



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

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## STICK-ON<sup>®</sup> SERIES

### Model ST-MX3

### Line Level Mixer

#### ANYWHERE YOU NEED...

- Audio Mixing with Up To Three Inputs
- Balanced or Unbalanced Inputs & Outputs
- To Add Additional Inputs to an Existing Mixer
- To Combine Signals of Different Level, Impedance, or Bal./Unbal. Configuration
- Low Noise and Low Distortion Performance
- Ground-Referenced or Floating Power



#### ***You Need The ST-MX3!***

The ST-MX3 is part of a group of products in the STICK-ON series from Radio Design Labs. The durable adhesives provided with the ST-MX3 permit permanent or removable mounting. Numerous available mounting accessories, brackets, rack-mount and table top chassis are optionally available to facilitate any system. The ST-MX3 gives you the advantage of a high performance audio mixer with a big plus, you can put it where you need it, and you can combine modules to build larger mixing systems using whatever combination you need!

**APPLICATION:** The ST-MX3 is a three-channel audio mixer for combining line-level signals to a line-level output. Individual level control is provided for each input. Each input features a separate preamplifier circuit, which isolates it from the other inputs. A single-turn trimmer 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 line-input circuit design of the ST-MX3 allows the inputs to accept either balanced to unbalanced signals, or either high or low impedance. The output is capable of driving into either high or low impedance, balanced or unbalanced loads. Each output may be connected in parallel with other ST-MX3s, or ST-UMX3s to form a multi-channel mixer to fit nearly any installation! The ST-MX3 features amplifier circuitry which produces the unsurpassed pure clarity for which Radio Design Labs products are known! Some features are:

- Ultra-low Distortion
- Ultra-low Noise
- Input Levels Individually Adjustable
- Ample Headroom at Operating Level
- Full Operation in either High or Low Impedance Circuits
- Outputs Short-Circuit Protected
- Positive Connections via Barrier Block, No Audio Connectors to Wire

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.

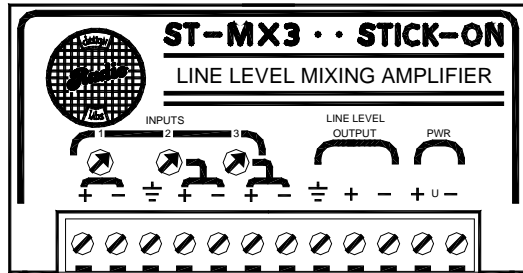
# STICK-ON® SERIES

## Model ST-MX3 Line Level Mixer

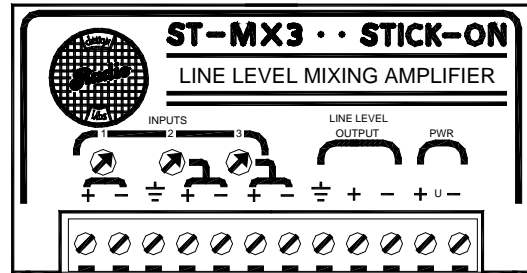
## Installation/Operation



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.



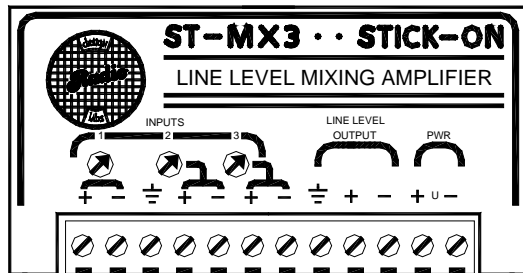
### AUDIO WIRING



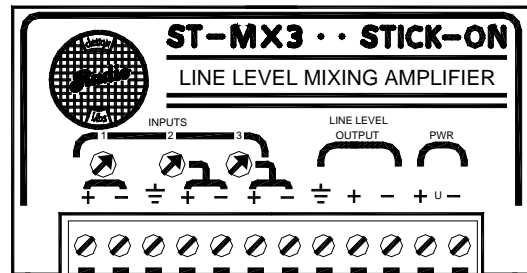
⊗ ADJUST LEVELS

SIGNAL FROM BALANCED LINE-LEVEL SOURCE  
OTHER BALANCED OR UNBAL INPUTS  
SIGNAL FEEDING BALANCED LINE-LEVEL EQUIPMENT

SIGNAL FROM UNBALANCED LINE-LEVEL SOURCE  
OTHER BALANCED OR UNBAL INPUTS  
SIGNAL FEEDING UNBALANCED LINE-LEVEL EQUIPMENT



### SUPPLY WIRING



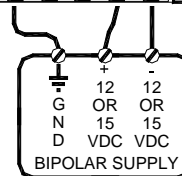
OPTIONAL JUMPER (WHEN USING GROUND-REFERENCED POWER SUPPLY)

RDL PS-24 TYPE SUPPLY      24 VDC POWER SOURCE

DO NOT GROUND NEGATIVE FOR FLOATING OR BIPOLAR POWER INSTALLATION

OR GROUND NEGATIVE FOR GROUND-REFERENCED POWER INSTALLATION

AUXILIARY BIPOLAR SUPPLY



### TYPICAL PERFORMANCE

Inputs (3):  
Input Range: Line-level  
-20 dBu to +18 dBu (for +4 dbu output)  
-24 dBu to +14 dBu (for 0 dBu output)  
> 30 kΩ bridging

Input Impedance:  
Gain (each input): -14 dB to +24 dB Adjustable  
Output: +4 dBu nominal

Output Impedance:  
400 Ω to drive low or high impedance  
balanced or unbalanced lines

Input or Output Configuration: Balanced or unbalanced

Frequency Response: 10 Hz to 20 kHz (+/- 0.50 dB)

THD+N: < 0.03% (below +4 dBu 10 Hz to 20 kHz)

Headroom: 22 dB (output); 16dB (input) Rel. +4 dBu

Noise below +4 dBu: < -80 dB (all inputs @ unity gain)  
< -80 dB (all inputs @ 10 dB gain)  
< -75 dB (all inputs @ 20 dB gain)  
> 50 dB (60 or 120 Hz)

CMRR: Multiple Module System Loss: > 50 dB (60 or 120 Hz)

Supply Input: 6 dB with two module outputs paralleled  
10 dB with three module outputs paralleled  
12 dB with four module outputs paralleled  
24 to 33 Vdc @ 55 mA,  
Ground-referenced or Floating