

Specification

SDI input	
Standards	SMPTE 259M 270Mb/s 525/625 SDI
Connector	75Ω BNC
Signal level	800mV p-p ±10% (terminated)
Return loss	>15dB to 270MHz
Cable equalisation	> 350m automatic (Belden 8281)
Analogue video output	
Standards	PAL (B, D, G, H, I), PAL N, NTSC USA & Japan
Format	Composite
Connector	75Ω BNC
Signal level	1Vp-p ±10%
DC offset	±50mV
Return loss	>36dB to 5.5MHz
Audio de-embedding	
Standards	SMPTE 272M
Extracts	20 or 24 bits
Analogue audio output	
Standard	Balanced analogue audio
Number	2 stereo pairs
Impedance	<50Ω
Output level	Max 0dBFS=+24dBu/ Min 0dBFS=+8.5dBu
Maximum level	+24dBu into 10kΩ
Connector	Removable screw terminals
Power	
Voltage	6-12V DC
Current	810mA at 6V
Power connector	Locking 2.5mm jack connector (centre +ve)
Other	
LEDs	Show group status and signal presence
Temperature range	0°C to 40°C
Dimensions	63.5mm x 84mm x 30mm (excluding connectors)
Weight	185g
<i>We reserve the right to change technical specifications without prior notice. E.&OE.</i>	



User Guide



4464A SDI to analogue composite video & audio DAC

Extracts two balanced stereo audio pairs from any group in the ancillary data space of a 270Mb/s SDI signal and provides broadcast quality composite video and analogue audio outputs

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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.

28 November 2005



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.

Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Level dBu
0	0	1	1	1	12
0	1	0	0	0	12.5
0	1	0	0	1	13
0	1	0	1	0	13.5
0	1	0	1	1	14
0	1	1	0	0	14.5
0	1	1	0	1	15
0	1	1	1	0	15.5
0	1	1	1	1	16
1	0	0	0	0	16.5
1	0	0	0	1	17
1	0	0	1	0	17.5
1	0	0	1	1	18
1	0	1	0	0	18.5
1	0	1	0	1	19
1	0	1	1	0	19.5
1	0	1	1	1	20
1	1	0	0	0	20.5
1	1	0	0	1	21
1	1	0	1	0	21.5
1	1	0	1	1	22
1	1	1	0	0	22.5
1	1	1	0	1	23
1	1	1	1	0	23.5
1	1	1	1	1	24

DTL MiniBlox™ - solutions in a box

General description

The 4464A SDI to analogue composite video & audio DAC extracts two balanced stereo audio pairs from any group in the ancillary data space of a 270Mb/s SDI signal and provides broadcast quality composite video and analogue audio outputs.

Analogue outputs are converted by a 24 bit DAC (sampled at 20 or 24 bits dependant on embedded audio format). De-embedding conforms to SMPTE 272M and allows audio to be extracted from any of the four groups.

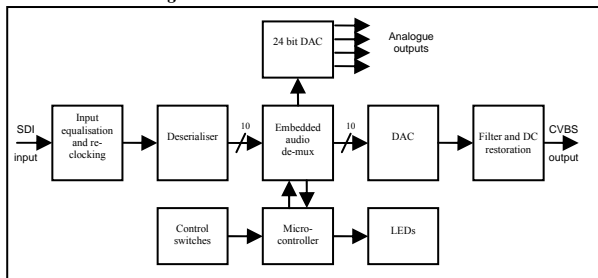
Composite video is converted using a 10-bit DAC with 4x over-sampling. Anti-aliasing filters and precision DC restoration provide the kind of conversion previously only available in rack mount systems.

The unit is housed in an extremely compact and rugged aluminium case and is suitable for both field and studio applications.

Main features

- Extracts two balanced analogue audio stereo pairs from any group
- High quality 24 bit audio DAC
- Automatic detection of 525/625 SDI
- 20 or 24 bit de-embedding
- Adjustable full scale output levels to meet all international standards
- LEDs show group status and input signal presence
- Automatic input cable equalisation to over 350m
- 10-bit video DAC with 4x over-sampling
- Extremely compact and rugged

Functional block diagram



Installation and operation

The unit is simple to use and install.

- Set the dipswitches by referring to the table and description below or the table on the rear of the unit.
- Connect a valid 270Mb/s SDI input.
- Connect analogue composite output.
- Connect analogue audio outputs.
- 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.
- On power-up the unit will perform a short (3 second) self test. The group LEDs will flash while this is in progress.
- The signal LED will be green when there is power and a valid 270Mb/s SDI signal present or red when there is power but no SDI signal.
- One of the group LEDs will light corresponding to the group selected by the switches. This LED will be green if the unit is receiving a valid video signal and successfully de-embedding audio. The LED will otherwise be red.
- The switch settings can be altered whilst the unit is powered and the changes are implemented immediately.
- 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.

Switch settings

Switch	1	2	Switch	OFF	ON
Group 1	OFF	OFF	3	18dBu	24dBu
Group 2	OFF	ON	4 *	Custom level	
Group 3	ON	OFF	5	NTSC Japan or PAL N	
Group 4	ON	ON	6	Set custom level	
* Overrides switch 3 and selects custom level					

Switches 1 & 2 set the group from which audio packets are extracted.

Switch 3 selects between analogue output levels of 18dBu and 24dBu (when switch 4 is in the OFF position).

Switch 4 over-rides the switch 3 setting and selects the custom level. This is 20dBu on delivery but can be altered (see below).

Switch 5 should only be on if NTSC Japan or PAL N outputs are required.

Switch 6 is used to set custom analogue output levels. If switch 6 is left on for more than six seconds the unit will enter custom level select mode – all group LEDs will flash red while the unit is in this mode. Refer to the next section for selecting custom levels.

Custom level select mode

To meet all international analogue audio full scale output levels the unit has a custom analogue output level select mode. In this mode it is possible to select any output level between <12dBu and 24dBu in 0.5dBu increments. The default value of the custom level on delivery is 20dBu. Once the value of the custom level is altered it will remain stored in memory until changed again.

To set the analogue input level:-

- Activate switch 6, once this has been on for more than six seconds the unit will enter custom level select mode. This can be verified by all four group LEDs on the front of the box flashing red.
- Switch 1-5 will now set the expected analogue output level as per the table below.
- To exit the custom level select mode deactivate switch 6, the value on switches 1-5 will be stored in memory. It will be necessary to reset switches 1-5 to the desired settings for normal use.