RDL®
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

# RACK-UP® SERIES

## Models RU-MLA2 & RU-MLA2T
## Dual Mic/Line Preamplifier

### ANYWHERE YOU NEED...

- Two-channel Audio Preamplifier
- Front Panel XLR Input / Output Jacks
- Detachable Input / Output Terminal Blocks
- Switch-selectable Mic or Line Inputs
- Switch-selectable Mic Gain and Phantom
- Gain Trim on Each Input
- Each Output Switch-selectable Mic or Line

The RU-MLA2 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-MLA2 is a dual channel audio preamplifier. The inputs and outputs may be connected through the front-panel XLR jacks or on the rear panel detachable terminal blocks. Each input accepts either a balanced microphone or line level signal. Each output provides either a microphone or line level signal. Both the front-panel XLR connectors and the rear-panel terminals are active at all times. The RU-MLA2 may be rack-mounted with the XLR jacks facing forward, or may be reverse-mounted using the RDL RU-FP1 Filler Panel/Reverse Mount Kit.

Each audio input is equipped with a rear-panel switch to select between MIC and LINE level. Two additional switches on each input allow setting the MIC input for LO or HI gain and for enabling or disabling standard 24 Vdc phantom. The two microphone gain settings allow the connection of a wide variety of dynamic and condenser microphones. Each output is provided with a separate rear-panel switch to set the associated level to either MIC or LINE. Audio outputs may be wired balanced or unbalanced. Crosstalk between channels is below the noise floor, allowing the RU-MLA2 to be operated as a stereo preamplifier or as two separate mono preamplifiers.

Gain trim for each channel is provided on a front-panel control. An RDL Dual-led VU meter is provided above each channel gain trimmer. The meters are calibrated to indicate +4 dBu for outputs set to line level.

The rear panel provides a detachable terminal block and a power input jack to connect 24 Vdc power. The RU-MLA2 audio outputs are active balanced. Each output of the RU-MLA2T is equipped with a studio-quality audio output transformer.

Wherever a dual channel mic and line level audio preamplifier with gain trim is needed to provide superior audio clarity, user adjustments, reliability, compactness and unsurpassed versatility, the RU-MLA2 is the ideal choice. Use the RU-MLA2 combined with other RDL RACK-UP, STICK-ON, TX™, or FLAT-PAK™ series products as part of a complete audio/video system.

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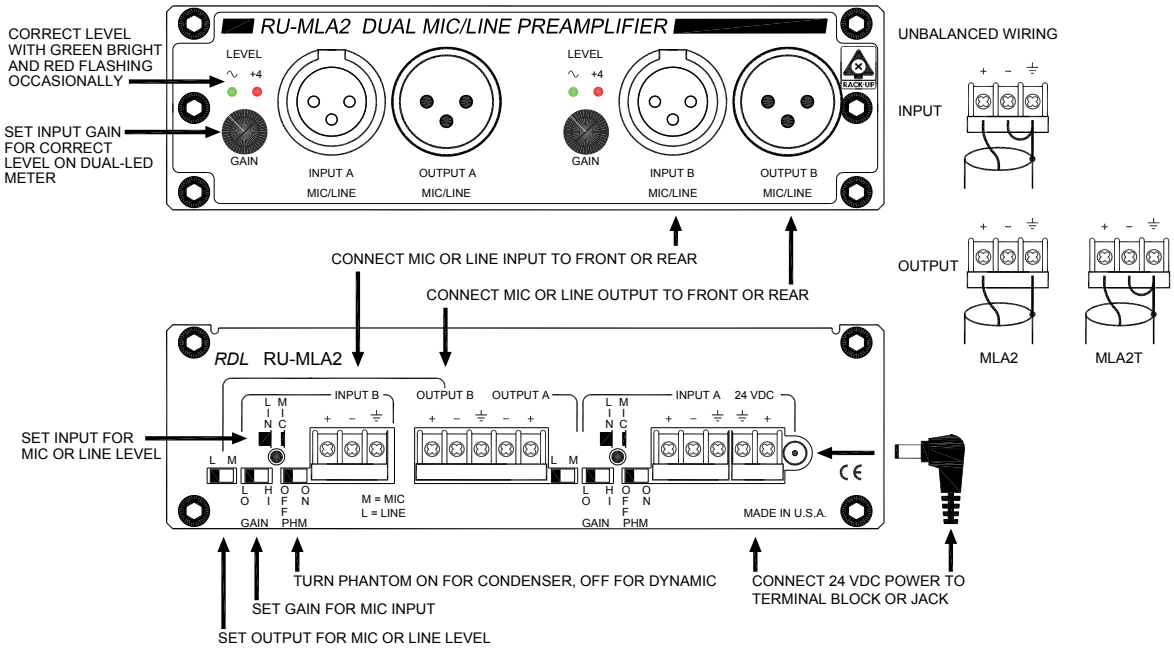
# RACK-UP® SERIES

## Installation/Operation

## Model RU-MLA2 & RU-MLA2T
## Dual Mic/Line Preamplifier

**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.




**TYPICAL PERFORMANCE**

| | |
|---|---|
| Inputs (2): | XLR (3 pin, front panel) and detachable terminal block (rear panel) |
| Input level (for +4 dBu output): | Switch-selectable (rear panel) **MIC** (**LO** or **HI** gain) or **LINE** |
| Mic: | -48 dBu to -3 dBu (**LO GAIN**); -65 dBu to -20 dBu (**HI GAIN**) |
| Line: | -15 dBu to +28 dBu |
| Input Impedance: | |
| Mic: | 2 kΩ balanced, switchable 24 V phantom (IEC 61938: 2013) |
| Line: | > 10 kΩ balanced; may be connected unbalanced |
| Outputs (2): | XLR (3 pin, front panel) and detachable terminal block (rear panel) |
| Output level: | Switch-selectable (rear panel) **MIC** (-46 dBu) or **LINE** (+4 dBu) |
| Output Impedance: | 150 Ω balanced; drives high or low impedance lines |
| Channels: | 2 (A and B; may be used for stereo or as two separate mono preamplifiers) |
| Gain Trim (2): | Front panel adjustable; one for each channel |
| Mic **LO GAIN**: | Off to 52 dB gain |
| Mic **HI GAIN**: | Off to 69 dB gain |
| Line: | Off to 20 dB gain |
| Frequency Response: | |
| Mic: | 80 Hz to 50 kHz (+/- 0.75 dB); < 10 dB @ 20 Hz (integral high-pass filter) |
| Line: | 15 Hz to 50 kHz (+/- 0.1 dB) |
| THD+N: | |
| Mic: | < 0.1% (80 Hz to 20 kHz) |
| Line: | < 0.005% |
| CMRR: | > 60 dB (Mic); > 50 dB (Line) |
| Residual Noise (below +4 dBu **LINE** output or -45 dBu **MIC** output): | |
| Mic 40dB Gain, **LO GAIN**: | -79 dB (20 Hz to 20 kHz) |
| Mic 50dB Gain, **HI GAIN**: | -79 dB (20 Hz to 20 kHz) |
| Mic 60dB Gain, **HI GAIN**: | -70 dB (20 Hz to 20 kHz) |
| Line: | -85 dB (20 Hz to 20 kHz) |
| Crosstalk: | Below noise floor (A to B; B to A) |
| Headroom (above +4 dBu **LINE** output): | > 20 dB |
| Power Requirement: | 24 Vdc @ 80 mA, Ground-referenced |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