Scarlett 2i4

User Guide

Focusrite®

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TABLE OF CONTENTS

OVERVIEW

Introduction

Thank you for purchasing this Second Generation Scarlett 2i4, one of the family of Focusrite professional audio interfaces incorporating high quality Focusrite analogue pre-amplifiers. You now have a simple and compact solution for routing high quality audio to and from your computer.

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 a Mac user. You will also be able to download some exciting new software plug-ins once you've registered the product.

This User Guide provides a detailed explanation of the hardware to help you achieve a thorough understanding of the product's operational features. We recommend that both users who are new to computer-based recording, as well as more experienced users, take the time to read through the user guide so that you are fully aware of all the possibilities that the Scarlett 2i4 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 common technical support queries.

Features

The Scarlett 2i4 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") at up to 24-bit, 192 kHz resolution; 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 2i4 is equipped with four audio output channels, which can be connected to an amplifier and speakers, powered monitors, headphones, DJ or other type of analogue mixer, or any other analogue audio equipment that you wish to use. Although all inputs and outputs on the Scarlett 2i4 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. A Direct Monitoring feature lets you hear what you are playing without the effects of computer latency. The 2i4 also acts as a convenient MIDI interface between your computer and other MIDI equipment.

For DJs, the four analogue outputs make it possible to have a stereo master output and a headphone cue channel when mixing internally on a laptop; alternatively you have two separate stereo outputs at your disposal for connection to an analogue DJ mixer.

Box Contents

Along with your Scarlett 2i4 you should find:

- Software Activation codes* for accessing the following on-line resources:
  - 2i4 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
- 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
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
OS: Windows 7 (32- or 64-bit), 8.1 and 10

GETTING STARTED

> **IMPORTANT:** WINDOWS USERS - PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING THE SCARLETT 2i4 TO YOUR COMPUTER.
>
> THE SECOND GENERATION SCARLETT 2i4 IS CLASS COMPLIANT FOR MACS, THEREFORE DRIVER INSTALLATION IS NOT NECESSARY.

Software Installation

All software required by the Scarlett 2i4 - 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 2i4 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 2i4 at **focusrite.com/register**

You will need the product serial number, found on the bottom of your 2i4 hardware

Once you have entered the serial number, you will be asked to enter your BUNDLE CODE, found below:

PRODUCT BUNDLE CODE | PRODUCT BUNDLE CODE |

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, diríjase 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/downloads에서 찾으실 수 있습니다.

1. Using your usual browser, go to http://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 2i4 drivers (Windows only). Follow all on-screen instructions.

5. When the installation is complete, restart your computer.

6. After restart, connect the Scarlett 2i4 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 2i4. To verify this, go to `System Preferences > Sound`, and ensure that the input and output are set to `Scarlett 2i4`. 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 2i4. 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 2i4'

Connecting your Scarlett 2i4

> **IMPORTANT - WINDOWS USERS:** Before you connect the Scarlett 2i4 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 2i4 has a single USB 2.0 port (on the rear panel). Once the software installation (if necessary) is complete, simply connect the Scarlett 2i4 to your computer using the USB cable provided. Note that Scarlett 2i4 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 2i4 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 2i4 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 the Scarlett 2i4 as its default I/O device. In this case, you must manually select `Scarlett 2i4` as the driver on your DAW's `Audio Setup`* page. Please refer to your DAW's documentation (or Help files) if you are unsure where to select the ASIO or Core Audio driver. The following example shows the correct configuration in the Ableton Live Lite `Preferences` panel (Windows version shown).
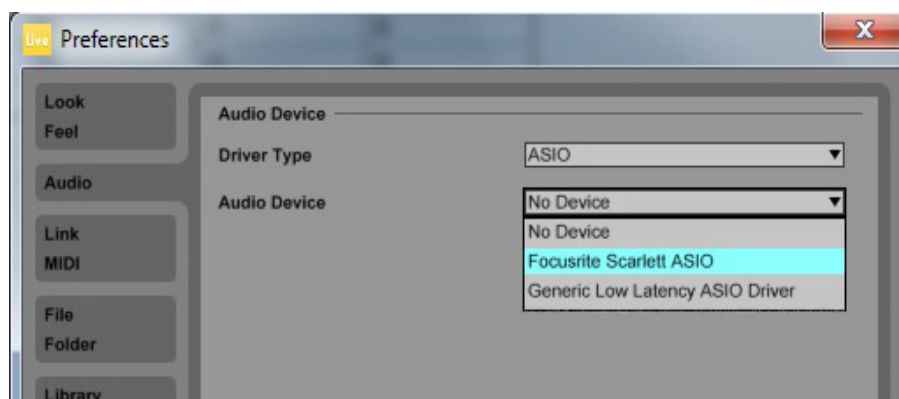
*Typical name. Terminology may differ slightly between DAWs.

