Focusrite | Saffire 6 USB

User Guide



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www.focusrite.com

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
12. WARNING - To reduce the risk of fire or electric shock do not expose this apparatus to rain or moisture.
13. The appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
14. No naked flame sources, such as lighted candles, should be placed on the apparatus.

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1 OVERVIEW

1.1 Introduction

Thank you for purchasing Saffire 6 USB, one in a family of Focusrite professional multi-channel audio 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 user guide provides a detailed explanation of the hardware to help you achieve a thorough understanding of the product's operational features. We recommend that both users who are new to computer recording, as well as more experienced users, take the time to read through the user guide so that you are fully aware of all the possibilities that the Saffire 6 USB and accompanying software has to offer. If the main User Guide sections do not provide the information you need, be sure to consult http://www.focusrite.com/answerbase, which contains a comprehensive collection of common technical support queries.

1.2 Features

The Saffire 6 USB hardware interface provides the means for connecting microphones, line-level signals, and instrument-level signals to a computer running Mac OS or Windows. The physical inputs and outputs can be routed to and from your audio recording software / digital audio workstation (referred to throughout this user guide as "DAW"). Audio signals connected to the physical inputs can be recorded in the DAW and then routed from your DAW to the physical outputs. The physical outputs can be connected to an amp and speakers, powered monitors, headphones, analogue mixer or any other analogue audio equipment that you wish to use. There are also connectors for sending and receiving MIDI through the Saffire 6 USB. All inputs and outputs on the Saffire 6 USB are routed directly to and from your DAW for recording and playback, though you can configure the routing within your DAW in order to meet your needs.

1.3 Box Contents

Along with your Saffire 6 USB you should have:

- Installer CD
    - Installer for Mac and Windows
    - Focusrite Plug-in Suite for Mac and Windows (Compressor, EQ, Gate, Reverb)
- Xcite+ Pack DVD
    - Ableton Live LE version 7 w/ registration card
    - Novation BassStation AU/VST Synthesizer plug-in w/ registration card
    - Over 1GB of 'Loopmasters' and 'Mike the Drummer' royalty free samples
- USB cable
- Self adhesive rubber feet (Qty 4) - to be fitted to base of the Saffire 6 USB
- Product Registration Card
- Focusrite / Novation Product Brochure

1.4 System Requirements

Mac OS

- OS: Mac OS X 10.5.7 or later
- Computer: Apple Macintosh with a USB 1.1 compliant USB port
- CPU/Clock: PowerPC G4/1 GHz or higher (Intel/Dual 1 GHz or better recommended)
- Memory (RAM): 512 MB (1 GB or more recommended)
- Screen Resolution: 1024x768 (1280x1024 or more recommended)

Windows

- OS: Windows Vista (All Versions) or Windows XP SP2 or higher (All Versions)
- Computer: Windows compatible computer with a USB 1.1 compliant USB port
- CPU/Clock: Pentium or AMD with 1 GHz or higher (Dual 1 GHz or better recommended)
- Memory (RAM): 512 MB (1 GB or more recommended)
- Screen Resolution: 1024x768 (1280x1024 or more recommended)

2 GETTING STARTED

2.1 Software Installation

PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING SAFFIRE 6 USB TO YOUR COMPUTER

We aim to ensure that the latest installation software will be on the disk included with your Saffire 6 USB. However we strongly recommend that you check for the latest version of software on our website at http://www.focusrite.com/support/software/ before using Saffire 6 USB.

2.1.1 Mac OS Installation

1. Insert your installer disk into your computer's CD-ROM and/or DVD-ROM drive.
2. A should window should appear displaying the contents of the disc. If this window does not appear automatically, you can manually navigate to the disc in the Mac OS Finder.
3. Double click on the installer icon to begin installation - labelled 'Install Saffire 6 USB.pkg'.
4. Follow onscreen instructions to complete installation.
5. When the installer is finished, restart your computer.
6. After restart, connect the Saffire 6 USB to your computer.

Your Computer OS should automatically switch its default audio outputs to be the Saffire 6 USB. To make sure this is the case, go to System Preferences > Sound and set the input and output to 'Saffire 6USB'. For more detailed setup options on a Mac OS, open to Applications > Utilities > Audio MIDI Setup.

