

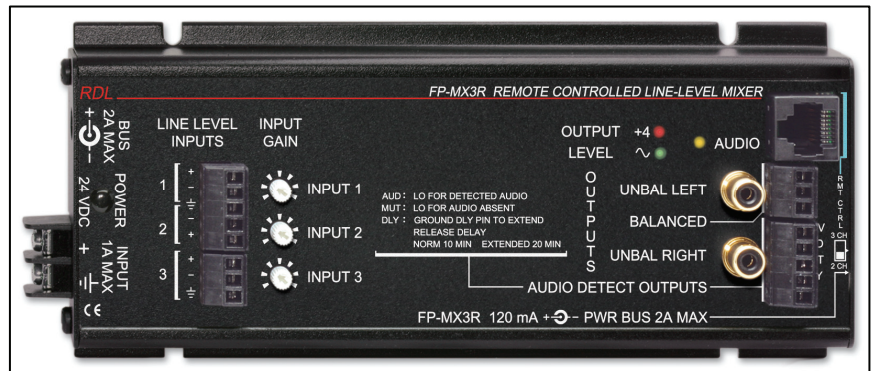


**RDL**<sup>®</sup>  
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## FLAT-PAK™ SERIES Model FP-MX3R Remote Controlled Line-Level Mixer

- 3-Channel Remote-Controlled Audio Mixer
- VCA Level Control for Each Input
- Balanced or Unbalanced Inputs
- Balanced and Unbalanced Outputs
- Two Mono Unbalanced Outputs to Feed Stereo Amplifier
- Inputs and Outputs on Detachable Connectors
- Twisted Pair Interconnection to Remote Control
- Directly Controlled by RDL Remote Controls
- Two and Three Channel Remote Controls Available
- Fixed Level Possible for Input 3 if Two Channel Remote Used
- Paging Source May Connect to Input 3
- Front-Panel Gain Trim for Standard Audio Line Levels
- Dual-LED VU Meter Displays Mixer Output Level
- Audio Presence Detector Controls Open-Collector Outputs
- Detector Outputs Intended to Enable Power Amplifiers or System Power
- Energy Savings Possible Using Detector Outputs
- Selectable 10 or 20 Minute Detector Release Delay



### ASSOCIATED REMOTE CONTROL EXAMPLES:

- ▶ D-RC2 and DS-RC2 Two-channel remote controls
- ▶ D-RC2M and DS-RC2M Two-channel remote controls with muting
- ▶ D-RC3 and DS-RC3 Three-channel remote controls
- ▶ D-RC3M and DS-RC3M Three-channel remote controls with muting

### TYPICAL APPLICATIONS:

- ▶ Meeting Rooms
- ▶ Boardrooms
- ▶ Classrooms
- ▶ Restaurant or Residential Patios
- ▶ Retail Stores
- ▶ Offices

The FP-MX3R is a mono audio mixer in the convenient line of FLAT-PAK products, featuring the superior engineering and components common to RDL products. The FP-MX3R may be rack or surface mounted with optional FLAT-PAK series accessories. The FP-MX3R gives you the advantages of a quality audio mixer with the added convenience of remote control!

The FP-MX3R is the ideal choice where a user-accessible mixer must control the volume of multiple sources. The mixer accepts balanced or unbalanced audio sources through a detachable terminal block. FP-MX3R outputs are provided in balanced and unbalanced formats. Two unbalanced outputs are available to feed the mono mixer output to a stereo amplifier input. Remote control of the mixer allows audio signals to be kept at a single equipment location. Audio is mixed by VCA circuits that are adjusted by control signals from the remote control.

Each input is equipped with an **INPUT GAIN** trimmer to set the proper operating level for each source. A standard RDL dual-LED VU meter provides visual indication of the output level from the mixer. Each input is normally adjusted to produce +4 dBu on the VU meter when the corresponding remote control channel is adjusted to maximum. This assures ample headroom at all normal operating levels. The mixer output is mono. The output is available on a single balanced detachable terminal block or on two unbalanced RCA jacks intended to connect directly to the stereo input of a power amplifier.

