Soundcraft®

by HARMAN

Si Multi Digital Card

User Guide

IMPORTANT

Please read this manual carefully before using your card for the first time.

This equipment complies with the EMC directive 2004/108/EC

This product is approved to
EMC standards
EN55103-1: 2009 (E2)
EN55103-2: 2009 (E2)

Warning: Any modification or changes made to this device, unless explicitly approved by Harman, will invalidate the authorisation of this device. Operation of an unauthorised device is prohibited under Section 302 of the Communications act of 1934, as amended, and Subpart 1 of Part 2 of Chapter 47 of the Code of Federal Regulations.

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 the 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 further details contact
Harman International Industries Ltd, Cranborne House, Cranborne Road, Potters Bar, Hertfordshire EN6 3JN, UK
Telephone +44(0) 1707 665000 Fax +44 (0)1707 660742 email: soundcraft@harman.com

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Part No. 5024024

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Harman International Industries Limited
Cranborne House, Cranborne Road, POTTERS BAR, Hertfordshire, EN6 3JN, UK

Tel:+44 (0)1707 665000
Fax:+44 (0)1707 660742
http://www.soundcraft.com

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with a dry cloth.

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of a polarised or grounding type plug. A polarised 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.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.

Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

NOTE: It is recommended that all maintenance and service on the product should be carried out by Soundcraft or its authorised agents. Soundcraft cannot accept any liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorised personnel.
WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not expose the apparatus to dripping or splashing and do not place objects filled with liquids, such as vases, on the apparatus. No naked flame sources, such as lighted candles, should be placed on the apparatus.
Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths, curtains etc.

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 when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la ClasseB respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

FOR YOUR OWN SAFETY AND TO AVOID INVALIDATION OF THE WARRANTY PLEASE READ THIS SECTION CAREFULLY.

SAFETY SYMBOL GUIDE

For your own safety and to avoid invalidation of the warranty all text marked with these symbols should be read carefully.

WARNINGS

The lightning flash with arrowhead symbol, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTIONS

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.

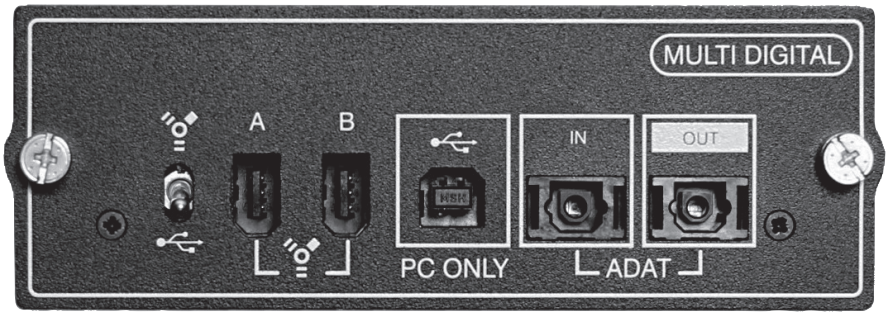
NOTES

Contain important information and useful tips on the operation of your equipment.

HEADPHONES SAFETY WARNING

Contain important information and useful tips on headphone outputs and monitoring levels.

INTRODUCTION



The Soundcraft® Multi Digital card offers digital audio connection between an Si Series console* and Apple® Mac® enabled with Firewire (1394), or PC enabled with a USB or Firewire port. Audio capability across the Firewire or USB link is 32 channels in and 32 channels out at 48KHz. In addition to the Firewire/USB ports, the Multi Digital card provides 8 further channels of ADAT in and out at 48KHz.

Connection and setup of the card to a PC is made simple with the use of the Soundcraft digital audio driver and associated control panel. Firewire connection to a Mac requires no software or drivers.

The additional ADAT channels in and out expand the connectivity further for functions such as expanding the input or output capacity with any ADAT-compatible I/O device.

NOTE: The Firewire and USB ports may not be used at the same time, these ports are 'either/or', however the ADAT functionality can be used in conjunction with the Firewire or USB.

