



# RDL®

High Performance Audio Products. Made in America.

## RACK-UP® SERIES Models RU-NMP44 Network Mixing Processor - 4x4

- Six Networked 4 x 1 Virtual Audio Mixers Dante / AES67
- Four Dante Network Inputs Feed Each Mixer
- Four Mixer Outputs Feed Dante Network Channels
- Two Mixer Outputs Feed Balanced Line-Level Outputs
- A Pair of Mixers may be Configured for Stereo Audio
- Module is Configured and Adjusted Using Network Control Software
- Compatible with RDL Networked Remote Controls
- Provides Level Adjustment in 1 dB Steps for Each Input of Each Mixer
- Provides Level Adjustment in 1 dB Steps for the Output of Each Mixer
- Automatic (VOX) Priority Ducking Assignable on Each Virtual Mixer
- Priority May be assigned to One of the Four Received Network Channels
- Selectable High Pass Filters for the Priority Input
- Adjustable Ducking Threshold, Attenuation Level and Recovery Delay
- Provides Four Stored Preset Configurations for Routing, Mixing and Levels
- Presets Activated by Network Commands, at Power-Up, or Using RDL RC4M Remote Control
- LED Indicators for Power and Network Sync
- Operation from PoE Power (Class 0, IEEE 802.3af) or external 24 Vdc



**APPLICATION:** The RU-NMP44 is a network mixing processor containing six virtual audio mixers controlled by network commands from RDL and other network remote controls. Each mixer operates independently with input signal attenuation from unity to off. The output level from each mixer is independently adjustable from unity to off. Based on the commands sent to the RU-NMP44, each mixer can be used as a mixer, a source selector, a priority paging inserter and/or as a volume control. The outputs from four of the mixers drive corresponding network audio channels. The outputs from two of the mixers drive line-level +4 dBu audio outputs. The RU-NMP44 is configured using RDL CONSOLE or other network control software.

If ducking is used, one of the four network audio inputs is assigned as the priority input. That input is connected to all six virtual mixers. An audio detector with installer-defined threshold and recovery delay may be assigned to one, several, or all of the six mixers. For each of those mixers, the priority input is set to a defined level, and the remaining three inputs are each set to attenuate to a fixed level between -10 and -64 dB when a message is detected on the priority input. If hum is anticipated from the paging source, one of four high-pass filter may be enabled.

Up to four preset configurations may be stored in the RU-NMP44. Each preset can define any or all mixer level settings. A preset is activated by a network command, an RDL network or wired remote control, a momentary switch closure or a compatible open-collector from other equipment. The RU-NMP44 may be configured to power up to a preset, to the last settings used, or with all levels "off".

The RU-NMP44 may be powered from an external 24 Vdc power supply, available separately. The RU-NMP44 is equipped to operate from a PoE enabled network switch. The RU-NMP44 will reserve power from the switch even while being powered from an external 24 Vdc supply. If PoE power and an external 24 Vdc supply are both feeding an RU-NMP44, the unit will run from the external supply and will seamlessly switch over to PoE power upon loss of the external supply.

The RU-NMP44 is ideal for adding volume control, mixing, switching and ducking to existing network audio systems. The digital signal processing offered in the RU-NMP44 often fulfills all the requirements for an audio system design, such as in classrooms, meeting rooms, restaurants/bars, fitness gyms and retail stores. The RU-NMP44's superior performance specifications make it ideally suited to the most demanding installations, and an exceptional value in commercial networked audio systems.

The RU-NMP44 is constructed in a durable, professional all-metal enclosure suitable for free-standing, surface-mounted or rack-mounted operation. This full-featured product is engineered and manufactured in the U.S.A for continuous duty in demanding installations. Built to last. Built to outperform.



