

# **User Guide**





# TABLE OF CONTENTS

OVERVIEW
Introduction
Features
Box Contents
System requirements
Mac OS X
Windows
GETTING STARTED
Software Installation
HARDWARE FEATURES
Front Panel
Rear Panel
Connecting your Scarlett 18i89
Power
USB
Mac OS X only
Windows only
Audio Setup in your DAW
Example of Usage
Connecting microphones and instruments
Connecting Scarlett 18i8 to loudspeakers
Using the ADAT connection
Using the Scarlett 18i8 as a stand-alone mixer
FOCUSRITE CONTROL
SPECIFICATIONS
Performance Specifications
Physical and Electrical Characteristics
TROUBLESHOOTING
COPYRIGHT AND LEGAL NOTICES

## **OVERVIEW**

### Introduction

Thank you for purchasing this Second Generation Scarlett 18i8, one of the family of Focusrite professional audio interfaces incorporating high quality Focusrite analogue pre-amplifiers. In conjunction with the unit's accompanying software application, Focusrite Control, you now have a compact yet highly versatile solution for routing high quality audio to and from your computer. You can also use the Scarlett 18i8 as a "stand-alone" interface to any other type of recording device, once you have configured it using Focusrite Control.

Focusrite Control, and several other exciting and useful software applications, can be downloaded free of charge once you have registered your product. Note that a separate Focusrite Control User Guide is also available; we strongly recommend that you download this as well.

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.

Your Second Generation Scarlett interface is compatible with the new Focusrite Control software application: this lets you control various hardware features, set up monitor mixes and configure routings. There is a Focusrite Control installer for both Mac and Windows platforms, and no driver is required for Macs. The Windows version of the installer contains the driver, so in either case, you only need to install Focusrite Control to get up and running.

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 you take the time to read through the user guide, whether you're new to computer-based recording or a more experienced user, so that you are fully aware of all the possibilities that the Scarlett 18i8 and accompanying software have to offer. If the main User Guide sections do not provide the information you need, be sure to consult <a href="https://support.focusrite.com/">https://support.focusrite.com/</a>, which contains a comprehensive collection of answers to common technical support queries.

### **Features**

The Scarlett 18i8 audio interface provides the means for connecting microphones, musical instruments, line level audio signals and digital audio signals in both ADAT and S/PDIF formats to a computer running compatible versions of Mac OS X or Windows via one of the computer's USB ports. 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 signals can be configured to appear at the unit's physical outputs.

The outputs can be connected to amplifiers and speakers, powered monitors, headphones, an audio mixer or any other analogue or digital audio equipment that you wish to use. Although all inputs and outputs on the Scarlett 18i8 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 precise needs.

The accompanying software application, Focusrite Control, provides further routing and monitoring options, as well as the ability to control global hardware settings such as sample rate and synchronisation.

All inputs on the Scarlett 18i8 are routed directly to your DAW software for recording, but Focusrite Control also allows you to route these signals internally within the device to the outputs so that you can monitor the audio signals with ultra-low latency - before they arrive at your DAW, should you need to do so.

The Scarlett 18i8 also has connectors for sending and receiving MIDI data; this lets you use it as a MIDI "hub" between your computer's USB port and other items of MIDI equipment in your system.

### **Box Contents**

Along with your Scarlett 18i8 you should find:

- Bundle code\* for accessing the following on-line resources:
  - Focusrite Control (also available from <u>www.focusrite.com/downloads</u>)
  - Focusrite Red 2 & 3 Plug-in Suite
  - Softube Time and Tone bundle
  - ProTools | First
  - Ableton Live Lite
  - LoopMasters sample library
  - Novation Bass station
  - Multi-language User Guides for both Scarlett 18i8 and Focusrite Control
- USB cable
- Getting Started Guide and Important Safety Information\*
- \* information printed on the inside of the gift box

### System requirements

#### Mac OS X

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.

\*\* System requirements are subject to change. Please check the following link for compatibility details: <a href="http://www.focusrite.com/downloads/os">www.focusrite.com/downloads/os</a>

## **GETTING STARTED**

IMPORTANT: PLEASE ENSURE THAT YOU INSTALL FOCUSRITE CONTROL BEFORE CONNECTING THE INTERFACE TO YOUR COMPUTER. NOTE THAT THE SECOND GENERATION SCARLETT 18i8 DOES NOT REQUIRE SEPARATE USB DRIVERS TO BE INSTALLED FOR EITHER MAC OR WINDOWS. FOCUSRITE CONTROL INCLUDES THE NECESSARY DRIVERS.