2.1.2 Windows Installation

1. Insert your installer disk into your computer's CD-ROM and/or DVD-ROM drive.
2. A window should open displaying the contents of the disc. If the window does not appear automatically, you can manually navigate to your disc drive in the Windows Explorer.
3. Double click on the installer icon to begin installation - labelled 'Saffire 6 USB Setup.exe'.
4. Follow onscreen instructions to complete installation.
5. When the installer is finished, restart your computer.

6. After restart, connect the Saffire 6 USB to your computer.

Your Computer OS should automatically switch its default audio outputs to be the Saffire 6 USB. To make sure this is the case:

On Windows Vista go to Start > Control Panel > Hardware and Sound > Sound > Manage Audio Devices and set 'Default Playback' and 'Recording' to 'Saffire 6USB'.

On Windows XP, go to Start > Control Panel > Sounds, Speech and Audio Devices > Sounds and Audio Devices > Audio tab and set 'Sound Playback' and 'Recording' to 'Saffire 6USB'.

2.2 Connecting Your Saffire 6 USB

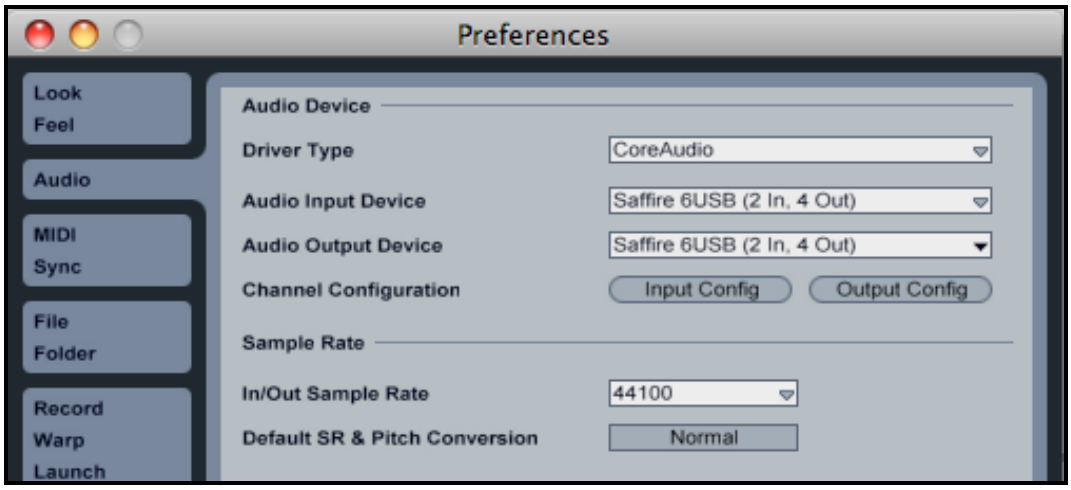
> IMPORTANT: Before you connect Saffire 6 USB to your computer, please complete the installer according to the instructions. This will ensure that the correct drivers are used, thus preventing unexpected behaviour.

The Saffire 6 USB has a single USB port on the back. Once installation is complete, simply connect Saffire 6 USB to your computer using the provided USB cable. Whilst Saffire 6 USB is a USB 1.1 device, the USB connection will work with any USB 1.1 or USB 2.0 compliant connector on your computer.

