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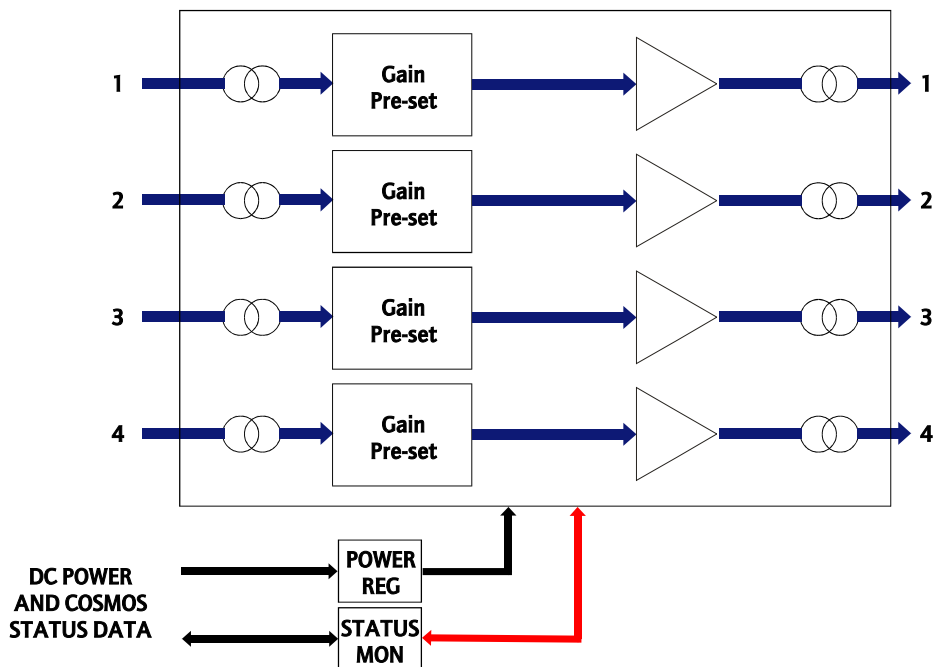
1 Introduction

The 4432 four channel audio isolating amplifier provides four individual circuits intended for terminating long audio feeds or those subject to high levels of interference due to electrically noisy environments. The 4432 offers a high level of rejection of common mode signals and pre-set gain adjustments allow for correction of non-standard input levels.

The module may be used in the 1050 3U and 1051 1U ICON modular product rackframes.

Characteristics of the 4432 are:

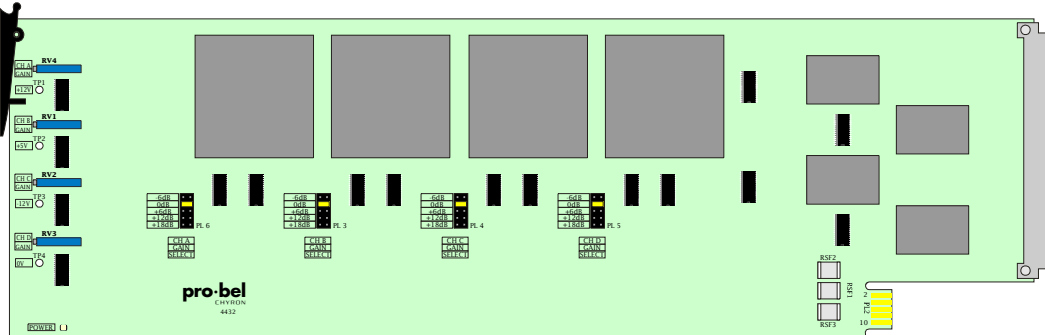
- four transformer coupled analogue audio channels
- high common mode rejection
- individual pre-set gains
- compact 20mm wide module
- compatible with Pro-Bel COSMOS status monitoring



The 4432 four channel audio isolating amplifier

2 Installation

The 4432 four channel audio isolating amplifier fits in the 1050 3U and 1051 1U ICON modular product rackframes. It is used with the K4401-2B 20mm rear panel.

