



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

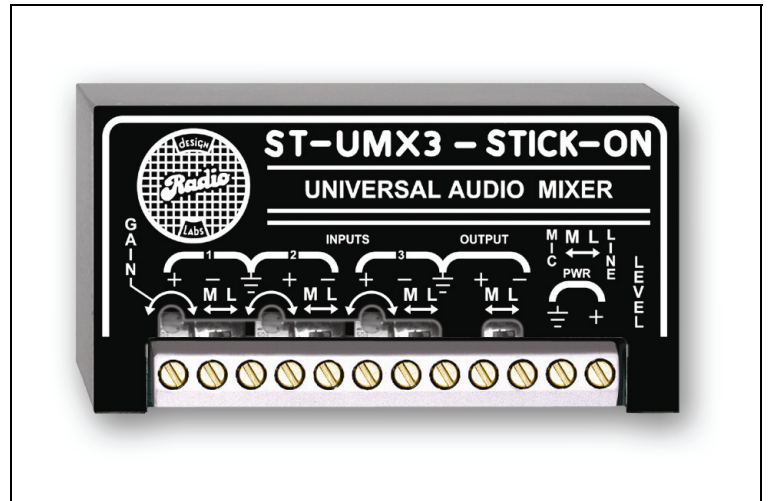
SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## STICK-ON<sup>®</sup> SERIES

### Model ST-UMX3

### Universal Audio Mixer

- Audio Mixing with Up To Three Inputs
- Switch Selectable Mic or Line Inputs
- Switch Selectable Mic or Line Output
- Add Additional Microphone or Line Level Inputs to an Existing Mixer
- Combine Signals of Different Level, Impedance, or Bal. / Unbal. Configuration



The ST-UMX3 is part of a group of products in the STICK-ON series from Radio Design Labs. The durable bottom adhesive permits quick, permanent or removable mounting nearly anywhere or it may be used with RDL's racking accessories. The ST-UMX3 gives you the advantage of a high performance audio mixer with a big PLUS, you can put it where you need it. STICK-ONs are designed, built and rated for continuous duty in professional A/V systems.

**APPLICATION:** The ST-UMX3 is a three-channel audio mixer for combining mic-level or line-level signals to a single output. A MIC/LINE switch is provided for each input. A separate MIC/LINE switch selects the output level. Each input features a separate preamplifier circuit, which isolates it from the other inputs. An audio-taper, single-turn gain adjustment is provided for each of the three input preamps. Signals from the three preamps are actively summed and fed to the output line-level driver amplifier. The output amplifier includes an RDL dual-LED VU meter.

The mic-level input circuits accept either balanced low-impedance mics or high-impedance unbalanced mics. The line-level input circuits bridge any line-level audio source. The output is switch-selectable for mic-level or line-level, and is capable of driving either high or low impedance, balanced or unbalanced loads.

Each input level is set while observing the LED output level meter. The dual LED output meter follows standard VU ballistics. The intensity of the green LED progresses from minimum at -11 dBu to full intensity at +4 dBu. Flashing of the red LED is equivalent to a VU meter needle swinging above the 0 level. If the output is switched to MIC level, the meter continues to indicate correct operating level. The output MIC level is padded 50dB below the normal LINE output level.

The ST-UMX3 is powered from ground-referenced 24 Vdc, permitting the module to share a common power source with most RDL modules.

The flexibility of switching each input and the output between MIC or LINE allows installers to address a wide variety of mixing solutions with only one product type. Wherever a flexible mic and line level mixing amplifier is needed, the ST-UMX3 is the ideal choice. Use the ST-UMX3 individually, or combine it with other RDL products as part of a complete audio/video system.



# STICK-ON<sup>®</sup> SERIES

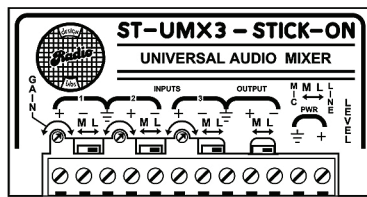
## Model ST-UMX3 Universal Audio Mixer

## 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.

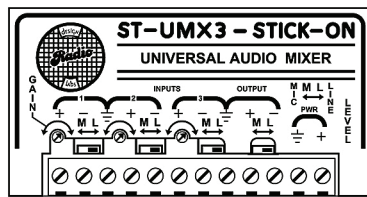
### AUDIO WIRING



SIGNAL FROM BALANCED LINE-LEVEL OR \*MIC-LEVEL SOURCE (SELECTABLE)

OTHER BALANCED OR UNBAL MIC OR LINE INPUTS

SIGNAL FEEDING BALANCED LINE-LEVEL OR MIC-LEVEL SOURCE (SELECTABLE)



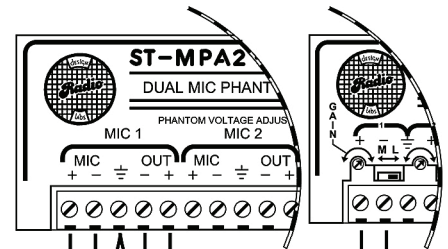
SIGNAL FROM UNBALANCED LINE-LEVEL OR \*MIC-LEVEL SOURCE (SELECTABLE)

OTHER BALANCED OR UNBAL MIC OR LINE INPUTS

SIGNAL FEEDING UNBALANCED LINE-LEVEL OR MIC-LEVEL SOURCE (SELECTABLE)

ADJUST LEVELS USING METER

NORMAL HIGH



SIGNAL FROM BALANCED MIC-LEVEL SOURCE

\*DYNAMIC MIC CONNECTIONS (NO PHANTOM VOLTAGE)

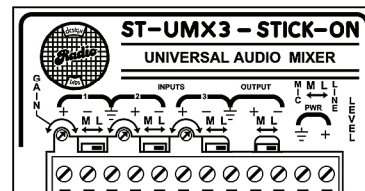
CONDENSER MIC CONNECTION (USING ST-MPA2 MODULE FOR PHANTOM VOLTAGE)

SELECTABLE MIC OR LINE LEVEL  
EACH INPUT AND THE OUTPUT MAY BE SET TO MIC OR LINE LEVEL



ADJUST LEVELS

### SUPPLY WIRING



THIS TERMINAL IS COMMON GROUND

24 VDC POWER SOURCE

### TYPICAL PERFORMANCE

Inputs (3): Mic: 600 Ω balanced; Line: 50 kΩ balanced  
NOTE: MIC INPUTS ON ST-UMX3 ARE NOT PROTECTED AGAINST PHANTOM VOLTAGE. USE THE ST MPA48 or ST-MPA24 Mic Phantom Adapter.  
Max Input Signal: Mic: -18 dBu; Line: +25 dBu  
Gain (each input): Mic: Adjustable from OFF to 60 dB  
Line: Adjustable from OFF to 21 dB  
Output: 150 Ω balanced; 75 Ω unbalanced  
Output Signal: +4 dBu nominal, mic level 50 dB below line level

THD+N: < 0.006%  
IMD: Mic (@ 50dB gain): < 0.04%; Line: < 0.008%  
Freq. Response: Mic: 50 Hz to 100 kHz (+/- 1 dB)  
Line: 10 Hz to 100 kHz (+/- 0.05 dB)  
Noise (each input): Mic: < -70 dB (50 dB gain)  
Line: < -82 dB (unity gain)  
Headroom: 18 dB  
CMRR: Mic: > 60 dB; Line: > 50 dB (50 to 120 Hz)  
Ambient Operating Environment: 0° C to 55° C  
Power Req.: GROUND-REFERENCED, 24 Vdc @ 55 mA