Installing
Logic 3

527-085

On completion of the installation, please insert this manual in Appendix A of your Logic Service Manual, for future reference.

Installing Logic 3

Introduction

It is extremely important that you refer to this document which takes you from unpacking and checking the contents to assembling and booting the system ready for use. AMS Neve can accept no responsibility for damage caused or missing components if the procedures described are not adhered to.

Please note that modules, cards or cables should not be “hot-plugged” (ie inserted or removed with the power on). Hot-plugging can stress the interface components which may lead to failure. Items returned for repair with this kind of damage are not covered under warranty.

All front panels must be fitted to the racks to achieve the required cooling. If the rack units are operated with the panels removed overheating will occur and may lead to component failure not covered under warranty.

PLEASE CHECK CAREFULLY THE PACKAGES YOU HAVE BEEN SUPPLIED. IF THERE IS A SHORTAGE OR EVIDENCE THAT ANY ITEM HAS SUFFERED TRANSIT DAMAGE THEN INFORM THE CARRIER AND AMS NEVE AS SOON AS POSSIBLE – SEE WARRANTY SECTION.

Power Requirements and Approx. Weights (per module)

Console	110 watts (maximum)	9U	15kg
Four Fader Extension	40 watts (maximum)	N/A	7kg
Signal Processing System	Powered from IOS	3U	20kg
Input Output System	400 watts (maximum)	6U	30kg
Relay Control System (optional)	20 watts (maximum)	2U	15kg
Mic/Line unit (optional)	50 watts (maximum)	3U	15kg

Mains Power

AMS Neve recommends that the system is powered from an on-line un–interruptable power supply. Typical power consumption is approximately two thirds of the maximum figures given above.

Cable Lengths

The maximum length of the digital communication cable (Tranlink) between the console and the racks which can be guaranteed to work is 30 metres. However, lengths of up to 50 metres have worked successfully but care must be taken to avoid sharp kinks in the cable and runs in the proximity of interfering signals. The standard length supplied is 10 metres. Any other length should be specified at the time of ordering.

Rack-Mounting

The rack units should be installed in a 19" cabinet with access to the front and rear. A rack depth of 700mm minimum is required for clearance of cabling and connectors. Ventilation panels must be provided to allow a free flow of air both across the rack and from the front to the back. It is recommended that intermediate chassis support rails are used to provide rear support to the units.

Cooling

No specific air conditioning is required for the racks, provided that there is a free flow of air both across the rack, from side to side, and from front to back, and that the ambient air is maintained below 30 degrees centigrade.

The console surface is designed for desktop use – if it is mounted in any type of enclosure the user is responsible for ensuring that there is sufficient air flow to provide adequate cooling.

IMPORTANT: READ THE FOLLOWING SECTION BEFORE ATTEMPTING TO POWER UP THE SYSTEM. IT IS IMPERATIVE THAT THE FOLLOWING CHECKS ARE CARRIED OUT PRIOR TO SWITCH-ON.

Initial Checks and Card Installation

Refer to the correct procedures, described overleaf, when handling static sensitive devices.

1 Remove the transit packing carefully and check for any signs of shipment damage.

2 Remove the front panels and take out the transit plates from the Signal Processing System, and the Input Output System. Install any cards shipped separately (see below) and replace the front panels DO NOT RE–FIT THE TRANSIT PLATES as this would greatly restrict air flow and cooling.

3 Check that the Voltage Selectors on the rear of the Signal Processing System Input Output System are set to the correct operating voltage.

4 The operating voltage of the Console and the Relay Control Unit will be labelled and should be supplied set to the correct operating voltage. If in doubt contact AMS service for advice.

5 The SSP (SSP818-030) cards and TranTAXI (SUN820-72) card(s) are shipped separately and must be installed in the SPS rack in the positions shown on the label on the rear of the SPS front panel. Check that the switch settings of the cards correspond with those shown on the label.

Upgrading to 8 or 16 Fader System

NOTE: If you are upgrading an existing console to an 8 or 16 fader system then your console may require modification. Please contact the AMS Neve Customer Service Department for details.

Static Sensitive Devices – Handling Precautions

Introduction

- This Specification details the precautions to be used for the Protection of Semi-Conductor Devices.
- Static Charge build up in humans, tools, fixtures etc, could appear as a voltage difference applied between the leads of a device.