## Software Installation

All software required by the Scarlett 18i8 - and several powerful and useful extras - are available for download from the Focusrite website (<u>www.focusrite.com/register</u>). You will find a "Bundle Code" printed on the inside of the box your Scarlett 18i8 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 SOFT	TWARE		
To download the included software, you will need to	register your Scarlett 18i8 at focusrite.com/register	Pour obtenir des instructions en Français sur la façon de commencer, veuillez-vous rendre sur focusrite.com/downloads	
You will need the product serial number, found on the bottom of your 18i8 hardware.		Für eine Kurzanleitung zum schnellen Start in deutscher Sprache besuche bitte focusrite.com/downloads	
Once you have entered the serial number, you will be asked to enter your BUNDLE CODE, found below:		Para la guía de inicio en Español, diríjase a focusrite.com/downloads	
PRODUCT BUNDLE CODE		所有使用说明中文版,请上网站: focusrite.com/downloads	
	XXXXXX-XXXXXXX-XXXXXXX	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	
For an in-doubh video tutorial inlease go to focusita	s com/ant started		
ror an in depth video tutorial, please go to rocusnite	For an in depth video tutorial, please go to focusrite.com/get-started		

1. Using your usual browser, go to <u>www.focusrite.com/register/</u>.

2. Follow the on-screen instructions, entering the Serial number and then the Bundle Code (XXXXX-XXXXX-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 Focusrite Control and the other software products to which your registration entitles you are available for download, complete with activation codes where applicable.

4. Download and install the Focusrite Control version (Mac or Windows) appropriate for your computer. Follow all on-screen instructions.

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

6. After restart, connect the Scarlett 18i8 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 <u>www.focusrite.com/get-started</u> for the latest info.

## HARDWARE FEATURES

## Front Panel



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

- 1. Inputs 1 and 2 XLR Combo type input sockets connect microphones, instruments (e.g., guitar), or line level signals via XLR or ¼" (6.35 mm) jacks as appropriate. Either ¼" TRS (balanced) or TS (unbalanced) jack plugs can be used for instruments or line level signals.
- 2. Inputs 3 and 4 XLR Combo type input sockets as [1], but accept mic or line level signals only. Direct connection of instruments should be via Inputs 1 and/or 2.
- 3. **48V** two switches enabling 48 V phantom power at the XLR contacts (mic inputs) of the Combo connectors, in pairs (1 & 2; 3 & 4). The switch illuminates when phantom power is selected.
- 4. GAIN 1 and GAIN 4 adjust the input gain for the signals at Inputs 1 to 4 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.
- 5. INST the input configuration for the jack contacts at Inputs 1 and 2 can be selected via software from Focusrite Control. The green LEDs illuminate when INST is selected. With INST selected, the gain range and input impedance are altered (relative to LINE), and the input is made unbalanced. This optimises it for the direct connection of instruments (usually via a 2-pole (TS) jack plug). When INST is off, the inputs are suitable for the connection of line level signals. Line level signals may be connected either in balanced form via a 3-pole (TRS) jack or unbalanced, via a 2-pole (TS) jack.
- 6. PAD a 10 dB pad may be inserted in each of the four analogue input signal paths; these are controlled via software from Focusrite Control. The pad increases the headroom of the input stage, and should be used to reduce mic or line level signals which are 'too hot' (i.e., when the gain halo is turning red while at minimum gain). It is not intended for use with the Instrument inputs. The red LEDs illuminate when PAD is selected.

- 7. USB LED a green LED which illuminates when the unit is recognised by the computer to which it is connected.
- 8. **MIDI** LED a green LED illuminates when MIDI data is received at the MIDI IN port.
- 9. **MONITOR** main monitor output level control this is an analogue control and adjusts the level at Outputs 1 and 2 on the rear panel.
- 10. **MUTE** push this button to mute Outputs 1 and 2. The button illuminates when MUTE is active.
- 11.  $\bigcirc$  connect one or two pairs of stereo headphones at the two ¼" (6.25 mm) TRS jack sockets below the headphone volume controls 1 and 2. The headphone outputs always carry the signals that are currently routed to analogue outputs 3 & 4 and 5 & 6 respectively (as stereo pairs) in Focusrite Control.

