



RDL[®]
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

RACK-UP[®] SERIES

Model RU-SX4A

Audio Switcher

ANYWHERE YOU NEED...

- Remote-Controlled Audio Switching
- Multiple Switching Control Points
- 4 Inputs to 1 Output
- Line-Level Audio Switching
- Balanced or Unbalanced In/Out
- Gain Trim on Each Source
- Provision for Stereo Switching



You Need The RU-SX4A!

The RU-SX4A is part of the group of versatile RACK-UP products from Radio Design Labs. The RACK-UP series features the advanced circuitry for which RDL products are known, combined with accessible, user-friendly controls and displays. The ultra-compact design permits high-density installations, with *three* products mounted in a single rack unit! Single RACK-UPS can be mounted right where they are needed using the adhesive methods popularized by RDL's STICK-ON[®] series of products. Optional brackets permit mounting a RACK-UP module above, below, or in front of any flat surface. Optional rack-mount adapters and chassis are available for conventional RACK-UP series installation.

APPLICATION: The RU-SX4A is the ideal choice in many installations where either local and/or remote audio source selection is desired. Input and output connections are made on the rear panel through clearly identified, full-size barrier block terminals. Each RU-SX4A may connect directly to RDL's wall-mount RCS4 remote control. In stereo applications, a second RU-SX4A may be wired as a slave.

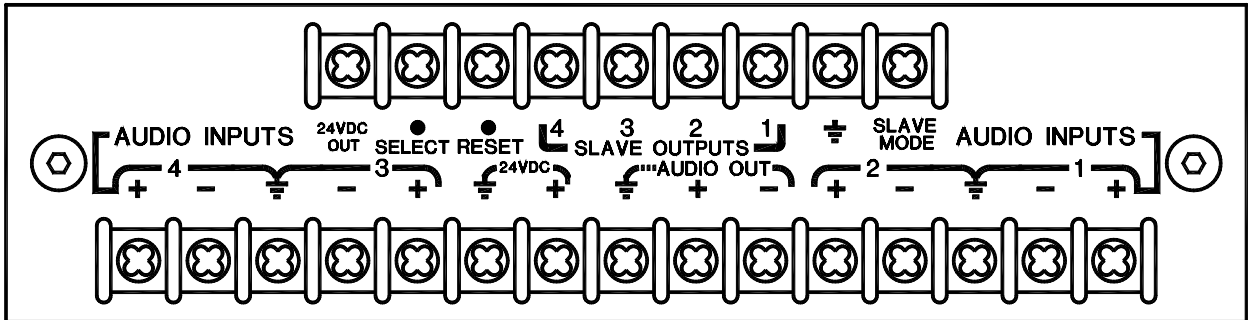
The RU-SX4A features 4 balanced line-level inputs. Each input may be wired balanced or unbalanced. High-impedance bridging inputs allow connection from either high or low impedance sources. The line-level, low-impedance output may be wired to drive either a balanced or unbalanced line. Individual multi-turn level trimmers are provided on the front panel for each input.

Audio switching in the RU-SX4A is solid-state for optimum reliability and long term, noise free performance. No mechanical switching is used in the audio path. The RU-SX4A powers up in the OFF position (no audio input selected). A front panel push-button selects the desired audio source. Remote push-button terminals are available on the rear. Each time the button is pushed, the RU-SX4A advances to the next audio source. A 1/2 second audio-on delay prevents annoying bursts of audio while stepping through audio inputs. Each selected source provides an open-collector output on the rear panel used for remote source indication, to control a second RU-SX4A as a stereo slave, or to skip any unused inputs if fewer than 4 sources are being used. An LED shows the selected source on the front panel. Each input has a write-on label area for identification of the source.

The RU-SX4A is the ideal choice wherever 1, 2, 3 or 4 audio inputs need to be switched into a single output locally or by remote control. Use the RU-SX4A combined with other RDL RACK-UP, STICK-ON, TX™, or FLAT-PAK™ series products as part of a complete audio/video system.

RU-SX4A Audio Switcher

Rear Panel View



AUDIO INPUTS: Four audio inputs are provided. Each input may be wired balanced or unbalanced. For balanced operation, connect the input cable shield to ground, and connect the balanced leads to + and -. For unbalanced operation, connect the input cable shield to ground, connect a jumper from ground to the - input, and connect the unbalanced signal lead to the + input terminal.

AUDIO OUTPUT: The output may be wired balanced or unbalanced. For balanced operation, connect the balanced leads feeding the output cable to the + and - terminals. (Note: The phase of the output signal corresponds to the phase of the input signal) For unbalanced operation, connect the output cable shield to ground, and connect the signal lead to the output + terminal. Do not make any connection to the output - terminal for unbalanced operation.

REMOTE SOURCE SELECTION: Connect a normally-open momentary switch (typically a push-button) between the **SELECT** terminal and + terminal of the **24VDC** terminals. When 24 Vdc is applied to the **SELECT** terminal, the RU-SX4A will advance to the next audio source.

