



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

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## TWISTED PAIR FORMAT-A Models D-HA1A, DS-HA1A, DB-HA1A Format-A Stereo Headphone Amplifier



- Headphone Amplifier with User Level Control
- 25mW power into Standard Headphones
- Output on Standard Mini Jack
- Mounts in a Wall or Cabinet
- Input and Power Connection on RJ45
- Connects to Format-A Sender using Twisted-Pair Cable
- Powered from RDL Twisted Pair Format-A Sender
- RJ45 Loop-Thru for Connecting Additional Modules
- Protected by Automatically Resetting Fuse
- Decora® Design with All Steel Panel and Rear Enclosure

The D SERIES-HA1A is part of the group of versatile wall-mounted products from Radio Design Labs. The standard mounting case can be directly fastened in North American electrical boxes or in RDL International wall boxes.

**APPLICATION:** The D SERIES-HA1A is a two pair receiver and audio headphone amplifier compatible with RDL Format-A twisted pair products. Each -HA1A receives stereo audio and 24 Vdc power through a rear-panel RJ45 jack fed from a Format-A sender. The left and right audio signals received on pairs B and C of the twisted pair cable are amplified and fed to the left and right channels of the output 3.5 mm Mini-jack.

The front panel provides the headphone output jack and a single-turn user volume control. There are no illuminated indicators that could be distracting in dark locations, such as a hotel room. The audio input circuits feature very high common mode rejection and a high quality stereo headphone amplifier for superior audio fidelity and low-noise performance.

The -HA1A is ideally suited to guest room installations with bedside and restroom listening stations. The input is fully compatible with all RDL Format-A senders.

The -HA1A is equipped with two Format-A RJ45 jacks. Either jack may be used as the input. The other RJ45 may be used to connect an additional -HA1A or other Format-A receiver.

Installation is simple and economical. Standard twisted pair cable is used to connect a Format A sender to the -HA1A. RDL FORMAT-A features superior audio performance that rivals or exceeds shielded wiring. Design simplicity, ease of installation, unsurpassed flexibility, automatic fused power, exceptional hum rejection, low noise, and low distortion provide designers and installers the optimum choice in economical twisted pair products.

**D- SERIES**

**Models D-HA1A, DS-HA1A, DB-HA1A  
Format-A Stereo Headphone Amplifier**

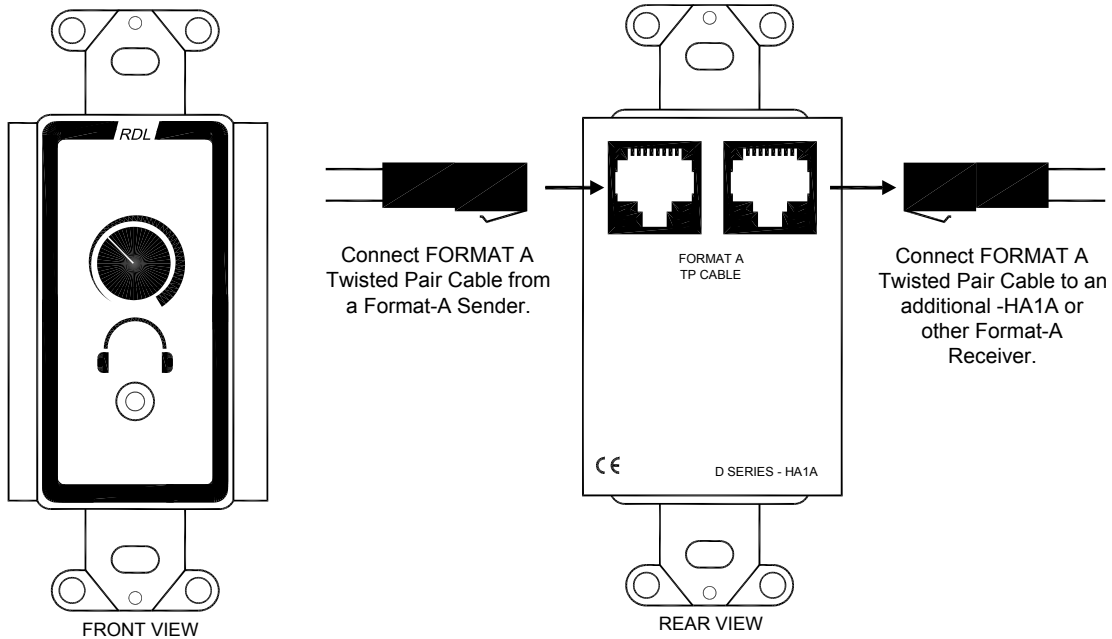
Mounting

The D SERIES-HA1A should be mounted in an RDL WB-1U wall box or equivalent. The ambient operating environment must not exceed 40 degrees C.

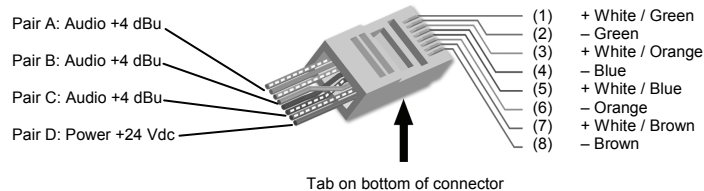
**Installation/Operation**



EN55103-1 E1-E5; EN55103-2 E1-E4; EN60065  
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice. This product is Professional Apparatus.



**RJ45 Standard wiring**



RJ45 conductor colors shown are for 568A standard. The 568B standard may be used if the connectors at both ends of the cable are wired identically.

**TYPICAL PERFORMANCE**

Input:	RDL TP Format-A
Input Connection:	RJ45
Format-A Signal Pairs Used (2):	B, C
Format-A Output:	RJ45 (loop-through)
Output:	Stereo, 25 mW per channel (into 100 ohms)
Frequency Response:	10 Hz to 40 kHz (+/- 1 dB, into 100 Ohms)
THD+N:	< 0.01% (1 kHz, 10 mW)
Noise:	< -90 dB (maximum gain)
Crosstalk:	< -85 dB (1 kHz); < -70 dB (20 Hz to 20 kHz)
Power Connection:	RJ45 (power provided by Format-A sender)
Power Requirement:	24 Vdc @ 30 mA
Dimensions:	1.33" (3.37 cm) D; 1.72" (4.37 cm) W; 4.11" (10.44 cm) H

**Radio Design Labs Technical Support Centers**

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