



VDA-101

**Utility Analog Video
Distribution Amplifier**



Statement of Warranty

The ISIS Group, Inc. warrants its products for a period of seven (7) years from the date of shipment to be free from defects in materials and workmanship and meets applicable published specifications. Equipment which has been operated within its ratings and has not been subjected to mechanical or other abuse or modification by the purchaser, its agents, and/or employees, will, at the option of The ISIS Group, be replaced or repaired if it is returned, freight prepaid, to ISIS. Equipment that fails under conditions other than described herein will be repaired at the price of components and labor in affect at the time of repair.

This warranty is in lieu of all other warranties, expressed or implied, with respect to the condition or performance of any ISIS Group product, its merchantability or fitness for a particular purpose. ISIS is not liable for any consequential damages.

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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Part Number 71-0026

Installation and Operation Manual

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SECTION I

VDA-101

General Description

The VDA-101 is a modular, utility video distribution amplifier intended for general video distribution systems. It is designed to be operated from the ISIS VMF-100 mounting frame, and it is also pin-compatible with the Leitch* FR-6801 and FR-6802 video mounting frames. The module can be used for general purpose distribution of NTSC and PAL subcarrier as well as analog composite and component video signals.

The module is configured as a one-input by eight-output amplifier, using 75Ω BNC connectors.

There are two jumpers present on the module. One is used to select AC or DC input coupling, and the other selects whether the input signal is looping or internally terminated in 75 ohms.

Each module has its own on-board voltage regulators with fuse protection. Any failure of a single module will not affect any of the other modules within the frame.

*Leitch is a trademark of Leitch Technology International, Inc.

SECTION II

VDA-101

Specifications

Input:

Number	1, Differential
Impedance	75Ω bridging or terminated (jumper select)
Video Input Level	1V p-p
Subcarrier Input Level	1 to 2V p-p
Input Coupling	DC (AC optional with jumper)
Maximum DC on Input	±15V (AC coupled)

Outputs:

Number	8
Impedance	75Ω

Performance:

Gain range	-3dB to +6dB
Frequency Response	<±0.1dB to 10MHz
Differential Gain (10-90% APL)	<0.15%
Differential Phase	<0.15°
Performance temperature	5 - 40° C
Maximum Operating temperature	0 - 50° C
Power Consumption	<2 W

SECTION III

VDA-101

Installation and Operation

The VDA-101 analog video distribution amplifier is designed to be mounted in either the ISIS VMF-100 video mounting frame, (up to ten modules), or a Leitch* video frame (such as the FR-6801 or FR-6802). There are no special cooling requirements, although care should be taken to ensure that extremely hot equipment is not installed directly beneath the frame.

It is recommended that when redundant power supplies are included in the frame, the two power cords be connected to different AC supplies. In this way the frame will continue to operate even if there is a partial failure of plant power.

Before installing the module in the frame, it is necessary to set the internal jumpers to the desired mode. Jumper H1 selects either internal 75 Ω termination or high impedance looping mode, and jumpers H2 selects either AC or DC input coupling.

*Leitch is a trademark of Leitch Technology International, Inc.

SECTION IV

VDA-101

Circuit Description

The VDA-101 is a single input, eight output video distribution amplifier. The input may be AC or DC coupled. AC or DC selection is made by jumper H1. The input may also be terminated with 75 ohms or a high impedance looping input as selected by H2. The input is buffered by U2 and then fed via gain control RV1 to the output drivers U1 and U3. Two output drivers are provided to improve output performance.

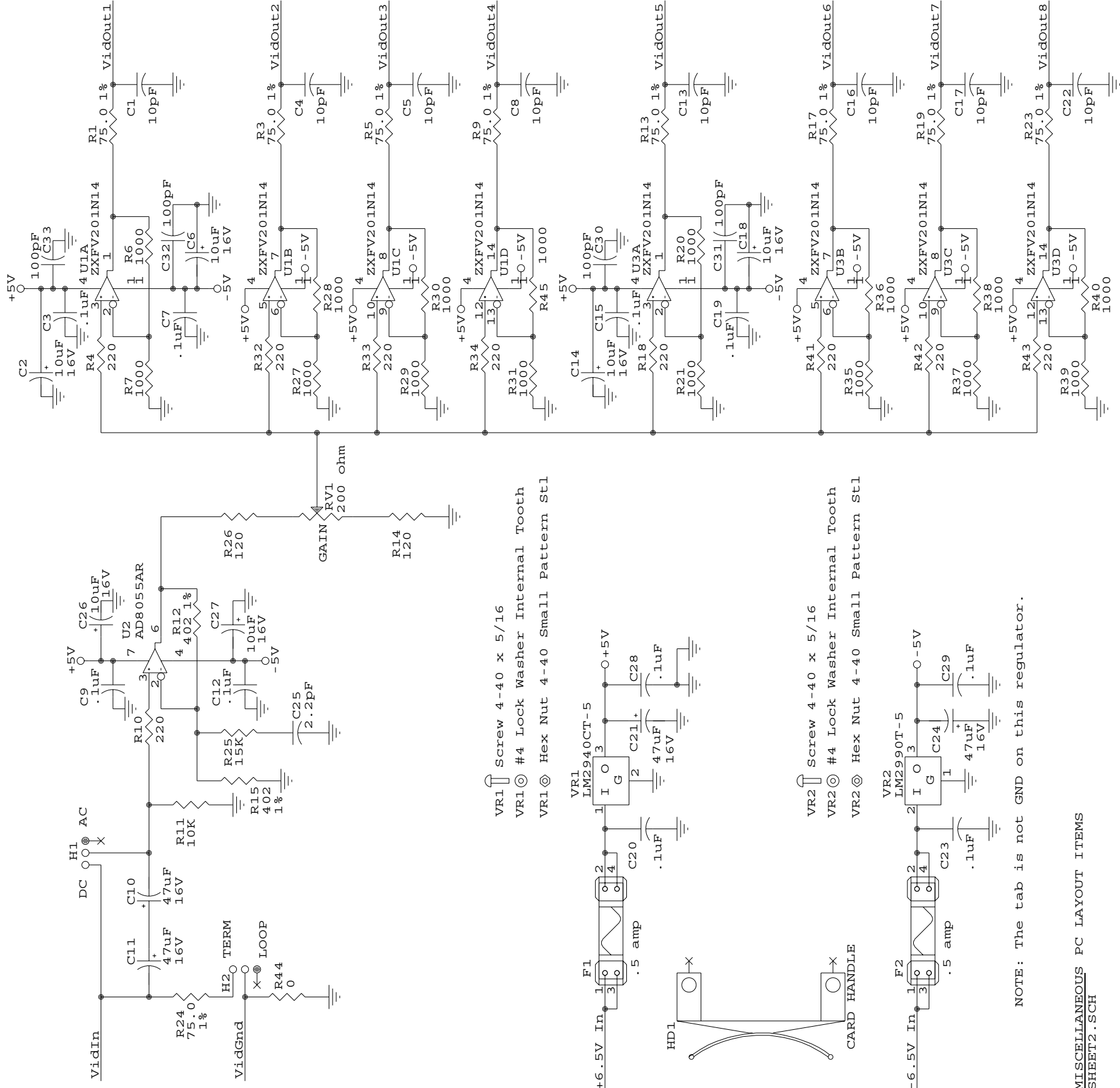
VR1 and VR2 provide regulated $\pm 5V$ supplies.