REMOTE TALLY / CONTROL: SLAVE OUTPUTS 1 through 4 switch to ground (open-collector transistors) when the related input is selected. These terminals may be used to drive external LEDs as source indicators. When using external LEDs, protect the LED from excessive current with a suitable dropping resistor.

INPUT BYPASS: If all 4 inputs are not used, the unused inputs may be bypassed by connecting the next slave output to the **RESET** terminal. For example, if 3 inputs are used, connect slave terminal 4 to **RESET**. The RU-SX4A will then skip input 4.

STEREO SLAVE OPERATION: Connect the **SLAVE OUTPUTS** 1 – 4 and Ground on the master RU-SX4A switcher to the corresponding terminals on the slave RU-SX4A. On the slave unit, connect the **SLAVE MODE** terminal to Ground. Upon power-up both the master and slave units will be in the OFF position. When a source is selected on the master unit, both units will switch to that source. Additional units may be connected as slave units in multi-channel systems.



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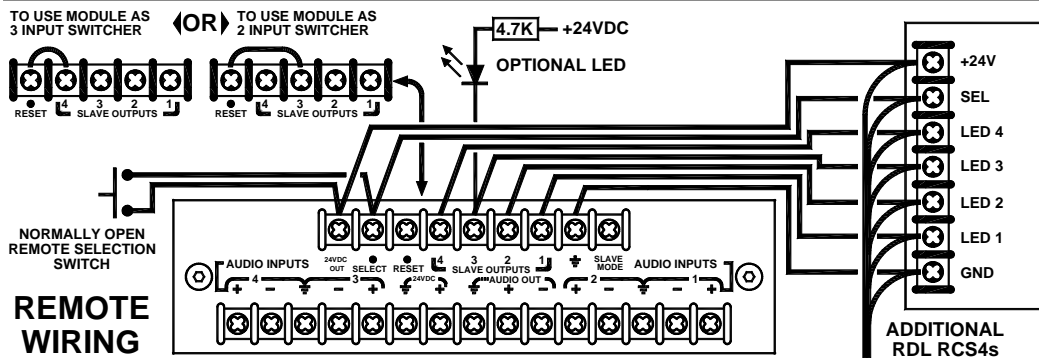
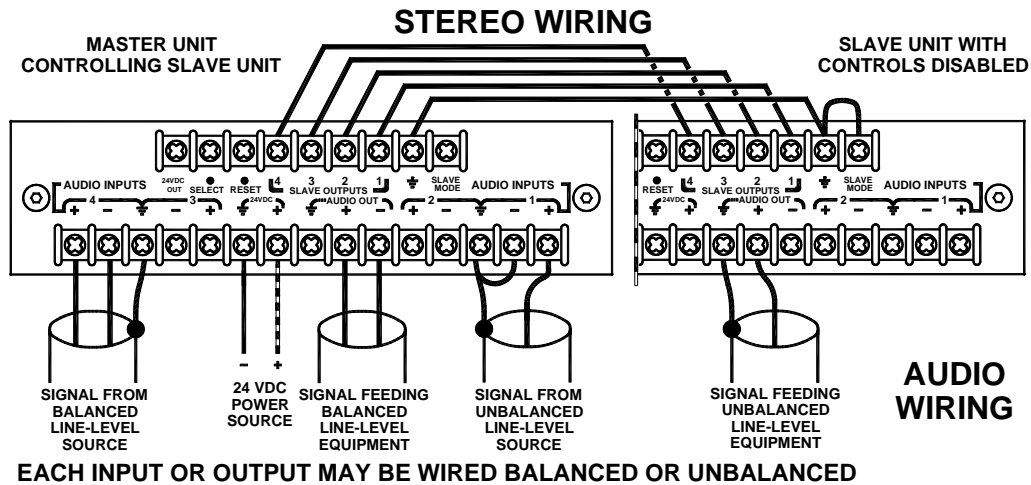
Model RU-SX4A / RCS4

Audio Switcher / Remote Channel Selector

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

- Inputs: 4 line-level, balanced or unbalanced via terminal block
- Input Impedance: 20 kΩ bridging
- Headroom: > 18 dB above +4 dBu
- Gain: Adjustable for each input from unity to +/-12 dB
- Frequency Response: 10 Hz - 50 kHz +/-0.25 dB
- Total Harmonic Distortion: < 0.010% (20 Hz - 20 kHz)
- Residual Noise: < -85 dB (referred to +4 dBu) with any input selected (-93 dB typical)
< -95 dB (referred to +4 dBu) with no input selected (-100 dB typical)
- OFF Attenuation: > 85 dB
- Crosstalk: < -85 dB @ 1 kHz; < -75dB using pink noise
- Indicators: Front panel LED indicates selected channel
- CMRR: > 55 dB (50 Hz to 120 Hz)
- Output: 150 Ω source impedance, balanced or unbalanced to drive high or low impedance
- Power Requirement: 24 to 33 Vdc @ 75 mA, Ground-referenced

Radio Design Labs Technical Support Centers

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