

Scarlett 8i6

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 Scarlett 8i6 near water
6. Clean only Scarlett 8i6 with dry cloth
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions
8. Do not install Scarlett 8i6 near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the Scarlett 8i6
11. Only use attachments/accessories specified by the Focusrite
12. Use only with the cart, stand, tripod, bracket, or table specified by Focusrite, or sold with the Scarlett 8i6. When a cart is used, use caution when moving the cart/Scarlett 8i6 combination to avoid injury from tip-over



13. Unplug Scarlett 8i6 during lightning storms or when unused for long periods of time
14. Refer all servicing to qualified service personnel. Servicing is required when Scarlett 8i6 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 Scarlett 8i6, the Scarlett 8i6 has been exposed to rain or moisture, does not operate normally, or has been dropped

WARNING: To reduce the risk of fire or electric shock, do not expose the Scarlett 8i6 to rain or moisture

It is important that Scarlett 8i6 shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases shall be placed on Scarlett 8i6

- Do not expose Scarlett 8i6 to drips or splashes
- Do not place any objects filled with liquids, such as vases, on Scarlett 8i6
- Do not install Scarlett 8i6 in a confined space such as a bookcase or similar unit
- Slots and openings in the casing are provided for ventilation and to ensure reliable operation of Scarlett 8i6 and to protect it from overheating. Please ensure adequate space around Scarlett 8i6 for sufficient ventilation. Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths curtains etc.
- Scarlett 8i6 draws nominal non-operating power from the AC outlet with its POWER switch in the off position
- Scarlett 8i6 should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time
- An apparatus with Class 1 construction shall be connected to an AC outlet with a protective grounding connection
- The MAINS plug or the appliance coupler is used as the disconnect device. Either device shall remain readily operable when the Scarlett 8i6 is installed for use
- 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

- GB** This equipment must be earthed by the power cord
- FIN** Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan
- NOR** Apparatet må kun tilkoples jordet stikkontakt

Important Safety Precautions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



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.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

Environmental Declaration

Compliance Information Statement: Declaration of Compliance procedure

Product Identification:	Focusrite Scarlett 8i6
Responsible party:	American Music and Sound
Address:	5304 Derry Avenue #C Agoura Hills, CA 91301
Telephone:	800-994-4984

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 Focusrite 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 this product conforms, 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.

Contents

Important Safety Instructions	2
Introduction	5
Basics	5
Box contents	5
Getting started	6
Note on USB hubs:.....	6
Powering the Scarlett 8i6.....	6
Hardware	7
Back panel	7
Front panel	8
Operating System requirements	9
Installation (Windows and Mac).....	9
Audio set-up in your DAW	9
Scarlett 8i6 architecture	10
Scarlett MixControl	11
Pre amp section	12
Mixer section	12
Input channel	13
Mix output channel	15
Routing section	16
Routing audio to the headphones	16
Routing presets	17
Monitor section	18
Monitor presets	19
Monitor section controls	19
Device status section	20
Sample rate display	20
Sync source display	20
Sync status display	21
USB driver	21
Unit name display	21
Settings menu (Windows only)	21
ASIO buffer size	21
Streaming buffer size	21
File menu	22
Technical Specifications	23
Troubleshooting	24
Copyright	24

Introduction

Thank you for purchasing Scarlett 8i6, one in a family of Focusrite professional multi-channel USB 2.0 interfaces featuring high quality Focusrite pre-amps. You now have a complete solution for routing high quality audio in and out of your computer.

This guide provides a detailed explanation of both the hardware and accompanying control software “Scarlett MixControl” 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 both Scarlett 8i6 and accompanying software have to offer.

If the main User Guide sections do not provide the information you need, be sure to consult <http://www.focusrite.com/answerbase>, where you’ll find a comprehensive list of common technical support queries regarding the product to date.

Basics

The Scarlett 8i6 hardware interface provides the means for connecting microphones, line-level signals, instrument-level signals, and digital signals to your computer, which are then routed to your audio recording software / digital audio workstation (referred to throughout this user guide as “DAW”).

All audio signals connected to the inputs, plus audio output from your computer programs are routed to the physical outputs for you to connect to an amp and speakers, powered monitors, headphones, analogue/digital mixer, and any other studio equipment that you wish to use. There are also connectors for sending and receiving MIDI.

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

Scarlett MixControl software provides mixing and routing to and from the DAW, allowing control over which signals are sent from the sequencer to each output. All inputs on the Scarlett 8i6 are routed directly to your DAW software for recording, but Scarlett MixControl also allows you to route these signals to your monitors so that you can listen to the audio signals with zero latency - before they arrive at your DAW.

Box contents

In the box there is:

- 1 x Scarlett 8i6
- 1 x USB cable
- 1 x Universal DC power supply unit (PSU).
- 1 x Installer CD: Contains combined installer for drivers and Scarlett MixControl software for Mac and Windows.
 - Scarlett VST, AU and RTAS plug-in Suite for Mac and Windows - includes
 - Compressor plug-in
 - EQ plug-in
 - Gate plug-in
 - Reverb plug-in
- 4 x Self adhesive rubber feet - to be fitted to the base of Scarlett 8i6
- 1 x Registration card
- 1 x Excite Bundle - includes:
 - Ableton Live LE software
 - Bass Station AU and VST synthesiser plug-in with serial number card
 - Over a Gigabyte of ‘Loopmasters’ and ‘Mike the Drummer’ royalty free samples
- 1 x Focusrite and Novation product brochure

Getting started

Before connecting Scarlett 8i6 to your computer, the software must be installed. This will ensure that the correct drivers are used, thus preventing any unexpected behaviour.