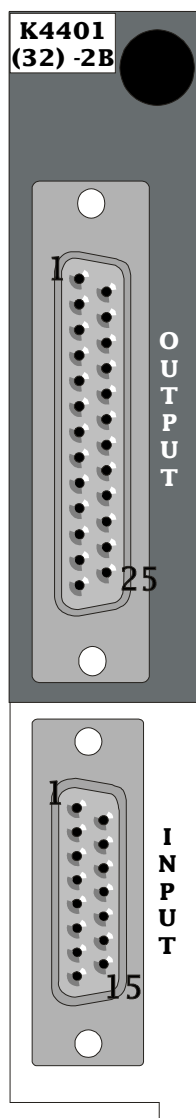


The 4432 four channel audio isolating amplifier

For module and rear connector installation please refer to the appropriate ICON rackframe section of the manual.

2.1 Signal I/O

The K4401-2B panel is equipped with two connectors. A 25 way female 'D' connector provides analogue outputs whilst a 15 way female 'D' connector provides analogue inputs. All grounds connected together - GND = Ground, SCN = Screen



Signal I/O (OUTPUTS)

Pin	Function	Pin	Function
1	A -	14	B-
2	A+	15	B+
3	GND	16	GND
4	C-	17	D-
5	C+	18	D+
6	N/C	19	N/C
7	N/C	20	N/C
8	GND	21	N/C
9	N/C	22	N/C
10	N/C	23	GND
11	GND	24	N/C
12	N/C	25	N/C
13	N/C	SCN	GND

Signal I/O (INPUTS)

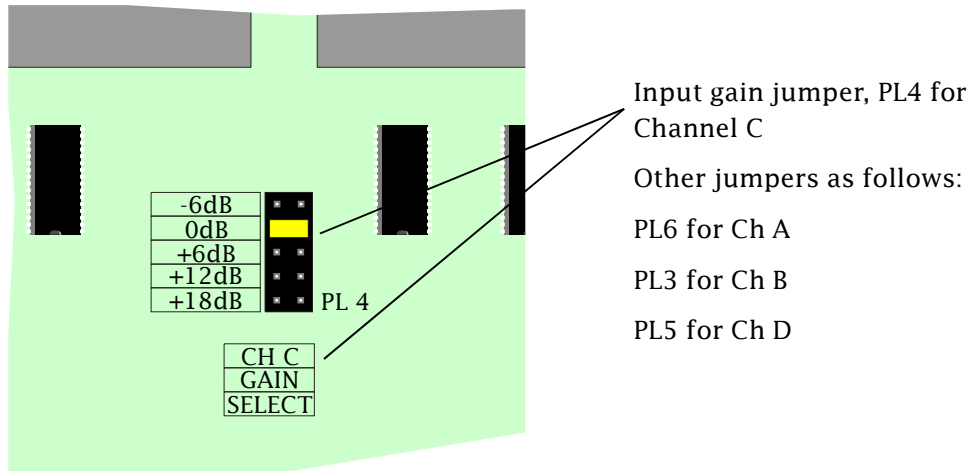
Pin	Function	Pin	Function
1	A+	9	A-
2	GND	10	B+
3	B-	11	GND
4	C+	12	C-
5	GND	13	D+
6	D-	14	GND
7	N/C	15	N/C
8	GND	SCN	GND

3 Configuration

The 4432 inputs are fully configurable for gain over the range -6dB to +28dB by jumper and card-edge variable controls for each input.

