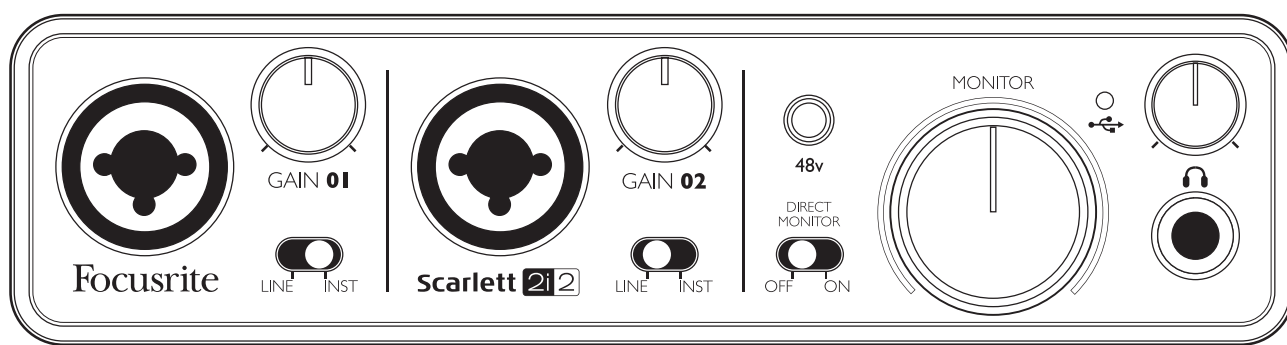


Scarlett **2i2**

User Guide



IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus with water.
6. Clean only with dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Only use attachments/accessories specified by the manufacturer.
10. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. No naked flames, such as lighted candles, should be placed on the apparatus.

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

WARNING: This equipment must only be connected to USB 1.0 , 1.1 or 2.0 type ports.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

ENVIRONMENTAL DECLARATION

Compliance Information Statement: Declaration of Compliance procedure

Product Identification: Focusrite Scarlett 2i2
Responsible party: American Music and Sound
Address: 4325 Executive Drive
Suite 300
Southaven MS 38672
Telephone: 800-431-2609

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For USA

To the User:

1. **Do not modify this unit!** This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Novation may void your authority, granted by the FCC, to use this product.
2. **Important:** This product satisfies FCC regulations when high quality shielded cables are used to connect with other equipment. Failure to use high quality shielded cables or to follow the installation instructions within this manual may cause magnetic interference with appliances such as radios and televisions and void your FCC authorization to use this product in the USA.
3. **Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

For Canada

To the User:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

RoHS Notice

Focusrite Audio Engineering Limited has conformed and [its/this] product[s] conform[s], where applicable, to the European Union's Directive 2002/95/EC on Restrictions of Hazardous Substances (RoHS) as well as the following sections of California law which refer to RoHS, namely sections 25214.10, 25214.10.2, and 58012, Health and Safety Code; Section 42475.2, Public Resources Code.

TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS	2
TABLE OF CONTENTS	4
OVERVIEW	5
Introduction	5
Features	5
Box Contents	5
System requirements	6
Mac OS	6
Windows	6
GETTING STARTED	7
Software Installation	7
Mac OS	7
Windows Installation	7
Connecting your Scarlett 2i2	8
Audio Setup in your DAW	8
Example of Usage	10
Connecting a microphone or instrument	10
Using Direct Monitoring	11
Connecting Scarlett 2i2 to loudspeakers	11
HARDWARE FEATURES	12
Front Panel	12
Back Panel	13
SPECIFICATIONS	14
Performance Specifications	14
Physical and Electrical Characteristics	15
TROUBLESHOOTING	15
COPYRIGHT AND LEGAL NOTICES	15

OVERVIEW

Introduction

Thank you for purchasing this Scarlett 2i2, one of the family of Focusrite professional computer audio interfaces incorporating high quality Focusrite analogue preamplifiers. You now have a simple and compact solution for routing high quality audio to and from your computer.

This User Guide provides a detailed explanation of the hardware to help you achieve a thorough understanding of the product's operational features. We recommend that both users who are new to computer recording, as well as more experienced users, take the time to read through the User Guide so that you are fully aware of all the possibilities that the Scarlett 2i2 and accompanying software has to offer. If the main User Guide sections do not provide the information you need, be sure to consult www.focusrite.com/answerbase, which contains a comprehensive collection of common technical support queries.

