

Spirit Digital Mic/Line Interface

USER MANUAL.....



Spirit Digital Mic/Line Interface

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Safety Symbol Guide

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



CAUTIONS

Must be followed carefully to avoid bodily injury.



WARNINGS

Must be observed to avoid damage to your equipment.



NOTES

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



IMPORTANT

Please read this manual carefully before connecting your Interface to the mains for the first time.



This equipment complies with the EMC Directive 89/336/EEC

This product is approved to safety standards
EN60065:1994
UL6500:1996
CSA E65:1994

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Part No. ZM0240
Issue I

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Warranty

1 **Spirit and Soundcraft** use trading divisions of Harman International Industries Ltd .

End User means the person who first puts the equipment into regular operation.

Dealer means the person other than Soundcraft (if any) from whom the End User purchased the Equipment, provided such a person is authorised for this purpose by Soundcraft or its accredited Distributor.

Equipment means the equipment supplied with this manual.

- 2 If within the period of twelve months from the date of delivery of the Equipment to the End User it shall prove defective by reason only of faulty materials and/or workmanship to such an extent that the effectiveness and/or usability thereof is materially affected the Equipment or the defective component should be returned to the Dealer or to Soundcraft and subject to the following conditions the Dealer or Soundcraft will repair or replace the defective components. Any components replaced will become the property of Soundcraft.
- 3 Any Equipment or component returned will be at the risk of the End User whilst in transit (both to and from the Dealer or Soundcraft) and postage must be prepaid.
- 4 This warranty shall only be valid if:
 - A) the Equipment has been properly installed in accordance with instructions contained in Soundcraft's manual; and
 - B) the End User has notified Soundcraft or the Dealer within 14 days of the defect appearing; and
 - C) no persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts maintenance adjustments or repairs to the Equipment; and
 - D) the End User has used the Equipment only for such purposes as Soundcraft recommends, with only such operating supplies as meet Soundcraft's specifications and otherwise in all respects in accordance Soundcraft's recommendations.
- 5 Defects arising as a result of the following are not covered by this Warranty: faulty or negligent handling, chemical or electro-chemical or electrical influences, accidental damage, Acts of God, neglect, deficiency in electrical power, air-conditioning or humidity control.
- 6 The benefit of this Warranty may not be assigned by the End User.
- 7 End Users who are consumers should note their rights under this Warranty are in addition to and do not affect any other rights to which they may be entitled against the seller of the Equipment.

IMPORTANT SAFETY INSTRUCTIONS



CAUTIONS

- **To avoid the risk of fire, replace the mains fuse only with the correct type and value fuse, as marked on the rear panel.**
- **AVIS: - Afin de réduire le risque de feu remplacer seulement avec fusible de même type.**
- **REPLACING MAINS FUSE**
Switch the ON/OFF switch to the OFF position. Remove the mains lead from the connector. Use a small screwdriver to prise the fuse carrier from its location in the connector. Check the fuse and replace if necessary; also check that the voltage selection is correct for the mains supply level before switching the unit ON again.
If the mains fuse fails repeatedly this may be because an electrical safety hazard exists. The unit must be taken out of service and referred to the Soundcraft/Spirit dealer from where the equipment was purchased.
- **THIS UNIT MUST BE EARTHED**
Under no circumstances should the mains earth be disconnected from the mains lead.
- **AVIS: - Cet appareil doit être branché à la terre.**
- The wires in the mains lead are coloured in accordance with the following code:

Earth: Green and Yellow (Green/Yellow - US)
Neutral: Blue (White - US)
Live: Brown (Black - US)

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol.

The wire which is coloured Blue must be connected to the terminal in the plug which is marked with the letter N.

The wire which is coloured Brown must be connected to the terminal in the plug which is marked with the letter L.

Ensure that these colour codings are followed carefully in the event of the plug being changed.



AVIS: RISQUE DE CHOC ELECTRIQUE
- NE PAS OUVRIR

- This unit is capable of operating over a range of mains voltages as marked on the rear panel. It is important to ensure that the correct mains fuse is fitted before switching on the unit.



WARNINGS

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- This unit contains no user serviceable parts. Refer all servicing to a qualified service engineer, through the appropriate Soundcraft dealer.
- Do not use this apparatus near water.
- Clean only with a damp cloth.
- Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
- Do not install near any heat sources such as radiators, heat resistors, stoves, or other apparatus (including amplifiers) that produce heat.
- 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. when 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.
- 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 have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
- 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.
- Use only with a cart, stand, hood, 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.



Spirit Digital Mic/Line Interface

1

Introduction

Introduction

Congratulations on your purchase of the Mic/Line Interface from Spirit by Soundcraft. You are about to enjoy one of the great features of the Digital product line from Spirit - Expandability.