Component and Package Identification from AMS Neve plc

Containers and Packages holding Semi-Conductive Devices shall be suitably marked. Approved containers shall consist of:

- A rigid plastic container lined with conductive foam.
- A conductive plastic bag of a size adequate to completely contain the item.

Handling of Static Sensitive Devices

General Precautions

- Personnel handling these shall not wear outer clothing which will generate a static charge. Cotton or linen is preferred.
  Wool frequently contains man made additives. Nylon or man made fibre outer garments or dust coats must not be worn.
- Freshly xeroxed/photostat copies can hold a substantial static charge and should be kept well away from static sensitive devices.
- All bench surfaces where these devices may be handled shall be conductive and maintained at earth potential.
- Personnel before removing a device from the protective material shall be adequately earthed. The device should not be handled by its leads.

Static Sensitive Devices to be returned to AMS Neve plc

All containers and packages containing semi-conductive devices should be suitably marked with a warning ‘STATIC SENSITIVE’. Approved containers shall consist of:

- A rigid plastic container lined with conductive foam.
- A conductive plastic bag of a size adequate to completely contain the item.

Preparing your existing AudioFile Plus (6U Cardframe) for-connection to the Logic 3.

Existing AudioFile PLUS systems (Green screen or Spectra) must have M16 capable cardframes to be suitable for modification for use with Logic 3.

If you are uncertain about the standard of your existing AudioFile System, or would prefer the required modifications to be carried out for you, contact AMS Neve Service or your Distributor for advice and/or a quotation.

A TAXI card is supplied which must be installed in the AudioFile Plus Cardframe and a Berg connection made to the respective slot.

Some wiring changes are necessary inside the cardframe on the rear of the TRANLINK A and TRANLINK B 25-way D type connectors.

Green Screen Control Unit

Green Screen systems will require 2 termination links (Part No. NN3141) fitting to the 25way Tranlink ‘D’ type connector on the rear of the Control Unit.

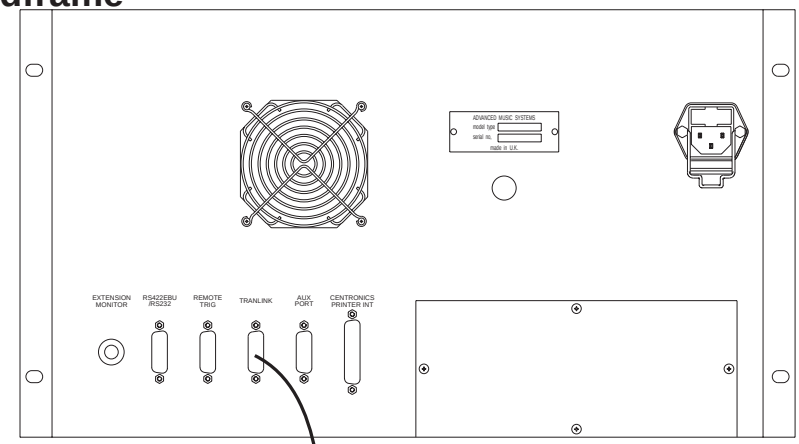
STEP 1

- Remove the front panel from the Control unit to gain access to the nuts on the rear of the 25way Tranlink ‘D’ type connector.

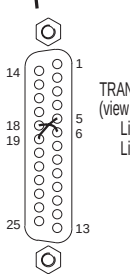
STEP 2

- Remove the connector and insert the 2 wire links supplied as shown the diagram below. Link pin 5 to 19 and pin 6 to 18. Replace connector and front panel.

6U Cardframe



Green Screen Control Unit - rear view



TRANLINK 25 way D type
(view on link insertion side)
Link pin 5 to pin 19
Link pin 6 to pin 18

STEP 1

- Remove the front panel from the AudioFile Plus cardframe. Remove all existing I/O cards from the AudioFile cardframe. These are all the cards to the **LEFT** of slot 31 as viewed from the front of the cardframe.

STEP 2

- Install the TAXI card SUN820-056 in the SLOT to the immediate left of the DAT backup card SUN820-128 (or SUN820-149). This should result in the TAXI card being installed in SLOT 31 for standard configuration M8 and M16 systems.