## **Rear Panel**



- 12. LINE INPUTS 5 to 8 the inputs are balanced, on ¼" (6.35 mm) jack sockets. Connect further line level sources here, using either ¼" TRS (balanced) or TS (unbalanced) jack plugs.
- 13. **MONITOR OUTPUTS 1** and **2** two balanced analogue line outputs on ¼" (6.35 mm) jack sockets; use TRS jacks for a balanced connection or TS jacks for unbalanced. These will generally be used for driving the main L and R speakers of your monitoring system; however, the signals at the outputs may be defined in Focusrite Control.
- 14. **OPTICAL INPUT** TOSLINK connector able to carry eight channels of digital audio in ADAT format at 44.1/48 kHz sample rate or four channels at 88.2/96 kHz. These are simply additional inputs (11 to 18) to the Scarlett 18i8. Note that the optical input is disabled when sample rates of 176.4/192 kHz are in use.
- 15. USB 2.0 port Type B connector; connect the Scarlett 18i8 to your computer with the cable supplied.
- MIDI IN and MIDI OUT standard 5-pin DIN sockets for connection of external MIDI equipment. The Scarlett 18i8 acts as a "Break-out (and Break-in) Box", allowing MIDI data to/from your computer to be distributed to additional MIDI devices.
- 17. **SPDIF IN** and **OUT** two phono (RCA) sockets carrying two-channel digital audio signals in and out of the Scarlett 18i8 in S/PDIF format. These are essentially Inputs 9 and 10 and Outputs 7 and 8 to/from the unit. Like all the other inputs and outputs, signals at these connectors may be routed in Focusrite Control.
- 18. External DC power input power the Scarlett 18i8 via the separate AC adaptor (PSU) supplied with the unit. Note that the Scarlett 18i8 cannot be powered via its USB port from the host computer.
- 19. Power On/Off switch.
- 20. **K** (Kensington security lock) secure your Scarlett 18i8 to a suitable structure if desired. Please see <u>www.kensington.com/kensington/us/us/s/1704/kensington-security-slot.aspx</u> for further information on how to use this feature.

## **Connecting your Scarlett 18i8**

**IMPORTANT:** Before you connect your Scarlett 18i8 to your computer, please complete the software installation according to the instructions at page 5. This will ensure that the hardware uses the correct drivers, and will prevent unexpected behaviour.

#### Power

Your Scarlett 18i8 should be powered from an external 12 V DC, 1 A mains adaptor. A suitable adaptor is supplied with the unit.

**IMPORTANT:** We very strongly recommend that you only use the supplied mains adaptor. Failure to use this adaptor is likely to permanently damage the unit and will also invalidate your warranty.

#### USB

Your Scarlett 18i8 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 18i8 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, however typically a USB 3.0 port will support a USB 2.0 device.)

#### Mac OS X only:

Your OS should automatically switch the computer's default audio inputs & outputs to the Scarlett 18i8. To verify this, go to **System Preferences > Sound**, and ensure that the input and output are set to **Scarlett 18i8**. 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 and outputs to be the Scarlett 18i8. 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 18i8**'

### Audio Setup in your DAW

The Scarlett 18i8 is compatible with any Windows-based DAW that supports ASIO or WDM or any Macbased DAW that uses Core Audio. After installing Focusrite Control and connecting the hardware, you can start using your Scarlett 18i8 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 online. To install either DAW, download and save the relevant 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 Ableton Live Lite and Pro Tools | First are beyond the scope of this User Guide, but both applications include a full set of Help files. You can also find a video tutorial on getting started with Ableton Live Lite at <a href="http://www.focusrite.com/getting-started">www.focusrite.com/getting-started</a>.

Please note - your DAW may not automatically select the Scarlett 18i8 as its default I/O device. In this case, you must manually select the driver on your DAW's **Audio Setup**\* page (select **Scarlett 18i8** 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 below shows the correct configuration in the Ableton Live Lite **Preferences** panel (Mac version shown).

Preferences		
	Audio Device	
	Driver Type	CoreAudio 🔻
	Audio Input Device	No Device 🔻
	Audio Output Device	No Device Ruilt in Microphone (2 In 0 Out)
	Channel Configuration	Built-in Microphone (2 In, 0 Out) Built-in Input (2 In, 0 Out)
	Sample Rate	Scarlett 18i8 USB (18 In, 8 Out)

Preferences		
Audio Device		
Driver Type	CoreAudio	
Audio Input Device	Scarlett 18i8 USB (18 In, 8 Out)	
Audio Output Device	Scarlett 18i8 USB (18 In, 8 Out)	
Channel Configuration	No Device	
Sample Rate	Built-in Output (0 In, 2 Out) — AirPlay (0 In, 2 Out)	
	Scarlett 18i8 USB (18 In, 8 Out)	

\*Typical name. Terminology may differ slightly between DAWs.

