

EU declaration of conformity

We certify that this apparatus conforms to the requirements of the EMC and Low Voltage Directives. Emissions EN 55103-1, susceptibility EN 55103-2 and safety EN 60950-1 2002.

01 September 2003



Warranty

The ISIS Group warrants this unit against defects in materials and workmanship for a period of one year from the date of shipment. At its option, the company will repair or replace products that prove to be defective during the warranty period, provided they are returned to the company with advance notification and with freight prepaid. ISIS Group's policy states that all repairs are only conducted by an authorized representative of the company. As a result any unauthorized repair or attempted repair will automatically void the warranty.

When a distributor supplies the company's products, that distributor should be approached initially if there are any warranty problems.

The company makes no other warranties, express or implied, as to the merchantability, fitness for a particular purpose, or otherwise. The company's liability for any cause, including breach of contract, breach of warranty, or negligence, with respect to products sold by it, is limited to repair or replacement by the company, at its sole discretion. This remedy is exclusive. In no event shall the company be liable for any incidental or consequential damages, including loss of profits.

The ISIS Group
119 E. McKnight Way Grass Valley, CA 95949
Phone: 530-477-2984 Fax: 530-477-2986
Internet: www.isis-group.com Email: info@isis-group.com



MiniBlox™

4640 Analog stereo to AES ADC

*Converts two balanced audio inputs to balanced
and unbalanced AES/EBU audio*

User Manual

Latest information available at:
www.isis-group.com
www.miniblox.com

Specifications

Audio input

Type	Balanced stereo analog audio
Connector	9-pin D female
Input impedance	>20K Ω
CMMR	>70dB (20Hz to 20KHz)
Max. input level	+12 to +24dBu

AES reference

Standard	75 Ω AES3-id (SMPTE 276M)
Sampling rate	32 to 94KHz
Connector	BNC
Return loss	>36dB (0.1 to 6.0MHz)
Level	1V p-p \pm 20%

Balanced outputs

Number	Four transformer coupled
Standard	110 Ω AES3
Connector	9-pin D female
Return loss	>32dB (0.1 to 6.0MHz)
Signal level	2-7V p-p

Unbalanced output

Number	One
Standard	75 Ω AES3-id (SMPTE 276M)
Connector	BNC
Return loss	>32dB (0.1 to 6.0MHz)
Level	1V p-p \pm 10%

Power

Voltage	6-12V DC
Current	250mA
Power connector	Locking 2.5mm jack connector (center +v)

Other

LED	Green = locked to external reference Orange = locked to internal reference Red = error
Temperature range	0°C to 45°C
Dimensions	3 1/4" x 2 1/2" x 1 1/8" (excluding connectors)
Weight	6oz

We reserve the right to change technical specifications without prior notice.

MiniBlox™ - solutions in a box

General description

The 4640 analog stereo audio to AES/EBU ADC takes stereo analog balanced inputs and converts them using a 24-bit ADC to a single AES feed. The circuit free-runs at 48KHz sampling rate and automatically switches to an external AES reference when supplied. The channel status information is maintained correctly in both modes. Presets are used to calibrate the input level against conversion level; an adjustment range of $\pm 6\text{dB}$ with respect to a nominal -18dB calibration is provided.



4640 Main features

- Balanced analog stereo audio input
- Balanced AES3 110 Ω and unbalanced AES3-id 75 Ω outputs
- 24-bit ADC
- Locks to any AES reference from 32-96KHz or free-runs at 48KHz
- Input gain controls to cover all commonly used levels
- Balanced inputs and outputs on a 9-pin D female
- Unbalanced output and AES reference input on BNC
- Compact and rugged design
- Locking connector for PSU

Installation and operation

The unit is simple to use and install.

Connect balanced inputs and outputs to a 9-pin D type plug (not supplied) per the table on the rear of the unit (and as detailed in the next section). Plug the D type into the socket on the unit and secure.

Connect the unbalanced output to the BNC socket detailed on the front of the unit (if required).

Connect an unbalanced AES reference signal (if required) to the relevant BNC detailed on the front of the unit.

Apply power to the unit either via the locking power connector from the 4000 external power supply or 1RU rack frame, or by sliding into the 2RU rack mounting frame with central power supplies. An alternative power source can be used to power the unit as long as the input power is within the range stated in the specifications.

On power-up the unit will perform a short self test. The LED will be red while this is in progress.

The LED then shows green when locked to an external reference or orange when locked to the internal reference.

The 4-800MB mounting bracket can be used to install a MiniBlox unit. The bracket should first be fixed vertically to any surface. The MiniBlox can then be lowered onto the dovetail part of the bracket with the front endplate uppermost to retain it.

D type pin connections

Connections to a 9-pin D type plug (not supplied) should be made as follows:

PIN CONNECTIONS	
1 IN left -	6 IN left +
2 IN right -	7 IN right +
3 Ground	8 Term ref
4 OUT -	9 OUT +
5 Ground	

Term Ref (pin 8) should be grounded to terminate the 75Ω reference input. Leave this pin floating (no connect) if a chain of devices are using this reference, and only terminate the last device in the chain.