The team would like to you to know that we take great pride in our products and may we wish you many successful years with your new purchase.

Please be aware that the recommended TDIF Cables are not supplied with the unit, but are available from your Spirit dealer.

The Mic/Line Interface is designed to meet the following requirements:

As an 8 channel bi-directional analogue audio interface to a Spirit Digital 328/324 Mixing Console.

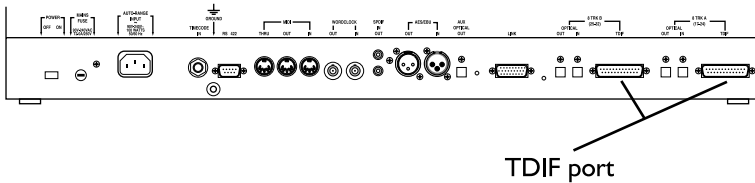
As an 8 channel bi-directional analogue audio interface for any other Digital Mixing Console fitted with a TDIF-I Input / Output connection.

As an 8 channel bi-directional analogue audio interface for any Digital Multitrack Tape Recorder fitted with a TDIF-I Input / Output connection.

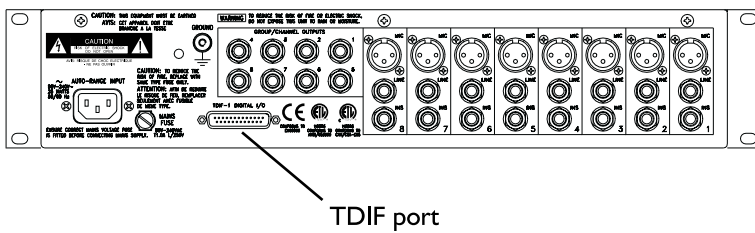
As an 8 channel bi-directional Digital audio interface for any Analogue Multitrack Tape Recorder or other device fitted with analogue Input / Output connections.

This interface is primarily an external accessory for the Digital 328/324 and other forthcoming Spirit Digital consoles. This interface provides eight channels, each with a Microphone Input, Line Input, Insert Point and a Direct Output. All channels include a Trim Control, High Pass Filter, Channel Metering, Insert Point switching and individual Phantom Power switching.

Operation



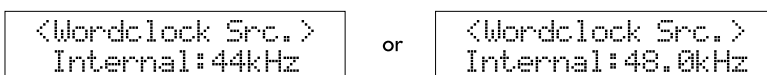
- 1) Connect the TDIF cable from the Interface to the required TDIF port on the Digital 328/324 as shown below.



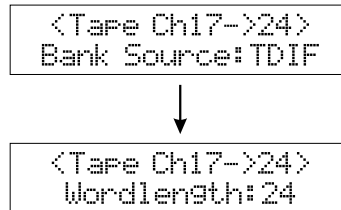
Rearcon of 328

Rearcon of Mic/Line Interface

- 2) To configure the Digital 328/324 as the wordclock master, enter the 328/324 menu pages by pressing the **<MENU>** button on the right hand side of the LCD display. Using the encoder beneath the display, scroll up or down until the 'Clock Source Sel' menu is highlighted, and press **<ENTER>**. Here, either the internal 44.1kHz clock or the internal 48kHz clock must be selected, depending on the sampling rate at which work is to be done. Press **<ENTER>** to set the sample rate and **<MENU>** to return to the menu pages.



- 3) To ensure that the Digital 328/324 Tape Ports are set to TDIF to work with the Mic/Line Interface, enter the 328/324 Menu pages by pressing the <MENU> button on the right hand side of the LCD display. Using the encoder beneath the display, scroll up or down until the 'Tape Port Select' menu is highlighted. Press <ENTER> and keep pressing the Up cursor arrow until the '<Tape Ch17-24 >' menu page is displayed. Using the encoder set the Bank Source to **TDIF**. Press the Down cursor arrow once, to set the wordlength. The Mic/Line Interface is capable of 24-bit operation, and so for optimum results, 24-bit wordlength can be selected here. If your work is being carried out at a wordlength other than 24-bits, 20-bit or 16-bit should be selected. Please note that when the outputs are 20/16-bit then the dither is automatically applied by the console.. The wordlength is set on the 328/324 with the encoder. Press <ENTER> to set the wordlength and <MENU> to return to the menu pages.



- 4) You will now be able to bring in the audio inputs to the interface on Tape Returns 17-24 (Port A), or 25-32 (PortB).
- 5) The outputs from the interface can be fed directly from two possible sources:
- The direct outputs from Channels 1-16, sequentially to tape sends 17-32.
 - The group outputs 1-8 on selected.ports.