Features

The Scarlett 2i2 hardware interface provides the means for connecting microphones, musical instruments or line level audio signals to a computer running Mac OS or Windows. The signals at the physical inputs can be routed to your audio recording software / digital audio workstation (referred to throughout this User Guide as the "DAW"); similarly, the DAW's monitor or recorded output will appear at the unit's physical outputs.

Audio sources – mics, instruments, etc. - connected to the physical inputs can be recorded in the DAW and then routed from your DAW to the physical outputs. The physical outputs can be connected to an amplifier and speakers, powered monitors, headphones, analogue mixer or any other analogue audio equipment that you wish to use. Although all inputs and outputs on the Scarlett 2i2 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

Along with your Scarlett 2i2 you should have:

- "Download your Software" which will provide online access to
 - USB Drivers for Mac and Windows
 - Scarlett Plug-in Suite for Mac and Windows
 - Ableton Live Lite (version 9)
 - Multi-language User Guides
- USB cable
- 8-page "Getting Started Guide"

System requirements

Mac OS

Apple Macintosh with a high-speed USB 2.0-compliant USB port

OS: Mac OS X 10.8 or later (Mountain Lion)

CPU/Clock: 1.5 GHz or higher (Intel/Dual 1.5 GHz or better recommended)

Memory (RAM): 1 GB minimum

Windows

Windows compatible computer with a USB 2.0-compliant USB port

OS: Windows 8 (all versions apart from Windows RT) Windows 7 (all versions)

CPU/Clock: Pentium or AMD, 1.5 GHz or higher (Dual 1.5 GHz recommended)

Memory (RAM): 1 GB minimum

GETTING STARTED

IMPORTANT: PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING THE SCARLETT 2i2 TO YOUR COMPUTER.

Software Installation

We aim to ensure that the latest installation software will be on the disk included with your Scarlett 2i2. However we strongly recommend that you check for any later version on our website at www.focusrite.com/downloads before performing the software installation.

Mac OS

1. Insert your installer disk into your computer's DVD-ROM drive
2. A window should appear displaying the contents of the disk. If this window does not appear automatically, you can manually navigate to the disk using Mac OS Finder
3. Locate the file 'Focusrite USB 2 Driver.pkg'; double-click its icon to begin the installation
4. Follow the on-screen instructions to perform the installation
5. When the installation is complete, restart your computer
6. After restart, connect the Scarlett 2i2 to your computer

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

Windows Installation

1. Insert your installer disk into your computer's DVD-ROM drive
2. A window should open displaying the contents of the disk. If this window does not appear automatically, you can manually navigate to the disk using Windows Explorer
3. Identify the file 'Focusrite USB 2 Driver-2.1.exe'; double-click its icon to begin the installation
4. Follow the on-screen instructions to complete the installation
5. When the installation is complete, restart your computer
6. After restart, connect the Scarlett 2i2 to your computer

Your OS should automatically switch the computer's default audio outputs to be the USB port to which the Scarlett 2i2 is connected. To verify this:

- on Windows 7 or Windows Vista go to **Start > Control Panel > Hardware and Sound > Sound > Manage Audio Devices** and ensure that 'Default Playback' and 'Recording' are set to 'Scarlett 2i2'
- on Windows XP, go to **Start > Control Panel > Sounds, Speech and Audio Devices > Sounds and Audio Devices > Audio tab** and ensure that 'Sound Playback' and 'Recording' are set to 'Scarlett 2i2'

Connecting your Scarlett 2i2

IMPORTANT: Before you connect the Scarlett 2i2 to your computer, please complete the software installation according to the instructions above. This will ensure that the hardware uses the correct drivers, and will prevent unexpected behaviour.

