



RDL[®]
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

max **RACK-UP**[®] SERIES Model RU-SPC1 Digital to Analog Converter

ANYWHERE YOU NEED...

- Broadcast Quality Audio D to A
- Transformer Isolated Digital Input
- Operation Up to 24 bits, 96 kHz
- Automatic Sample Rate Detection
- Exclusive **SURE-LOK**[™] Auto-Recovery Sentinel
- Adjustable Audio Output Gain Trim
- Absent Digital Input Mutes Audio
- SPDIF Signal Inputs (3 formats)
- Output Ground-Lift Provisions
- Digital Signal **ERROR** Indication



You Need The RU-SPC1!

The RU-SPC1 is part of the group of versatile *Max* RACK-UP products from Radio Design Labs. *Max* RACK-UPs feature all metal chassis' and the advanced circuitry for which RDL products are known, combined with accessible, user-friendly controls and displays. The compact design permits high-density installations, with *three* products mounted in a single rack unit! Optional brackets permit mounting a *Max* RACK-UP module above, below, or in front of any flat surface. Optional rack-mount adapters (RU-RA3) are available for *Max* RACK-UP series installation. *Max* RACK-UP modules may be used freestanding as well!

APPLICATION: The RU-SPC1 is the ideal choice in installations requiring high quality analog audio from an SPDIF digital audio source. All three input format jacks are provided: Phono, BNC and Optical.

The coaxial (phono and BNC) RU-SPC1 inputs are transformer isolated for ground loop rejection. Any one of the three inputs may be used. Audio outputs are available both on XLR connectors and on the full-size barrier block on the rear panel. This block permits the user to lift the output grounds to each XLR jack individually. The RU-SPC1 is powered from 24 Vdc, which may be connected through the barrier block or through the dc power jack. A front-panel power switch is provided. All inputs and outputs are available on the rear panel.

The RU-SPC1 front panel provides a **POWER** LED, and a red **ERROR** LED. The **ERROR** indicator is illuminated whenever the module is not locked to a valid digital audio source. This condition occurs in the absence of an input signal, or during a phase-lock or any bit error related to an incoming signal that is present. The RU-SPC1 automatically adjusts to the incoming sample rate making operator switch settings unnecessary.

A frequent problem encountered with consumer and professional quality digital audio converters is unpredictable latch-up when digital signals are switched or connected to the converter input. **SURE-LOK**[™] auto-recovery circuitry unique to the RU-SPC1 monitors the most frequent causes of latch-up and reinitiates digital signal lock, bringing a new higher level of stability to digital audio signal conversion under the variety of conditions encountered in professional environments.

Wherever broadcast quality digital to analog audio conversion is required, the RU-SPC1 is the ideal choice. Use the RU-SPC1 individually, or combine it with other RDL products as part of a complete audio/video system.



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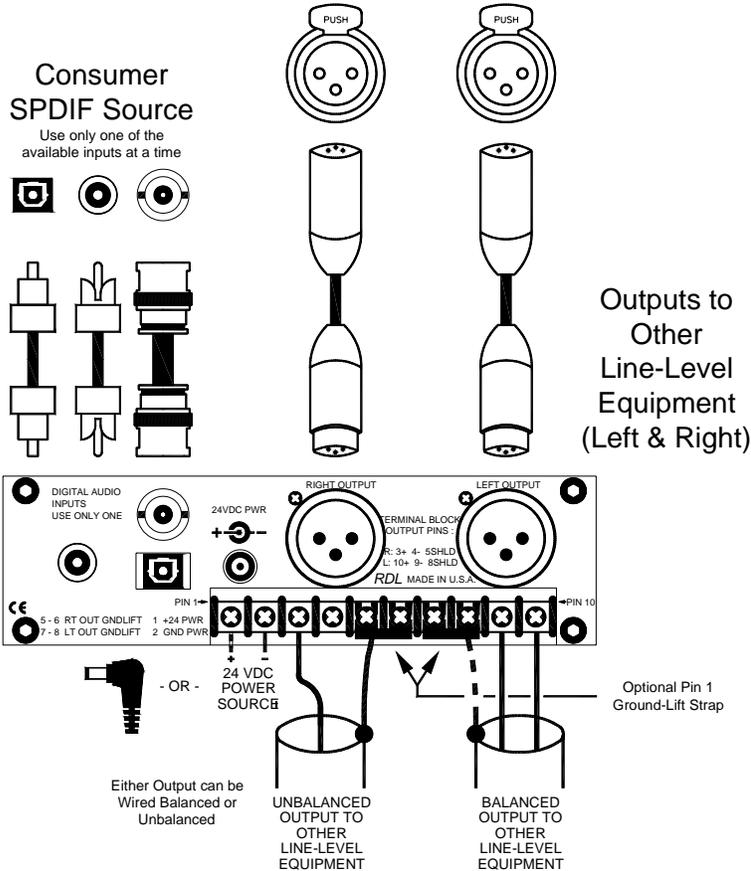
max RACK-UP® SERIES

Model RU-SPC1 Digital to Analog Converter

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 (3):	75 Ω SPDIF transformer isolated (phono or BNC) or optical
Outputs (2):	150 Ω balanced XLR or terminal block with ground-lift straps
Sample Rate:	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Resolution:	16 to 24 bits
Frequency Response:	10 Hz to 20 kHz (+/- 0.5 dB)
THD+N:	< 0.04%
Crosstalk:	< -80dB (100 Hz to 20 kHz); -70 dB (10 Hz to 100 Hz)
Output Level:	Adjustable +4 dBu to +21 dBu (input = 0 dBFS)
Phase L↔R:	±1° to 10 kHz; ±1.5° to 20 kHz
Residual Noise:	< -90 dB (-240 dBFS, reference +4 dBu @ 0 dBFS) < -95 dB (no digital input, reference +4 dBu @ 0 dBFS)
Dynamic Range:	> 90 dB
Indicators (2):	POWER LED and ERROR LED (ERROR indicates not locked to a valid signal)
Standards:	IEC958, S/PDIF and EIAJCP340/120
Power Requirement:	24 to 33 Vdc @ 150 mA, Ground-referenced
Mounting:	Rack-mount using optional rack adapters such as RU-RA3; or operate freestanding
Dimensions:	Height: 1.7 in 4.3 cm Length: 5.8 in 15.0 cm Depth: 3.3 in 8.4 cm

Radio Design Labs Technical Support Centers

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