



Installation and Operation Manual



RDDA 4x4

Four input, sixteen-output routing digital audio distribution device

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INTRODUCTION

Thank you for your purchase of the Broadcast Tools® RDDA 4x4, Four input, sixteen-output routing digital audio distribution device, which we will refer to throughout the manual as the RDDA 4x4. We're confident this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the product.

SAFETY INFORMATION

Only qualified personnel should install Broadcast Tools® products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product or you need assistance, please contact your distributor from whom you purchased this equipment.

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BROADCAST TOOLS® BRAND PRODUCTS!**



CAUTION!

Broadcast Tools® Products, as with any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.



NOTE:

This manual should be read thoroughly before installation and operation.

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PRODUCT DESCRIPTION

The RDDA 4x4 quad-mode AES/EBU digital distribution system provides up to sixteen outputs from a single digital source. The sixteen outputs may be split into four groups, providing four transformer-balanced outputs each from a single source. The RDDA 4x4 is ideal for distributing AES/EBU signals of sample rates up to 96kHz and/or word clock around your facility without any signal alteration. The RDDA 4x4 is equipped with four transformer balanced loop-thru inputs with selectable termination and sixteen transformer-balanced outputs with selectable termination. There are four configuration modes selected by DIPswitches. Single mode, operates as a 1 x 16 D.A. Dual mode operates as a 2 x 8 D.A. Tri-mode operates as 3 x 4 D.A. and the quad mode, which operates as a 4 input x 4 output D.A. All modes are independent with no interaction between channels. Inputs, outputs and status are supplied on plug-in euroblock connectors. Input signal presence is monitored and displayed on four front panel LEDs with remote open collector status provided on the rear panel. The RDDA 4x4 is powered by a surge protected internal power supply. The half rack profile, allows the unit to be set on a desktop, mounted on a wall as part of the RA-1, Rack-Able mounting shelf.

INSTALLATION

Please examine your RDDA 4x4 carefully for any damage that may have been sustained during shipping. If any is noted, please notify the shipper immediately and retain the packaging for inspection by the shipper. The package contains the RDDA 4x4, 9VAC @ 1 amp wall transformer, mating connector and this manual.

Installation of the RDDA 4x4 in **high RF environments** should be performed with care. Shielded cable is suggested for all I/O connections. All shields should be tied to the **“C-GND”** Chassis **GrouND** terminals. The station ground should be connected to the chassis ground screw located on the far right side of the RDDA 4x4 as viewed from the rear. It is recommended that all I/O cables connected to the RDDA 4x4 be looped through ferrite cores to suppress RF.

The RDDA 4x4 is equipped with four inputs and four groups of 4 (16 total) outputs. Connections are via plug-in euroblock connectors. To install, remove the plug, strip 1/8” of insulation from the wire. Insert the wire in to the desired terminal and tighten the setscrew. When finished, reinsert the plug into the appropriate connector.

AES Inputs:

Connect the source equipment to the desired input terminal labeled Input **1 thru 4, + - CG**.

To configure inputs for termination, remove the cover and locate jumper JP1 the termination jumper for input 1, JP2 for input 2, JP3 for input 3 and JP4 for input 4. Select any one of three termination choices, 75, 110 ohm or no termination. If you plan on looping thru your source equipment, be sure to terminate the last piece of equipment only. Reinstall the cover when finished.



NOTE:

Some features may require the removing of the chassis cover. Caution should be observed, as hazardous voltages may be present on the printed circuit board. Be sure to reinstall the cover before operating the RDDA 4x4.

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AES Outputs:

Each output has a set of dipswitches that allows any or all groups of four outputs to be driven by one input. There is a four-position dipswitch for each output. Remove the cover and locate each dipswitch. **Example:** Selecting input one to feed output one, simply turn on (Output 1) DIP SW 2-1. Any one input may feed any or all outputs. Termination is made to the desired output terminal labeled **OUT #-1 thru OUT #-4 for each of the four outputs**. Each out terminal is labeled: + - CG. Reinstall the cover when finished.

Remote Control:

Each input is monitored for data activity. A separate (active low) open collector status output is provided for each input. The connector is labeled Remote Status. Connections should be made between the desired input status output and ground. The open collectors are diode protected, while voltage levels should be limited to 6 vdc @ 100ma each.

SPECIFICATIONS

AES Inputs	Four AES transformer balanced. Impedance 110 ohm or 75 ohm. 3-terminal plug-in Euroblock connectors.
AES Outputs	Four groups of four (16 total) AES transformer balanced. Source impedance 110 ohms. 3-terminal plug-in Euroblock connectors.
Sample Rate	Any, up to 96kHz.
Remote Control	Four diode protected active low open collector outputs. Each output rated at 6 vdc @ 100ma. A pull-up may be required in some installations.
Connectors	Plug-in euroblock. Mating connectors are supplied.
Power	9 Vac @ 1 amp. 120 Vac 50-60 hz transformer, supplied.
Size:	1/2 rack space, 8.50" x 6.50" x 1.55" (WDH), painted chassis with 4 – 6-32 mounting holes.
Weight:	2.0 lb.
Options:	RA-1, Rack Shelf. 1 RU (holds two RDDA 4x4's). CE 240 Vac 50-60 Hz transformer

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LIMITED WARRANTY

The term “Buyer” as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person’s or entity’s own use.

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APPENDIX A

Functional Diagram

