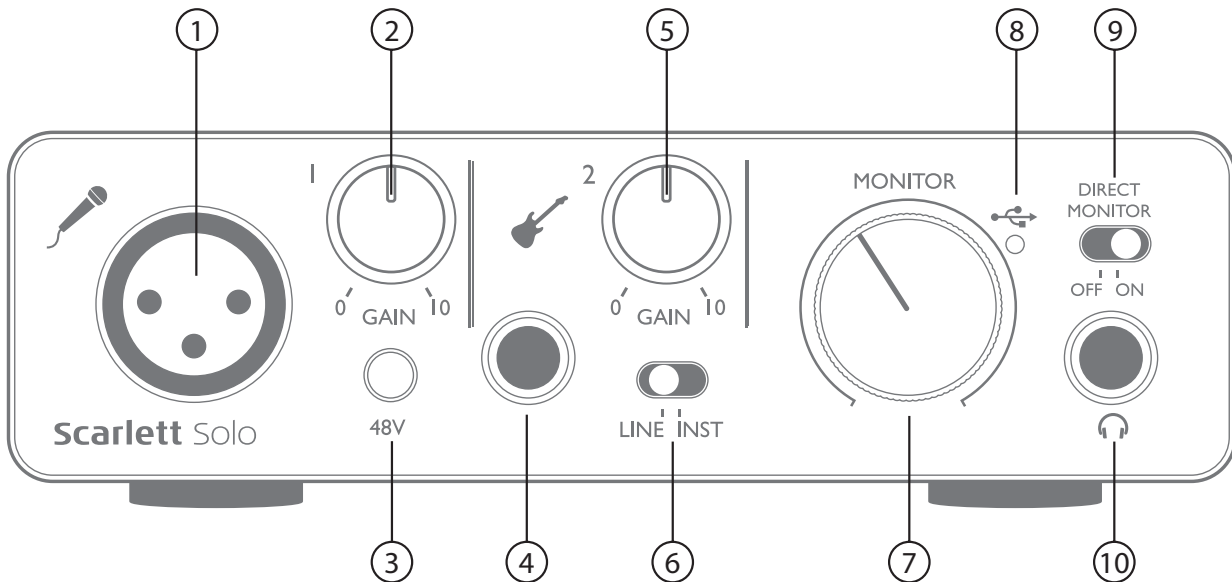
Connecting passive speakers

The line output connectors are standard phono (RCA) sockets. Typical consumer (hi-fi) amplifiers and small powered monitors will have inputs on phono (RCA) sockets or a single 3.5 mm 3-pole jack plug (intended for direct connection to a computer). In either case, use a suitable connecting cable with phono plugs (RCA jacks) at one end.

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

HARDWARE FEATURES

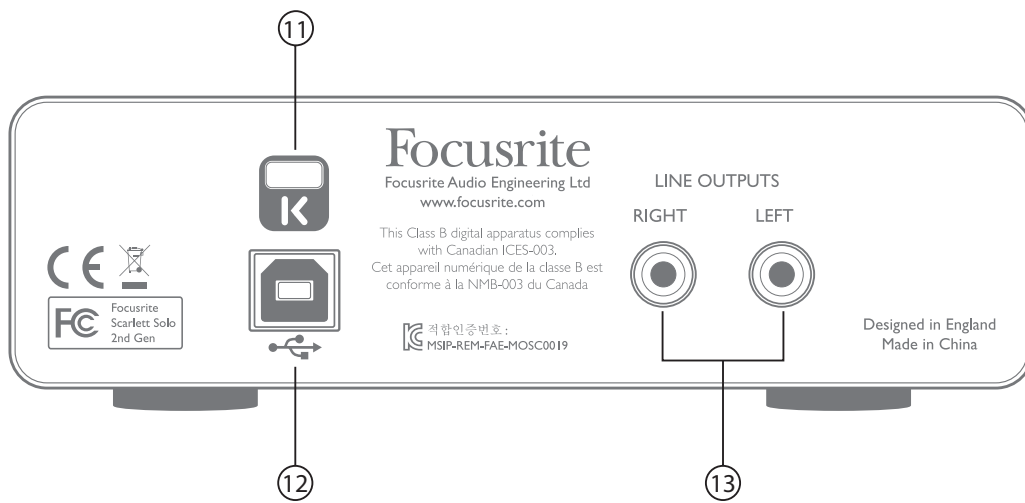
Front Panel




The front panel includes the input connectors for mic and line/instrument signals, and the input gain and monitoring controls.

