



RDL® Radio Design Labs®

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™



max **RACK-UP**® SERIES Model RU-MX4 Pro Audio Mic/Line Mixer

ANYWHERE YOU NEED...

- Four Channel Audio Mixer
- XLR Microphone Inputs, Phono Line Inputs
- Switchable Phantom for Each Mic Input
- Mic or Line XLR Output, Switchable
- Unbalanced Line Output and Direct Input
- Studio Quality, Low-Noise Performance
- Integral Compressor/Limiter, Switchable
- Expansion Bussing Capability
- Output Isolation Transformer
(Order RU-MX4T)



You Need The RU-MX4(T)!

The RU-MX4 is part of the group of RDL RACK-UP products. The compact design permits high-density installations, with three products mounted in a single rack unit. The RU-MX4 may be used alone, or mounted using a wide variety of RACK-UP series options.

APPLICATION: The RU-MX4 is the ideal choice in many applications where a combination of balanced mic and/or unbalanced line-level signals needs to be mixed. All balanced connections are made through XLR connectors. Unbalanced signals are coupled through phono jacks.

Each of the four RU-MX4 inputs can accept either a balanced XLR mic or an unbalanced line-level phono input. Each **MIC** input accepts either a dynamic or a condenser microphone. A **PHANTOM** switch is located below each microphone input. These switches activate the phantom voltage and set the input preamplifier for the optimum gain range for the type of microphone. An integral high-pass filter rolls off frequencies below 80 Hz.

A separate unbalanced **DIRECT** input allows an external audio source to be summed directly into the mix amplifier, bypassing the front-panel input level controls. The unbalanced phono jack **LINE OUTPUT** from one RU-MX4 may connect to the unbalanced input of other equipment, or may be connected to the **DIRECT** input of another RU-MX4 to expand mixing capabilities. Up to 3 RU-MX4 mixers may be rack mounted in a single rack unit using an RDL RU-RA3HD rack adapter. A power interconnect cable is supplied with each RU-MX4 allowing the rack mounted mixers to run from a single 24 Vdc power supply.

The RU-MX4 provides one balanced output, switchable for mic or line level. The balanced XLR output and the unbalanced phono jack output may be used at the same time.

Audio levels are adjustable on the front panel. A convenient label area is provided below each fader knob. A label tab included with the mixer may be professionally labeled using a commercial lettering machine, or the user may write on the front of the mixer.

Each input channel is equipped with a front-panel dual-LED VU meter that follows standard VU ballistics. A green LED illuminates at 15 dB below the optimum input gain, becoming progressively brighter with increasing audio level. The adjacent red LED illuminates when the input gain exceeds the correct operating level.

The final mix is displayed on an LED string VU meter featuring a visually comfortable arc motion. The outputs may be fed directly from the final mix, or may be routed through the integral compressor/limiter. A rear-panel switch allows the soft-knee compressor to be switched in or out. When active, the compressor/limiter begins acting as signals exceed 6 dB below the normal output level, and maintain an average +4 dBu output level for excessive signal levels up to 20 dB. An optional security cover (RU-MX4RS) is available to prevent user access to the rear panel switches. The RU-MX4 is electronically balanced. A factory installed output isolation transformer is available by ordering the RU-MX4T.

Wherever a mixer is needed to provide superior audio clarity, user adjustments, reliability, compactness and unsurpassed versatility, the RU-MX4 is the ideal choice. Use the RU-RA3HD rack-mount adapter to mount multiple mixers, or to combine related products (such as audio or video distribution, or audio metering) into a single rack unit!