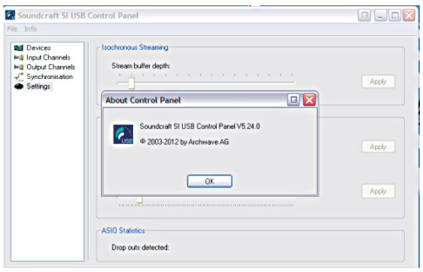
** Not Si1, 2, 3 or 'plus' variants*

Apple and Mac are trademarks of Apple Corp Inc.

NOTE: The packaging, in which your card arrived, forms part of the product and must be retained for future use.

INSTALLING THE DRIVERS (PC ONLY)

On PC systems, you will be required to install audio drivers. These can be found on the Soundcraft website. The drivers install software which is needed to enable communication between console and PC. The driver package also installs the control panel tool for adjusting various settings such as buffer size, input/output patching and synchronisation of the Firewire and USB mediums.



Once drivers are installed shortcuts for the control panel are normally available on the desktop or in program files under Soundcraft digital audio driver 1394 (USB).

When the card is connected to the computer taskbar, icons will indicate a device has been detected. Clicking the icon will open the appropriate control panel.

When the drivers are installed onto your PC, you will need to power it down, connect the Multi Digital card and then reboot for the process to be complete.

Taskbar icon indicating drivers are loaded and console is connected.

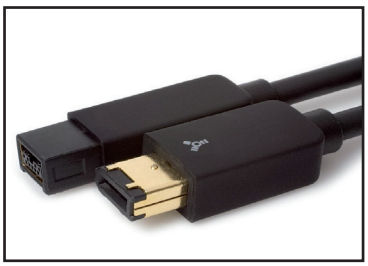
NOTE: There is no need to install drivers on a Mac as the Multi Digital Card uses Apple's Core Audio drivers.

Some DAWs detect the Multi Digital card and automatically prompt you to use the Soundcraft Digital (0000) audio driver; if your DAW does not present a similar dialogue you may have to detect the card manually.

Please refer to the documentation for your DAW, Mac or PC for details of how to adjust audio settings.

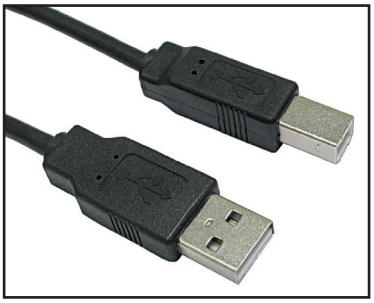
FIREWIRE AND USB CONNECTORS

The Soundcraft Multi Digital card features a Firewire 400 port and requires the corresponding 6 pin male plug. An Apple™ MacBook Pro™ (from 2009) uses the Firewire 800 plug so a Firewire 400 – 800 (6pin-9pin) cable must be used to connect these devices. If your device has a 4 pin firewire port most commonly found on a PC laptop, a 4pin to 6pin cable is required.



9 pin Firewire 800 (top) to 6 pin Firewire 400 (bottom)

The Soundcraft Multi Digital USB port is the square 'B type' connector (a standard for all peripheral devices). Most USB host devices use the rectangular 'A type' connector so typically a 'Type A to B' cable is required.