The **AUDIO** LED illuminates whenever audio is present at the output of the mixer, defined as greater than 35 dB below +4 dBu. This threshold triggers the **AUDIO DETECT OUTPUTS**. Two open collectors are provided on a detachable terminal block. One of these terminals switches low when audio is present, and may be used to switch amplifiers or other system components on. The other terminal is pulled low when audio is not present. It is intended for muting the digital carrier of power amplifiers equipped for remote muting. Either of these terminals may be used to trigger a variety of other RDL modules or OEM equipment. The use of these terminals to shut down unused equipment can produce effective system energy and cost savings. These control terminals normally remain triggered for 10 minutes after audio is absent. The delay can be increased to 20 minutes using a ground jumper on the terminal block.

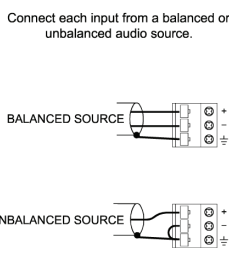
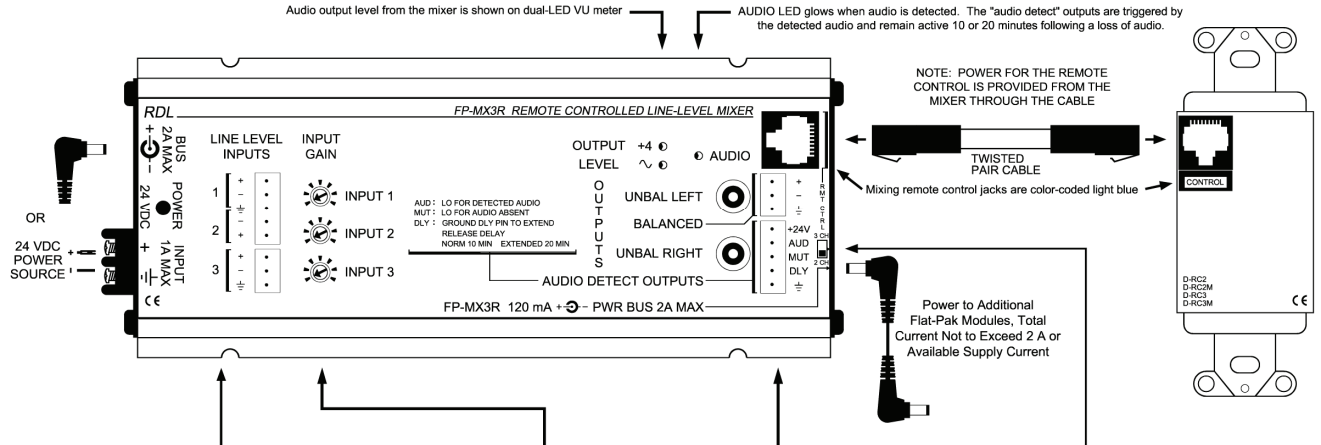
The mixer levels are set by RDL remote controls that connect directly to the FP-MX3R through an RJ45 jack using standard twisted pair cable. The control ports on the mixer and remote controls are color-coded light blue to distinguish them from other twisted pair jacks. The mixer provides power to the remote control. Either a two or three channel remote control may be used. If remote mixing of only two channels is needed, a two channel remote may be used. **INPUT 3** becomes the input channel that is not remotely controlled. This input may be left active at a level set on the corresponding **INPUT GAIN** control, typically for a paging or music source, or may be disabled by a switch set during installation. If the cable connected to the remote control becomes disconnected, the mixer output mutes.

Wherever it is desirable to keep audio signal sources at an equipment location while providing compact, high quality user mixing controls, the FP-MX3R is the ideal choice. Use an FP-MX3R and its associated remote control individually or combine them with other RDL products as part of a complete audio/video system.