The Scarlett 2i2 has a single USB 2.0 port (on the rear panel). Once the software installation is complete, simply connect the Scarlett 2i2 to your computer using the USB cable provided. (Note that Scarlett 2i2 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

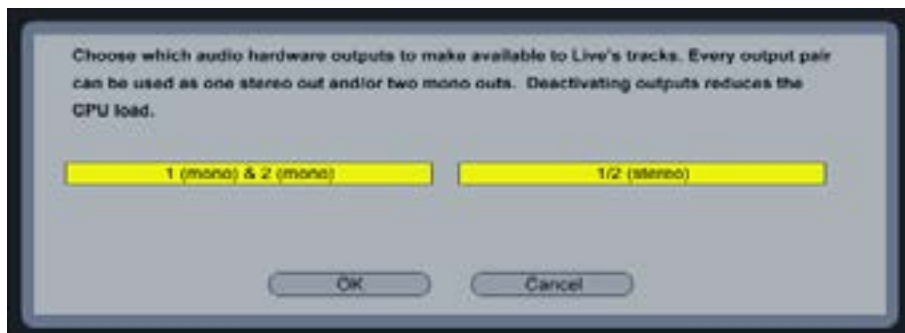
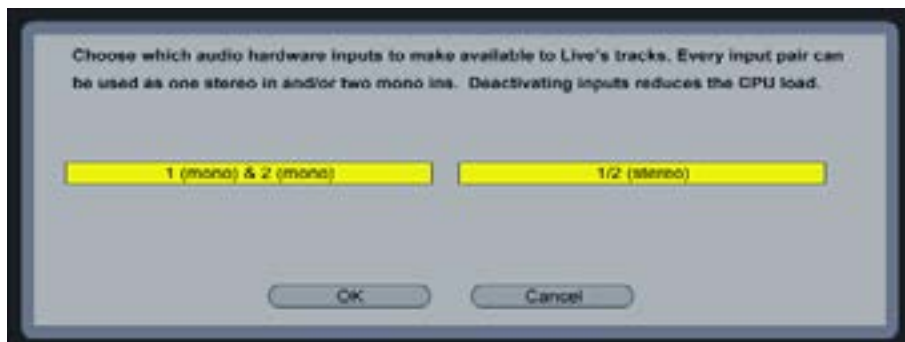
The Scarlett 2i2 is compatible with any Windows-based DAW that supports ASIO or WDM and any Mac-based DAW that uses Core Audio. After installing the drivers and connecting the hardware, you can start using the Scarlett 2i2 with the DAW of your choice. Ableton Live Lite is included on the Scarlett 2i2 Resources DVD to allow you to get started if you do not already have a DAW application installed on your computer. To install Ableton Live Lite, locate the file **Ableton Live Lite** on the DVD, double-click it and follow the on-screen instructions. Operating instructions for Ableton Live Lite are beyond the scope of this User Guide, but the application includes a full set of Help files.

Please note - your DAW may not automatically select the Scarlett 2i2 as its default I/O device. In this case, you must manually select the driver on your DAW's Audio Setup* page (select "Scarlett 2i2" driver for Mac, or "Focusrite USB 2.0" driver for Windows). Please refer to your DAW's documentation (or Help files) if you are unsure where to select the ASIO/Core Audio driver. The example on the following page shows the correct configuration in the Ableton Live Lite **Preferences** panel (Mac version shown).

*Typical name. Terminology may differ slightly between DAWs.



