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# DiNET DAN-TX2

## 2-Channel Dante Network Transmitter


# User Guide

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# Radial® DAN-TX2™ User Guide

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Thank you for purchasing the Radial DiNET DAN-TX2. The DAN-TX2 is a high-resolution stereo direct box designed to connect to a Dante™ enabled Ethernet network and seamlessly convert analog audio to a digital format compatible with Dante. This makes it ideal for connecting consumer line-level devices such as laptops, tablets or CD players, or professional balanced line-level equipment directly to a Dante network for easy routing and distribution to other devices.

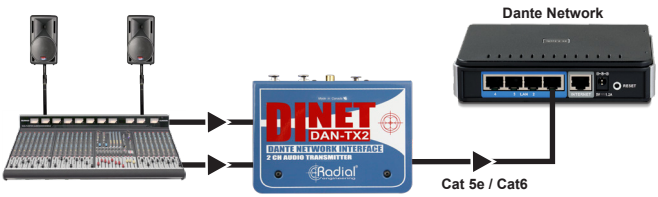
This manual covers the setup and operation of the DAN-TX2 in various applications. Please take a few minutes to read through and familiarize yourself with the DAN-TX2 features and functions. If you have any questions that are not covered in this manual, please consult the FAQ section on our website. This is where we post the latest updates. If you still do not find what you are looking for, feel free to send us an email at info@radialeng.com and we will do our best to reply in short order.

## OVERVIEW

The DiNET DAN-TX2 is an analog to digital converter that is designed to take the signal from both consumer and professional line-level audio sources and transmit them over an existing Dante or AES67-enabled network.

The DAN-TX2 is equipped with a variety of connection options to make it easy to connect with any type of audio equipment. The included stereo 3.5mm, RCA and XLR/TRS combo connectors are wired in parallel to allow for immediate hookup of laptops, tablets, smartphones, consumer audio devices, broadcast and professional audio equipment without the need for adapter cables.

The inputs of the DAN-TX2 are processed using high quality 24 bit/96kHz analog-to-digital converters, providing two channels of Dante digital outputs over a single Ethernet connector, and allowing easy integration of analog audio devices with an existing Dante network.




The DAN-TX2 is easy to use, with no setup required on the device itself. It is completely configured by Dante Controller, which manages digital audio routing across the Dante network. Dante Controller is a software application by Audinate™ that allows the user to manage all Dante-enabled devices across a network. Use Dante Controller to route audio from the DAN-TX2 to ny number of destinations on the network. Simply connect the DAN-TX2 to the network and it will automatically appear as an available transmit device within Dante Controller.

The DAN-TX2 will initially have the name “DiNET-TX2-xxxxxx”, where the last 6 digits will be the unique media access control address (MAC address) of your DAN-TX2. As this can be changed to a user-generated name using Dante Controller, we recommend writing down the MAC address of your unit in the space provided below for future reference.

**Record your DAN-TX2 MAC address here:**

## DiNET-TX2-_____

Dante Controller can be downloaded for free at www.audinate.com. For latest firmware for the DAN-TX2 please visit www.radialeng.com.

## FEATURES


1. **3.5MM INPUT:** Stereo TRS input for use with laptops, tablets and smartphones. Wired in parallel with the XLR and RCA inputs.

2. **PAD:** Engages a -18dB input pad for high output line-level sources.

3. **TRIM:** Adjustable trim control to set input levels, with unity gain at 12 o'clock. Provides -10dB of cut or +10dB of gain at the min/max settings.

4. **LINK:** When engaged, the TRIM and PAD controls for Channel-1 become the master controls for stereo operation.

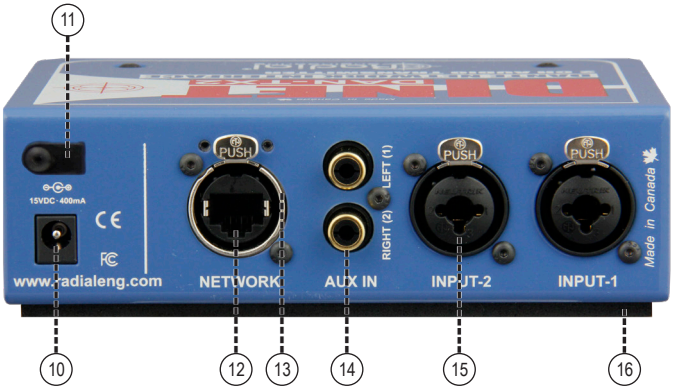
5. **SIG/CLIP LEDS:** Will illuminate when input signal is present or clipping is detected on each input channel.