Once the Scarlett 2i4 is set as the preferred Audio Device* in your DAW, Inputs 1 & 2 and Outputs 1 to 4 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 to 4 enabled in the Ableton Lite Audio Preferences.
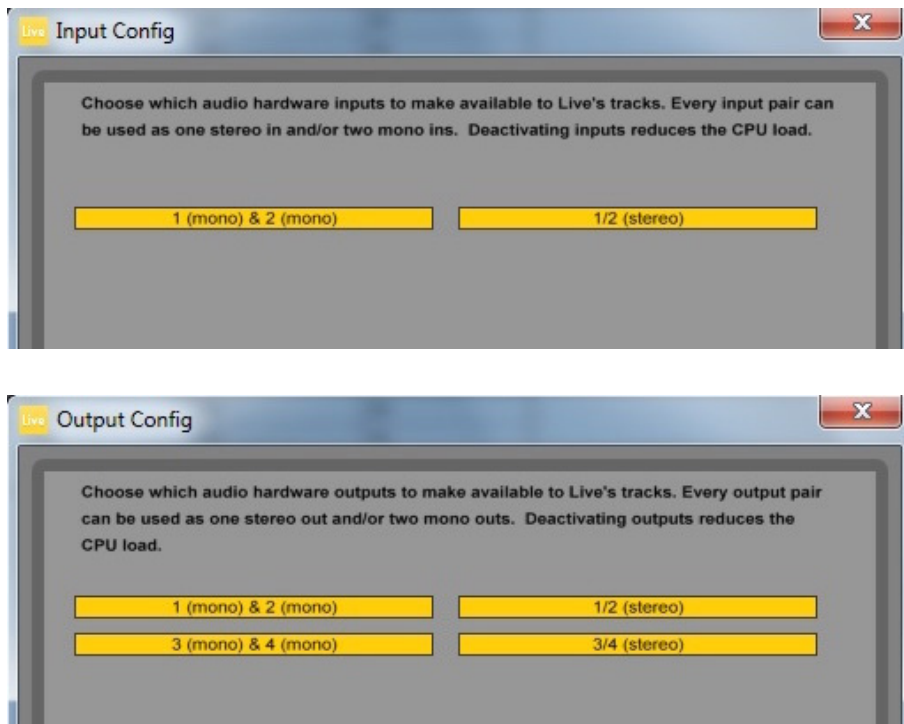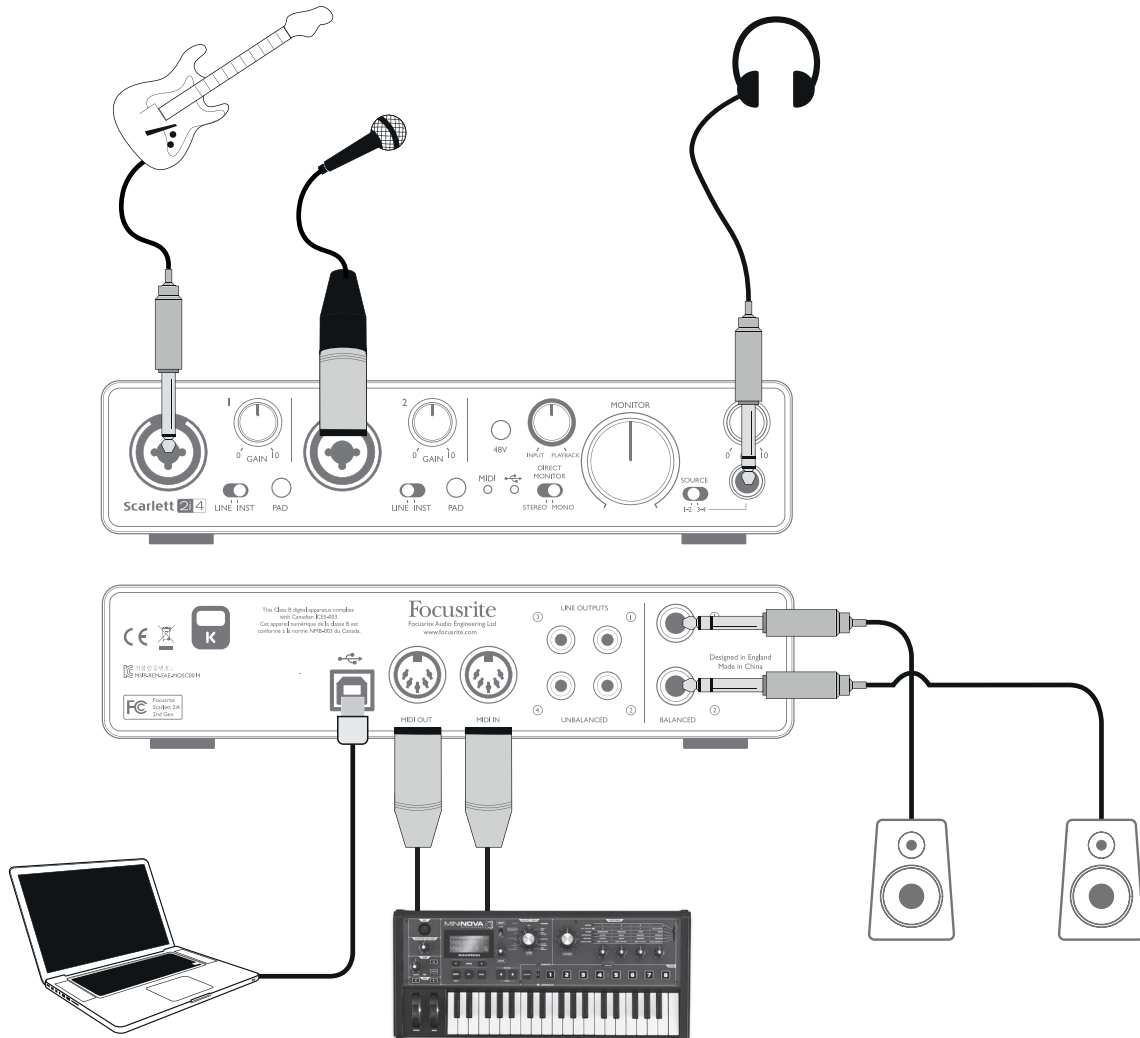