STEP 3

- Unscrew the 3 retaining screws on the rear of the AudioFile PLUS cardframe and carefully lower the hinged rear panel.
- Identify the TAXI flying lead with 12-way Berg connector and connect to the mating Berg connector on the backplane at the rear of the SLOT now occupied by the TAXI card.

STEP 4

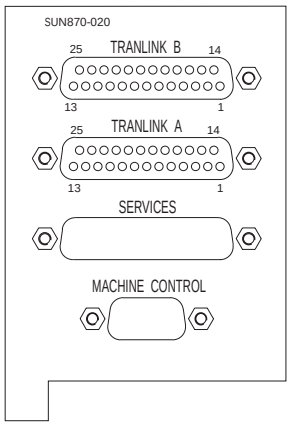
- From the front of the cardframe identify the two Taxi cables. These are the two flying leads with the gold SMB connectors. Connect the two Taxi cables to the front of the Taxi card, SUN820-056, as follows:

  The cable marked Receive (Rx) connects to the **TOP** gold SMB connector.

  The cable marked Transmit (Tx) connects to **BOTTOM** gold SMB connector.

STEP 5

- With the rear panel still lowered identify the two 25–way D type connectors TRANLINK A and TRANLINK B mounted on PCB assembly SUN870-020 see drawing NW2799 overleaf.
- Use the special insertion/extraction tool (supplied AMS Neve part no. 330-491) to remove and insert connector pins.
- On TRANLINK B 25–way connector remove cables from postions 3, 16, 17, 4 and insert them into positions 1, 14, 15, 2 respectively on TRANLINK A 25–way connector.
- On TRANLINK B 25–way connector remove cables from postions 7, 20, 21, 8 and insert them into positions 5, 18, 19, 6 respectively on TRANLINK A 25–way connector.



Preparing your existing AudioFile 8U Mainframe for connection to the Logic 3.

A TAXI card is supplied which must be installed in the AudioFile Mainframe.

Some wiring changes are necessary inside the Mainframe on the rear of the TRANLINK A and TRANLINK B 25-way D type connectors.

STEP 1

- Remove the front panel from the AudioFile Mainframe. Remove all existing I/O cards from the AudioFile Mainframe. These are all the cards to the **LEFT** of slot 28 as viewed from the front of the Mainframe.

STEP 2

- Install the TAXI card SUN820-056 in SLOT 28.

STEP 3

- From the front of the Mainframe identify the two Taxi cables. These are the two flying leads with the gold SMB connectors. Connect the two Taxi cables to the front of the Taxi card, SUN820-056, as follows:

  The cable marked Receive (Rx) connects to the **TOP** gold SMB connector.

  The cable marked Transmit (Tx) connects to **BOTTOM** gold SMB connector.

STEP 4

- Unscrew the 3 retaining screws on the rear of the AudioFile Mainframe and carefully lower the hinged rear panel.
- With the rear panel still lowered identify the two 25–way D type connectors TRANLINK A and TRANLINK B.
- Use the special insertion/extraction tool (supplied AMS Neve part no. 330-491) to remove and insert connector pins.
- On TRANLINK B 25–way connector remove cables from postions 3, 16, 17, 4 and insert them into positions 1, 14, 15, 2 respectively on TRANLINK A 25–way connector.
- On TRANLINK B 25–way connector remove cables from postions 7, 20, 21, 8 and insert them into positions 5, 18, 19, 6 respectively on TRANLINK A 25–way connector.