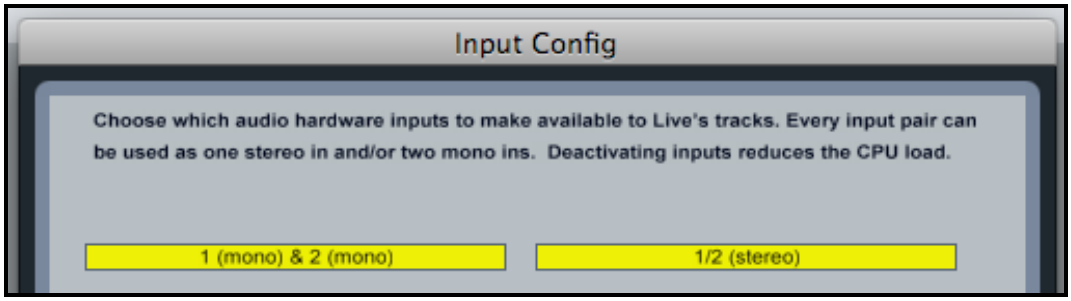
2.3 Audio Set-up in your DAW

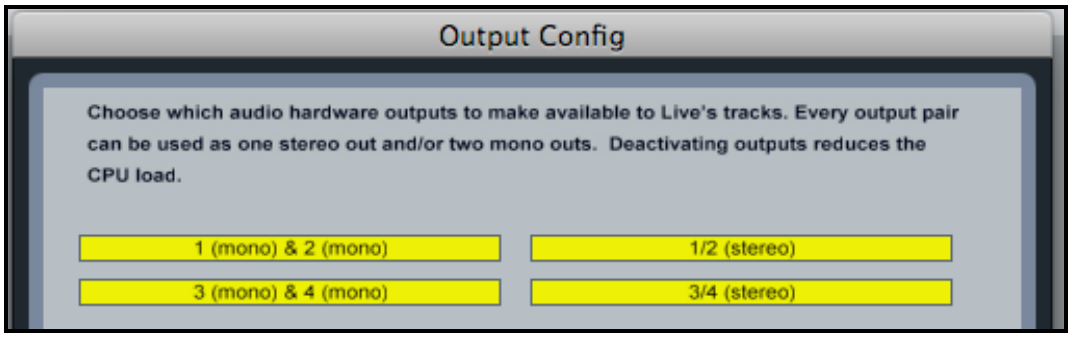
Saffire 6 USB is compatible with any DAW that supports ASIO or WDM on Windows and any DAW that uses Core Audio on Mac. After installing the drivers and connecting the hardware, you can start using Saffire 6 USB with your DAW of choice. Ableton Live Lite is included with the Xcite+ Pack to get you started.

Please note - your DAW may not automatically switch to Saffire 6 USB as its default device. In this case, you must ensure that you select 'Saffire 6 USB' as the driver in your DAW's audio set-up page. Please refer to your DAW's documentation if you are unsure where to select the ASIO / Core Audio driver. The example below shows correct configuration of Saffire 6 USB within the Ableton Live Preferences panel.



Once Saffire 6 USB has been selected in your DAW, audio inputs 1-2 and audio outputs 1-4 will appear within 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 1-4 enabled in the Ableton Live Audio Preferences.

