Specification

Input				
Impedance		75Ω bridging		
Return loss		<-46 dB to 15 kHz and <-40 dB to 5.5 MHz		
Allowable dc superimposed		3 V maximum		
Common mode signal level		4 V maximum		
CMRR		<-60 dB to 15 kHz, <-35 dB to 5.5 MHz		
Output				
Number		Six 75Ω		
Return loss		<-40dB (50Hz-5.5MHz)		
Isolation		<-46dB		
dc superimposed		<±20 mV adjustable		
Signal level		1 V p-p		
Electrical length		18 ns		
Consistency		Typically 0.5 ns		
Video performance				
Gain control range		±3dB		
Frequency response		±0.1 dB to 8 MHz roll off 3 dB/octave		
Pulse to bar ratio		<0.2% K		
Bar slope		<0.2% K		
Pulse slope		<0.2% K		
Y/C gain inequality		<0.5%		
Y/C gain delay		±1 ns		
Differential gain		<0.2% (12.5%-87.5% APL)		
Differential phase		<0. 2° (12.5%-87.5% APL)		
Noise added at output				
Luminance CCIR weighted		<-82 dB		
Chrominance CCIR weighted		<-75 dB		
LF random unweighted		<-70 dB		
Equalisation				
Front panel controls		Low, medium and high frequencies		
Range		±200m PSF1/3 or equivalent (+0-400m jumper selectable internally)		
Power				
Power supply required		230VAC 50Hz		
Power consumption		10 VA		
Operating temperature		0-40° C		
NB Above measurements refer to the 5AV2628 CEDA and associated 5AV2647 rear connector unit in a 5AV2645 frame using PSF1/3 cable and with all unused outputs terminated.				
Physical	Weight (kg)	Height (mm)	Width (mm)	Depth (mm)
5AV2628	1.000	88	44	300
5AV2628L	1.000	88	44	300
5AV2647	0.210	88	44	120

DTL Broadcast Ltd, Johnson's Estate, Silverdale Road, Hayes, Middlesex, UB3 3BA, UK
Phone: +44 (0) 20 8813 5200 Fax: +44 (0) 20 8813 5022
Internet: www.dtl-broadcast.com support@dtl-broadcast.com

DTL 2600 range

Broadcast

User Guide

5AV2628 clamped equalising video DA

A precision clamped equalising analogue video distribution amplifier that, with its associated rear connector unit, provides six outputs and a differential looping input.

www.dtl-broadcast.com

Features

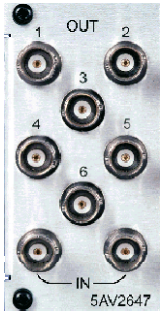
The 5AV2628 clamped equalising video distribution amplifier (CEDA) is designed primarily to equalise signals from outside the studio environment such as from satellite and microwave links but can also be used to equalise signals passed through a variety of cable types. Standard (5AV2628) and long time-constant (5AV2628L) CEDA's are available, the long time-constant version providing more compensation at lower frequencies when this is required. The units are based on the proven 5AV2646 video distribution amplifier and use the same mating rear connector unit (5AV2647) for input and output connections. .

- +ve and ˜ ve wide ranging equalisation to compensate for under and over equalised signals. Equalises for >200m PSF1/3 or equivalent (+0-400m jumper selectable internally).
- Inherently high CMRR that effectively eliminates common mode hum pick up on lines.
- The signal LED turns from green to red when there is no input video present
- Front panel adjustments for gain and low, medium and high equalisation frequencies.
- A clamp circuit with switched options on the front panel. Designed to considerably reduce the effect of differential mode hum or jitter on the input signal it can be switched on or off.
- Hard or soft clamping is selectable on the front panel to eliminate excessive or slight differential hum or jitter.
- Back-porch or sync-tip clamping allows the user to choose the most effective clamping point for the input signal.
- Passes sound in sync.

Installation

Systems are generally delivered with modules (including sub-modules) and associated rear connector units already installed and configured within frames to your requirements.

Before installing or re-arranging modules and rear connector units in 2600 series frames the 2600 range and frames user guide should be consulted. Section 1.3 'Safety and pre-installation checks' includes instructions that must be followed. Section 2 describes how to install or re-arrange modules and rear connector units in 2600 series frames.



Rear connector units

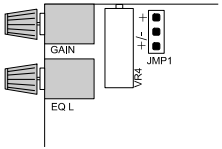
Input and output BNC connections are clearly shown on the rear connector unit. Ensure that the looping input is terminated in 75Ω either on the unit or at the end of any interconnecting cable. Ensure that all unused outputs are terminated in 75Ω.

Front module

The CEDA fits into the frame from the front and is secured by two thumbscrews. This may be done with the frame powered.

The signal LED when lit, shows that the unit is receiving mains and the internal power supply is functioning & turns from red to green when an input video signal is present.

Video input screen can be floating or grounded depending on the user's requirements. CEDA's are shipped with the screen floating so that input common mode signals are rejected. It may be necessary to ground the input screen, for instance in cases where lightning induction is a problem. To ground the input screen link LK1, found near the edge connector pins on the component side on the VDA motherboard.



Front panel gain and equalisation controls are at unity gain and 0m equalisation when the knob pointers align with the panel marker. Turning the control clockwise increases, and anticlockwise decreases, the Gain and Equalisation respectively. Section 3.1 describes the alignment procedure using a Pulse & Bar test signal to equalise a signal.

The +ve equalisation range can be greatly increased at the expense of ˜ ve equalisation, by moving the jumper to + on JMP1 on the sub-board. Access to the link is by sliding the module half way out of the frame and its location is as shown in the sketch. CEDA's leave the factory with JMP1 set to +/.

Clamping is done by feedback in which the output is sampled, an error signal derived by comparing the sample to a reference, and then the output drift corrected by adding back the inverse of the error with a selectable time-constant. One switch on the front panel allows the clamp to be switched on or off, another allows the clamp time-constant to be selected between hard (short) and soft (long) while a third allows the point at which the clamp operates to be selected between back-porch or sync-tip. Hard time-constant will be selected when excessive differential signal components have to be removed, though a soft time-constant is recommended for normal operation. Sync-tip or back-porch clamping will be selected by the user for the portion that is least noisy.

Ordering information

5AV2628	Clamped equalising video distribution amplifier (CEDA)
5AV2628L	Long time-constant CEDA
5AV2647	Connector unit with looped through input and 6 output