Note on USB hubs:

Scarlett 8i6 is a USB 2.0 device and must be connected to a compatible USB 2.0 port. If using a USB hub, it is essential that all other devices connected to the hub are also USB 2.0 compatible. If any USB 1.0 / 1.1 devices are connected, the hub will be forced to run at the legacy speed which may prevent the Scarlett 8i6 from working.

Scarlett 8i6 will use a significant amount of USB bandwidth (the amount of data transferred via USB). If connected to a USB hub other devices connected to the hub may affect the performance of Scarlett 8i6. For example, if using a USB 2.0 hard drive for audio sample playback (also transferring a large amount of data) this should not be connected to the same USB hub as Scarlett 8i6. Therefore it is recommended, when possible, to connect Scarlett 8i6 directly to your computer USB port rather than through a USB hub.

Powering the Scarlett 8i6

You must use the included power supply to use the Scarlett 8i6, it does not power from USB alone. This is because the analogue and digital circuitry requires more power to run than the USB standard can provide.

Hardware

Back panel

The Back Panel provides the majority of input and output connections on Scarlett 8i6

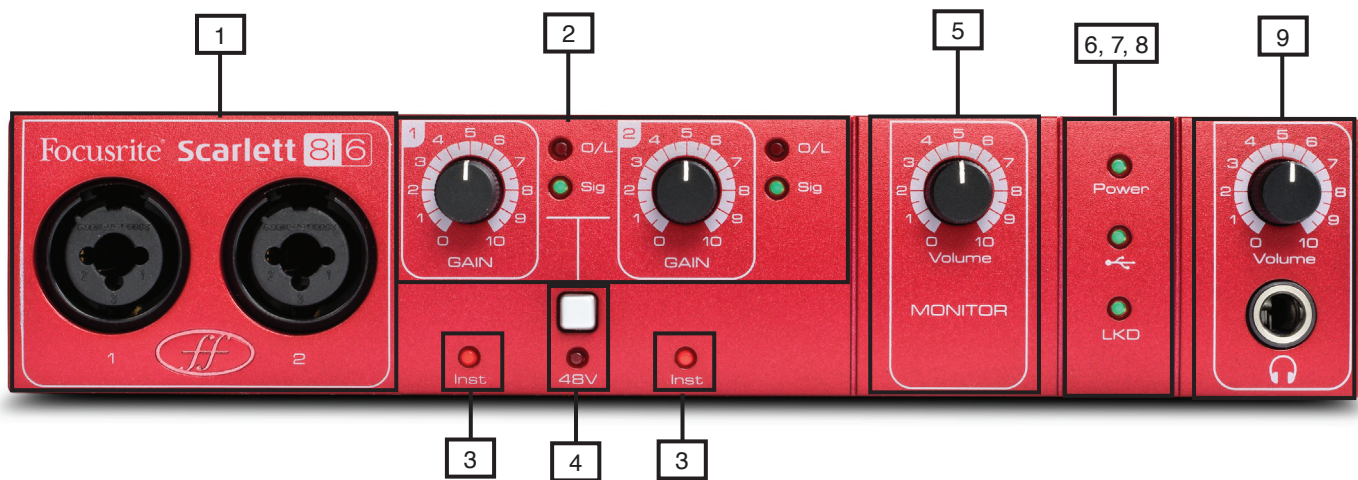


- [1] 2 x TRS jack sockets line inputs 3 and 4 *
- [2] 4 x TRS jack sockets for line outputs 1-4 *
- [3] 1 x USB 2.0 socket
- [4] 2 x DIN5 MIDI input and output sockets
- [5] 1 x 2.0mm DC power inlet socket - use supplied power supply only
- [6] 2 x RCA S/PDIF input and output sockets

* Either 1/4 inch TRS (balanced) or TS (unbalanced) jack connectors can be used.

Front panel

The Front Panel includes the input connectors for mic, line and instrument signals, as well as the input gain controls and monitoring controls.



- [1] Channels 1 and 2 with combo XLR input sockets for mic / line / instrument
- [2] Channels 1 and 2 gain controls with signal and overload LEDs
- [3] Channels 1 and 2 instrument LEDs
- [4] Phantom power switch with LED for mic inputs 1-2
- [5] Monitor level control
- [6] Power LED - lit when the unit receives power from the external power supply unit
- [7] USB (Active) LED - lit when the unit connects to the USB driver
- [8] LKD (Locked) LED - lit when the unit locks to its internal clock, or to an external clock source
- [9] Headphone level control and output ¼ " jack

Operating System requirements

Macintosh

Mac OS X 10.6.5 Snow Leopard

Windows

Windows 7 (All versions), Windows Vista (32bit version only), or Windows XP SP3 (32bit version only)

For more detailed and up to date system requirements please go to http://www.focusrite.com/scarlett_8i6

Installation (Windows and Mac)

The latest installation software should be on the disk included with your Scarlett 8i6. However it is strongly recommend that you check for the latest version of software on the Focusrite website; http://www.focusrite.com/support/scarlett_8i6 before connecting your Scarlett 8i6 unit.

PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING THE Scarlett 8i6 TO YOUR COMPUTER

1. Insert the installer disk into your computer's CD-ROM drive.
2. A window should pop up showing the following installer icons:
For Windows - Scarlett MixControl-1.0.exe **For Mac** - Install Scarlett MixControl.pkg
3. Double click on the installer icon to begin the installation process
4. Follow on screen instructions to complete the installation process
5. Connect Scarlett 8i6 to the computer USB port when instructed
6. Connect the power supply to Scarlett 8i6
7. Restart the computer

Once the installation is complete, the computer OS should automatically select the Scarlett 8i6 as the default audio outputs. To make sure this is the case:

On **Windows 7**, go to Start > Control Panel > Hardware and Sound > Sound > Manage Audio Devices > Set Default 'Playback' and 'Recording' to 'Scarlett 8i6 Audio'

On **Windows Vista**, go to Start > Control Panel > Hardware and Sound > Sound > Manage Audio Devices > Set Default 'Playback' and 'Recording' to 'Scarlett 8i6 Audio'

On **Windows XP**, go to Start > Control Panel > Sounds, Speech and Audio Devices > Sounds and Audio Devices > Audio tab > Set Sound playback and recording to 'Scarlett 8i6 Audio'

On **Mac OSX**, go to System Preferences > Sound > Set the input and output to 'Scarlett'

For more detailed setup options on a Mac, go to Applications > Utilities > Audio Midi Set-up

Audio set-up in your DAW

The Scarlett 8i6 is compatible with any DAW that uses ASIO drivers on Windows, and any DAW that uses Core Audio on Mac.

It should be noted that the DAW software may not automatically switch the device it uses to input and output audio.

To enable Scarlett 8i6 in the DAW software, ensure that 'Scarlett USB' is selected as the ASIO driver (Windows) or Core Audio driver (Mac) in the DAW's audio set-up page.

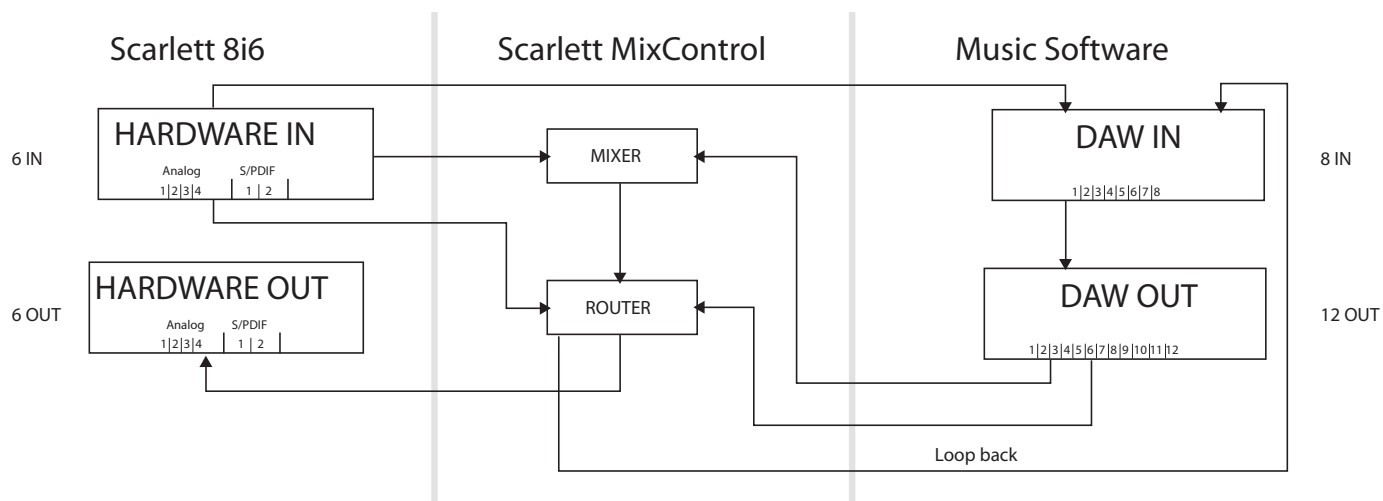
Please refer to the DAW's documentation if you are unsure where to select the ASIO / Core Audio driver.

Scarlett 8i6 architecture

Scarlett 8i6 offers more than just simple input and output routing to and from a computer. Scarlett MixControl software also allows the re-routing of audio signals to any output, and the creation of custom mixes to be sent to recording artists, outboard processing equipment, or mixing console.

The following diagrams give an overview of the Scarlett 8i6 audio paths at all sample rates. The hardware inputs are routed directly to the DAW inputs.

The table below the diagram shows the input routing configuration:



HARDWARE IN	DAW IN
Analogue 1-4	1-4
Loop back 1-2	5-6
S/PDIF 1-2 (RCA)	7-8

The hardware features 6 inputs and 6 outputs, whereas the music software will display 8 inputs and 12 outputs. The additional 2 inputs are in the form of Loop back 1-2; allowing the routing of any internal signal back into the DAW (see page 17). The 12 DAW outputs can be sent to the mixer in Scarlett MixControl, where they can be mixed and sent to the 6 hardware outputs (see page 13).

Scarlett MixControl

The Scarlett MixControl software allows flexible mixing and routing of all audio signals to the physical audio outputs as well as control of output monitor levels. All sample rate selection, digital syncing and driver latency settings (Windows only) are available from Scarlett MixControl.

