



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

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## HALF-RACK SERIES Model HR-MP2A Dual Microphone Preamplifier



- Two Independent Microphone Preamplifiers
- Balanced XLR Microphone Inputs
- Independent Controls for Each Preamplifier
- Front-Panel 20 to 60 dB Gain Control
- Switch-selectable 48 Volt Phantom
- Switch-Selectable 15 dB Input Pad
- Switch-Selectable Polarity Reversal
- Switch-selectable 48 Volt Phantom for Both Preamplifiers
- CLIP Indicators for Peaks 3 dB Below Clipping
- Balanced Line-Level Outputs
- Each Output Allows Balanced or Unbalanced Connection
- Each Preamp Output on 1/4" TRS or Detachable Terminal Block
- Separate Summed Output 1 + 2 on Detachable Terminal Block

The HR-MP2A is an RDL HALF-RACK product, featuring an all metal chassis and the advanced circuitry for which RDL products are known. HALF-RACKs may be operated free-standing using the included feet or may be conveniently rack mounted using available rack-mount adapters.

**APPLICATION:** The HR-MP2A is a dual channel microphone preamplifier with line-level outputs. Each section provides identical rear-panel signal connections and front-panel controls.

Each preamplifier is equipped with a front-panel **INPUT PAD** switch that allows the operator to attenuate the input signal by 15 dB prior to the preamplifier input stage, increasing the maximum input level from +5 dBu (attenuator out) to greater than +20 dBu. A **POLARITY** switch provides signal polarity reversal if needed. The **GAIN** control provides continuous adjustment between 20 dB and 60 dB. A **CLIP** LED flashes if a signal peak is within 3 dB of clipping. The trigger threshold of the **CLIP** LED is 17 dB above a normal +4 dBu output.

The HR-MP2A offers exceptional input headroom, wide flat frequency response and extremely low noise with very high common-mode signal rejection. Total harmonic distortion and crosstalk are below the noise floor, allowing the HR-MP2A to be operated as a stereo preamplifier or as two separate mono preamplifiers.

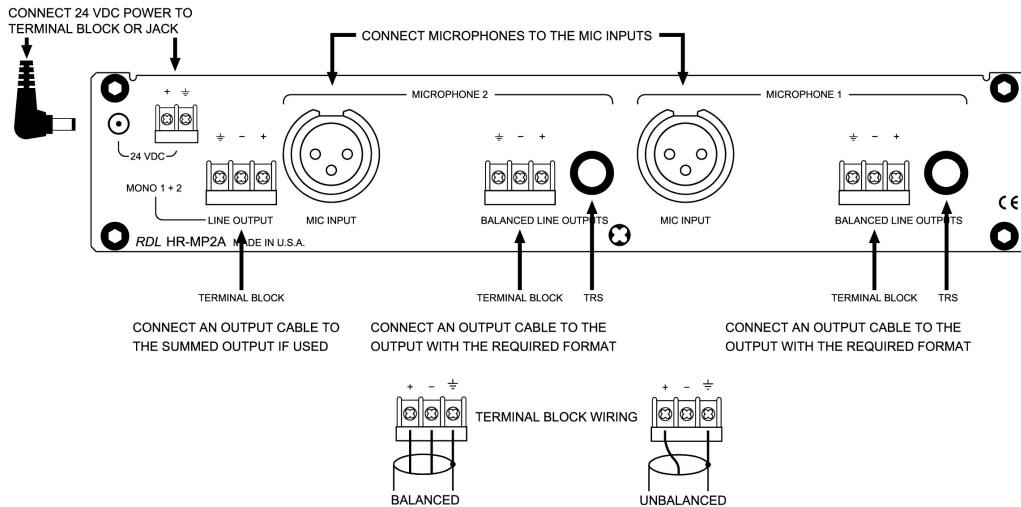
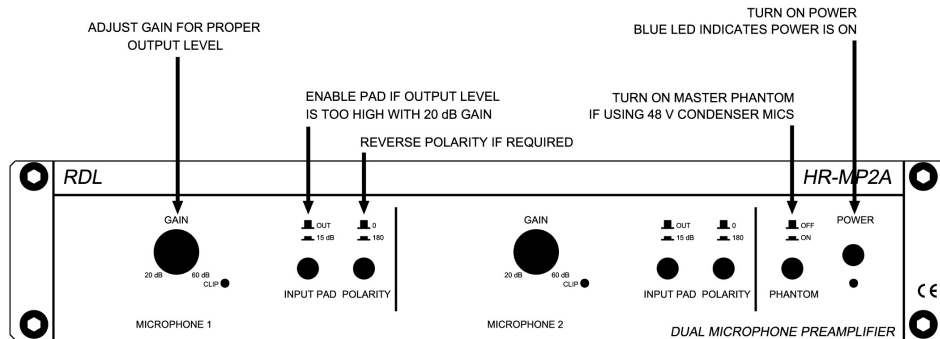
Each preamplifier provides two balanced line-level output formats: Detachable terminal block and 1/4" TRS. A separate summing amplifier provides a combined mono output on a line-level detachable terminal block. Balanced outputs may be wired unbalanced. The rear panel also provides a detachable terminal block and a power input jack to connect 24 Vdc power.