Connecting the System

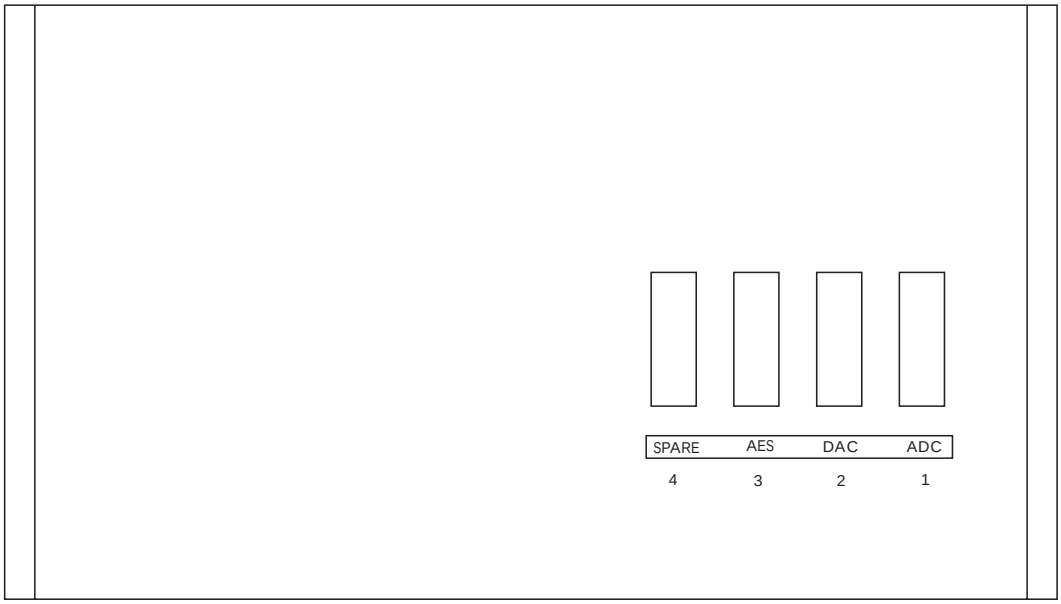
When the units are in position and all the cables have been identified and prepared, connect the system as described below and shown on the following pages.

- Refer to the AudioFile PLUS or Spectra Installation manual for details on disk installation.
- Three sets of typical system interconnection diagrams are shown on the following pages. Refer to the set that matches your system.
- If your system is not represented exactly and you are in any doubt as to the correct wiring requirements contact AMS Neve Service for advice.
- Ensure each module is fed with a suitable mains supply.

ADC, DAC and AES Connections - standard configuration

The IOS rack card population is shown on the following pages. The table shows the pin-outs for the varicon connectors.

STANDARD CONFIGURATION



Rear View IOS 56 way Varicon connectors

Console Connections

Refer to the console interface panel for the talkback and monitor connections. DAC output SEL should be wired to MON LS IN and drives the speakers connected to MAIN LS OUT or the speakers connected to SMALL LS OUT when the SMALL LS button is pressed on the console. DAC output L/S 2 should be wired to PFL IN and drives the speakers connected to PFL OUT. The TALKBACK OUT is the line level feed from the Talkback mic, for feeding to an ADC or an external TB system, or both.

Sync Connections

Other connectors are fitted on the IOS rack for AES SYNC, WCK IN, WCK OUT (Word clock), VIDEO and LOOP. These allow connection of three types of sync. The system can operate from any one of these (selectable by the user) or from its internal reference. All remaining connectors on IOS rack are for the control cables between the various racks, or are not used.

Automation Connections

The Automation Computer/AudioFile Plus cardframe has connectors for TIMECODE IN, TIMECODE OUT, TACH IN, MACHINE CONTROL and PCM 701/SPDIF (For high level back up from AudioFile Plus to DAT tape). The layout of this is almost identical to the IOS rack, all other connectors being unused, or for system inter-connects.

XLR Pin Outs

The pin out for the XLRs is:

- Pin 1, Screen
- Pin 2, Phase (or Hot)
- Pin 3, Anti-phase (or Cold)

and for dual circuit connectors:

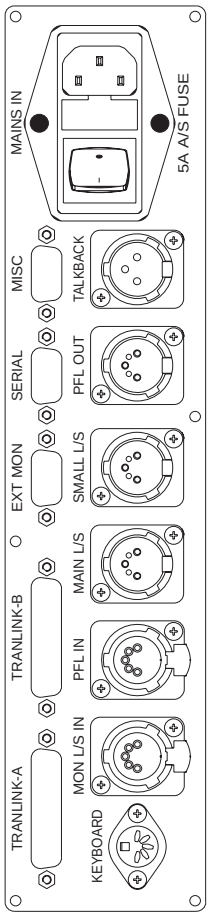
- Pin 4, Phase (or Hot), second circuit (or B channel)
- Pin 5, Anti-phase (or Cold), second circuit (or B channel)

Booting the System

When the basic inter-connection detailed above is completed, your system may be powered up and booted with the Boot Disk.

Please refer to the **AudioFile Spectra User Manual** Section I Part C16 for full details.