To open Scarlett MixControl.

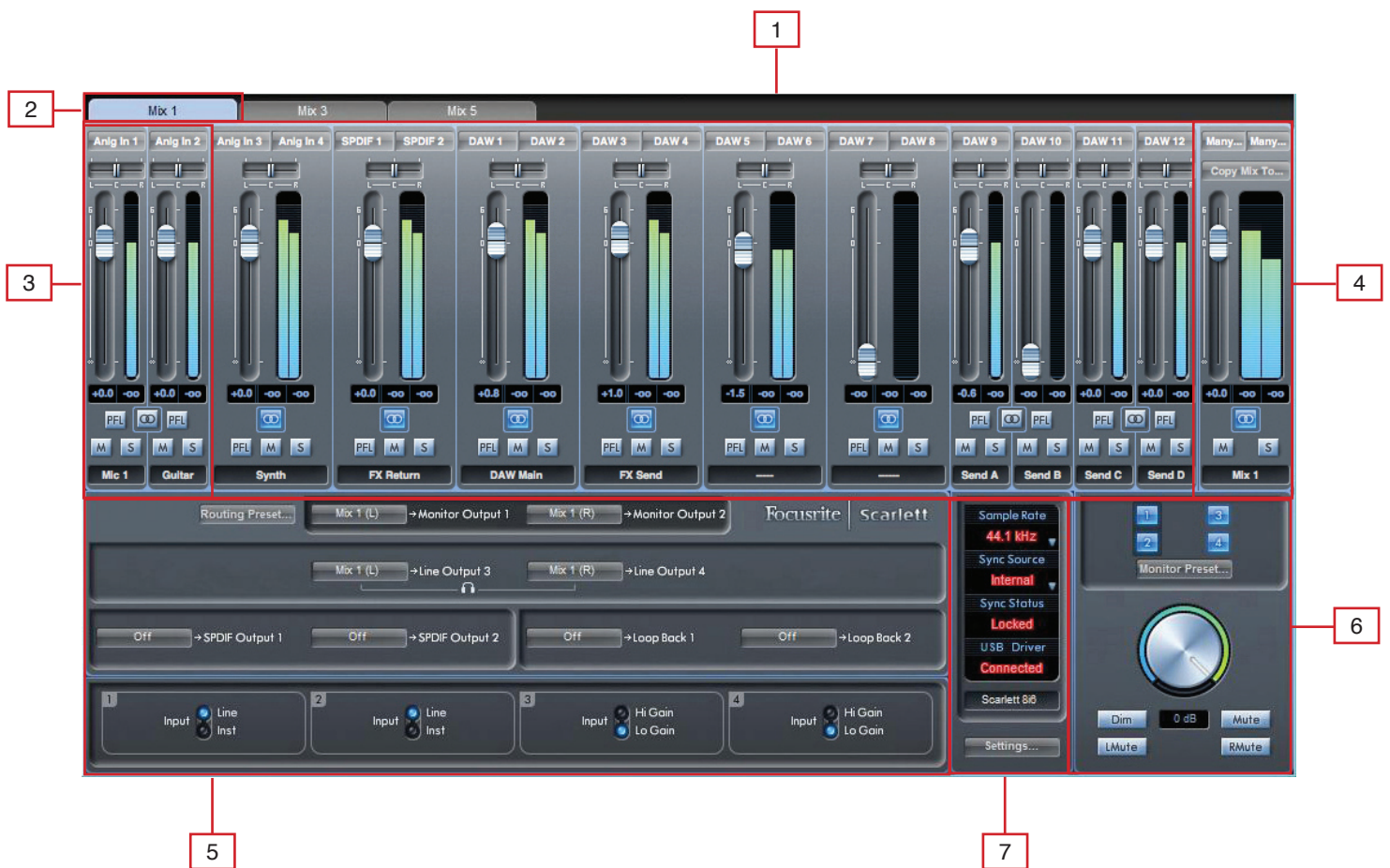
Windows

Start > Programs > Focusrite > Scarlett MixControl.

Mac

Open Finder > Applications > Scarlett MixControl.

This is how the Scarlett MixControl Graphical Interface will appear on your computer.



- [1] Mixer
- [2] Selected Mix tab
- [3] Mixer Input channel
- [4] Selected Mix Output channel
- [5] Routing and pre amp section
- [6] Monitor section
- [7] Device Status section

Pre amp section

When connecting a microphone to Scarlett 8i6, connect an XLR cable to the combo inputs on the front panel. When connecting either line level signal or instrument signal to the combo inputs, select either 'Line' or 'Inst' from the pre amp section.



Additional Line level signals can be connected to inputs 3 and 4 on the rear of the unit. The pre-amp gain for inputs 3 and 4 can be set to either Lo (low) or Hi (high) gain. The maximum input level before the signal will clip for each setting is as follows:

Low gain: 0dBFS = +16dBu

High gain: 0dBFS = -10dBV (~-6dBu)

Mixer section

The Scarlett MixControl software includes a total of 6 mixes, each with a maximum of 18 channels in the mix. Up to 6 mono mixes or 3 stereo mixes, (or any combination of mono and stereo mixes) are available, making up a total of 6 mix channels.