SECTION V

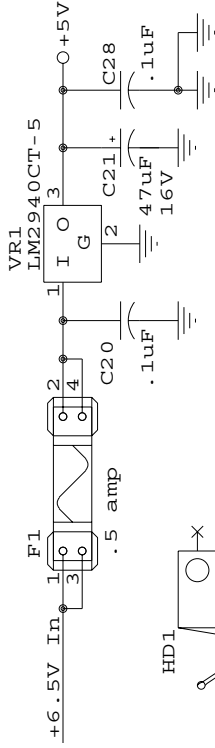
VDA-101

Diagrams

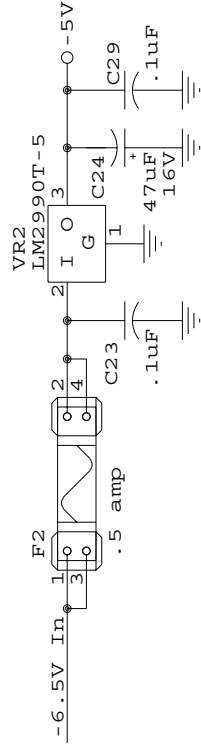
VDA-101 VIDEO DISTRIBUTION AMPLIFIER



- VR1 ⬆ Screw 4-40 x 5/16
- VR1 ⊙ #4 Lock Washer Internal Tooth
- VR1 ⊙ Hex Nut 4-40 Small Pattern St1

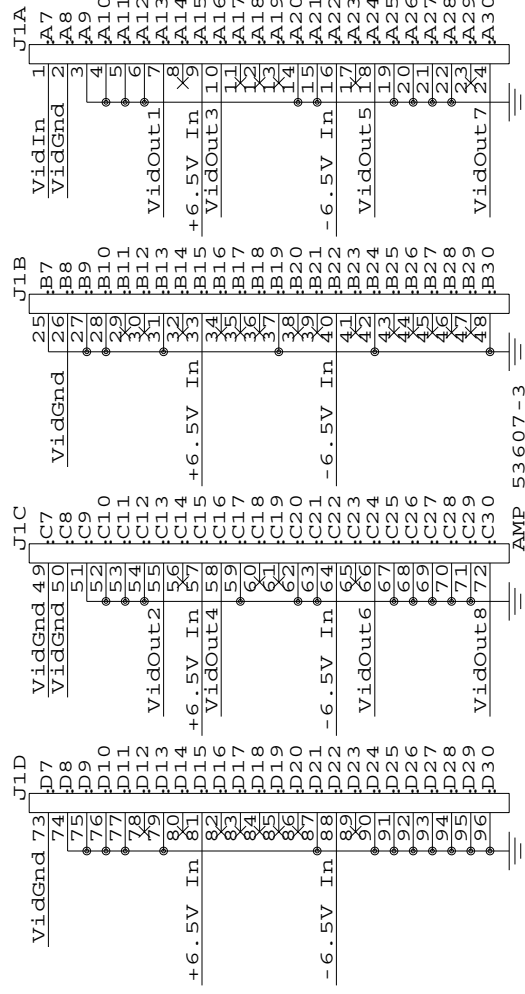


- VR2 ⬆ Screw 4-40 x 5/16
- VR2 ⊙ #4 Lock Washer Internal Tooth
- VR2 ⊙ Hex Nut 4-40 Small Pattern St1



NOTE: The tab is not GND on this regulator.

MISCELLANEOUS PC LAYOUT ITEMS
SHEET2.SCH



AMP 53607-3

R1 - Reversed polarity of C24 & C27.
Changed C25 from 10pF to 2.2pF.
Changed R25 from 120 to 15K ohm.

The ISIS Group, Inc.
Grass Valley, Ca.

Title	
VDA-101 Utility Video Distribution Amp	
Size	Document Number
B	1
REV	1