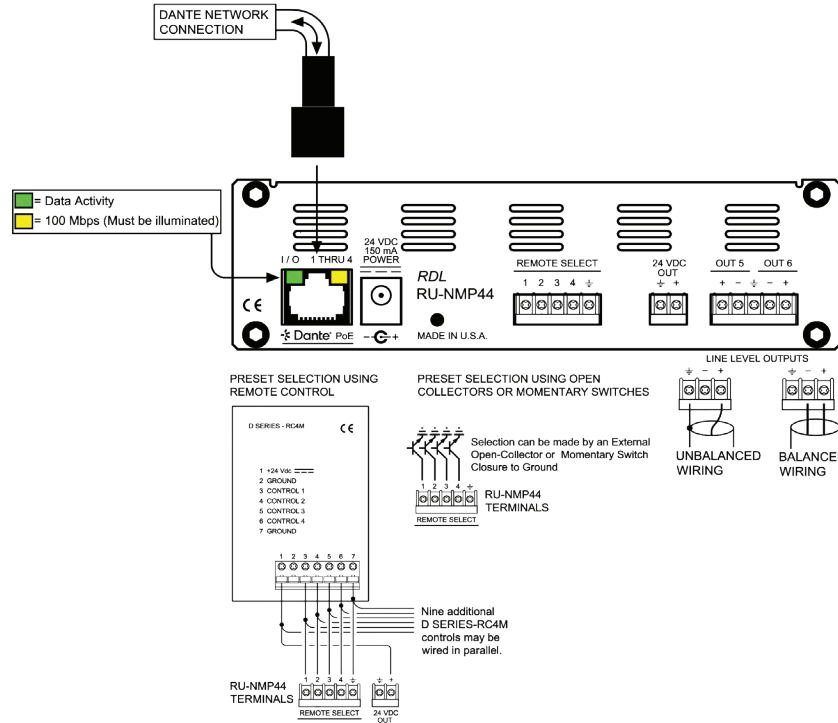
# RDL®

High Performance Audio Products. Made in America.

## RACK-UP® SERIES Models RU-NMP44 Network Mixing Processor - 4x4

## Installation/Operation

**CE** Declaration of Conformity available from rdlnet.com.  
Sole EMC specifications provided on product package.  
Specifications are subject to change without notice.



### TYPICAL PERFORMANCE

#### Network Section

Network Connector:	RJ45 with Link and Speed indicators
Digital Audio Ethernet Protocol:	Dante or AES67
Digital Audio Sources (4):	Dante or AES67
Transmission Rate:	100 Mbps
Sample Rates Supported:	44.1 kHz, 48 kHz (default)
Bit Depth Supported:	24 bits
Digital Audio Outputs (4):	One output channel per virtual mixer (1 through 4)

#### Analog Output Section

Outputs (2):	+4 dBu (nominal, -20 dBFS), 150 Ohms
Output Connection:	Detachable terminal block
Frequency Response:	20 Hz to 20 kHz ( $\pm 0.25$ dB)
THD+N:	< 0.01%
Noise below +4 dBu:	< 85 dB
Crosstalk:	Below noise floor (20 Hz to 20 kHz, -20 dBFS)
Headroom above +4 dBu:	> 18 dB

#### Virtual Mixers (6)

*Note: All 6 virtual mixers use the same four network audio sources.*  
*Note: Each mixer output is connected to one RU-NMP44 output.*  
*Note: A mixer that is using only one input acts as a virtual VCA.*  
*Note: A mixer that is using one standard and one priority input acts as a paging / ducking module.*

Inputs (Up to 4):	Dante or AES67
Input Attenuation (Mix level):	0 to -64, 1 dB steps (-64 = OFF)
Mixed Output Attenuation:	0 to -64, 1 dB steps (-64 = OFF)

Mixer Output (Mixer 1 thru 4):	Dante or AES67
Mixer Output (Mixer 5 and 6):	+4 dBu, Balanced Analog
Priority Input:	Dante or AES67 Input 1, 2, 3 or 4
Priority Input Filters:	Programmable: 36 dB/Octave; High-Pass 100 Hz, 125 Hz, 200 Hz, 250 Hz, and 250 Hz
Priority Detector Threshold:	-25 dB (default); adjustable -15 to -40 dB (rel -20 dBFS)
Ducking Attenuation:	10 to 64 dB, 1 dB steps (64 = OFF)
Recovery Delay:	2 seconds (default); adjustable 0.5 to 10 seconds, 0.5 second steps
Recovery Ramp:	Adjustable 1 second to 10 seconds

#### Preset Settings

Number of Presets:	4
Stored Settings per Preset:	All settings for all mixers, routing of network inputs and outputs
Preset Activation:	Programmable at power-up (1 preset), momentary contact or open collector (supporting 24V pullup), RDL D*-RC4M Remote Controls (up to 3) Detachable terminal block
Preset Connections:	

#### Common

Indicators (2):	Power, Sync
Ambient Operating Environment:	0° C to 40° C
Power Requirement:	24 Vdc @ 150 mA
Dimensions: Height:	1.64 in. (4.17 cm); Width: 5.74 in. (14.58 cm); Depth: 3.96 in. (10.06 cm)
Package Type:	Cardboard Box
Package Dimensions:	6.7 x 6.25 x 2.75 in
Shipping Weight:	1.358 lbs.
WEEE weight:	1.1 lbs.
Tariff code:	8543.70.9100

Radio Design Labs Technical Support Centers

U.S.A. (800) 933-1780, (928) 778-3554 - Europe [NH Amsterdam] (++31) 20-6238 983