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

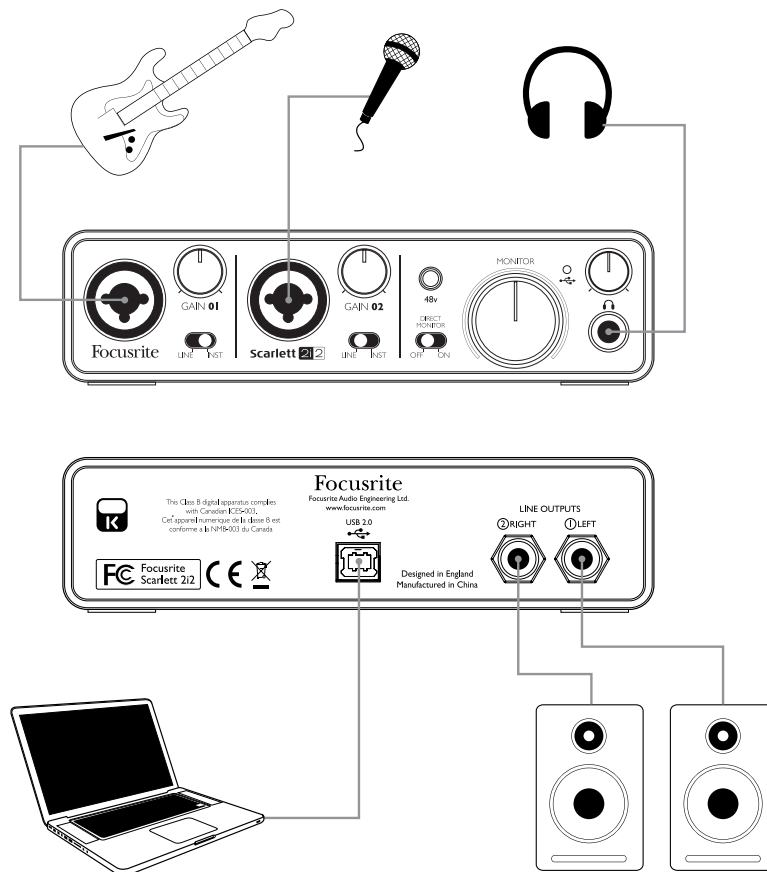


*Typical name. Terminology may differ slightly between DAWs.

Example of Usage

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

Connecting a microphone or instrument



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

The front panel input sockets are Neutrik Combo®, which accept either an XLR male connector (you will probably have one on the end of your microphone cable) or a ¼" (6.35 mm) jack plug. Note the Scarlett 2i2 has no "Mic/line" switch – the Focusrite preamplifier stage is automatically configured for a microphone when you plug an XLR into the input, and for a line or instrument when you connect a jack plug. Set the LINE/INST switch next to the socket to INST if you are connecting a musical instrument (a guitar in the example) via an ordinary 2-pole (TS) guitar jack, or to LINE if you are connecting a line level source such as the balanced output of a stage piano via a 3-pole (TRS) jack. Note the Combo connector accepts both TRS and TS types of jack plug.

Using Direct Monitoring

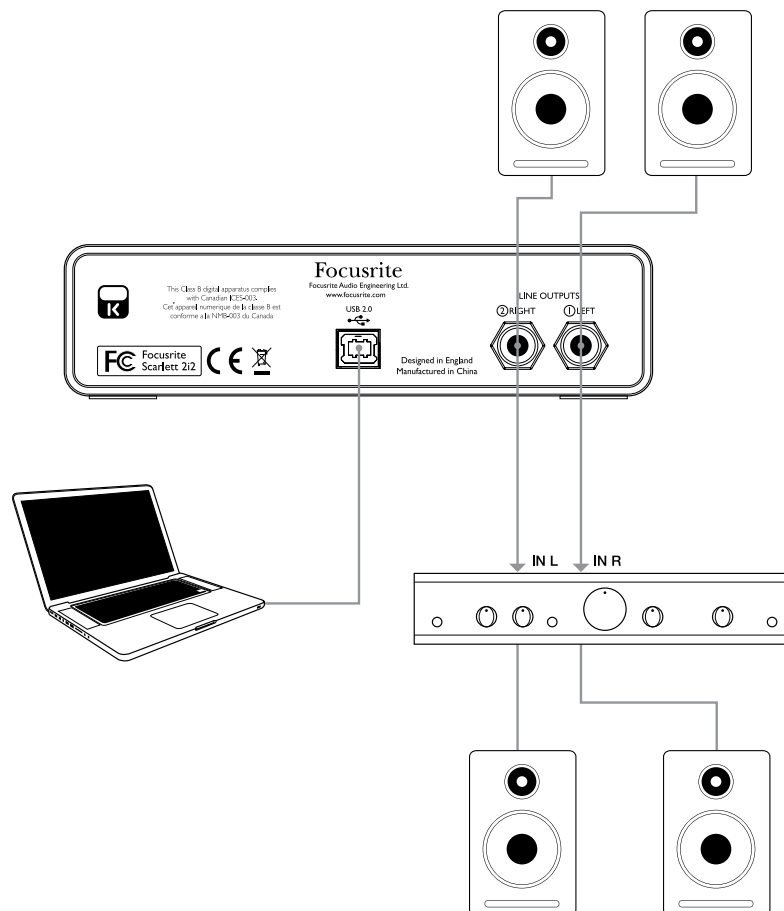
You will frequently hear the term “latency” used in connection with digital audio systems. In the case of the simple DAW recording application described above, latency will be the time it takes for your input signals to pass through your computer and audio software. Latency can be a problem for a performer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

The Scarlett 2i2 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 the Scarlett 2i2’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 DAW 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.

Connecting Scarlett 2i2 to loudspeakers

The 1/4” jack outputs on the rear panel can be used to connect monitoring speakers. Self-powered monitors (i.e., typical computer speakers) 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.