*Typical name. Terminology may differ slightly between DAWs.

Examples of Usage

The Scarlett 2i4 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 "Combo" type, 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 2i4 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 musical instrument (a guitar in the example) via an ordinary 2-pole guitar jack, or to **LINE** if you are connecting a line level source such as the balanced output of an external audio mixer via a 3-pole (TRS) jack. Note the Combo connector accepts both types of jack plug.

If you are using a capacitor (condenser) microphone, press the **48V** button to supply phantom power to the mic. Don't turn this on if you're using any other type of mic.

Each channel of the Scarlett 2i4 has a **PAD** button on the front panel; pressing this reduces the input sensitivity by 10 dB. You may find this useful if you are feeding the input from a line-level source when the output is particularly "hot".

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, and back out again via your audio interface. Latency can be a problem for a performer who wishes to record while monitoring their input signals.

The Scarlett 2i4 is fitted with a "Direct Monitoring" option, which overcomes this problem. Setting the front panel **DIRECT MONITOR** control to **INPUT** will route your input signals directly to the Scarlett 2i4'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.

DIRECT MONITOR is a "mix" control – it lets you set your own preferred blend of input signals and DAW playback. As you rotate the control clockwise, the level of DAW playback increases and the level of your input signal decreases. At the 12 o'clock position, a 50/50 mix of the two is obtained.

Note that if the **DIRECT MONITOR** control is set anywhere other than fully anti-clockwise, 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.

The Direct Monitoring facility can also be switched for mono operation, which is useful if you are only recording one instrument or voice. With the **STEREO/MONO** switch set to **STEREO**, Input 1 is routed to the left input channel and Input 2 to the right, and this will be the correct setting if you are recording a stereo source. In **MONO** mode, both inputs are routed equally to both channels, and will appear in the centre of the stereo image.

### Connecting Scarlett 2i4 to loudspeakers

Any of the Scarlett 2i4's outputs may be used to connect monitoring speakers. Output channels 1 and 2 are provided both in variable-level, electronically balanced form on ¼" (6.35 mm) 3-pole (TRS) jacks and as variable-level unbalanced signals on phono (RCA) sockets. Outputs 3 and 4 are provided in fixed-level unbalanced form only, also on phono (RCA) sockets.

If Outputs 1 and 2 are used, Outputs 3 and 4 are free to be used for another purpose, such as connecting to an additional recording device or an additional pair of monitors. However, please note that only Outputs 1 and 2 are affected in level by the the large front panel **MONITOR** volume control. The signals at Outputs 3 and 4 are at (full) fixed level, and thus if you use these for monitoring, you will have to control the volume either at source (within the DAW itself), or by adjusting the volume at an external amplifier.