Console Interface Panel



External Monitor Port

Location: Rear of Console Interface Panel

Mating Connector Required: 15–way high density D type male (Std VGA)

Pin No.	Signal
1	RED
2	GREEN
3	BLUE
4	GND
5	GND
6	GND
7	GND
8	GND
9	no connection
10	GND
11	GND
12	no connection
13	HSYNC
14	VSYNC
15	no connection

Serial Port
NB leave out for now!

Location: Rear of Console Interface Panel

Mating Connector Required: 9–way D type male

Pin No.	Signal
1	no connection
2	Rx
3	Tx
4	DTR
5	GND
6	no connection
7	no connection
8	CTS
9	no connection

Misc Port

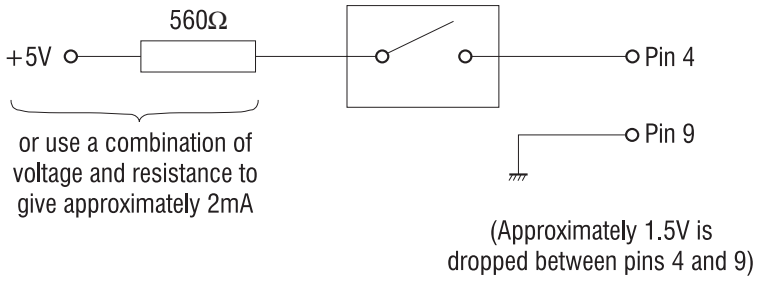
Location: Rear of Console Interface Panel

Mating Connector Required: 9–way D type male

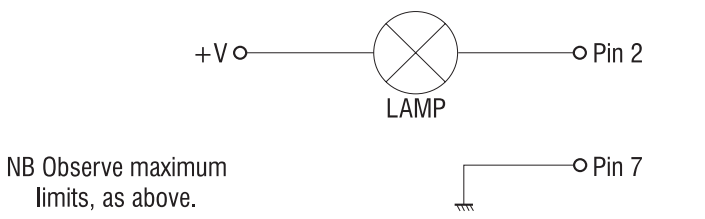
RELAY LOOPS
MAX CURRENT THROUGH EACH PAIR – 0.5A
MAX VOLTAGE ON RELAY CONTACTS – 100V
OPTO–ISOLATED READER INPUTS – 'OPTO INPUT 1 & 2'
MAX REVERSE VOLTAGE – 6V
MAX FORWARD CURRENT – 60mA
FORWARD VOLTAGE (@10mA) – 1.3V MAX
FORWARD CURRENT TO OPERATE – >1mA

Pin No.	Signal
1	RELAY 1A
2	RELAY 2A
3	OPTO 1 anode
4	OPTO 2 anode
5	GND
6	RELAY 1B
7	RELAY 2B
8	OPTO 1 cathode
9	OPTO 2 cathode

Remote Talkback Input :



Talkback Indicator Output :



External Keyboard Port

Location: Rear of Console Interface Panel

Mating Connector Required: 5 pin 180^{o} DIN male

Pin No.	Signal
1	Clock
2	Data
3	no connection
4	GND
5	+5v

4–Fader Extension Interface Panel (optional)

NOTE: For details of 4–Fader Extension installation, see drawings at back of manual