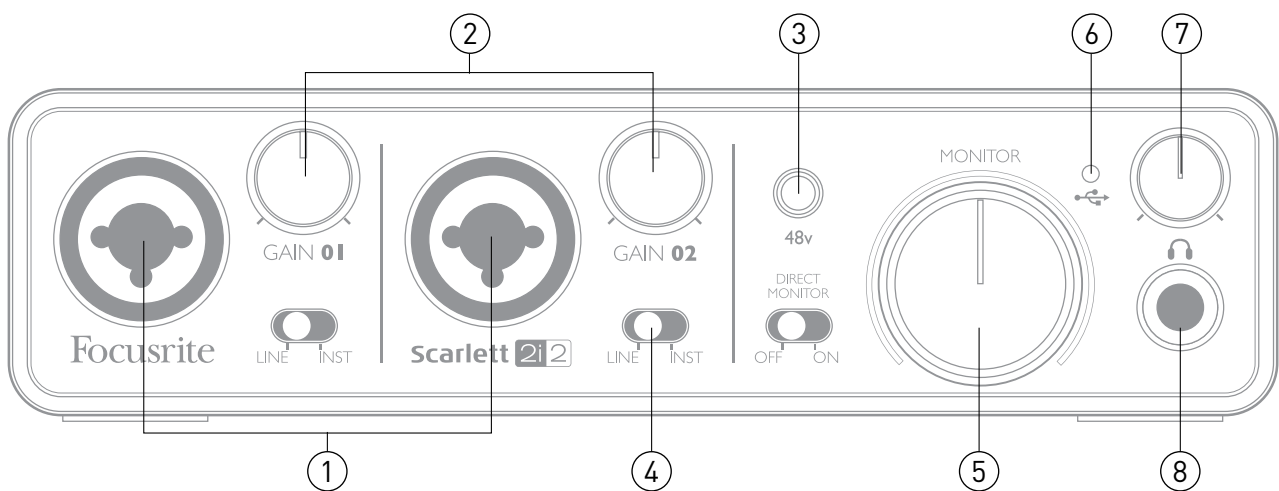
The line output connectors are 3-pole (TRS) ¼" (6.35 mm) jack sockets, and are electronically balanced. Typical consumer (hi-fi) amplifiers and small powered monitors will have unbalanced inputs, either on phono (RCA) sockets or via a 3.5 mm 3-pole jack plug intended for direct connection to a computer.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

Professional power amplifiers will generally have balanced inputs.

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

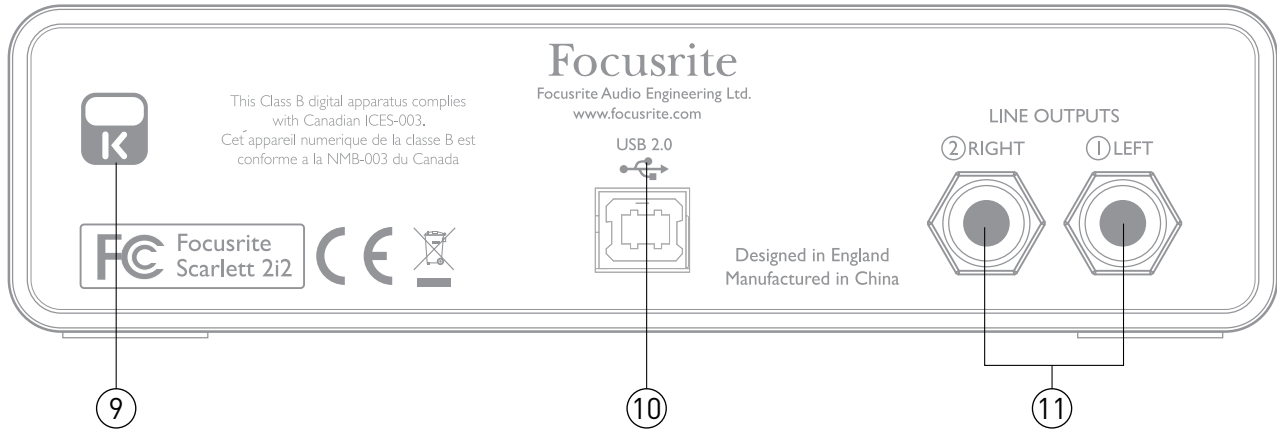


The Front Panel includes the input connectors for Mic, Line and Instrument signals, as well as the input gain and monitoring controls.

