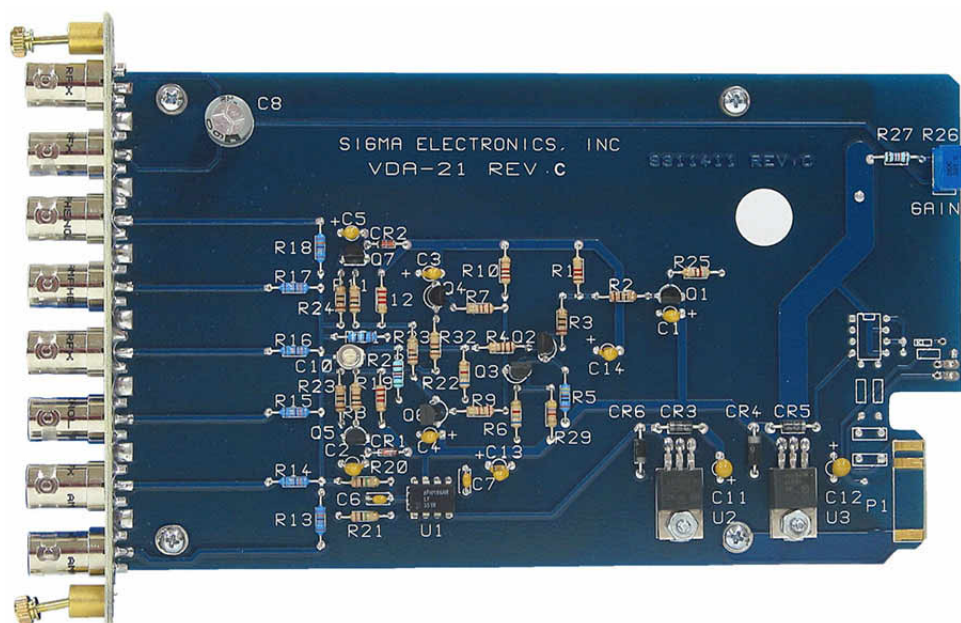


VDA-21

VIDEO DISTRIBUTION AMPLIFIER INSTRUCTION MANUAL



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VDA-21 VIDEO DISTRIBUTION AMPLIFIER

GENERAL:

The VDA-21 Video Distribution Amplifier is designed to provide six (6) outputs from a single video signal source. The module is compatible with either NTSC or PAL video signals. The 30 MHz bandwidth of the VDA-21 makes it compatible with HDTV applications, as well. The “looping” input is compatible with 1 Vp-p video as described and 2 Vp-p Subcarrier signals.

This module must be installed in a Sigma Frame for proper operation. Power is provided by the power supply within the frame. A Sigma frame is designed to accommodate any 2100 Series module. This allows the VDA-21 to be resident with any other Sigma 2100 Series module in a common frame.

POWER:

The VDA-21 operates from bus voltages of unregulated +20 VDC and -20 VDC. These voltages are supplied by the Sigma frame / power supply. The module has two regulators U2 -12 VDC and U3 +12 VDC .

FRAMES:

The VDA-21 module can reside in any of four different frames or the Stand-Alone box provided by Sigma Electronics, Inc. If this module is purchased as a component of a system, please refer to the SERIES 2100 FRAMES Instruction Manual. If the module was purchased separately, an existing frame must be present for proper operation. Sigma would like to emphasize the fact that any of the Series 2100 modules can be mixed in any frame.

- ◆ When assembled in the SSB-21 Stand-Alone Box, it is assigned the model number VDA-26. This is a single slot desk top box.
- ◆ The SS-2100-2 frame is also designed for desk top applications. This frame provides two (2) slots for dual module configurations; i.e. a blackburst module and a video distribution amplifier.
- ◆ The SS-2100-6 frame is designed for 19 inch EIA rack installations. It provides six (6) slots for modules in 1 RU.
- ◆ The SS-2100-12 frame provides twelve (12) slots for modules within 3 RU. Redundant power supplies are provided within this frame.
- ◆ The SS-2100-16 frame is also available for installations in a 19 inch EIA rack. This frame provides sixteen (16) slots for modules within 3 RU.