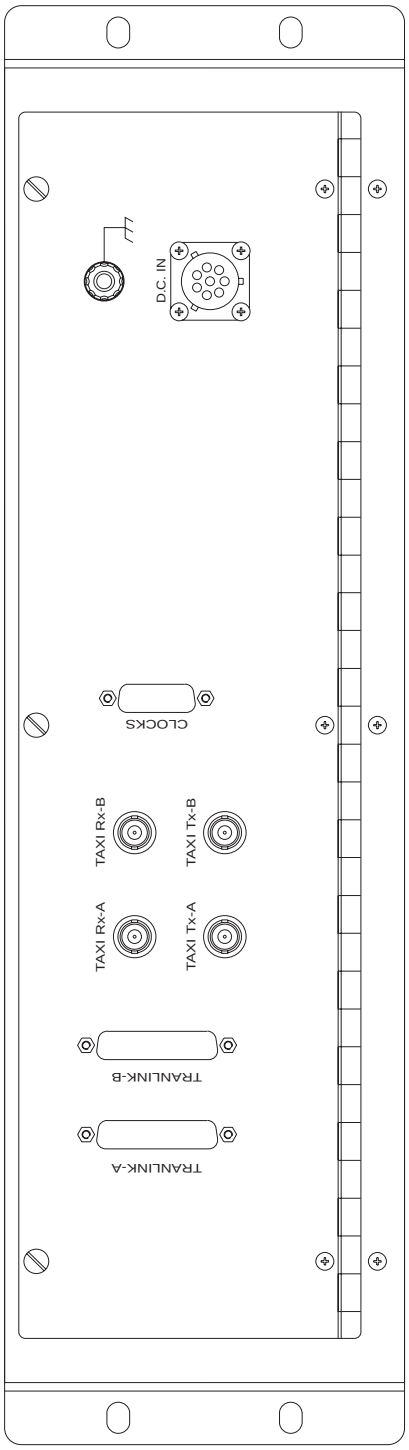
Audio Input Port

Location: Rear of 4–Fader Interface Panel
Mating Connector Required: 5 pin XLR male

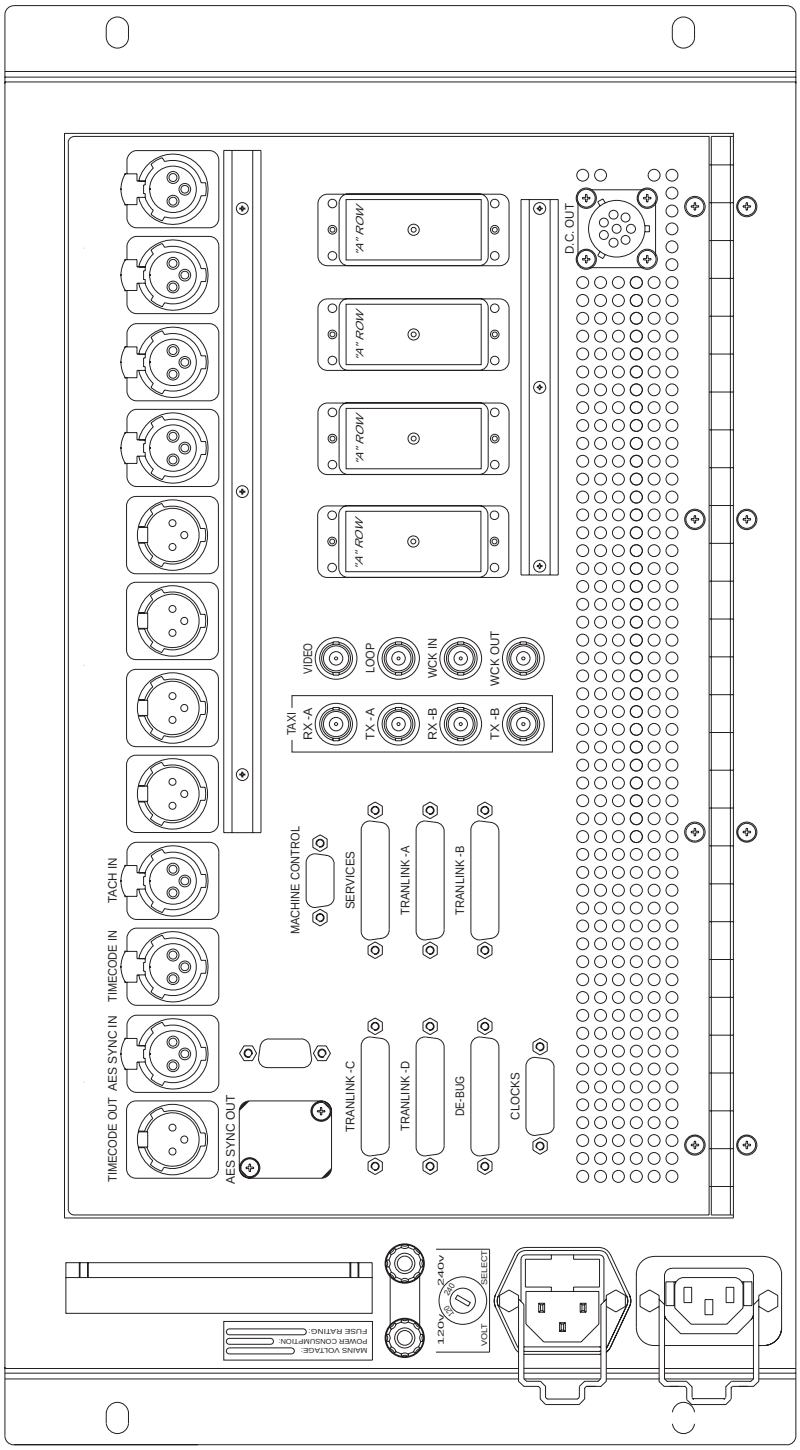
Pin No.	Signal
1	Screen
2	Phase
3	Anti–Phase
4	Phase B
5	Anti–Phase B