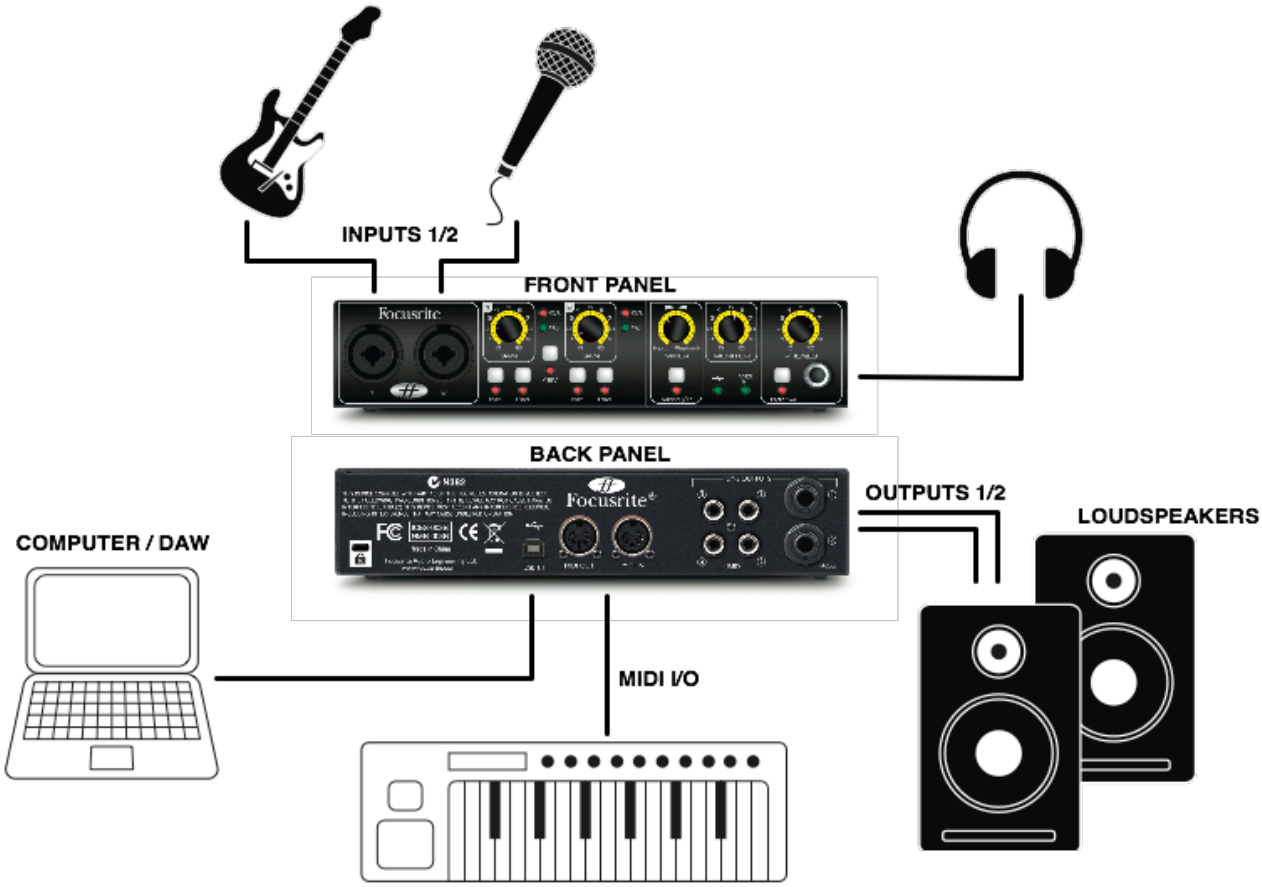




2.4 Example Hardware and Software Usage

Saffire 6 USB is an excellent choice for several different recording and monitoring applications. Some typical configurations are shown in the diagrams below.