Self-powered monitors (e.g., typical computer speakers) incorporate internal amplifiers with a volume control, and may be connected directly. Larger, passive loudspeakers will require a separate stereo amplifier; in this case, the outputs should be connected to the amplifier's inputs.
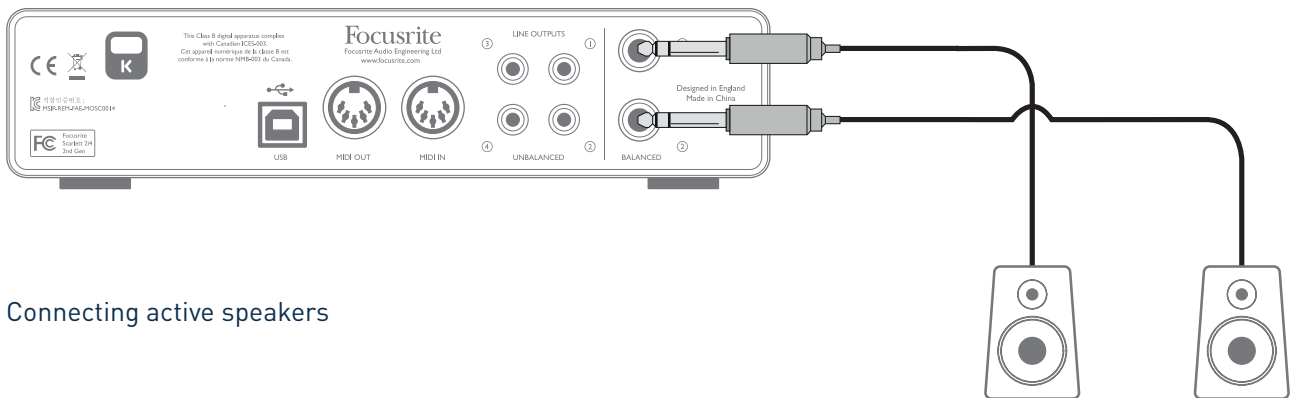
Connecting active speakers
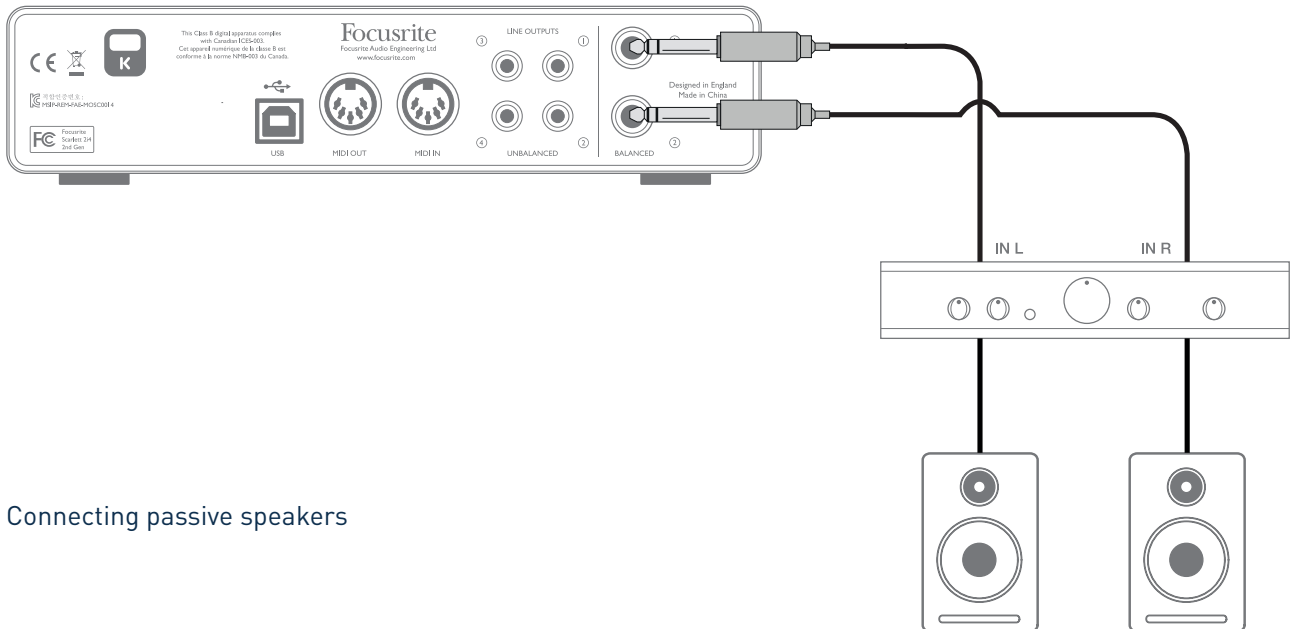
Connecting passive speakers

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 phono plugs (RCA jacks) at one end. Hi-fi amplifiers and powered monitors will have their own volume controls; use these to adjust the monitoring volume.

Professional power amplifiers will generally have balanced inputs (either on 3-pin XLR or 3-pole (TRS) ¼" (6.35 mm) jack sockets); we highly recommend using balanced (twin-and-screen) cables to connect these to the ¼" jack outputs of the Scarlett 2i4. If you use the balanced outputs, you can adjust the monitoring volume from the Scarlett 2i4's front panel.

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.