Once the Scarlett 18i8 is set as the preferred Audio Device\* in your DAW, all 18 inputs and 8 outputs will appear in your DAW's Audio I/O preferences (note however that Ableton Live Lite is limited to a maximum of four simultaneous mono input channels and four simultaneous mono output channels). 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 Ableton Live Lite Audio Preferences.

Choose which audio hardware inputs to make available to Live's tracks. Every input pair can be used as one stereo in and/or two mono ins. Deactivating inputs reduces the CPU load.	
1 (mono) & 2 (mono)	1/2 (stereo)
3 (mono) & 4 (mono)	3/4 (stereo)
5 (mono) & 6 (mono)	5/6 (stereo)
7 (mono) & 8 (mono)	7/8 (stereo)
9 (mono) & 10 (mono)	9/10 (stereo)
11 (mono) & 12 (mono)	11/12 (stereo)
13 (mono) & 14 (mono)	13/14 (stereo)
15 (mono) & 16 (mono)	15/16 (stereo)
17 (mono) & 18 (mono)	17/18 (stereo)

Choose which audio hardware outputs to make available to Live's tracks. Every output pair can be used as one stereo out and/or two mono outs. Deactivating outputs reduces the CPU load.	
1 (mono) & 2 (mono)	1/2 (stereo)
3 (mono) & 4 (mono)	3/4 (stereo)
5 (mono) & 6 (mono)	5/6 (stereo)
7 (mono) & 8 (mono)	7/8 (stereo)

\*Typical name. Terminology may differ slightly between DAWs.

## Example of Usage

The Scarlett 18i8 is an excellent choice for several different recording and monitoring applications. Some typical configurations are shown below.

#### **Connecting microphones and instruments**



This setup illustrates a configuration for recording a group of musicians with DAW software on Mac or PC. In this case, Inputs 1 and 2 are used for two guitars, while Inputs 3 and 4 are used for vocals. Two stereo keyboards are connected to Inputs 5 to 8 at the rear. During recording, playback of the DAW can be monitored on the loudspeakers (if they are in a separate room – otherwise use headphones!), and Focusrite control can be configured to provide each vocalist with their own dedicated headphone mix. This can consist of any mix of themselves, the other singer, the guitars and keyboards, plus any other DAW tracks that may have already been recorded.

The front panel input sockets are XLR 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 18i8 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. Select INST in Focusrite Control (on the **Device Settings** page) if you are connecting a musical instrument (like a guitar) via an ordinary 2-pole guitar jack, or 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 capacitor (condenser) microphones, press the **48V** button to supply phantom power to the mics. (In the example, this would be the **48V** button for Inputs 3 and 4.) We recommend that you don't turn it on if you're using any other type of mic. As the **48V** button enables phantom power at both inputs of a pair, it is best not to intermix condenser mics and other types (e.g., dynamics) in the same pair, as the application of phantom power may cause damage to some types of non-condenser microphones.

Channels 1 to 4 of the Scarlett 18i8 each have a **PAD** facility, selectable from Focusrite Control (on the Device Settings page); switching the Pad into circuit 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".

#### Low Latency 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. While not an issue for most simple recording situations, under some circumstances, latency can be a problem for a performer who wishes to record while monitoring their input signals. This might be the case if you need to increase the size of your DAW's recording buffer, which could be necessary when you record overdubs on a particularly large project using many DAW tracks, software instruments and FX plug-ins. Common symptoms of too low a buffer setting include audio glitching (clicks and pops) or an unusually high CPU overhead within your DAW (most DAWs show current CPU usage). Buffer size may be increased on Macs from within the DAW application itself, while on PCs it is usually accessed on the DAW Setup Preferences page.

The Scarlett 18i8, in conjunction with Focusrite Control, allows "low latency monitoring", which overcomes this problem. You can route your input signals directly to the Scarlett 18i8's headphone outputs. This enables the musicians to hear themselves with ultra-low latency – i.e., effectively in "real time" – along with the computer playback. The input signals to the computer are not affected in any way by this setting. However, note that any effects being added to the live instruments by software plug-ins will not be heard in the headphones in this case, although the FX will still be present on the recording.

In the example, each vocalist is receiving his/her own monitor mix because they each have their "own" Scarlett 18i8 headphone output. Focusrite Control lets you define up to four separate stereo mixes (or eight mono) and these mixes may include previously recorded DAW tracks as well the current input signals. Here, just two stereo mixes are being used.