2.4.1 Recording with Saffire 6 USB in your DAW

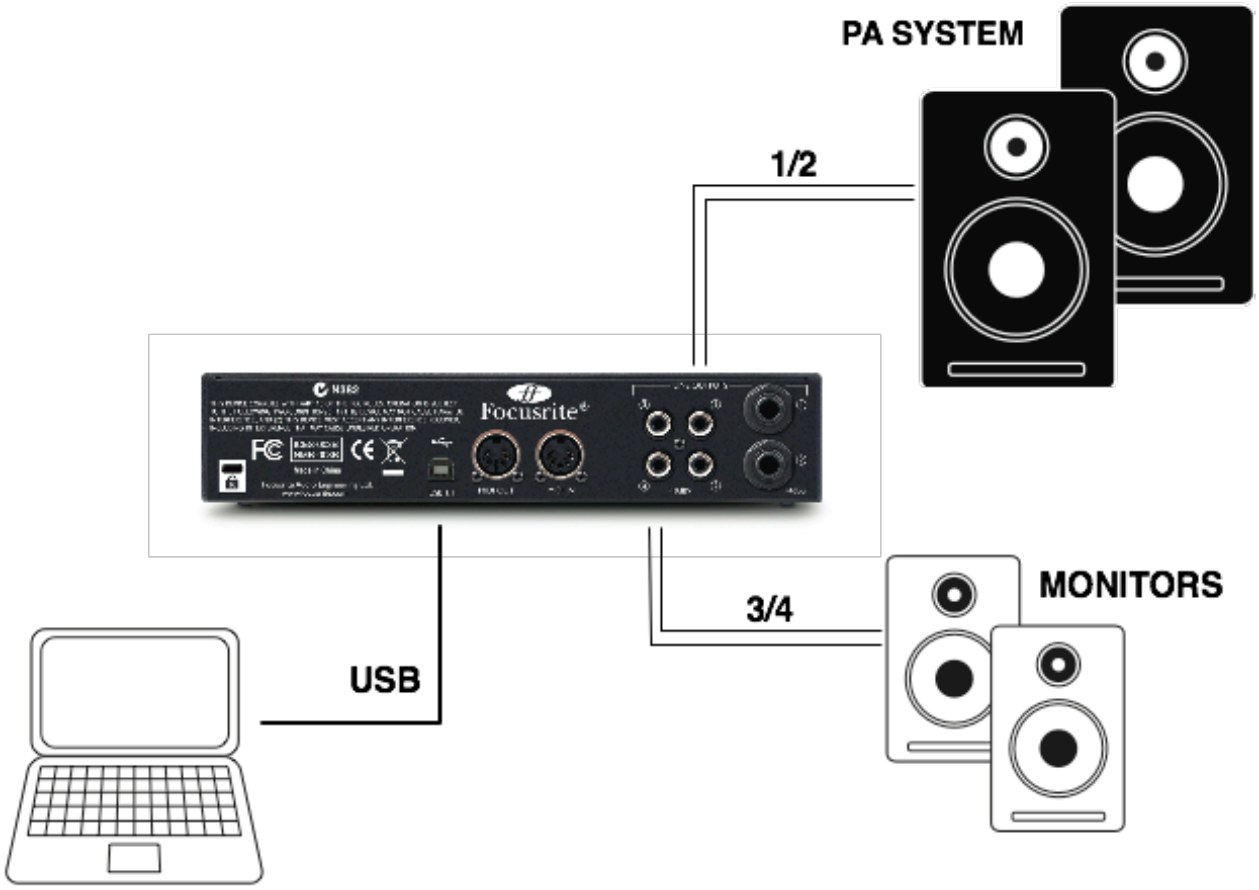


This setup illustrates the most typical configuration for recording with a digital audio workstation (DAW) software on your Mac or PC. In this case, you might record guitar through

instrument input 1 and vocals through mic input 2 into Ableton Live whilst monitoring the playback from Ableton Live in the headphones or loudspeakers. You might then lay down some basslines with the Novation BassStation (included on the Xcite+ Pack DVD) using a Novation MIDI controller like the SL MKii.

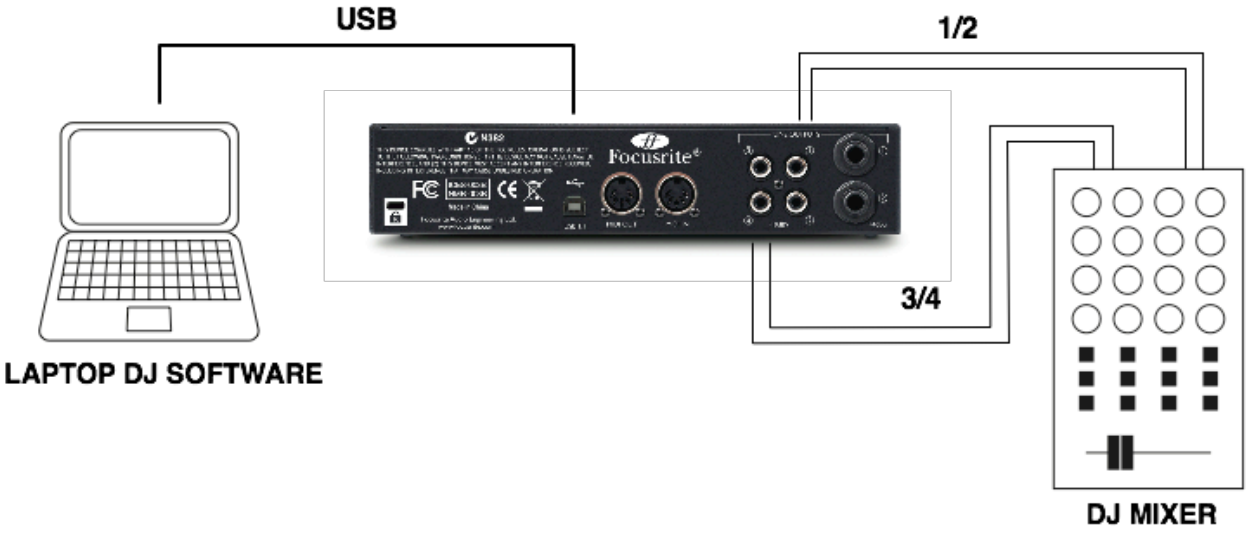
2.4.2 Connecting Saffire 6 USB to Loudspeakers

Both 1/4" outputs (1-2) and RCA/phono outputs (1-4) on the rear panel can be used to connect to speakers.