The Mixer Section is used to create mixes for monitoring purposes. Created mixes do not affect how the audio inputs are routed to the DAW, nor do they affect the audio level of the recorded signal. What is set up in the mixer section of Scarlett MixControl only affects what is heard in the outputs of the mix.

The recording levels that are sent to the DAW are therefore only affected by the input gain settings on the Scarlett 8i6, not the mixer.

The mixer section is useful for creating different simultaneous mixes. For example, the recording engineer may wish to provide a headphone monitor mix for the recording artist that is different to the mix heard in the monitor speakers, where the artist needs to hear mainly the backing track, and a little of the recorded input signal, whereas the engineer needs to hear mainly the recording artist's signal and a little of the backing track.

A separate mix can be created for both artist and engineer with the exact levels desired. Each independent mix is created on a different mix tab.

Mixer tab



Each mix can be selected by clicking on the corresponding mixer tab.

Input channel

Here is a picture of 2 mixer input channels. Below is a description of every component of a mixer channel.



Audio source select

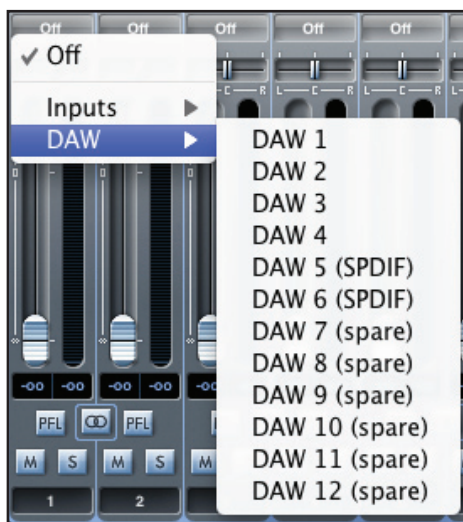
When there is no input to a mixer channel, it will display “Off”.



Clicking on the “Off” region brings up a list of all available inputs that can be fed to the channel. All analogue (labelled ‘Anlg’), digital inputs (S/SPDIF), and DAW outputs are available.

When selecting a source on a stereo channel, if an odd numbered input is chosen for the left channel, the next even number input is auto selected for right, and vice versa.

Note that if an input has already been taken, it will be greyed out and cannot be selected again. The input needs to be deselected from the track where it is already taken, and then re-selected on the desired track.



To get sounds from the DAW or other computer applications into the mixer, ‘DAW 1’ and ‘DAW 2’ should be selected on a stereo input track.

Pan slider

A Pan slider is used to position the audio signal anywhere between the left and right speakers.



Moving the horizontal slider from left to right will move the audio signal from left to right within the stereo field, i.e., the signal is faded between two audio outputs such as monitor L and R.

When used with a stereo track, the slider affects the audio signal such that when fully left, only the left channel is heard, and when fully right, only the right channel is heard

Fader

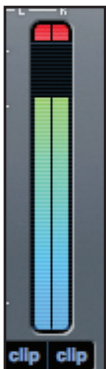


Use the fader to set the level of your audio signal for monitoring within the current mixer. Click the fader with your mouse and drag to any position. Double click on the fader to set it to 0.

Fader range is from $-\infty$ to +6 dB with the current fader level displayed in the box below. Holding the Shift key whilst moving the fader allows for fine adjustment of fader levels.

Meter

The meter shows the signal level of the source input to the channel. The recent maximum signal level is displayed in the box below.



The metering is always pre-fade, showing the level of the signal at the input. Therefore, the fader level has no effect on the metering.

There is a clip light at the top of the meter. If this red portion at the top of the meter lights up, then the signal level is too high. The signal level must be turned down by either using the gain knobs on the front panel for the analogue inputs, using the gain on the external devices connected to the digital inputs, or using the gain within the DAW.

Once the gains are lowered, click on the red portion to reset the clip light.

Mute



Pressing this button mutes the signal. Red indicates that mute is active.

Solo



Pressing this button solos the signal. The level of the fader will affect the level of the soloed signal. Yellow Indicates that solo is active.

PFL (Pre-fade listen)



Pressing this button solos the signal and automatically routes it to monitor 1 and 2. The level of the soloed signal is pre-fade (i.e. it will not be affected by the level of the fader). Green indicates that PFL is active.

Stereo



Pressing this button combines 2 mono channels into 1 stereo channel.

Track name



As a default, each track is given a corresponding number as a name. Double click to rename the track to something more useful such as 'Vocal Mic'.

Mix output channel



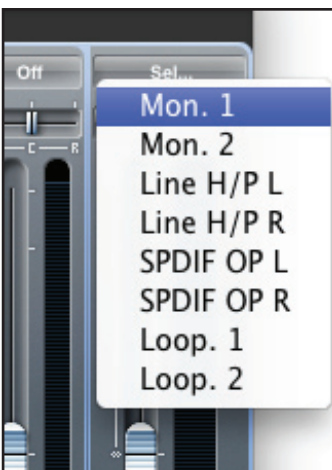
The output channel of the mix is where all the input channels are routed to and mixed together. The output channel provides control of the overall level of the entire mix. It is possible to send a mix to any or all hardware outputs; if a single output is selected this is displayed at the top of the output channel. "Many..." will be displayed if multiple outputs are selected.

The output channel can be either mono or stereo depending on the status of the stereo button. When the channel is set to stereo, the tab for that mix doubles in size. This is because the stereo version takes up 2 channels of the available total output channel count.

