



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

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

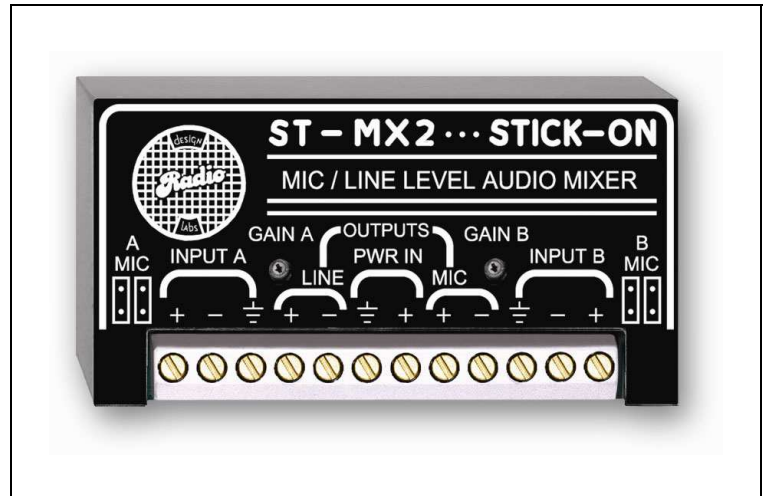
## STICK-ON<sup>®</sup> SERIES

### Model ST-MX2

### Universal Audio Mixer

#### ANYWHERE YOU NEED...

- Two Channel Audio Mixing
- Mixer with Selectable Mic or Line Level Inputs
- Mixer with Simultaneous Mic and Line Outputs
- To Add Additional Inputs to an Existing Mixer
- Audio Output Level Metering
- Balanced or Unbalanced Inputs and Outputs
- Low Noise and Low Distortion Performance



#### ***You Need The ST-MX2!***

The ST-MX2 is part of the group of versatile STICK-ON products from Radio Design Labs. STICK-ONs feature the advanced circuitry for which RDL products are known, combined with unequalled versatility in mounting possibilities. The durable adhesives provided with the ST-MX2 permit permanent or removable mounting. Numerous available mounting accessories, brackets, rack-mount and tabletop chassis are optionally available to facilitate any system.

**FUNCTIONAL DESCRIPTION:** The ST-MX2 is a two channel audio mixer. Each input channel is identical. Pin jumpers adjacent to each audio input permit the installer to set that input for either mic or line level. The mic input accepts low impedance balanced microphones (150  $\Omega$  nominal) or high impedance unbalanced microphones (5 k $\Omega$  nominal). The line inputs are 20 k $\Omega$  bridging and accept either unbalanced or balanced audio signals. A single-turn trimmer is provided for each input channel. The usual range of mic or line level signals may be adjusted to produce +4dBu at the line level output. The dual LED audio meter provides accurate dynamic level adjustment without an external meter. A separate mic level output is also provided.

The dual LED output meter follows standard VU ballistics. A green LED illuminates at 15 dB below +4 dBu. The intensity of the green LED progresses from minimum at -11 dBu to full intensity at +4 dBu. The adjacent red LED illuminates at +4 dBu. The audio may be adjusted for maximum intensity of the green LED. Flashing of the red LED is equivalent to a VU meter needle swinging above the 0 level.

Unbalanced audio inputs are converted in the module to balanced. Mic level inputs are preamplified to line level. Either input may be turned down if it is not used. The combination of input levels, individual input adjustments and output levels makes the ST-MX2 suited to a wide variety of mixing, summing, preamplification and audio format conversion applications.

**TYPICAL APPLICATION:** The ST-MX2 is used in any application requiring mixing of two audio sources. A mic may be mixed with a line level music source. Two mics may be mixed to feed the mic or line level input of a power amplifier in a meeting room or choir loft. A mic or professional +4 dBu line level mono sum is possible from stereo CD players, cassette decks, computer sound cards, televisions, and a wide variety of other unbalanced sources. If a single input channel is used, the ST-MX2 may be used to convert mono line level signals from consumer to professional, or from professional to consumer format. It may also be used as a microphone preamplifier, or conversely to adapt unbalanced or balanced line level signals into the microphone input of other equipment.

The audio clarity, low noise, low distortion and versatility make this module ideally suited to a wide variety of demanding audio applications. Use this module in conjunction with other RDL modules as part of a high quality, flexible audio/video system.