In this setup, the speakers can be connected directly (using the relevant cable) or via a line level input on an amp. Furthermore, either Outputs 1/2 or 3/4 can be used, as preferred. If Outputs 1/2 are used, Outputs 3/4 are free to be used for another purpose, such as connecting to an additional recording device or an additional pair of monitors. Note that if you require a balanced connection to your loudspeakers, you must use TRS 1/4" balanced cables on outputs 1/2. Outputs 3/4 are RCA and therefore do not offer a balanced connection.

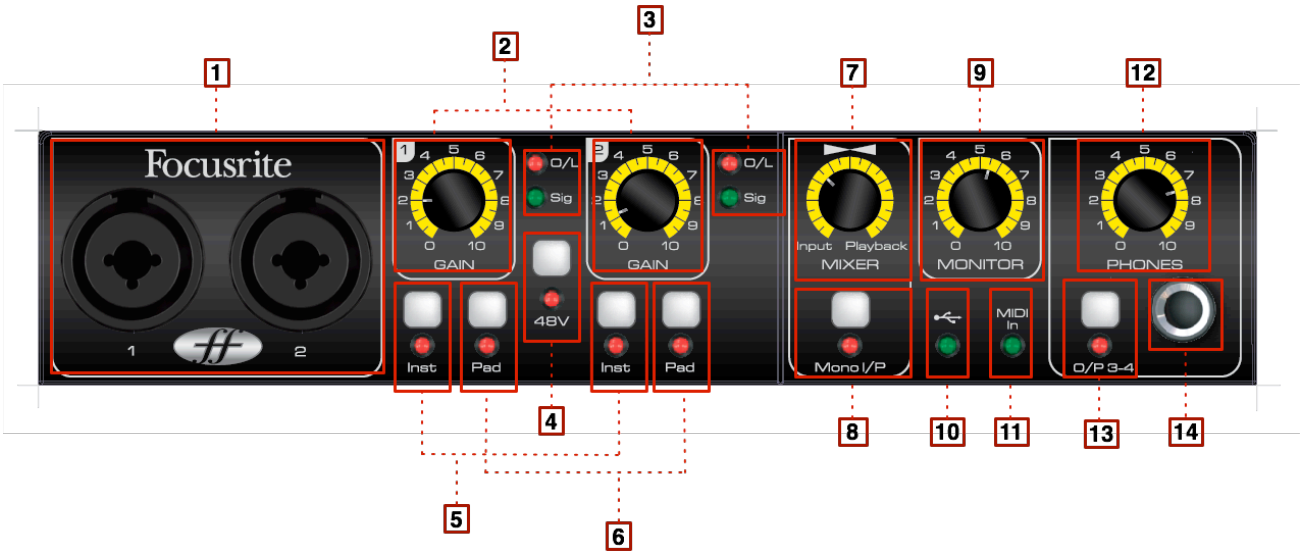
2.4.3 Connecting to a DJ Mixer



In this ‘DJing-style’ setup, Outputs 1/2 are connected to Line Inputs 1/2 of an external DJ mixer, whilst Outputs 3/4 are connected to Line Inputs 3/4. Connecting in this way means that the facilities on the mixer, such as EQs or the crossfader, can be accessed.