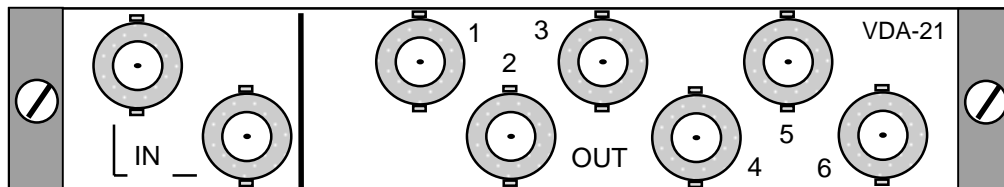
Additional information on the various frames is available. Please refer to the special section on frames if this was purchased as a complete system. If this information is not provided with this shipment, contact Sigma Electronics for assistance.

CONNECTIONS:

Wiring to the module is performed via connectors on the rear panel (Figure 1).

INPUT: There is a looping input on the rear panel of the unit. The INPUT is a high impedance configuration. This allows the video signals to loop to other units. To ensure proper impedance matching it is necessary to terminate the input with a 75Ω load. When multiple units have the same source looped only apply the 75Ω resistor to the last unit in the line. The looping configuration may be used for as many as five modules to increase the number of available outputs.

OUTPUT: There are six (6) outputs on the rear panel of each unit. Each output is designed to drive a 75Ω load. It is not necessary to terminate unused outputs.



REAR PANEL CONNECTIONS
Figure 1

VDA-21 VIDEO DISTRIBUTION AMPLIFIER

FRONT PANEL:

The gain adjustment on the front panel (Figure 2) can be accessed through the provided slot on the VDA-26. When mounted within the SS-2100 Series frames, it will be necessary to remove the front panel of the frame to access this adjustment. Factory setting of the module provides unity gain and maximized frequency response.

The variable gain control (R26) provides adjustment of at least ± 1.5 dB.

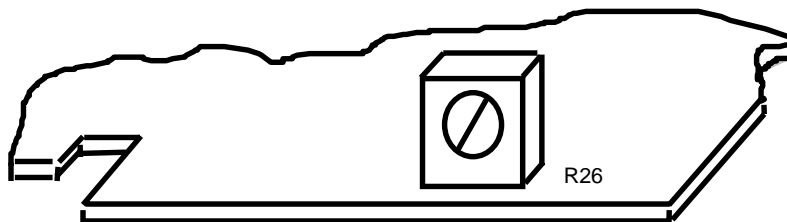


Figure 2: Front Panel

ADJUSTMENTS:

Gain and frequency response are both set for optimum performance by Sigma Electronics. If necessary, these parameters may be readjusted via the controls listed below.

R26: Gain, Front panel access. Factory adjusted for unity gain.

C10: Frequency response. Optimized by factory setup.

SPECIFICATIONS:

INPUT:

INPUT: 1, High Z, Looping
INPUT LEVEL: 1.4 Vp-p video, 2.0 Vp-p Subcarrier
COUPLING: AC
RETURN LOSS: 35 dB
GAIN RANGE: ± 1.5 dB

OUTPUT:

OUTPUT: 6, 75 Ω , source terminated
BANDWIDTH: 30 MHz
DIFFERENTIAL PHASE: 0.1° to 5 MHz
DIFFERENTIAL GAIN: 0.1% TO 5 MHz
TILT: 1% Maximum
FREQUENCY RESPONSE: ± 1 dB to 30 MHz
RETURN LOSS: 35 dB to 5 MHz

GENERAL:

OPERATIONAL TEMPERATURE: .. +32° TO +122° F (0° to 50° C)
SIZE: 1 Card Slot, consumes one position in a Sigma 2100 Series frame
CONNECTORS: BNC

TECHNICAL MANUAL:

A manual including schematics, circuit description, and parts list is available upon request. This information is intended for the service of the module. Modules should be serviced by Qualified Personnel only ! Sigma Electronics, Inc. recommends service to be performed by our Factory Service Center.

All specifications, drawings, dimensions, weights and other details are subject to change without notification. Information is intended to give a general performance and operation guideline of the product.

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