Connecting Scarlett 2i4 to a DJ mixer

The Scarlett 2i4 makes an excellent interface between a laptop running DJ software and the channels of a DJ mixer. In this setup, Outputs 1 and 2 can be connected to Line Inputs 1 and 2 of an external DJ mixer, and Outputs 3 and 4 to Line Inputs 3 and 4. Connecting in this way means that all mixer facilities, such as EQs and crossfading, are easily accessible. However, note that you must set the front panel Monitor Level control to maximum, otherwise Outputs 1 and 2 will be at a lower level than Outputs 3 and 4.
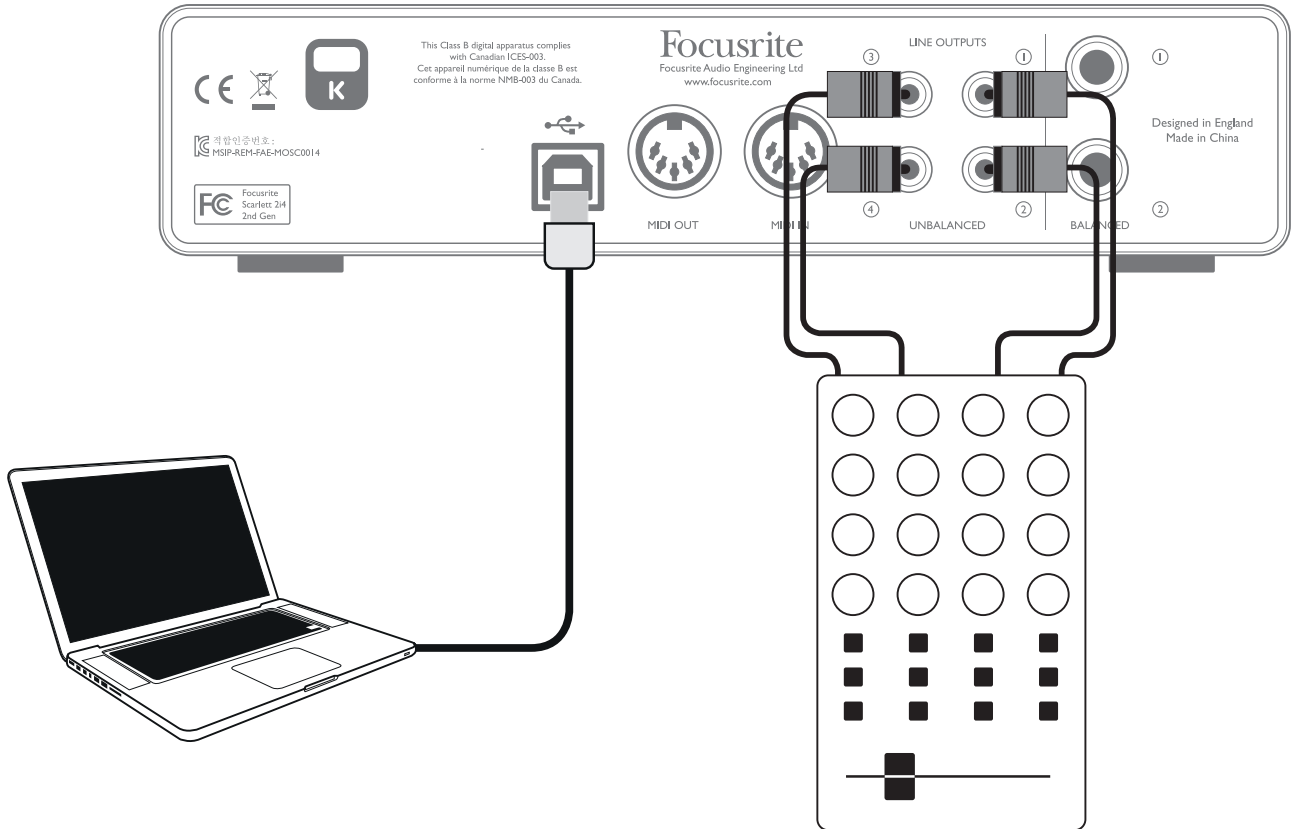
HARDWARE FEATURES