6. **SYNC LEDS:** Red LED is illuminated when unit is powered. Green LED will illuminate once connected to an Ethernet network. Flashing green LED indicates that the DAN-TX2 is in master clock mode, solid green LED indicates that it is in slave mode.

7. **SYS LEDS:** Red LED illuminates when power is first applied, green LED illuminates once Dante processor becomes active.

8. **+15V LED:** Will illuminate when the DAN-TX2 is connected to the included DC power adaptor.

9. **POE LED:** Will illuminate when the DAN-TX2 is receiving Power over Ethernet (PoE).




10. **POWER:** 15VDC connection for use with included Radial power adapter when PoE is not available.

11. **CABLE CLAMP:** Used to secure the power supply cable to prevent accidental disconnection.

12. **ETHERNET PORT:** Connects to the Dante network using a standard CAT5e or CAT6 Ethernet cable. This port delivers the digital audio signal to the network and powers the DAN-TX2 when Power over Ethernet (PoE) is available.

13. **ETHERCON COMPATIBLE CONNECTION:** Locking connector prevents accidental disconnection or damage to RJ45 connectors when used with Neutrik etherCON cable connector carriers.

14. **RCA AUX INPUTS:** Provided for connection from CD/DVD players and other consumer-level playback devices. Wired in parallel with the XLR/TRS and 3.5mm inputs.

15. **XLR/TRS COMBO INPUTS:** Balanced inputs for connection to professional audio playback sources.

16. **NON SLIP PAD:** Provides electrical & mechanical isolation and keeps the unit from sliding around.

## GETTING STARTED

Before making any connections, always ensure your amplifiers or speakers are either turned down or turned off in order to protect sensitive components from damage due to loud transients that can occur when plugging in or turning on various components.

## POWERING THE DAN-TX2

### PoE

Power for the DAN-TX2 can be provided via Power over Ethernet (PoE) from a PoE-capable network switch or a separate PoE injector. Once power is available, the side panel PoE LED indicator will illuminate and the DAN-TX2 will be ready to use.

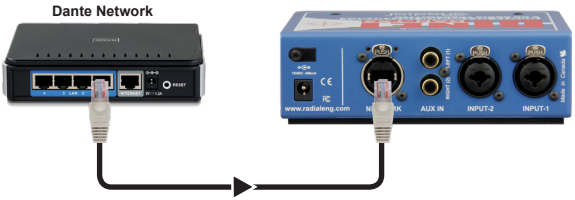

### Power Supply

The included 15VDC power supply is provided for use when PoE is not available. Once you have connected the DAN-TX2 to the Ethernet switch, plug in the power supply. The +15VDC LED will illuminate and the DAN-TX2 will be ready to use.


As a backup option, the DAN-TX2 is designed to be able to have both PoE and the 15VDC adaptor connected at the same time. If one fails, the other will maintain power without interruption.

## ETHERNET CONNECTION

The DAN-TX2 connects to an Ethernet switch using a standard CAT5e or CAT6 cable. Once the Ethernet switch is connected to a computer running the Dante Controller software, the DAN-TX2 will appear as an available transmit device.

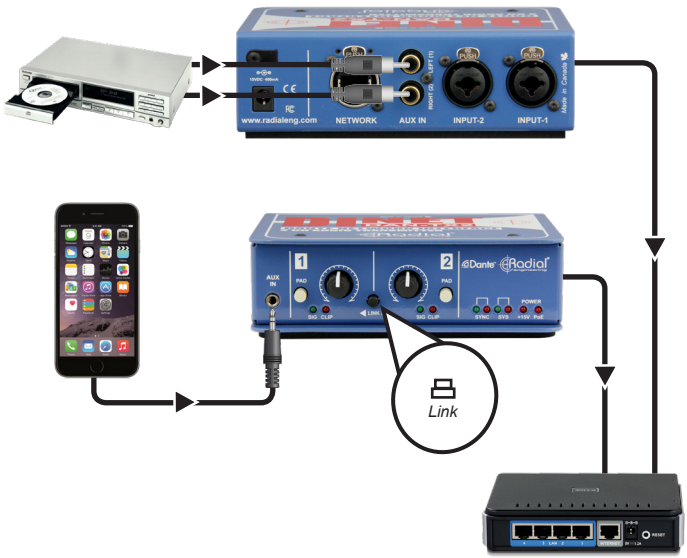


## DAN-TX2 WITH UNBALANCED CONSUMER AUDIO

When using the DAN-TX2 with consumer audio devices, typically either the RCA connectors or the mini 3.5mm connector will be used, however, the XLR/TRS inputs can also be employed. The DAN-TX2 will accept consumer line level signals such as those from a CD/DVD player, laptop, tablet, or smartphone. The TRIM control can be used to fine tune the level, and the PAD can be engaged should further attenuation be required.

