

Digital IEM Transmitter



The M2T Digital Half-Rack Transmitter with analog and digital Dante™ network audio inputs presents an excellent sounding IEM system with a unique level of performance in a wireless in-ear monitor system. With ultra-low latency 24-bit audio, digital RF modulation and two stereo digital channels, the M2T provides a truly unique IEM product for demanding, professional applications.

The M2T boasts a USB port for firmware updates and an IR port for fast setup. A large, high resolution, backlit LCD and large membrane switches provide an intuitive interface that is highly visible in daylight or dimly lit conditions.

The half-rack transmitter provides four audio inputs which can be individually configured to be analog or Dante compatible. The input connectors are full size XLR/TRS combo types for balanced line level analog signals. Input preamp circuits use a special balanced amplifier with very high common mode rejection to minimize hum and noise. Analog signals are converted to an internal 24-bit digital format which is then encoded, organized into packets, and passed to an RF modulator. The modulated RF signal is filtered before and after amplification to suppress out-of-band noise and spurious signals.

- **IEM (Wireless Monitor) with digital RF transmission**
- **24-bit digital audio**
- **2 independent stereo audio transmissions per 1/2 RU enclosure**
- **USB port for firmware updates**
- **Fully Dante™ compatible**
- **IR (infrared) port for fast setup**
- **Up to 50 mW per RF carrier**
- **Solid machined aluminum housing**
- **Compatible with Wireless Designer™ Software**

Conventional in-ear wireless monitor systems rely on decades-old technology: FM transmission with multiplexed, companded audio. The M2T Transmitter employs unique technology to provide ruler-flat frequency response from 20 Hz to 15 kHz and maximum channel separation. In addition, the digital audio eliminates a compander and the associated artifacts. The result is crystal clear sound, rock solid stereo imaging, and extremely low distortion of <0.1%.

The M2T is designed and developed with the professional touring, installation, theater and broadcast customers in mind. The transmitter chassis is all-metal. The front panel is an aluminum extrusion with a durable powder coat finish.



The M2T half-rack transmitter features transmission power of up to 50 mW for extended operating range. Locking XLR/TRS Combo connectors facilitate up to four channels of analog audio sources to be applied to the transmitter. A large, high resolution, backlit LCD and large membrane switches provide an intuitive interface.

Firmware updates are made via the USB port on the front panel of the housing. The procedure is very simple using a menu item on the transmitter and a standard micro USB cable connected to a PC.

Summary of Dante Benefits

- Plug-and-play technology – automatic discovery and simple signal routing
- Reduced Cost & Complexity- No special skills required to set up audio networking
- Sample accurate playback synchronization
- Lowest latency available from any networking technology
- Add/remove/rearrange components at will
- Deterministic latency throughout the network
- Support mixed bit depths and mixed sample rates over one network
- Scalable, flexible network topology supporting a large number of senders and receivers
- Supports 1Gbps networks
- Supports a single integrated network for audio, video, control, monitoring
- Uses inexpensive, off-the-shelf computer networking equipment

Setup and adjustment are enabled through a backlit LCD, membrane switches and an intuitive menu structure. Input gain is adjustable over a wide range in 1 dB steps to optimize modulation and limiting for maximum signal to noise ratio and minimum distortion.

Specifications

RF Power Output:

- Two carriers; two audio channels each
- Power adjustable on each carrier to 10, 25 or 50 mW

Antenna Output: 2 x BNC sockets

Operating Frequencies: 470.100 – 607.975 MHz

Frequency Selection Steps: 25 kHz

Frequency Stability: $\pm 0.002\%$

Modulation: 8 PSK

Emission Designator: 200KG7E

Spurious Radiation: Compliant with ETSI EN 300 422-1

Equivalent input Noise: -128 dBV

Audio Frequency Response: 20 Hz - 15 kHz

Audio Input: -10 dBV or +4 dBu settings w/ ± 5 dB trim

Audio Input Jack: 4 x combo XLR/TRS connectors

Input impedance: Line: 2k Ohm

Dante Connection: 2 x RJ45, 4 audio RX channels, internally routable

Ethernet Connection: RJ45

USB Connection: Micro USB on front panel for firmware updates

IRDA: IR transceiver for sync of receivers

Headphone jack 3.5 mm stereo jack

Power Requirements: 9-18 VDC

Power Consumption: 5 Watts

Dimensions: Height: 1.750 in. / 44.45 mm

Width: 8.375 in. / 212.7 mm

Depth: 7.750 in. / 196.8 mm.

Specifications subject to change without notice.



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08 August 2017