



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

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## RACK-UP<sup>®</sup> SERIES

### Model RU-SH1

### Stereophonic Headphone Amp

- Rack-Mounted Headphone Amplifier
- RACK-UP Series Headphone Amplifier
- Integral Long-Life VCA Stereo Level Control
- Balanced or Unbalanced Inputs
- Switch-Selectable Input Sensitivity
- Switch-Selectable Mono (L) or Stereo Operation
- Drive High or Low Impedance Headsets



The RU-SH1 is part of the group of versatile RACK-UP products from Radio Design Labs. These modules combine advanced circuitry, durable all-metal construction and versatile mounting possibilities. The 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. Optional rack-mount adapters are available for RACK-UP series installation.

**APPLICATION:** The RU-SH1 is used in applications requiring headphones of any impedance to be driven from consumer or professional audio sources. The module mounts in RACK-UP series rack mounts or in various RDL mounting accessories. The RU-SH1 is ideally suited to applications as diverse as language translation, museums, interview studios and music stores.

The RU-SH1 is a dual channel headphone amplifier with balanced/unbalanced left (**INPUT L**) and right (**INPUT R**) inputs. Each input accepts operating levels between -20 dBV and +20 dBu. Two recessed slide switches located on the side of the rear enclosure are set prior to mounting the module. One switch is provided for setting the **INPUT SENSITIVITY**. The **MODE** switch selects between stereo and mono operation. In the **MONO (L)** position, the left input is used to drive both output channels. When the module is used in a monaural system, only the left channel input must be wired. The front panel level control is a long-life potentiometer controlling matched VCAs. Audio does not pass through this control, assuring years of noise-free level adjustment. The output amplifiers deliver more than 50 mW into either high or low impedance headphones through a durable, metal ¼" (6.3 mm) standard headphone jack.

Module operation is from a 24 Vdc ground-referenced power supply. It can also operate from a 12 Vdc supply with a 6 dB reduction in headroom and a maximum output power of 10 mW.

The versatile input level range, low distortion, audio clarity and excellent crosstalk performance make this module ideally suited to a wide variety of audio applications. Use this module in conjunction with other RDL modules as part of a high quality, flexible audio/video system.

# RACK-UP® SERIES

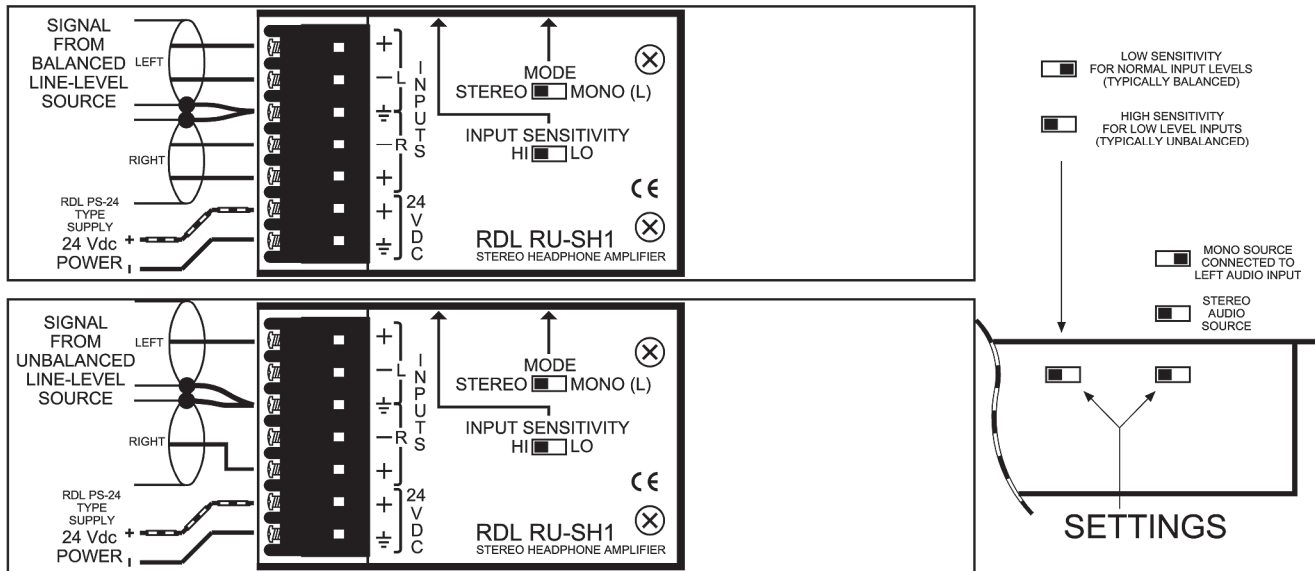
## Model RU-SH1 Stereophonic Headphone Amp

## 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.

### AUDIO AND POWER WIRING



NOTE: FOR MONO AUDIO SOURCES, ONLY  
CONNECT INPUT TO LEFT (L) INPUT

### TYPICAL PERFORMANCE

Inputs (2):	10 kΩ balanced or unbalanced bridging
Input Level:	+4 dBu nominal (Low input sensitivity) balanced; -15 dBV nominal (High input sensitivity) unbalanced
Maximum Input Level:	+21 dBu (Low input sensitivity) balanced; +3 dBV (High input sensitivity) unbalanced
Output Signal (normal rated):	10 mW into 100 Ω
Output Signal (maximum):	50 mW into 100 Ω
THD+N:	< 0.5% @ 1 kHz
Frequency Response:	30 Hz to 20 kHz (± 2 dB)
Noise:	< -70 dB below normal operating level
Gain:	User-adjustable on front panel; 18.5 dB (maximum, High input sensitivity); Unity (maximum, Low input sensitivity)
CMRR:	> 60 dB (50 to 120 Hz)
Crosstalk:	Below noise floor (20 Hz to 20 kHz)
Ambient Operating Environment:	0° C to 50° C
Power Requirement:	GROUND-REFERENCED, 24 Vdc @ 50 mA

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