1. **Inputs 1 & 2** – Combo XLR input sockets - connect microphones, instruments (e.g., guitar) or line level signals via XLR or ¼" (6.35 mm) jacks as appropriate
2. **Gain 01** and **Gain 02** - adjust the input gain for input signals on inputs 1 and 2 respectively. The gain controls have concentric bi-colour LED 'rings' 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
3. **48V** - phantom power switch for mic inputs - enables +48 V phantom power at the XLR contacts of both Combo connectors
4. **LINE/INST** - Line / Instrument level switches for each input – switches gain to suit instrument or line level signals
5. **MONITOR** - main monitor output level control - sets the output level at the main (rear panel) outputs 1 & 2
6. **USB LED** - illuminates when the unit receives USB bus power and is recognised by the host computer

7. **Headphone level** - adjusts the output level at the front panel stereo headphone output
8. **Headphone socket** - ¼" TRS output jack - connect your stereo headphones here

Back Panel



9. **Kensington security lock** – secure your Scarlett 2i2 to a suitable structure if desired
10. **USB 2.0 port** – Type B connector; connect to your computer with cable supplied
11. **Line outputs** - 2 x ¼" (6.35 mm) TRS jack sockets; +4 dBu output level

Either ¼" TRS (balanced) or TS (unbalanced) jack plugs can be used.

SPECIFICATIONS

Performance Specifications

A-D dynamic range	105 dB 'A-weighted' (all inputs). Converter chipset A-D dynamic range 114 dB
D-A dynamic range	Range 104 dB 'A-weighted' (all outputs). Converter chipset D-A dynamic range 114 dB
Supported sample rates	44.1 kHz, 48 kHz, 88.2 kHz and 96 kHz
Microphone Inputs 1 & 2	
Frequency response	20 Hz - 20 kHz +/-0.1 dB (min gain)
Gain range	-4 dB to + 46 dB
THD+N	-100dB (minimum gain, -1 dBFS input with 20 Hz - 20 kHz filter)
Noise EIN	-127 dB: measured at maximum gain with 150 Ohm termination (20 Hz - 20 kHz filter)
Input impedance	2 kOhm
Line Inputs 1 & 2	
Frequency response	20 Hz - 20 kHz +/-0.1 dB (min gain)
Gain range	-21 dB to +29 dB
THD+N	-91dB (measured at minimum gain with -1 dBFS input and 20 Hz - 20 kHz filter)
Noise in presence of signal	-104 dBu (measured at minimum gain, with a 20 Hz - 20 kHz filter)
Input impedance	10 kOhm
Instrument Inputs 1 & 2	
Frequency response	20 Hz - 20 kHz +/-0.1 dB (min gain)
Gain range	-4dB to +46 dB
THD+N	-72dB (measured at minimum gain with -1dBFS signal and 20 Hz - 20 kHz filter)
Noise in presence of signal	-87 dBu (20 Hz -20 kHz filter)
Line Outputs 1 & 2	
Maximum output level (0 dBFS)	10 dBu, balanced
THD+N	-100dB (measured with -1dBFS input and 20Hz - 20 kHz filter, unweighted)

Physical and Electrical Characteristics

Analogue Inputs Inputs 1 & 2	
Connectors	Neutrik XLR Combo: Mic/Line/Inst (Inputs 1-2) on front panel
Mic/Line switching	Automatic
Line/Instrument switching	2 x front panel switches
Phantom power	Shared +48 V phantom power switch for inputs 1 & 2
Analogue Outputs	
Main outputs	2 x balanced ¼" TRS jacks on rear panel (Main outputs)
Stereo headphone output	¼" TRS jack on front panel
Main output level control	On front panel
Headphones level control	
Other I/O	
USB	1 x USB 2.0 Type B connector
Front Panel Indicators	
USB power & connected	LED
Gain controls	Colour-coded LED rings
Weight and Dimensions	
W x H x D	175 mm x 45 mm x 100 mm
Weight	0.5 kg

TROUBLESHOOTING

For all troubleshooting queries, please visit the Focusrite Answerbase at www.focusrite.com/answerbase where you will find articles covering numerous troubleshooting examples.

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