The HR-MP2A is constructed in a durable half-rack-width shielded metal enclosure for free-standing use or for mounting in an RDL rack adapter, available separately.

Wherever a dual-channel half-rack microphone audio preamplifier is needed to provide superior audio clarity, user adjustments, reliability, compactness and unsurpassed versatility and performance, the HR-MP2A is the ideal choice. Use the HR-MP2A combined with other RDL RACK-UP, STICK-ON, TX™, or FLAT-PAK™ series products as part of a complete audio/video system.

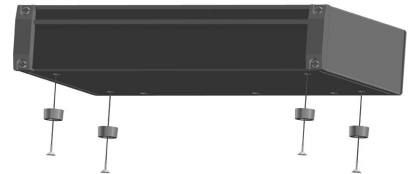
## HALF-RACK Model HR-MP2A Dual Microphone Preamplifier

**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.



### MOUNTING

For free-standing operation, use the four provided machine screws to mount the feet to the bottom of the module as shown, OR Use the four provided machine screws to secure the module to an optional RDL mount, such as an HR-RA2 Rack Adapter.



### TYPICAL PERFORMANCE

Inputs (2):  
Input level (for +4 dBu output): -56 dBu to 0 dBu (maximum gain without pad, minimum gain with pad)  
Maximum Input Level: >+5 dBu (input pad disabled), +22 dBu (input pad enabled)  
Input Impedance: < 1 kΩ balanced  
Phantom Power: Switchable (both preamplifiers) 48 V phantom (IEC 1938: 1996-12)  
Input pad (2): 15 dB nominal (1 per preamplifier)  
Outputs (5):  
Output level: +4 dBu balanced, -4 dBV unbalanced; +24 dBu maximum balanced  
Output Impedance: 150 Ω balanced  
Channels: 2 (1 and 2; may be used for stereo or as two separate mono preamplifiers)  
Gain Trim (2): 20 dB to 60 dB (front panel adjustable; one for each preamplifier)  
Frequency Response: 10 Hz to 70 kHz (+/- 0.5 dB, FLAT); -3 dB @ 80 Hz (LOW-CUT FILTER enabled)  
THD: Below noise floor  
CMRR: > 80 dB (50 Hz to 5 kHz)  
Residual Noise (below +4 dBu output): <-85 dB (20 Hz to 20 kHz, 40 dB gain, 150Ω source)  
<-70 dB (20 Hz to 20 kHz, 60 dB gain, 150Ω source)  
Below noise floor  
Crosstalk: > 80 dB (50 Hz to 5 kHz)  
Indicators (3): POWER LED (blue), CLIP (2, red)  
Power Requirement: 24 Vdc @ 165 mA (190 mA with phantom), Ground-referenced  
Mounting: Rack-mount using optional rack adapters such as HR-RA2; or operate free-standing (feet included)  
Dimensions: Height: 1.7 in, 4.3 cm; Length: 8.6 in, 20.6 cm; Depth: 4.59 in, 11.66 cm

### Radio Design Labs Technical Support Centers

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