Note that when the solo button on an output channel is pressed, that channel (i.e. the whole mix) is soloed and routed to Monitor outputs 1 and 2. This is a non-latching button.

The current mix can be named by typing the desired name in the text field below the output channel. The given name appears in the mix tab. For example, Mix 1 can be renamed "Monitor Mix", and Mix 5 named "Headphone 1 Mix".

To copy an existing mix to another mix, simply click on "Copy Mix To..." and select the mix to which a copy is required. Note that a stereo mix can only be copied to another stereo mix, and a mono mix to another mono mix. Therefore it is important to make sure that the output channels are correctly set up to either stereo or mono before copying the mix.



Clicking "Sel..." will show a drop down menu of the available output destinations for the selected mix. Selecting an output in this menu will choose the output destination for the selected mix.

Routing section



The routing section allows the setting up of audio sources which are to be routed directly to physical outputs. The routing section displays every physical output on the Scarlett 8i6. An audio stream can be routed to an output using the dropdown menu to the left of the output.



Clicking on the box to the left of the output label will bring up a list of all available audio output sources.

The available sources include:

- All inputs (Analogue 1-4, S/PDIF)
- All DAW playback streams (DAW 1 - 12)
- All mixes from the mixer (Mix 1 - 6)

If the mix has been named (by clicking in the track name section – see previous chapter) then this name is displayed as the mix source name.

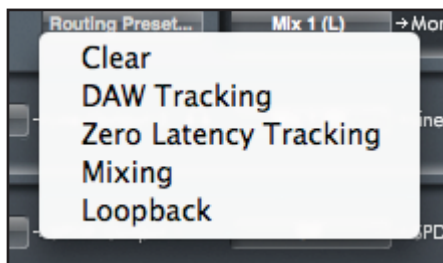
Note that the routing section is linked to the selection made for the output channel destination set-up in the mixer.

Routing audio to the headphones

The headphone symbol in the router denotes the source for the left and right ears of the headphones. The headphone left ear is a copy of line output 3 and the right ear a copy of line output 4. All audio routed to line outputs 3 and 4 will be heard in headphone left and right respectively.



Routing presets



Routing presets are provided as a starting point for the creation of routing and mixer set-ups.

These will enable the quick set up of routing for recording (monitoring inputs); mixing (sending signals out to outboard processors or external mixer); or internal looping (routing audio between software applications without leaving the computer).

Clear

This turns off all output routing. This can be used to reset the routing for the complete restart of a configuration, meaning that there is no requirement to manually reset the routing.

DAW Tracking

'DAW Tracking' is used for the initial recording process. It will automatically output DAW 1 and 2 to be sent to all line outputs, the main monitors (1+2) and headphones. All input channels must therefore be monitored from within the DAW application.

Zero Latency Tracking

Zero Latency Tracking is used for the recording process. It will automatically output Mix 1 and 2 to all the line outputs, routing to the main monitors and to the headphones simultaneously. Line inputs and DAW outputs must be set up in Mix 1 so that the monitor sources can be monitored with zero latency. It is important that the same signals are not monitored from within the DAW at the same time, otherwise the same signal twice will be monitored twice (once direct from Scarlett MixControl AND a second time (with latency) from the DAW.)

Mixing

'Mixing' is used for the mixing process. DAW outputs route directly to the line output of the same number allowing external mixing of the 4 signals in e.g. an analogue mixer. DAW outputs 1-4 are routed to Line outputs 1-4.

Loopback

Use when recording from one software program to another. Loopback can be used for routing audio from e.g. your internet browser to record into the DAW, or to record from one DAW to another.

To prevent any audio feedback, make sure that the DAW you are recording into is not set to monitor its own inputs. Alternatively, set the outputs of the DAW which is being recorded into to 3 and 4; this allows the monitoring of the inputs without feeding the signal back into the record stream.

Monitor section



The output levels of the monitor outputs and line outputs are configured in the Monitor Section. Scarlett 8i6 can be set up so that the audio sent to the line outputs are controlled by the software volume dial; independent of the software volume dial; or muted.

Monitor control enable buttons (1 to 4)



The monitor control enable buttons indicate which outputs are controlled by the monitor section on the GUI directly below the 4 buttons. The Scarlett 8i6 can be set up so that there is control of volume levels, and depending on the monitoring set-up, level sent to just a single pair of speakers, or up to 4 speakers can be controlled simultaneously.

(All digital output levels are unaffected by the monitor section in Scarlett MixControl. The output levels set up in the DAW are used to control digital output levels).

Each button can be set to 1 of 3 possible states:



Blue - this output is controlled by the below monitor section



Red - this output is not controlled by the below monitor section and it is muted



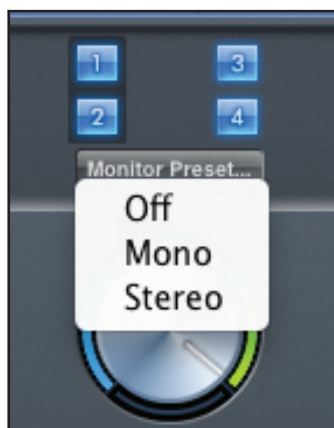
Grey - this output is not controlled by the below monitor section and it is at full level.
To set a button to its grey state, SHIFT + Click the button

WARNING: When a monitor control button is set to 'Grey', the signal routed to that output will be played back at full level. This may potentially result in a very loud signal being sent to your monitor speakers, headphones or other equipment.