Line Level Input, Left and Right legs are mixed down to MONO for speaker

SPS Rack


D.C. IN
CLOCKS
TAXI Rx-B
TAXI Tx-B
TAXI Rx-A
TAXI Tx-A
TRANLINK-B
TRANLINK-A

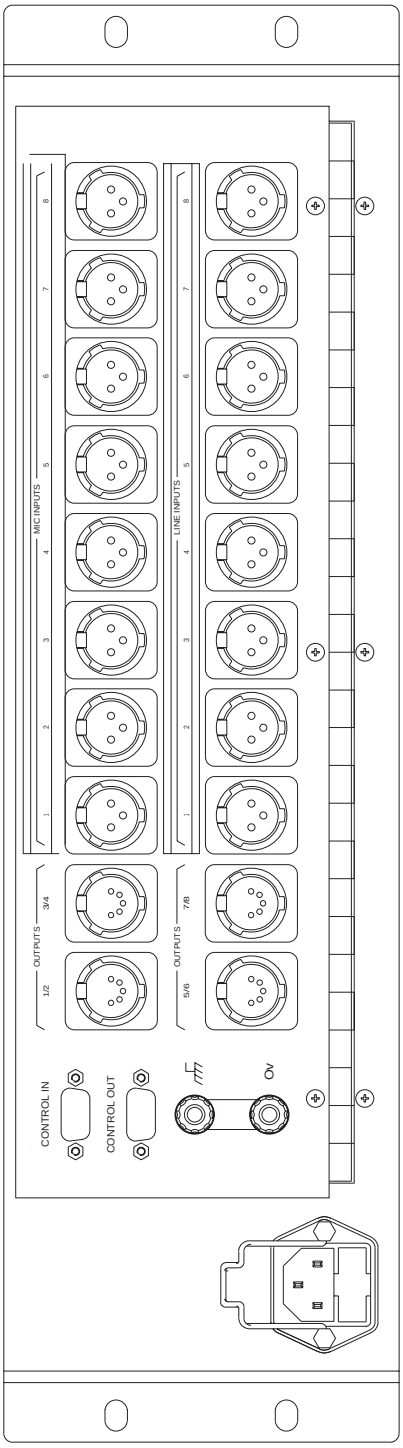
IOS Rack


TIMECODE OUT
AES SYNC IN
TIMECODE IN
TACH IN
AES SYNC OUT
TRANLINK-C
TRANLINK-D
DE-BUG
CLOCKS
MACHINE CONTROL
SERVICES
TRANLINK-A
TRANLINK-B
TAXI
RX-A
TX-A
RX-B
TX-B
VIDEO
LOOP
WCK IN
WCK OUT
"A" ROW
"A" ROW
"A" ROW
"A" ROW
D.C. OUT
MAINS VOLTAGE:
POWER CONSUMPTION
FUSE RATING
120V
240V
SELECT
VOLT

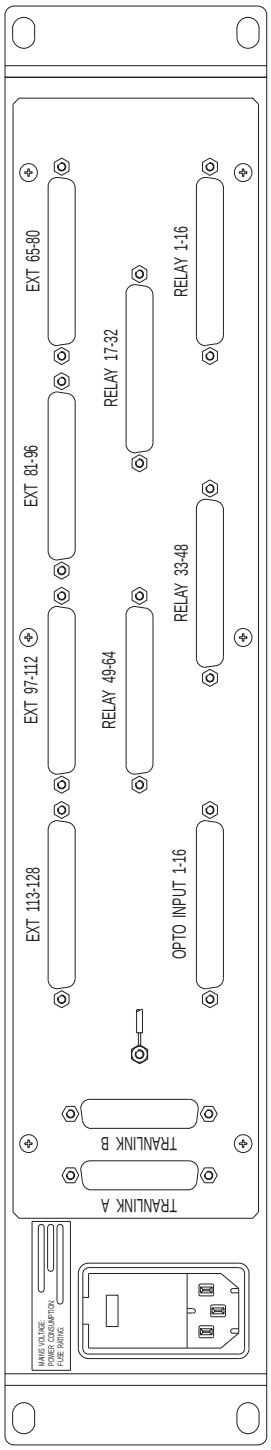
Mic/Line Unit – (Optional)