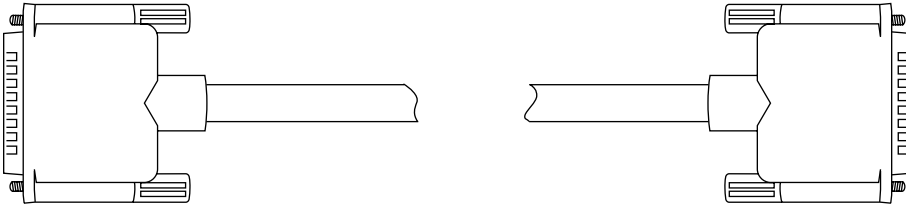
The selection is simple - if on the Mic/Line channel T.SND DIR is engaged then the port will be fed with the direct outputs from channels 1-16 sequentially. Therefore channels 1 would be send to tape send 17, 2 to 18 etc.

When T.SND DIR is not selected on any of the Mic/Line channels, the ports will be fed with Groups 1-8 sequentially.

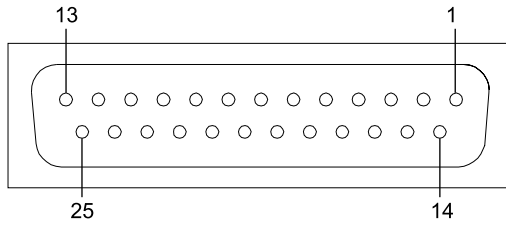
Connection leads

This unit should be connected to 328 using a standard TDIF cable. These are available through your Spirit dealer

TDIF Cable



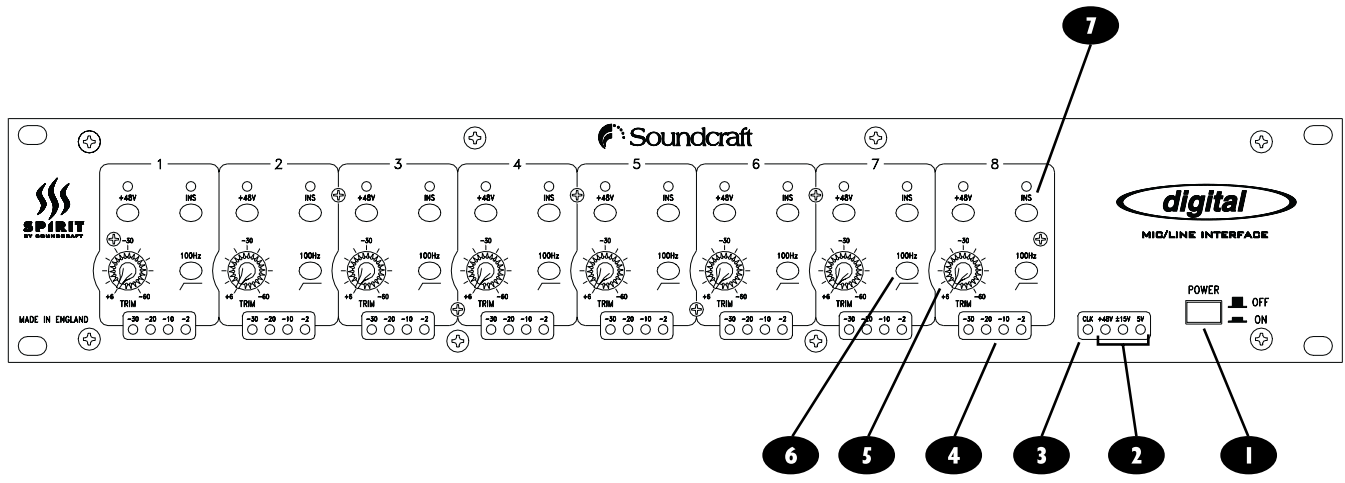
Pin-Outs



IMPORTANT

Please be aware that the TDIF cable specification is not pin to pin compatible and standard 25 way serial cables should not be used under any circumstances.

Front Panel Diagram



1 POWER ON/OFF SWITCH

When the correct mains connection is made to the interface pushing this switch will apply power to the interface.

2 POWER INDICATION LED's

These green lights indicate that the unit is receiving mains power from the input on the rear panel, and that the respective voltage rails are at expected levels of +48V, +/-17V and +5V respectively.

3 CLOCK LED

This yellow LED will light when the unit is receiving a clock source from the TDIF input.

4 CHANNEL LEVEL METERS

These four LED's are used to indicate post-trim signal strength, the levels are displayed in dBFS (Full-Scale). This should be used to set-up the trim value required for your specific input, for both microphone and line level signals.

5 TRIM CONTROL

This control is used to adjust the amount of gain to be applied to the input signal. The trim control has a padless 66dB gain range for use with both Mic and Line level signals.