Therefore it is important to be cautious when setting levels (in the DAW or the Scarlett MixControl Mixer) before setting the monitor button to Grey.

Monitor presets drop-down menu

These presets allow quick changing of typical monitoring set-ups.



For the monitor presets to work, you must have your speakers connected to the line outputs as shown below.

Line out	Speaker
1	Left
2	Right
3	Mono Speaker

Monitor Presets

Preset Name	Output
Off - no monitor control buttons enabled, therefore no sound will come out of any analogue output	No Outputs
Mono - outputs only to the centre / mono speaker (Line output 3.) All other channels are muted	Output - 3
Stereo - outputs to stereo speakers (monitor 1 and 2 output.) All other channels are muted	Outputs - 1, 2

Monitor section controls

The following controls in the Monitor Section will affect those channels that have been selected for monitor control (indicated with a blue button, see above).

Monitor level control knob



The output level of all assigned outputs is set using this knob. The output level can be adjusted using the mouse and will affect all assigned outputs (as indicated with a blue button). The dB display below shows the current level to which the monitor knob is set.

Note that the front panel Monitor control affects only outputs 1 and 2, and is an additional volume control on top of the monitor level set in Scarlett MixControl software.

Dim switch



Attenuates the output level by 18dB

Mute switch



Mutes the output

Left mute switch



Mutes the left output

Right mute switch



Mutes the right output

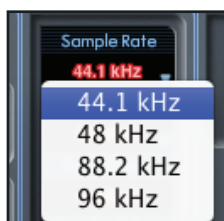
Remember that these dim and mute buttons only affect the outputs selected for control (i.e. Blue) in the monitor control section.

Device status section



The Device status section shows information about the sample rate, synchronisation and driver status of Scarlett 8i6. The desired sample rate can be set as well as external synchronisation options for using Scarlett 8i6 with external digital devices.

Sample rate display



The sample rate display shows the current sample rate at which the Scarlett 8i6 is running. To change the sample rate, click on the red sample rate value and select 44.1kHz, 48kHz, 88.2kHz, or 96kHz,

Note: you must quit your DAW application BEFORE you make sample rate changes to prevent any undesirable side-effects in your DAW!

Sync source display



This sync source display shows the currently selected sync source. To change the sync source, click on the red sync source value and select S/PIDF or Internal.

Sync status display

The sync status display shows “Locked” when the Scarlett 8i6 has successfully locked to the specified Sync Source. If “No Lock” is seen, then the unit has been unable to lock to an external S/PDIF signal. If this is the case, then please check that digital cables are secure in their input sockets, and that the external digital devices have been set up as sync master devices.

USB driver



The USB driver display shows “Connected” when the Scarlett 8i6 is connected to the computer via USB.

Unit name display

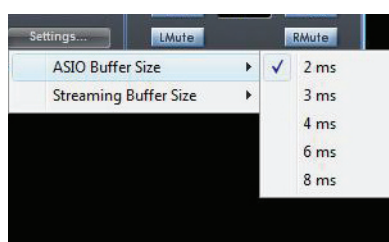


This displays the name of the Scarlett 8i6 unit, and allows the re-naming of the Scarlett 8i6 unit. Right-click in the field and enter your text. Press ENTER (RETURN) on your computer keyboard to complete.

Settings menu (Windows only)

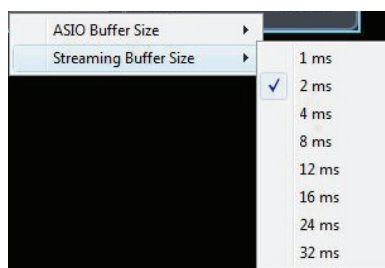
The settings menu is a drop down menu containing driver latency settings. Macintosh OSX users will change driver latency from within their chosen DAW or music software application. PC users set the latency settings here.

ASIO buffer size



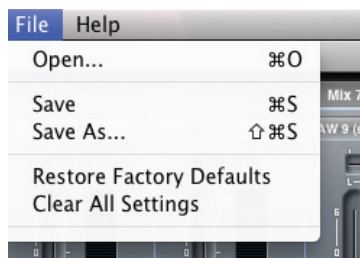
The ASIO buffer size sets the driver latency for your DAW or music software application. A small buffer size will result in lower latency at the expense of increased CPU usage. A high buffer size will result in a higher latency but with lower CPU usage. If you are using lots of virtual instruments and effects processing in your DAW project, and the CPU usage is high, then increase the buffer size to permit lower CPU usage. Note that the ASIO buffer size settings are dependant on the streaming buffer size settings. To obtain the lowest ASIO buffer size, the streaming buffer size must also be set low.

Streaming buffer size

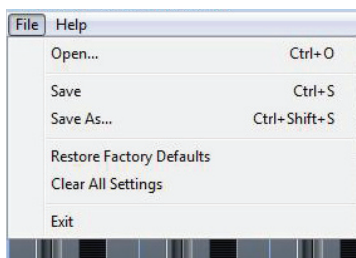


The streaming buffer size sets the driver latency for all other windows applications. The same CPU usage vs buffer size settings trade-off applies as above.

File menu



Mac



Windows

Open - opens a 'File Open' window allowing selection of any pre-saved Scarlett MixControl set-ups.