## FLAT-PAK™ SERIES Model FP-MX3R Remote Controlled 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.

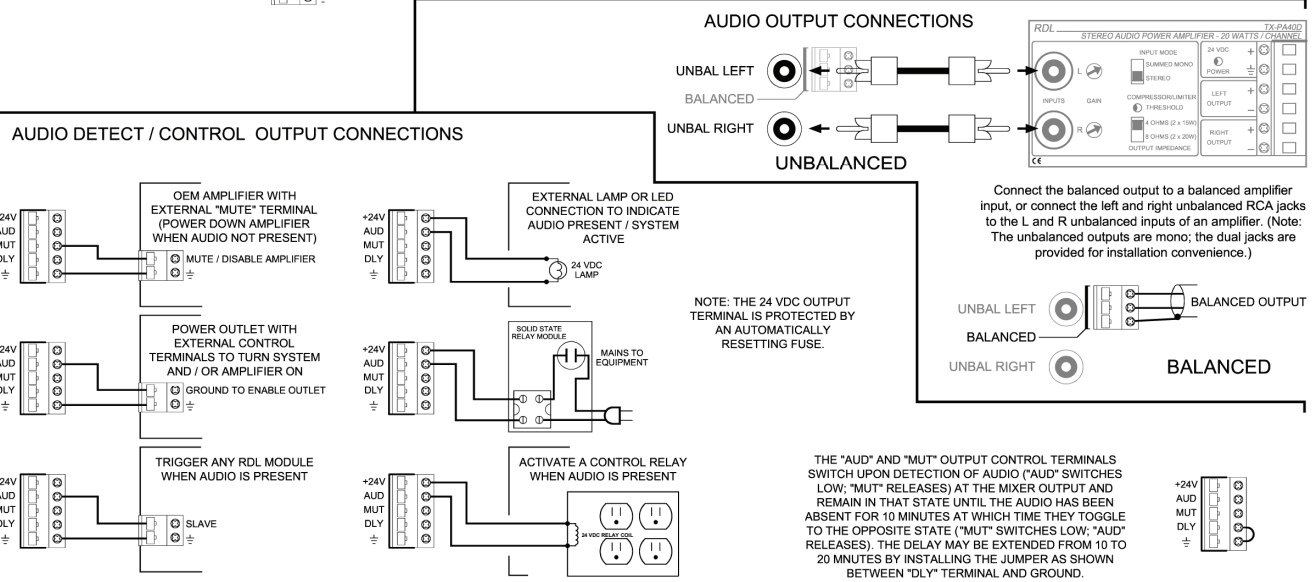


With the corresponding input channel set to maximum level on the remote control, set the front-panel INPUT GAIN control for a proper reading on the dual-LED VU meter (maximum green LED intensity with minimum red LED activity)

SWITCH LOCATED IN THE MODULE END PLATE ACTIVATES OR DE-ACTIVATES INPUT PAIR 3 IF A 2 CHANNEL REMOTE CONTROL IS USED

SET TO 3 CHANNEL REMOTE CONTROL POSITION IF:  
1) A 3 CHANNEL REMOTE CONTROL IS CONNECTED, OR  
2) A 2 CHANNEL REMOTE CONTROL IS CONNECTED AND THE THIRD MIXER INPUT (INPUT 3) WILL NOT BE USED (IN THIS POSITION, INPUT 3 IS DISABLED)

SET TO 2 CHANNEL REMOTE CONTROL POSITION IF:  
A 2 CHANNEL REMOTE CONTROL IS CONNECTED AND THE THIRD MIXER INPUT (INPUT 3) WILL BE USED WITH A LOCAL INPUT NOT REQUIRING GAIN ADJUSTMENT (EXAMPLE: PAGING INPUT)



### TYPICAL PERFORMANCE

Inputs (3):	Balanced or unbalanced line level	Noise below +4 dBu:	< -100 dB (all channels off); <-75 dB (any channel on); <-70 dB (all channels on)
Input Connections:	Detachable Terminal Blocks	Headroom above +4 dBu:	> 18 dB
Input Signal Range:	-20 dBV to +8 dBu, adjustable (for +4 dBu output)	CMRR:	> 50 dB (50 Hz to 150 Hz)
Outputs (3):	150 Ω balanced; 1 kΩ unbalanced (2)	VCA attenuation:	>90 dB (each input, remote control volume off)
Output Connections:	Detachable Terminal Block (balanced); RCA Phono Jacks (unbalanced)	Indicators (3):	Dual-LED VU meter (2); Audio present (threshold = 35 dB below +4 dBu output)
Output Level:	+4 dBu balanced, -10 dBV unbalanced	Power Connections (3):	Terminal block; dc power jack (2)
Frequency Response:	20 Hz to 20 kHz (+/- 0.25 dB)	Power Requirement:	24 Vdc @ 120 mA plus connected control output loads, if any
THD+N:	< 0.05% (20 Hz to 20 kHz); < 0.02% (1 kHz)	Overall Dimensions:	Height: 1.42 in. 3.61 cm Width: 3.25 in. 8.26 cm Length: 8.14 in. 20.68 cm