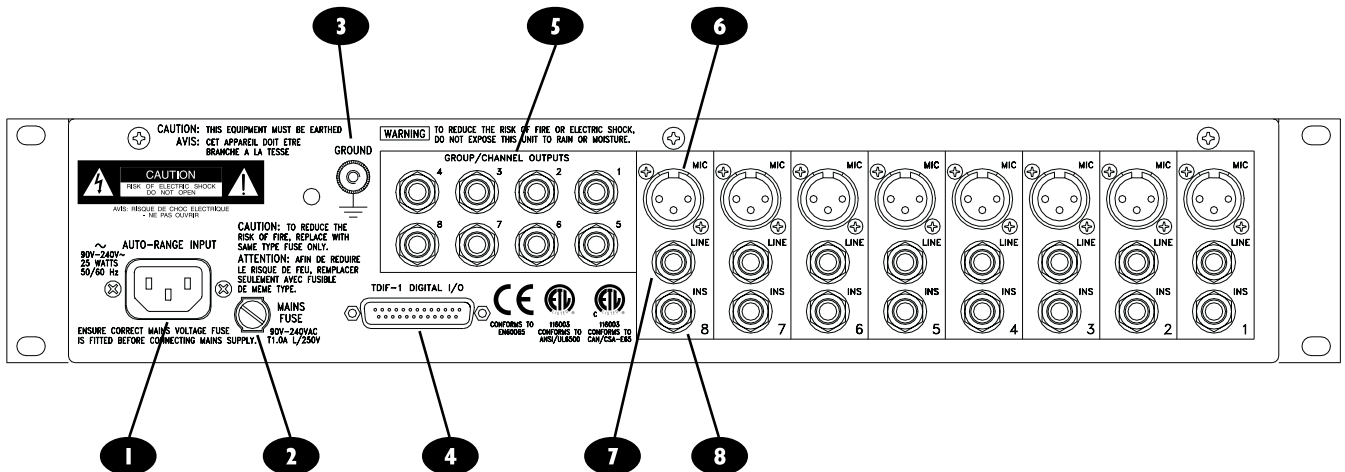
6 HIGH PASS FILTER

This switch puts the incoming audio signal through a 100Hz high pass filter with a roll-off of 18dB per octave, used to eliminate low frequency signals such as hum, mic popping and stage rumble.

7 INSERT POINT

This is used to switch in and out any external processing which is being applied to the audio signal via the insert point on the rear of the interface.

Rearcon Diagram



1 IEC SOCKET

The correct mains voltage supply should be connected here.

2 MAINS FUSE

The interface is protected from current overload by a T1.0A L/250V fuse. If for any reason this fuse blows contact your Spirit dealer.

3 GROUNDING NUT

This is to be used when a system ground is in operation at your site, for more details contact an experienced electrician or engineer regarding system grounding.

4 TDIF SOCKET

This is the port used to transfer digital audio data to and from the TDIF port of the host unit. Use only recommended TDIF cables.

5 GROUP/CHANNEL OUTPUTS

These are impedance balanced outputs which are configured pin 1 - ground, pin 2 - hot signal, pin 3 cold signal.

6 MIC XLR

This is a fully balanced Microphone level input socket it is configured pin 1 - ground, pin 2 - hot signal, pin 3 cold signal.

7 LINE JACK

This is a ground compensated Line level input socket it is configured pin 1 - ground, pin 2 - hot signal, pin 3 cold signal, and will accept an unbalanced input.

8 INSERT JACK

This is a unbalanced send and return point for inserting audio processors such as compressors, limiters etc into the path of the audio signal. It is configured Tip = Send Audio, Ring = Return Audio, Sleeve - Ground.

Specifications

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Analogue to Digital Conversion

Mic/Line Inputs : 24-bit 128 x Oversampling

Digital to Analogue Conversion

All Outputs : 24-bit dithered by source when applicable

Maximum Output Level: +18dBu

Frequency Response

@4dBu into 600ohms

(20Hz-22kHz - Rel 1kHz): +0/-0.5dB

Phantom Power Capability: 80mA maximum

Bit Depth: 16/20/24 bits selectable from source

Sampling Rate: 44kHz to 50kHz selectable from source

Mains Input Voltage Range: 90-240 VAC @ 50/60Hz

Mains Fuse Rating: T1.0A L / 250V

Dimensions: W 486mm x D 230mm x H 89mm (2U)

Weight: 4.25kg (excluding packing)

Power Supply: 90-240V, 50/60Hz, 25 Watts

Noise:



Cables Used in EMC Evaluation of this Unit

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TDIF:-

JACKETED CABLE SCKF-26 FULLY SCREENED WITH METALISED 'D' TYPES.

Signal:- XLR ML→FML:

XLR ML → JACK

XLR FML → JACK

KLOT2 a.b.s. PROFESSIONAL GRADE