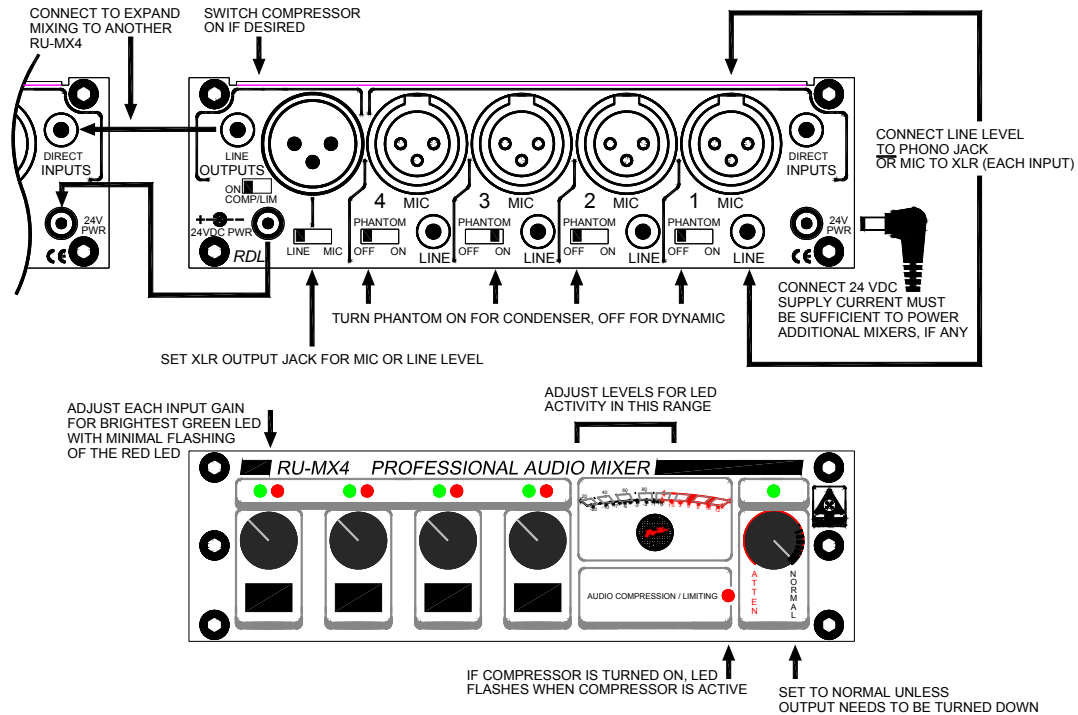
max RACK-UP® SERIES

Model RU-MX4 Professional Audio Mic/Line Mixer

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.



TYPICAL PERFORMANCE

- Microphone Inputs(4): 2 k Ω balanced, switchable 24 V phantom (IEC 1938: 1996-12)
- Microphone Input Level: -58 to -20 dBu (**PHANTOM OFF**); -41 to -4 dBu (**PHANTOM ON**) for +4 dBu output
- Line Inputs (4): 2 k Ω unbalanced
- Line Input Level: -25 dBV to +20 dBV for +4 dBu output; -10 dBV nominal
- Gain Adjustments (5): Mic: Off to 62 dB gain (**PHANTOM OFF**); Off to 46 dB gain (**PHANTOM ON**);
Line: Off to 27 dB gain
- Output Attenuator: 0 dB to infinity
- Frequency Response: 80 Hz to 30 kHz (+/- 1.5 dB), <-10 dB @ 20 Hz (integral high-pass filter)
- Mic: 20 Hz to 30 kHz (+/- 0.25 dB)
- THD+N: < 0.1% (80 Hz to 20 kHz)
- Mic: < 0.02%
- Line: 4 line level sources (unity gain): < -82 dB (wideband)
- Residual Noise (below +4dBu output): Mic: -79 dB; all 4 mic level sources: < -73 dB (wideband); < -76 dB ("A" weighted)
- 40dB Gain, **PHANTOM ON**: Mic: -79 dB; all 4 mic level sources: < -73 dB (wideband); < -76 dB ("A" weighted)
- 50dB Gain: Mic: -70 dB; all 4 mic level sources: < -64 dB (wideband); < -66 dB ("A" weighted)
- 60dB Gain: +4 dBu 150 Ω balanced (switchable **MIC** or **LINE**); -10 dBV unbalanced
- Outputs (2): Dual-LED VU meter for each input
- Indicators (18): **COMPRESSION/LIMITING** active LED
POWER LED
8-segment bar mode string LED audio mix level meter, 0 dB = +4 dBu
VU ballistic: -20 dB, -10 dB, -6 dB, -2 dB, 0 dB, +3 dB; Peak reading: +8 dB, +12 dB
- Power Requirement: 24 Vdc @ 150 mA, Ground-referenced
- Overall Dimensions: Height: 1.7 in. 4.3 cm
Length: 5.8 in. 15.0 cm
Depth: 4.8 in. 12.2 cm

Radio Design Labs Technical Support Centers

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