

## Specification

<b>Audio input</b>	
Type	Balanced stereo analogue audio
Connector	9 way D type socket
Input impedance	>20k $\Omega$
CMMR	>70dB (20Hz to 20kHz)
Maximum input level range	+12 to +24dBu
<b>AES reference</b>	
Standard	75 $\Omega$ AES3-id (SMPTE 276M)
Sampling rates	All from 32 to 96kHz
Connector	BNC
Return loss	>36dB (0.1 to 6MHz)
Level	1V p-p $\pm$ 20%
<b>Balanced outputs</b>	
Number	Four transformer coupled
Standard	110 $\Omega$ AES3
Connector	9 way D type socket
Return loss	>32dB (0.1 to 6MHz)
Signal level	2-7V p-p
<b>Unbalanced output</b>	
Number	One
Standard	75 $\Omega$ AES3-id (SMPTE 276M)
Connector	BNC
Return loss	>32dB (0.1 to 6MHz)
Level	1V p-p $\pm$ 10%
<b>Power</b>	
Voltage	6-12V DC
Current	250mA at 6V
Power connector	Locking 2.5mm jack connector (centre +ve)
<b>Other</b>	
LEDs	Green locked to external reference, orange internal reference or red for error
Temperature range	0°C to 40°C
Dimensions	63.5mm x 80mm x 30mm (excluding connectors)
Weight	250g
<i>We reserve the right to change technical specifications without prior notice. E&amp;OE.</i>	

**DTL MiniBlox**<sup>TM</sup>



## User Guide



### 4640 Analogue stereo audio to AES-EBU ADC

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

[www.miniblox.com](http://www.miniblox.com)

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## ***DTL MiniBlox™ - solutions in a box***

### ***General description***

The 4640 Analogue stereo audio to AES-EBU ADC takes stereo analogue balanced inputs, and converts them using a 24-bit ADC to a single AES feed. The circuit free-runs at 48 kHz 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 +/-6dB with respect to a nominal -18dB calibration is provided.

It is housed in an extremely compact and rugged aluminium case ideally suited to both studio and portable applications.

### ***Main features***

- Balanced analogue stereo audio input
- Balanced AES3 110Ω and unbalanced AES3-id 75Ω 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 way D type
- Unbalanced output and AES reference input on BNCs
- Compact and rugged design

### ***Installation and operation***

The unit is simple to use and install.

Connect balanced inputs and outputs to a 9 way 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 external power supply or 1U rack frame, or by sliding into the 2U rack mounting frame with central power supplies. An alternative power source can 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 whilst this is in progress.

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

The mounting bracket supplied can be used to install the 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 way 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.

### ***EU declaration of conformity***

We certify that this apparatus conforms to the requirements of the EMC and Low Voltage Directives. Emissions EN55103-1, susceptibility EN55103-2 and safety EN60950-1 2002.

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### ***Warranty***

DTL Broadcast Ltd 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. Repairs may only be conducted by an authorised representative of the company. As a result any unauthorised 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.