When connecting to stereo input sources, engage the LINK switch to allow the TRIM and PAD on Channel-1 to affect both left and right signals equally, providing you with the ability to adjust the levels of both channels using just one control without altering the stereo balance.

Only one set of inputs should be used at a time, as they will all sum together to the left and right Dante outputs over Ethernet. To connect more than one device at a time to the Dante network, use multiple DAN-TX2 units.




*Dante Network*

## DAN-TX2 WITH PROFESSIONAL LINE-LEVEL EQUIPMENT

The balanced XLR/TRS combo inputs on the DAN-TX2 are designed to be used with professional audio and broadcast equipment such as mixing consoles and recording interfaces, with the ability to handle extremely hot signal levels of up to +28dBu. TRIM controls for each channel have +/- 10dB of gain to accomodate for a wide range of input levels, along with -18dB pad switches for extremely hot signals. When the TRIM control is set to 12 o'clock and the PAD is engaged, +18dBu = 0dBFS. Without the PAD engaged 0dBu = 0dBFS. As with the unbalanced inputs, when connecting to stereo input sources engage the LINK switch to allow the PAD and TRIM on Channel-1 to affect both inputs equally.


*Audio connections for PA system and recording systems use balanced XLR cables up to 100 meters (300').*

*Dante Network*

## MOUNTING THE DAN-TX2 IN A RACK

The DAN-TX2 can be mounted in standard 19" equipment racks using the optional SA Series Rack Adaptor kit (Part # R800 9422). This 1 RU adaptor allows you to mount one or two DAN-TX2 receivers in a single rack space.

## SPECIFICATIONS*

| | |
|---|---|
| Audio Circuit Type: | High current balanced active input device |
| Number of Channels: | 2 |
| Sample Rate: | 44.1kHz, 48kHz, 88.2kHz, and 96kHz |
| Bit Depth: | 24 bit |
| Frequency Response: | 20Hz-20kHz |
| Idle Channel Noise: | -108dB |
| Dynamic Range: | >103dB |
| Channel Separation: | >85dB |
| Maximum Input: | +28dBu |
| Equivalent Input Noise: | -98dB |
| Total Harmonic Distortion + Noise: | 0.008% @ -6dBfs |
| IMD: | 0.0017% -10dBfs |
| Balanced Input Impedance: | 40kOhm |
| Unbalanced Input Impedance: | 20kOhm |
| Power Consumption: | 1.25W |

**Features**

| | |
|---|---|
| Input Connectors: | 2x XLR/TRS combo, 3.5mm TRS, 2x RCA |
| Output Connectors: | RJ45 Ethernet with locking etherCON |
| LED Indicators: | SYNC, SYS, +15V, and PoE |
| Pad: | -18dB |

**General**

| | |
|---|---|
| Power: | 15VDC 400mA (included) or PoE |
| Power Over Ethernet (PoE): | Class 1 IEEE 802.3af |
| FCC Approval: | Meets FCC Part 15B Class A |
| Construction: | 14-gauge steel |
| Finish: | Durable powder coat |
| Size (L x W x D): | 4.5" x 2" x 6" (121 x 6 x 147mm) |
| Warranty: | Radial 3-year, transferable |

Note: This device has been tested and found to comply with the limits for a Class A digital device, according to Part 15 of the FCC Rules and EN55022. These limits are designed to provide reasonable protection against harmful interference when the device is operated in a commercial environment. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the user manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

** Subject to change without notice.*

## THREE YEAR TRANSFERABLE LIMITED WARRANTY

RADIAL ENGINEERING LTD. (“Radial”) warrants this product to be free from defects in material and workmanship and will remedy any such defects free of charge according to the terms of this warranty. Radial will repair or replace (at its option) any defective component(s) of this product (excluding finish and wear and tear on components under normal use) for a period of three (3) years from the original date of purchase. In the event that a particular product is no longer available, Radial reserves the right to replace the product with a similar product of equal or greater value. In the unlikely event that a defect is uncovered, please call 604-942-1001 or email service@radialeng.com to obtain an RA number (Return Authorization number) before the 3 year warranty period expires. The product must be returned prepaid in the original shipping container (or equivalent) to Radial or to an authorized Radial repair centre and you must assume the risk of loss or damage. A copy of the original invoice showing date of purchase and the dealer name must accompany any request for work to be performed under this limited and transferable warranty. This warranty shall not apply if the product has been damaged due to abuse, misuse, misapplication, accident or as a result of service or modification by any other than an authorized Radial repair center.

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To meet the requirements of California Proposition 65, it is our responsibility to inform you of the following:
**WARNING:** This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
Please take proper care when handling and consult local government regulations before discarding.

Made in Canada

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