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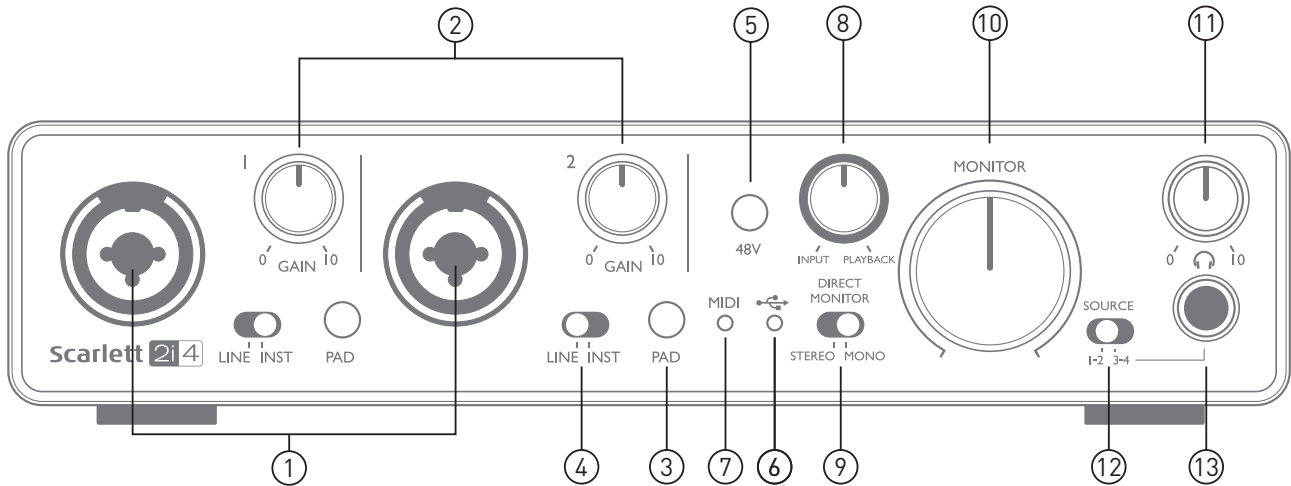
The Front Panel includes the input connectors for Mic, Line and Instrument signals, as well as the input gain and monitoring controls.

1. Inputs 1 & 2 – "Combo" type input sockets - connect microphones, instruments (e.g., guitar), or line level signals via XLR or ¼" (6.35 mm) jacks as appropriate.

2. **GAIN 1 and GAIN 2** – 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. **PAD** – 10 dB pad for each input. Pressing this button reduces the sensitivity of the input; use if feeding the input with a particularly high-level signal.

4. **LINE/INST** – Instrument/Line level switches for each input – switches gain to suit instrument or line level signals.

5. **48V** – phantom power switch for mic inputs - enables 48 V phantom power at XLR contacts of both Combo connectors.

6. ⬸ USB LED – illuminates when the unit receives USB bus power and is confirmed by the computer as connected and operating correctly.

7. **MIDI** LED – illuminates when MIDI data is received at the MIDI IN port.

8. **DIRECT MONITOR** – rotary "blend" control letting you set your monitor mix as a balance of the input signal(s) and the DAW playback.

9. **STEREO/MONO** – selects whether the inputs are summed to mono for monitoring.

10. **MONITOR** – main monitor output level control - sets the output level at the balanced (rear panel) outputs of channels 1 and 2 at both the TRS and RCA (phono) connectors.

11. ⌒ Headphone level – adjusts the output level at the front panel stereo headphone output.

12. Headphone **SOURCE** – allows you to select whether the headphones output is fed from Outputs 1 and 2 or Outputs 3 and 4 (as stereo pairs; modified by the setting of [9]).

13. ⌒ Headphone socket – ¼" TRS output jack - connect your stereo headphones here.