1. **Input 1** – electronically balanced input via 3-pin XLR socket for microphones.
2. **GAIN 1** – adjust the gain for the microphone signal at Input 1. The gain control has a concentric bi-colour LED 'ring' to confirm signal level: green indicates an input level of at least -24 dBFS (i.e., 'signal present'), the ring then turns red when signal level reaches 0 dBFS, indicating digital clipping.
3. **48V** – phantom power switch for mic input - enables 48 V phantom power at the XLR socket.
4. **Input 2** – for connecting instruments (unbalanced) or line level (balanced) sources; 1/4" TRS jack socket.
5. **GAIN 2** – adjusts the gain for the line/instrument signal at Input 2. The gain control has a bi-colour LED ring as [2].
6. **INST/LINE** – Instrument/Line level switch for Input 2 – switches gain to suit instrument or line level signals.
7. **MONITOR** – main monitor output level control - sets the output level at the rear panel outputs and the front panel headphone output.
8. **USB LED** – illuminates when the unit receives USB bus power and is confirmed by the computer as connected and operating correctly.
9. **DIRECT MONITOR** – selects monitoring of input signals (mixed with the DAW output) to be directly from inputs (ON) or via the DAW (OFF).
10. **1/4" TRS output jack** - connect your stereo headphones here.

Back Panel



11. **K** (Kensington security lock) – secure your Scarlett Solo to a suitable structure if desired. Please see www.kensington.com/kensington/us/us/s/1704/kensington-security-slot.aspx for further information on how to use this feature.
12.  USB 2.0 port – Type B connector; connect to your laptop or computer with the USB cable supplied.
13. **LINE OUTPUTS: LEFT** and **RIGHT** – 2 x phono (RCA) sockets; +9 dBu max. output level.

SPECIFICATIONS

Performance Specifications

Clock Source	Internal
Supported sample rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz
Microphone Input	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz \pm 0.1 dB
THD+N	<0.002% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Noise EIN	-128 dB (A-Weighted)
Maximum Input Level	+4 dBu
Gain Range	50 dB
Line Input	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz, \pm 0.1 dB
THD+N	<0.002% (minimum gain, -1dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level	+22 dBu
Gain Range	50 dB
Instrument Input	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz, \pm 0.1 dB
THD+N	<0.02% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level	+13 dBu
Gain Range	50 dB
Line Outputs	
Dynamic Range	106 dB (A-weighted)
Maximum Output Level (0 dBFS)	+10 dBu
THD+N	<0.002% (minimum gain, -1 dBFS input 1 kHz, with 22 Hz/22 kHz bandpass filter)

Headphone Output	
Dynamic Range	107 dB (A-weighted)
Maximum Output Level	> +10 dBu
THD+N	<0.002% (minimum gain, -1 dBFS input, 1 kHz, with 22 Hz/22 kHz bandpass filter)

Physical and Electrical Characteristics

Analogue Input 1	
Connector	Balanced, via female 3-pin XLR on front panel
Phantom power	48 V phantom power switch
Analogue Input 2	
Connector	¼" (6.35 mm) jack socket on front panel INST mode: unbalanced, 2-pole (TS) LINE mode: balanced (TRS)
Analogue Outputs	
Main outputs	Unbalanced, via 2 x phono (RCA) sockets on rear panel
Stereo headphone output	¼" TRS jack on front panel
Output level control (main and headphone)	On front panel
Direct Monitoring	Front panel switch; allows zero-latency monitoring of inputs
Other I/O	
USB	1 x USB 2.0 Type B connector
Front Panel Indicators	
USB power	Green LED
Gain Halos	Colour-coded LED rings
Weight and Dimensions	
W x H x D	144 mm x 44 mm x 119 mm 5.67 in x 1.73 in x 4.68 in
Weight	0.43 kg 0.95 lb

Scarlett Studio CM25 MkII Microphone Specifications

Capsule	
Type	20 mm dia. condenser element
Response type	Cardioid
Mounting	Standard 5/8" female; 3/8" adaptor supplied
Performance	
Frequency response	30 Hz to 20 kHz
Sensitivity	-36 dB \pm 2 dB (0 dB = 1 V/Pa)
Self noise	18 dBA
Maximum SPL	130 dB (1 kHz)
S/N ratio	76 dB (A-weighted)
Impedance	150 ohms
Power	Via 48 V phantom supply

Scarlett HP60 MkII Headphones Specifications

Type	Closed
Driver diameter	53 mm
Impedance	60 ohms
Sensitivity SPL	94 dB \pm 3 dB
Frequency response	10 Hz to 30 kHz
Max. power rating	1.2 W
Cable length	3 m (approx.)
Connectors	3.5 mm / 6.35 mm dia. (via adaptor)
Weight	280 g (inc. cable)

TROUBLESHOOTING

For all troubleshooting queries, please visit the Focusrite Answerbase at <https://support.focusrite.com/> where you will find articles covering numerous troubleshooting examples.

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