Save - opens a 'File Save' window allowing selection of a location into which your Scarlett MixControl set-up can be saved. Subsequent saves overwrite the original file.

Save As - opens a 'File Save' window allowing selection of a location into which your Scarlett MixControl set-up can be saved. Use this option if you want to keep your original saved set-up and create a new one with a different name.

Restore Factory Defaults - causes the Scarlett 8i6 to revert to the original default state in which it left the factory.

Clear All Settings - causes the Scarlett 8i6 to reset all mixer and routing settings. This can be used to globally reset all mixer, routing, and monitor settings, allowing creation of a new set-up from scratch.

As can be seen from the above screen shots, 'Open', 'Save' and 'Save As' all have keyboard shortcuts. These are standard shortcuts for their respective functions, so if when regularly changing settings for various sessions, the shortcuts will reduce your set-up time.

Performance specifications

Microphone Inputs 1-2

- Frequency Response: 20Hz - 20kHz +/- 0.2 dB
- Gain Range: +13dB to +60dB
- THD+N: 0.001% (measured at 1kHz with a 20Hz/22kHz bandpass filter)
- Noise EIN: 124dB analogue to digital (measured at 60dB of gain with 150 Ohm termination 20Hz/22kHz bandpass filter)
- Input Impedance: 2k Ohm

Line Inputs (Inputs 1-2)

- Frequency Response: 20Hz - 20kHz +/- 0.2dB
- Gain Range: -10dB to +36dB
- THD+N: 0.001% (measured with 0dBFS input and 22Hz/22kHz bandpass filter)
- Noise: -90dBu (22Hz/22kHz bandpass filter)
- Input Impedance: >10k Ohm

Line Inputs 3-4

- Frequency Response: 20Hz - 20kHz +/- 0.2 dB
- Gain Range: Switch-able between +16dBu or -10dBV for 0dBFS (balanced inputs)
- THD+N: 0.003% (measured at 1kHz with a 20Hz/22kHz bandpass filter)
- Noise: -100dBu (22Hz/22kHz bandpass filter)
- Input Impedance: >10k Ohm

Instrument Inputs (Inputs 1 and 2)

- Frequency Response: 20Hz - 20kHz +/- 0.1dB
- Gain Range: +13dB to +60dB
- THD+N: 0.004% (measured with 0dBu input and 20Hz/22kHz bandpass filter)
- Noise: -87dBu (20Hz/22kHz bandpass filter)

Analogue Audio Outputs (Outputs 1-4)

- 4 Electronically Balanced Outputs
- Maximum Output Level (0dBFS): +12dBu
- THD+N: 0.001% (0dBFS input, 20Hz/22kHz bandpass filter)

Crosstalk (Channel Isolation)

- Any input to input: > 100dB
- Any output to output: > 100dB
- Any input to output: > 100dB

Digital performance

- A/D Dynamic Range > 109dB (A-weighted), all analogue inputs
- D/A Dynamic Range > 106dB (A-weighted), all analogue outputs
- Clock Sources:
 - Internal Clock
 - Sync to Word Clock on S/PDIF Input (RCA)
- Clock jitter < 500 picoseconds
- Supported Sample Rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz
- 8 input channels to computer: Analogue (4), Loop-back (2) and S/PDIF (2).
- 12 output channels from computer: Analogue (4), S/PDIF (2), DAW (6)
- 18 input by 6 output mixer.

Front and rear connectivity

Analogue Channel Inputs (Inputs 1-4)

- 2 Mic XLR Combo (channels 1-2) on front panel
- 2 Line ¼" TRS (channels 3-4) on rear panel
- Automatic switching between Mic / Line (channels 1-2)
- Switching between Line / Instrument Inputs (channels 1-2) via Scarlett MixControl Application
- Switching between +16dBu (low) and -10dBV (high) gain on inputs 3-4 via Scarlett MixControl Application

Digital Channel Inputs (Inputs 7-8) 44.1 - 96kHz

- Stereo S/PDIF input on RCA

Analogue Audio Outputs (Outputs 1-4)

- 4 ¼" TRS Jacks
- Output Level control (analogue) for outputs 1 and 2
- Stereo Headphones on ¼" TRS (also routed to Outputs 3 & 4) with independent analogue volume control

Digital Channel Outputs (Outputs 5-6) 44.1 - 96kHz

- Stereo S/PDIF Output on RCA

Other I/O

- 1 USB "Type B" Connector
- 2 Standard 5-pin DIN MIDI connectors: In and Out
- DC Power Input Connector (for use with supplied universal input power supply)

Front Panel Indicators

- 2 Two segment input meters, -18 and 0dBFS
- "Lkd" Locked Indicator
- "USB Connected" Indicator
- Instrument input source selection LED for channels 1 and 2
- Phantom Power (48V) switch and LED for inputs 1 and 2

Weight and Dimensions

- Dimensions: approx. 215 x 450 x 220mm (W x H x D)
- Weight: 1.5kg

Troubleshooting

For all troubleshooting queries, please visit the Focusrite Answerbase where there are articles covering numerous troubleshooting examples. www.focusrite.com/answerbase.

Copyright

Focusrite is a registered trade mark of Focusrite Audio Engineering Limited. Scarlett is a trade mark of Focusrite Audio Engineering Limited. 2010 © Focusrite Audio Engineering Limited. All rights reserved.