Back Panel
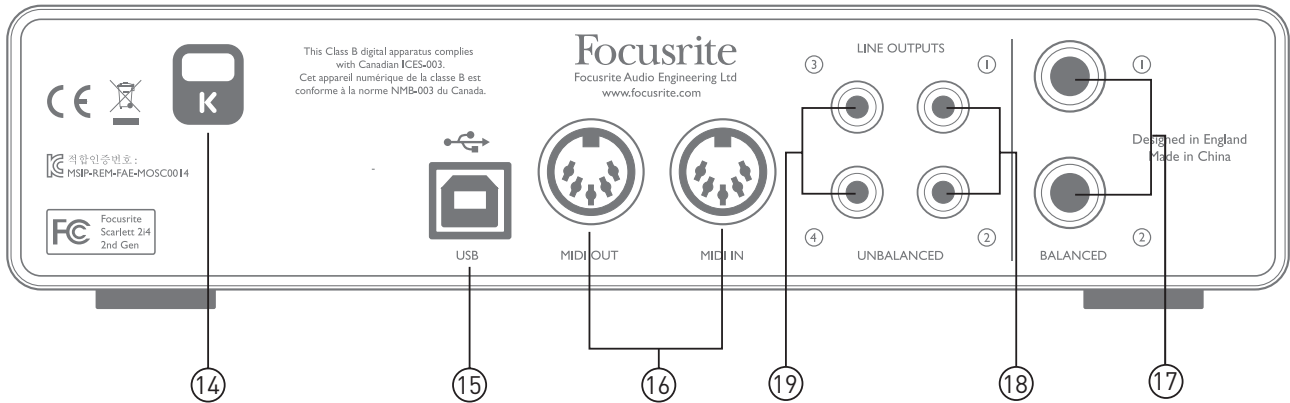
14. **K** (Kensington security lock) – secure your Scarlett 2i4 to a suitable structure if desired. Please see http://www.kensington.com/kensington/us/us/s/1704/kensington-security-slot.aspx for further information on how to use this feature.

15. ⟷ **USB** 2.0 port – Type B connector; connect to your computer with cable supplied.

16. **MIDI IN and MIDI OUT** – standard 5-pin DIN sockets for connection of external MIDI equipment such as keyboards or sound modules. The Scarlett 2i4 provides a convenient MIDI interface with your DAW, making a computer MIDI card unnecessary.

17. **LINE OUTPUTS 1** and **2** – 2 x ¼" (6.35 mm) TRS jack sockets; +10 dBu output level (variable), electronically balanced. Either ¼" TRS (balanced connection) or TS (unbalanced connection) jack plugs can be used.

18. **LINE OUTPUTS 1** and **2** – 2 x phono (RCA) sockets; unbalanced outputs, +5.5 dBu level (fixed). These sockets carry the same signal as [17] at all times.

19. **LINE OUTPUTS 3** and **4** – 2 x phono (RCA) sockets; unbalanced outputs, +5.5 dBu level (fixed).

SPECIFICATIONS

Performance Specifications

Microphone Inputs	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz ±0.1 dB
THD+N	<0.002% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
Noise EIN	>-126 dB (A-Weighted)
Maximum Input Level	+4 dBu
Gain Range	50 dB
Line Inputs	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz, ±0.1 dB
THD+N	<0.003% (minimum gain, -1dBFS input with 22 Hz/22 kHz bandpass filter)
Maximum Input Level	+22 dBu
Gain Range	50 dB
Instrument Inputs	
Dynamic Range	106 dB (A-weighted)
Frequency Response	20 Hz to 20 kHz, ±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 and Monitor Outputs	
Dynamic Range Outputs (1-2)	106 dB (A-weighted)
Dynamic Range Outputs (3-4)	106 dB (A-weighted)
Maximum Output Level (0 dBFS) Balanced Line/TRS Outputs	+10 dBu
Maximum Output Level (0 dBFS) Unbalanced Line/RCA Outputs	+5.5 dBu
THD+N Outputs (1-2)	<0.001% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)
THD+N Outputs (3-4)	<0.008% (minimum gain, -1 dBFS input with 22 Hz/2 2kHz bandpass filter)

Headphone Outputs	
Dynamic Range	106 dB (A-weighted)
Maximum Output Level into 32 ohms	> +7.8 dBu
THD+N	<0.001% (minimum gain, -1 dBFS input with 22 Hz/22 kHz bandpass filter)

Physical and Electrical Characteristics

Other I/O	
USB	1 x USB 2.0 Type B connector
Front Panel Indicators	
USB power	LED
Gain controls	Colour-coded LED rings
Weight and Dimensions	
W x H x D	210 mm x 138 mm x 47 mm 8.27 in x 5.43 in x 1.85 in
Weight	0.87 kg 1.92 lb

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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