When using Direct Monitoring, ensure that your DAW software is not set to route any inputs (what you are currently recording) to any outputs. If it is, the musicians will hear themselves "twice", with one signal audibly delayed as an echo.

#### **Connecting Scarlett 18i8 to loudspeakers**

The 1/4" **MONITOR OUTPUTS** jacks on the rear panel will normally be used to send audio to monitoring speakers. Self-powered monitors incorporate internal amplifiers with a volume control, and may be connected directly. Passive loudspeakers will require a separate stereo amplifier; in this case, the rear panel outputs should be connected to the amplifier's inputs.





All 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 probably 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 active monitors and 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 mute (or turn off) monitoring loudspeakers while recording, and use headphones when overdubbing.

#### Using the ADAT connection

In addition to the eight analogue inputs, the Scarlett 18i8 has an optical ADAT input port which can provide an additional eight audio inputs at 44.1/48 kHz sample rate or four at 88.2/96 kHz. (Note that the optical ADAT input port does not support 176.4/192 kHz sample rates.) Using a separate 8-channel microphone preamplifier equipped with an ADAT output – such as the Focusrite OctoPre MkII – provides a simple and excellent method of expanding the Scarlett 18i8's input capability.



The OctoPre MkII's ADAT output is connected to the Scarlett 18i8's ADAT input with a single TOSLINK optical cable. To synchronise the devices, set the clock source of the OctoPre MKII to **Internal** and that of the Scarlett 18i8 (via Focusrite Control) to **ADAT**.

**TIP:** When interconnecting two digital devices by any method, always ensure that both are set to the same sample rate.

The additional inputs realised by use of the ADAT port may be routed using Focusrite Control in exactly the same manner as the other inputs. The additional inputs can form part of any musician's headphone mix, as required.

#### Using the Scarlett 18i8 as a stand-alone mixer

The Scarlett 18i8 has the ability to store a mix configuration defined in Focusrite Control within the hardware. This feature lets you configure it – for example, as an on-stage keyboard mixer – using your computer, and then upload the configuration to the device itself. Then you can use the Scarlett 18i8 as a simple local mixer as part of your keyboard rig to control the overall mix of multiple keyboards.



In the example illustrated, three stereo keyboards are connected to the inputs of the Scarlett 18i8; the Monitor Outputs go to the main PA system. The performer can adjust the volume of two of the keyboards against the third from the front panel; he/she can also adjust the overall level of the keyboard mix.

Greater flexibility of on-stage mixing could be achieved by connecting an OctoPre Mk II via the optical ADAT port, as in the previous example; all keyboard sources could be connected directly to the OctoPre Mk II, providing pre-input level control.

# **FOCUSRITE CONTROL**

Focusrite Control software allows flexible mixing and routing of all audio signals to the physical audio outputs, as well as control of output monitor levels. Sample rate selection and digital sync options are also available from Focusrite Control.

**NOTE:** Focusrite Control is a generic product, and may be used with other Focusrite hardware interfaces. When you connect an interface to your computer and launch Focusrite Control, the model of interface is automatically detected, and the software configured to suit the number of inputs and outputs, and other facilities, available on the hardware.

**IMPORTANT:** A separate Focusrite Control User Guide can be downloaded once you have completed the on-line registration process. This describes the use of Focusrite Control in full detail, together with examples of application.

To open Focusrite Control:

Installing Focusrite Control on your computer will place an FC icon on the dock or desktop. Click the icon to launch Focusrite Control.

Assuming that your Scarlett interface is connected to your computer with the USB cable, the Focusrite Control GUI (Graphical User Interface) will appear as shown below (Mac version illustrated).



The following table provides the channel routings when preset option "Direct Routing" is selected in Focusrite Control; see the screen image on page 18.

#### At 44.1 kHz and 48 kHz sample rates:

CH NO.	INPUTS	OUTPUTS
1	Input 1	Output 1
2	Input 2	Output 2
3	Input 3	Output 3
4	Input 4	Output 4
5	Input 5	Output 5
6	Input 6	Output 6
7	Input 7	S/PDIF 1
8	Input 8	S/PDIF 2
9	S/PDIF 1	
10	S/PDIF 1	
11	ADAT 1	
12	ADAT 2	
13	ADAT 3	
14	ADAT 4	
15	ADAT 5	
16	ADAT 6	
17	ADAT 7	
18	ADAT 8	

