



**RDL**<sup>®</sup>  
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## RACK-UP<sup>®</sup> SERIES

### Model RU-VDA4B

### Video Distribution Amplifier

- Adjustable Gain Amplification
- Input Loop-Through Jack
- Video 1 Volt Video Signal Indicator
- 10 MHz Bandwidth
- 1/3-Rack, High-Density Rack-Mounting



The RU-VDA4B is part of the group of RACK-UP products from Radio Design Labs. RACK-UPs feature the advanced circuitry for which RDL products are known, combined with accessible user-friendly controls and displays. The ultra compact design permits high-density installations, with *three* products mounted in a single rack unit! Optional brackets permit mounting a RACK-UP module above, below, or in front of any flat surface!

**APPLICATION:** The RU-VDA4B is the ideal choice in most applications where video signals need to be distributed. Video inputs and outputs are made on the front panel BNC jacks. Power connections are made using full-size barrier block terminals on the rear panel.

The RU-VDA4B has two jacks in the bridging input stage. One jack is for the input signal; the other is a *loop-through* output of the source signal. If 75-Ohm termination of the input signal is required, the terminator (provided) is plugged onto the **Loop Out** jack.

Gain is user adjustable from the front panel. The gain potentiometer allows adjustment from  $-1$  dB to  $+7$  dB.

Four source-terminated outputs are provided through the BNC output jacks. Unused outputs need not be terminated. A convenient (write-on) label area is provided to identify the feed from each output jack.

A unique feature of the RU-VDA4B is the **1V VIDEO INTO TERMINATED LOAD** LED indicator. While not intended as precision test equipment, this indicator can prove very helpful in field and remote location setup. The indicator is off when the video signal drops below 1 Vp-p, and comes on when the signal just achieves 1 volt.

Wherever a video distribution amplifier is needed to provide wide-band video feeds, gain adjustment, reliability, compactness and unsurpassed versatility, the RU-VDA4B is the ideal choice. Use the RU-RA3 rack-mount adapter to mount multiple RU-VDA4Bs, or to combine related products (such as audio mixing, audio distribution, or audio metering) into a single rack unit!



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## Model RU-VDA4B

### Video Distribution Amplifier

## Installation/Operation



EN55103-1 E1-E5; EN55103-2 E1-E4  
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.



**POWER CONNECTION:** Connect a single-ended 24 Vdc power source to the **+24** terminal. Connect the ground return from that supply to the adjacent **GND** terminal. Power supply and circuit grounds are common.

### FRONT PANEL CONNECTIONS

**INPUT:** Connect video input to the **IN** jack. If the input signal is to continue on to another piece of equipment which will terminate the input, connect a cable to the **LOOP OUT** jack; connect the other end of this cable to the terminating equipment. If no loop output is used, connect a 75 Ohm terminator to the **LOOP OUT** jack.

**OUTPUT:** Connect the coaxial cable to the desired output(s) on the RU-VDA4B, and label them as desired.

**GAIN ADJUSTMENT:** Adjust the GAIN potentiometer for 1 Vp-p video level on your instrumentation. In the absence of test equipment, the **1V VIDEO INTO TERMINATED LOAD** LED may be used. First turn the gain counter-clockwise. Then advance the **GAIN** clockwise until the **1V VIDEO INTO TERMINATED LOAD** LED just illuminates.

### TYPICAL PERFORMANCE

Input Impedance:	1 k $\Omega$ (Bridging, 75 Ohm Line)
Gain Range:	-1 dB to +7 dB (adjustable)
Load Impedance:	75 Ohms
Outputs (5):	1 <b>Loop Out</b> from Input Signal 4 Amplified Outputs
Output Level:	1 V p-p (into 75 Ohm)
Frequency Response:	10 Hz - 10 MHz (+/- 0.2 dB)
Noise:	< -70 dB (below 1 V p-p)
Output Isolation:	> 40 dB
Differential Gain:	0.1%
Differential Phase:	0.1 degree (measured at 10% and 90% APL)
Connector Type:	BNC
Power Requirement:	24 Vdc @ 60 mA, Ground-referenced
Mounting:	Rack-mount using any one of several rack mount chassis accessories or other mounting accessories listed in the short form catalog or product CD-ROM.
Dimensions:	Height: 1.7 in. 4.3 cm Length: 5.8 in. 15.0 cm Depth: 2.0 in. 5.1 cm (case only) 2.5 in. 6.4 cm (including barrier block) 3.0 in. 7.7 cm (including barrier block and jacks)

### Radio Design Labs Technical Support Centers

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