Description

The outputs of the Mic/Line unit are line level, unbalanced (balanced impedance). Each Mic/Line unit can accommodate up to 4 dual mono cards which should be connected to the first 8 ADC inputs: LIN 1 (AB) to LIN 4 (AB).



Relay Control Unit – (Optional)



RELAY CONNECTORS

Location: Rear of Relay Contol Unit

Mating connector required: 37–way D type male

PINOUT OF CS2857 FADER START BOX – 37 WAY RELAY LOOP D'S
MAX CURRENT THROUGH EACH PAIR – 0.5A
MAX VOLTAGE ON RELAY CONTACTS – 100V

'RELAY 1–16'			
	PIN	PIN	
RELAY 1		1	20
RELAY 2		2	21
RELAY 3		3	22
RELAY 4		4	23
RELAY 5		5	24
RELAY 6		6	25
RELAY 7		7	26
RELAY 8		8	27
RELAY 9		9	28
RELAY 10		10	29
RELAY 11		11	30
RELAY 12		12	31
RELAY 13		13	32
RELAY 14		14	33
RELAY 15		15	34
RELAY 16		16	35

'RELAY 17–32'			
	PIN	PIN	
RELAY 17		1	20
RELAY 18		2	21
RELAY 19		3	22
RELAY 20		4	23
RELAY 21		5	24
RELAY 22		6	25
RELAY 23		7	26
RELAY 24		8	27
RELAY 25		9	28
RELAY 26		10	29
RELAY 27		11	30
RELAY 28		12	31
RELAY 29		13	32
RELAY 30		14	33
RELAY 31		15	34
RELAY 32		16	35

'RELAY 33–48'			
	PIN	PIN	
RELAY 33		1	20
RELAY 34		2	21
RELAY 35		3	22
RELAY 36		4	23
RELAY 37		5	24
RELAY 38		6	25
RELAY 39		7	26
RELAY 40		8	27
RELAY 41		9	28
RELAY 42		10	29
RELAY 43		11	30
RELAY 44		12	31
RELAY 45		13	32
RELAY 46		14	33
RELAY 47		15	34
RELAY 48		16	35

'RELAY 49–64'			
	PIN	PIN	
RELAY 49		1	20
RELAY 50		2	21
RELAY 51		3	22
RELAY 52		4	23
RELAY 53		5	24
RELAY 54		6	25
RELAY 55		7	26
RELAY 56		8	27
RELAY 57		9	28
RELAY 58		10	29
RELAY 59		11	30
RELAY 60		12	31
RELAY 61		13	32
RELAY 62		14	33
RELAY 63		15	34
RELAY 64		16	35

OPTO–ISOLATED READER INPUTS

Location: Rear of Relay Control Unit

Mating connector required: 37–way D type male

OPTO–ISOLATED READER INPUTS – ‘OPTO INPUT 1–16’
CURRENT INTO LEFT HAND PIN – OUT OF RIGHT HAND PIN
MAX REVERSE VOLTAGE – 6V
MAX FORWARD CURRENT – 60mA
FORWARD VOLTAGE (@10mA) – 1.3V MAX
FORWARD CURRENT TO OPERATE – >1mA

‘OPTO–INPUT 1–16’			
	PIN	**PIN**	
INPUT 1		1	20
INPUT 2		2	21
INPUT 3		3	22
INPUT 4		4	23
INPUT 5		5	24
INPUT 6		6	25
INPUT 7		7	26
INPUT 8		8	27
INPUT 9		9	28
INPUT 10		10	29
INPUT 11		11	30
INPUT 12		12	31
INPUT 13		13	32
INPUT 14		14	33
INPUT 15		15	34
INPUT 16		16	35