3.1 Setting coarse input gain

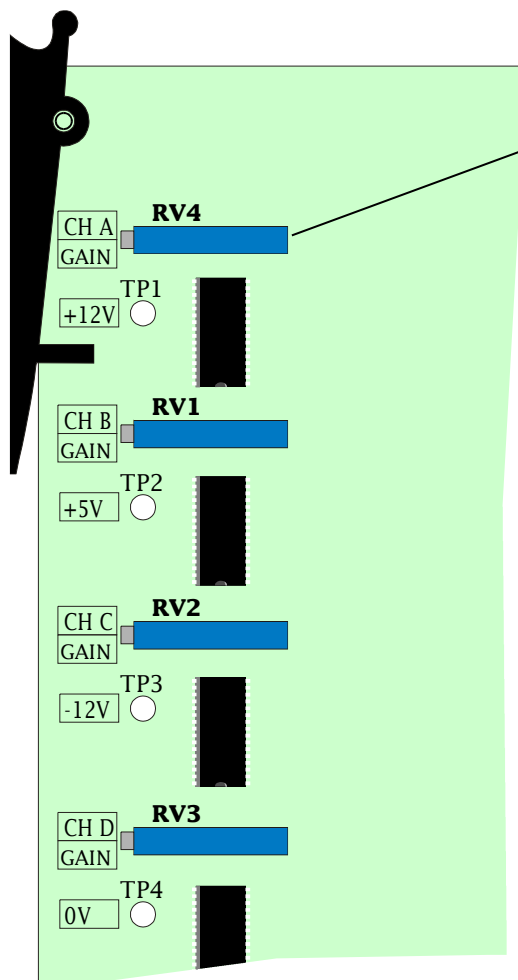
On card jumpers provide -6dB, 0dB, +6dB, +12dB and +18dB fixed ranged. To select the fixed range use jumpers PL6, PL3, PL4 and PL5 for input channels A, B, C and D respectively.



Note: Always ensure that only one jumper is fitted per jumper block and that two pins alongside each gain setting are shorted by the jumper.

3.2 Setting fine input gain

The fine channel controls are at the edge of the card.



Use RV4 to set Channel A
fine Input gain (-6dB to
+2dB)

Other channels:

RV1 for Ch B

RV2 for Ch C

RV3 for Ch D

4 Status monitoring

The module provides the following information to the status monitoring controller, if fitted:

- power status

In addition, the module is programmed with the following information, which can be read by the status monitoring controller:

- Module type
- Module bar code
- Module issue no

For further details of the Pro-Bel status monitoring system please refer to the COSMOS status monitoring manual.

5 **Trouble shooting**

The green card edge POWER LED is not lit

- check the PSU indicator to confirm that there is power to the frame
- check the resettable fuses protecting the card - do this by removing the power to the card for about 30 seconds then restoring the power
- if necessary, refer to the power supply trouble shooting guide in the appropriate ICON rackframe manual section

There are no output signals

- ensure that the green power LED on the front of the main card is lit
- ensure that valid input(s) are present
- check that the appropriate gain setting has been applied

6 Specification

Inputs

Number and type:	4, transformer coupled, floating
Impedance:	> 20 K Ω
CMRR:	> 60dB, 40Hz to 15kHz
Connector:	15 way 'D' female socket

Outputs

Number and type:	4, (one per input) transformer coupled, floating
Impedance:	< 25 Ω + 125 μ H
CM Impedance:	> 100k Ω 20Hz to 20kHz
Max Level:	+28dBu into 300 Ω (0.1% THD) +29dBu (no load) (0.1% THD)
CMRR:	> 40dB, 40Hz to 15kHz (IEC) > 60dB, 40Hz to 15kHz (IRT)
Short Circuit Protection:	Indefinite
Connector:	25 way 'D' female socket

Performance

Noise:	-85dBu, Q-P, CCIR468-2 weighted
Distortion:	< 0.1%, 40Hz to 20kHz, -10dBm to +22dBm
Frequency Response:	\pm 0.1dB, 30Hz to 15kHz into 600 Ω \pm 0.25dB, 25Hz to 20kHz into 600 Ω
Crosstalk:	< -90dB at 16kHz

On card controls/Indicators

Coarse Gain:	-6dB, 0dB, +6dB, +12dB, +18dB
Fine Gain:	-6dB to +2dB
Power status:	Green LED

Temperature range

Operating:	0° to +40°C
Storage:	-10° to +70°C

7 **Ordering information**

Part number

ICO-4432-2000

Description

Four channel audio isolating amplifier, 20mm