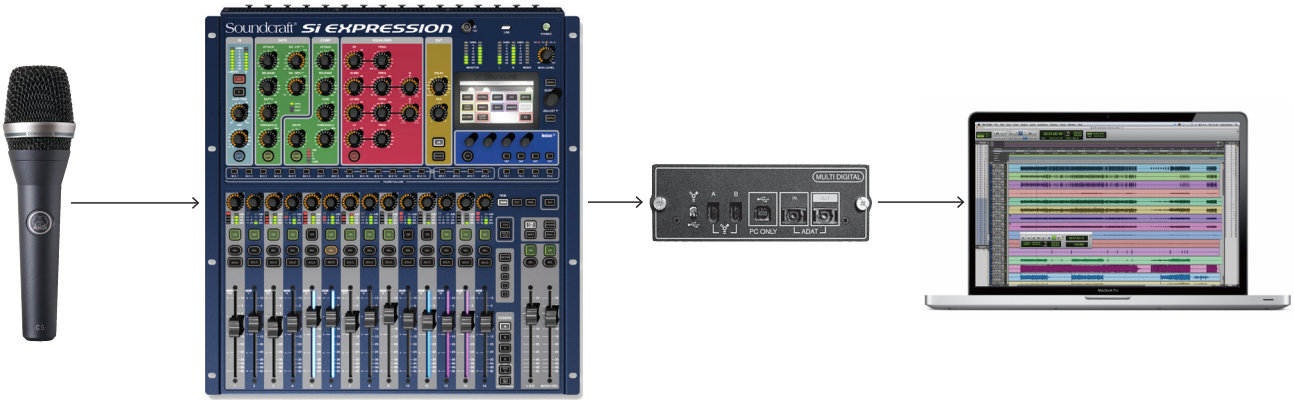


USB Type A to B

NOTE: Firewire and USB cables come in many different forms, ensure you use the correct cables for your system.

NOTE: It is advised to install the latest drivers in the host computer before connecting the Multi Digital card. Drivers may be found on the Soundcraft website; there is a 1394 driver for firewire devices and USB drivers for USB devices.

LIVE RECORDING WITH THE MULTI DIGITAL CARD



With the Multi Digital card installed in a console, live recording couldn't be simpler! Standard mic/line input sources can be recorded through the Si Series console via the multi-digital card to a DAW or similar. This simple yet powerful solution is suitable for recording live gigs; but is equally at home in the studio.

To record audio into the Mac or PC you will require a Digital Audio Workstation (DAW). Any DAWs that allow use of third-party audio drivers like Pro Tools, Logic, Cubase, Nuendo can be used. These full-featured tools will handle all the demands of live multi-track recording, becoming the hub for all of the recording activities.

NOTE: The PC or Mac hosting the DAW requires adequate hard disk space, RAM and processing power to ensure reliable operation; see the specification requirements for your chosen DAW package.

The audio to be recorded is typically sent via the 'direct outputs' on the source channels, for example:

Channel 1-32 on the console to... Direct out 'digital output 1-32' to... DAW channels 1-32 as illustrated in the table below.

Example of Patching Console to DAW

Console	Console Direct Output:	DAW Channel Inputs:
Input 1: Kick	Multi Digital Out 1	Channel 1: Input 1
Input 2: Snare	Multi Digital Out 2	Channel 2: Input 2
Input 3: Hi Hat	Multi Digital Out 3	Channel 3: Input 3
Input 4: Tom	Multi Digital Out 4	Channel 4: Input 4
etc.	etc.	etc.

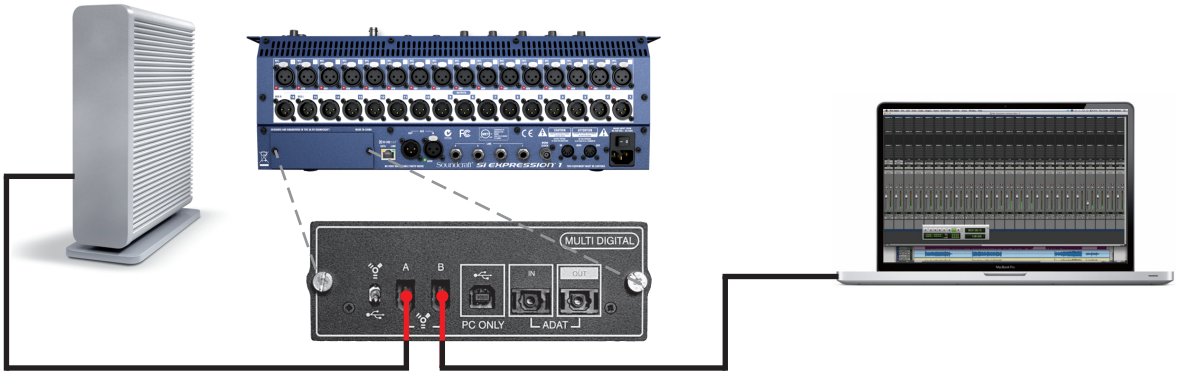
For playback from the DAW a '1:1 reversal' of the above will return the DAW signals to the console such that the mic recorded from channel 1 is played back on channel 1. This configuration allows a 'virtual sound check' to be conducted by just changing the console input patches from Mic to Multi Digital

