Specification

Input				
Impedance		75Ω bridging		
Return loss		<-46 dB to 15 kHz		
		<-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		
Output				
Number		6		
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		-1 dB to +3 dB		
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		
Power				
Power supply required		230VAC 50Hz		
Power consumption		8 VA		
Operating temperature		0-40° C		
NB Above measurements refer to the 5AV2646 VDA with 6PD2649 EQ and associated 5AV2647 rear connector unit in a 5AV2645 frame using PSF1/2 cable and with all unused outputs terminated.				
Physical				
	Weight (kg)	Height (mm)	Width (mm)	Depth (mm)
5AV2646	0.635	88	44	300
5AV2647	0.210	88	44	120
6PD2649	0.010	N/A	N/A	N/A
6PD26491	0.010	N/A	N/A	N/A
6PD3191	0.014	N/A	N/A	N/A
6PD26493	0.014	N/A	N/A	N/A

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DTL 2600 range

User Guide

5AV2646 analogue video equalising distribution amplifier

www.dtl-broadcast.com

Features

The 5AV2646 video distribution amplifier (VDA) together with its associated 5AV2647 rear connector unit is a high quality amplifier of proven reliability with looping inputs and six 75Ω outputs. The VDA handles composite video (or a channel of YC, YUV or RGB) and 4-volt pulse. Various equalisation (EQ) sub-modules can be fitted to cater for most cable types and lengths. The front panel incorporates an input signal presence LED and access to frequency range and gain adjustments dependent on the EQ sub-module fitted. Each module contains its own independent power supply and can be mixed with other modules in the standard frames (see section 2 of the 2600 range and frames user guide).

- Differential looping inputs.
- Choice of plug in equalisation sub-modules to cater for most cable types and lengths.
- Six matched75Ω outputs as standard.
- The signal LED turns from green to red when there is no input video present.
- Inherently high CMRR - very effective for reducing hum and pick-up.

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 VDA fits into the frame from the front and is secured by a thumbscrew. 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.

Front panel mounted gain and equalisation are factory set at unity and 0m equalisation respectively. Turning the respective control clockwise increases and anti-clockwise decreases Gain or Equalisation.

Gain and EQ alignment

Alignment of Gain and EQ is best done by observing one of the VDA outputs on an oscilloscope with a cable terminated in 75 ohms at the 'scope.

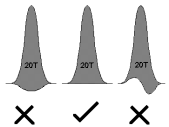
Gain and EQ can be aligned with the following procedure:

As source signals use 1Vp-p Pulse & Bar with 2T, 20T chroma filled & Bar:

Set the Gain at the VDA output for 1V between sync tip and the top of the bar.

Observe the peak of the pulses with the 'scope set for 50mV/div and adjust the equalisation control so that they are the same level as the bar.

Observe the base of the 20T pulse envelope and trim the equalisation control to optimise the base line so that it is as flat as possible.



Recheck the gain setting.

All other adjustments are factory pre-set and should not be changed.

Equalisation sub-modules

Four EQ sub-modules are available one of which MUST be fitted for the VDA to function. EQ sub-modules plug into the VDA motherboard and are retained by a fixing screw allowing units to be changed in the field.

6PD2649 variable EQ sub-module - Gain and EQ control are made available at the front panel by this sub-module. This module will equalise for cable lengths of up to 150m of PSF1/2 or PSF1/3 and equivalent cable types.

6PD26491 variable EQ sub-module - As the 6PD2649 above but set for cable lengths of 150 to 450m.

6PD3191 0-300m multivariable EQ sub-module - This sub-module provides gain and adjustments for high, medium, low and very low frequencies, which are available from the front panel.

6PD26493 0-800m multivariable EQ sub-module - This sub-module provides gain and adjustments for high, medium, low and very low frequencies, which are available from the front panel. It is suitable for lengths from 0 to 800m of PSF1/2 or equivalent cable.

Input options

Video input screen can be floating or grounded depending on the user's requirements. VDA'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.

Ordering information

5AV2646	Video distribution amplifier for 6 outputs
5AV2647	Connector unit with looped through input and 6 outputs
6PD2649	0-150m cable equalising sub-module
6PD26491	150-450m cable equalising sub-module
6PD3191	Multi-variable 0-300m cable equalising sub-module with front panel adjustment for very low, low, medium and high frequencies
6PD26493	Multi-variable 0-800m cable equalising sub-module with front panel adjustment for very low, low, medium and high frequencies