3 HARDWARE FEATURES

3.1 Hardware 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. Input 1-2 Combo XLR input sockets for Mic / Line / Instrument - connect microphones, instruments (eg, guitar), or line level signals*
2. Input 1-2 Gain Control - set the input gain for input signals on inputs 1-2
3. Input 1-2 'signal present' LEDs (lit green @ -18 dBFS) and 'clipping' LEDs (lit red @ -1 dBFS)
4. Shared phantom power switch with LED for Mic inputs 1-2 - enables +48V phantom power for condenser microphones which require power
5. Input 1-2 Instrument / Line level switches - switch either input between instrument and line level signals
6. Input 1-2 Level Pad switches - each switch attenuates the corresponding input by 10dB when engaged
7. Input/Output Monitor Mix - set the balance between input/output playback
8. Mono Input button - engage this switch for direct monitoring of mono input sources on stereo monitors or headphones
9. Main Monitor Output Level control knob - set the output level for outputs 1-2
10. USB Power LED - lit when the unit receives USB bus power via connection to the computer
11. MIDI input LED - lit when MIDI data is received at Saffire 6 USB MIDI input port
12. Headphone level control knob - set the output level to the stereo headphone output
13. Headphone selector switch - switch headphone monitoring to either Outputs 1-2 or 3-4
14. ¼" TRS headphone output jack - connect your headphones here

3.2 Hardware Back Panel



The Back Panel contains the following connectors for Saffire 6 USB:

1. 1 x Kensington security lock
2. 1 x USB 1.1 connector
3. 2 x Din5 MIDI Input/Output sockets
4. 4 x RCA phono jack sockets (Outputs 1-4) - output level @ -10dBV
5. 2 x TRS jack sockets (Outputs 1-2)- output level @ +4dBV

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

4 PERFORMANCE SPECIFICATION

Dynamic Range - 105 dB (A-weighted)

DAC Dynamic Range - 103 dB (A-weighted)

Actual ADC/DAC DNR - 114 dB (A-weighted)

Microphone Inputs 1-2

- Frequency Response: 20Hz - 20kHz +/- 0.1 dB
- Gain Range: 12dB to 60dB
- THD+N: 0.0025% (measured at 1kHz with a 20Hz/22kHz bandpass filter)
- Noise EIN: 120dB
- Input Impedance: 2k Ohms

Line Inputs 1-2

- Frequency Response: 20Hz - 20kHz +/- 0.1dB
- Gain Range: -10dB to +36dB
- THD+N: < 0.0025% (measured with 0dBFS input and 20Hz/22kHz bandpass filter)
- Noise: -90dBu (20Hz/22kHz bandpass filter)
- Input Impedance: >10k Ohm

Instrument Inputs 1-2

- Frequency Response: 20Hz - 20kHz +/- 0.1dB
- Gain Range: +13dB to +60dB
- THD+N: 0.0025% (measured with 0dBu input and 20Hz/22kHz bandpass filter)
- Noise: -87dBu (20Hz/22kHz bandpass filter)

Analogue Audio Outputs 1-2 (¼" TRS)

- Electronically Balanced Outputs
- Maximum Output Level (0dBFS): +9dBu
- THD+N: 0.0025% (0dBFS input, 20Hz/22kHz bandpass filter)

Analogue Audio Outputs 1-4 (RCA phono)

- Unbalanced Outputs
- Maximum output level (0dBFS): -3.5dBu
- THD+N: 0.03% (0dBFS input, 20Hz/20kHz bandpass filter)

5 PHYSICAL CHARACTERISTICS

Analogue Inputs Inputs 1-2

- Neutrik XLR Combo Mic/Line/Inst (Inputs 1-2) on front panel
- Automatic switching between Mic / Line
- Switching between Line / Instrument Inputs (channels 1-2) via front panel 'Inst' switches
- 'Pad' switches provide 10 dB attenuation
- Shared +48V phantom power switch for inputs 1-2

Analogue Outputs Outputs 1-4

- 2 x Balanced ¼" TRS Jacks (Outputs 1-2)
- 4 x RCA Phono connectors (Outputs 1-4)
- Main Output Level control (Outputs 1-2)
- Stereo Headphones Mix on ¼" TRS - switch-able between 1-2 mix and outputs 3-4 via a switch on the front panel

Other I/O

- 1 x USB 1.1 connector
- 2 Standard 5-pin DIN MIDI connectors: In and Out

Front Panel Indicators

- USB Logo LED indicates USB power
- MIDI In data activity LED
- Instrument input source selection LEDs for channels 1 and 2
- Signal and clipping LEDs for Inputs 1-2
- Pad indicators LEDs for Inputs 1-2

Weight and Dimensions

- Dimensions: approx. 14.5 x 4.5 x 22cm (W x H x D)
- Weight: 0.96 kg

6 TROUBLESHOOTING

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