Example of Patching DAW to Console

Daw Channel Outputs:	Console Digital In	Console Channel Inputs:
Channel 1: Output 1	Multi Digital In 1	Channel 1: Kick
Channel 2: Output 2	Multi Digital In 2	Channel 2: Snare
Channel 3: Output 3	Multi Digital In 3	Channel 3: Hi Hat 3
Channel 4: Output 4	Multi Digital In 4	Channel 4: Tom 4
etc.	etc.	etc.

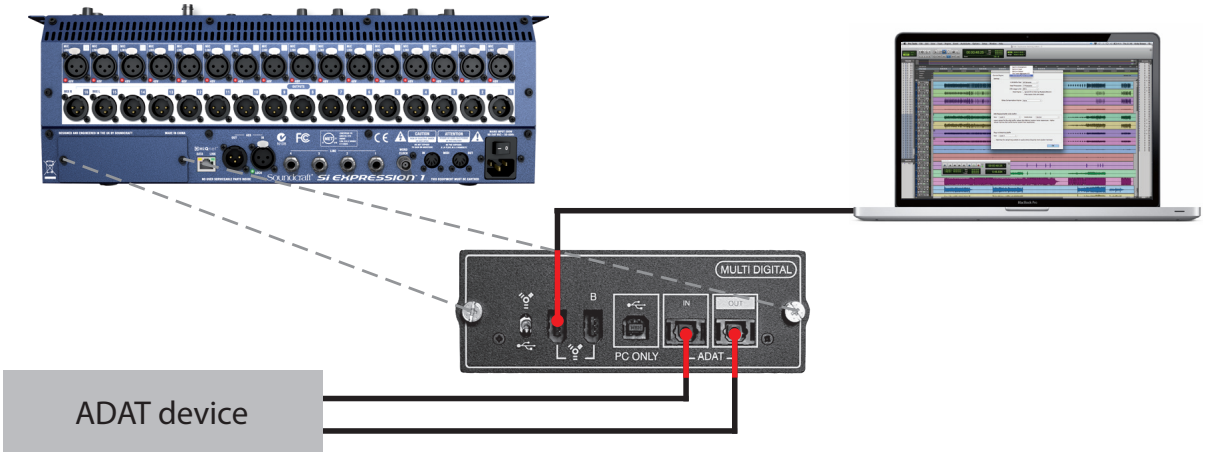
APPLICATION – SECOND FIREWIRE PORT

On the Multi Digital card there are two Firewire sockets that facilitate many uses. Firewire is a peer to peer network that allows for multiple devices to be connected to each other in a 'daisy chain' format. This allows the use of chaining an external hard drive and console from the PC or Mac.



APPLICATION – ADAT I/O

ADAT is a long accepted method of digital transfer. Devices such as the Alesis ADAT XT-8 were used to record live audio long before Firewire or USB was an audio connectivity standard. The reliability and resilience of ADAT makes the setup of a system straightforward. By patching direct outs, sub mix or mixes to the ADAT outputs of the Multi Digital card, signals can be sent to devices such as the Tascam HS-8 or similar hard disk recorders – ideal for recordings in small venues where carrying a laptop is not ideal.



Soundcraft
Harman International Industries Ltd
Cranborne House
Cranborne Road
Potters Bar
Herts. EN6 3JN
United Kingdom

+44 (0)1707 665000

www.soundcraft.com