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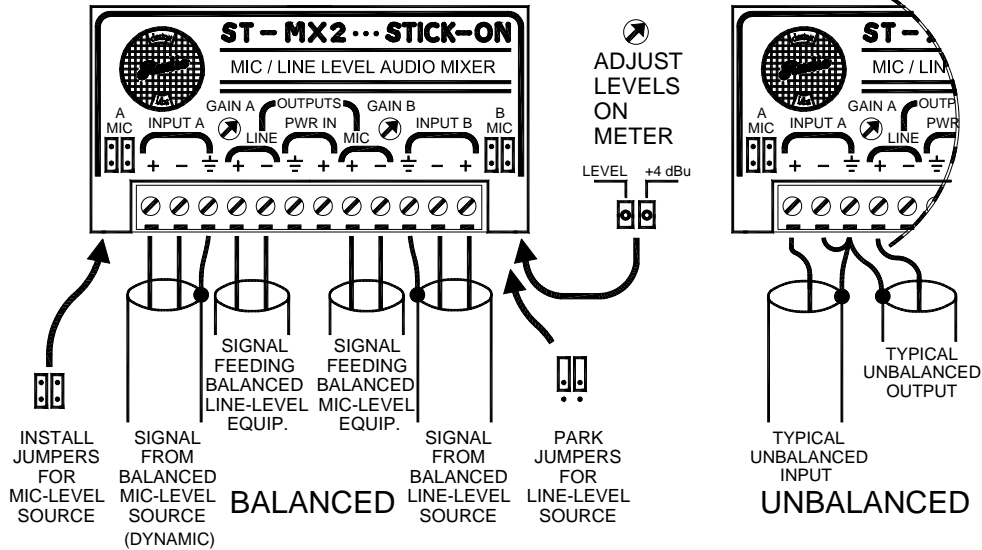
## Model ST-MX2

### Universal Audio Mixer

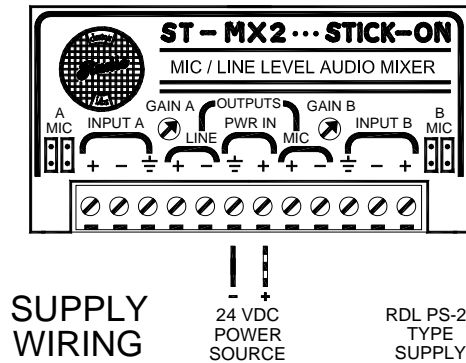
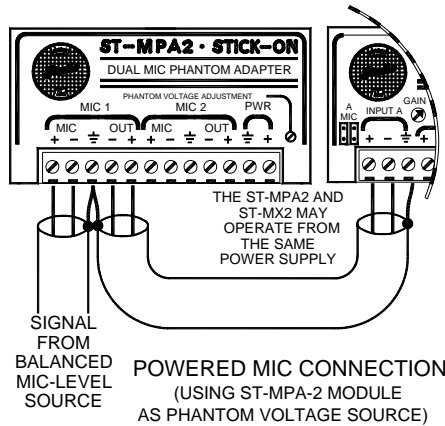
## Installation/Operation



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.



EACH INPUT OR OUTPUT MAY BE BALANCED OR UNBALANCED



### TYPICAL PERFORMANCE

Inputs (2):  
Input range for +4 dBu output:  
Mic: -45 dBu to -65 dBu; max input: -28 dBu  
Line: -18 dBV to +10 dBu max input: +22 dBu  
Input impedance:  
Input or output configuration:  
Outputs (2):  
Output impedance:  
Frequency Response:  
Mic: 25 Hz to 50 kHz (+/- 1 dB)  
Line: 10 Hz to 30 kHz (+/- 0.25 dB)  
THD+N:  
Mic: < 0.05% (25 Hz to 20 kHz)  
Line: < 0.005%  
IMD:  
Output Level:  
Mic: -45 dBu; line: +4 dBu

Headroom:  
Mic Input: > 22 dB (rel. -50 dBu)  
> 32 dB (rel. -60 dBu)  
Line Input: > 18 dB (rel. +4 dBu)  
Output: > 20 dB (rel. +4 dBu)  
Noise:  
Mic: < -70 dB (150 Ω source; rel. +4 dBu)  
< -80 dB (200 Ω source; rel. +4 dBu)  
(mics set to 50 dB gain)  
< -90 dB (referred to +4 dBu)  
Line:  
CMRR:  
Mic: > 65 dB (50 Hz to 120 Hz)  
> 45 dB (50 Hz to 120 Hz)  
Line:  
Power Requirement:  
24 to 33 Vdc @ 60 mA, Ground-referenced

Radio Design Labs Technical Support Centers

U.S.A. (800) 933-1780, (928) 778-3554; Fax: (928) 778-3506

Europe [NH Amsterdam] (+31) 20-6238 983; Fax: (+31) 20-6225-287