#### At 88.2 kHz and 96 kHz sample rates:

CH NO.	INPUTS	OUTPUTS
1	Input 1	Output 1
2	Input 2	Output 2
3	Input 3	Output 3
4	Input 4	Output 4
5	Input 5	Output 5
6	Input 6	Output 6
7	Input 7	S/PDIF 1
8	Input 8	S/PDIF 2
9	S/PDIF 1	
10	S/PDIF 1	
11	ADAT 1	
12	ADAT 2	
13	ADAT 3	
14	ADAT 4	
15		
16		
17		
18		

CH NO.	INPUTS	OUTPUTS
1	Input 1	Output 1
2	Input 2	Output 2
3	Input 3	Output 3
4	Input 4	Output 4
5	Input 5	Output 5
6	Input 6	Output 6
7	Input 7	S/PDIF 1
8	Input 8	S/PDIF 2
9	S/PDIF 1	
10	S/PDIF 1	
11		
12		
13		
14		
15		
16		
17		
18		

### At 176.4 kHz and 192 kHz sample rates:

Please refer to the Focusrite Control User Guide for further details.

# SPECIFICATIONS

## Performance Specifications

Configuration		
Inputs	18: analogue (8), ADAT (8), S/PDIF (2)	
Outputs	8: analogue (6), S/PDIF (2)	
Mixer	Fully assignable 18-in/8-out software mixer (Focusrite Control)	
Digital Performance		
Supported sample rates	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and 192 kHz	
Clock jitter	<250 ps	
Microphone Inputs		
Frequency Response	20 Hz to 20 kHz, +0.5/-1.5 dB	
Dynamic Rnge	109 dB ('A'-weighted)	
THD+N	< 0.002%	
Noise EIN	–127 dBu	
Maximum Input Level	+8.5 dBu (without pad)	
Gain Range	50 dB	
Line Inputs 1 & 4		
Frequency Response	20 Hz to 20 kHz, +0.5/-1.5 dB	
Dynamic Range	109 dB ('A'-weighted)	
THD+N	< 0.003%	
Maximum Input Level	+22 dB	
Gain Range	50 dB	
Line Inputs 5 & 8		
Frequency Response	20 Hz to 20 kHz, +/-0.5 dB	
Dynamic Range	110 dB ('A'-weighted)	
THD+N	< 0.003%	
Maximum Input Level	+16 dB	

Instrument Inputs		
Frequency Response	20 Hz to 20 kHz, +0.5/-1.5 dB	
Dynamic Range	109 dB ('A'-weighted)	
THD+N	< 0.003%	
Maximum Input Level	+12 dBu	
Gain Range	50 dB	
Monitor Outputs 1 & 2		
Frequency Response	20 Hz to 20 kHz, +/-0.5 dB	
Dynamic Range	108 dB ('A'-weighted)	
THD+N	< 0.001%	
Maximum Output Level (0 dBFS)	+16 dBu, balanced	
Headphone Outputs		
Frequency Response	20 Hz to 20 kHz, +/-0.5 dB	
Dynamic Range	108 dB ('A'-weighted)	
THD+N	< 0.001%	
Maximum Output Level (0 dBFS)	+13 dBu	

## Physical and Electrical Characteristics

Analogue Inputs 1 & 2		
Connectors	XLR Combo type: Mic/Line/Inst, on front panel	
Mic/Line switching	Automatic	
Line/Instrument switching	Via software from Focusrite Control	
Phantom power	Shared +48 V phantom power switch for inputs 1 and 2	
Analogue Inputs 3 & 4		
Connectors	XLR Combo type: Mic/Line/Inst, on front panel	
Mic/Line switching	Automatic	
Phantom power	Shared +48 V phantom power switch for inputs 3 and 4	
Analogue Outputs 1 to 6		
Connectors (Outputs 1 & 2)	2 x balanced ¼" TRS jacks on rear panel	
Stereo headphone outputs (Outputs 3 to 6)	2 x ¼" TRS jacks on front panel	
Main monitor output level control	- On front panel	
Headphones level controls		
Other I/O		
ADAT	TOSLINK optical connector 8 channels @ 44.1/48 kHz or 4 channels @ 88.2/96 kHz	
S/PDIF I/O	2 x phono (RCA)	
USB	1 x USB 2.0 Type B connector	
MIDI I/O	2 x 5-pin DIN sockets	
Weight and Dimensions		
W x D x H	192 mm x 66 mm x 229 mm 7.56" x 2.6" x 9.02"	
Weight	1.68 kg 3.70 lb	

# TROUBLESHOOTING

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

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