

M2T/E01

Digital IEM Transmitter

TECHNICAL DATA



The M2T/E01 Digital Half-Rack Transmitter with analog and digital Dante™ (optional) 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/E01 provides a truly unique IEM product for demanding, professional applications.

The M2T/E01 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.



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- **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 (optional)**
- **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/E01 Transmitter employs unique technology to provide ruler-flat frequency response and maximum channel separation. In addition, the digital audio eliminates a compandor and the associated artifacts. The result is crystal clear sound, rock solid stereo imaging, and extremely low distortion of <0.15%.

The M2T/E01 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.

**This data is for all 2.X
versions of Duet Firmware.**





The M2T/E01 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:	<ul style="list-style-type: none"> • 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 – 614.375 MHz
Frequency Selection Steps:	25 kHz
Frequency Stability:	± 0.002%
Modulation:	8 PSK
Emission Designator:	200KG7E
Spurious Radiation:	Compliant with ETSI EN 300 422-1 v2.1.2
Equivalent input Noise:	-128 dBV
Latency: (overall system)	
Digital Source:	1.0 ms plus Dante network (on Dante unit)
Analog Source:	<1.4 ms
Audio Frequency Response:	20Hz - 10.5 KHz, ± 1dB
Audio Input:	-10 dBV or +4 dBu settings w/ ±5 dB trim
Audio Input Jack:	4 x combo XLR/TRS connectors
Dante Connection:	2 x RJ45. Internally routable with Ultimo 4x4 module
Ethernet Connection:	RJ45
USB Connection:	Micro USB on front panel for firmware updates
IRDA:	IR transceiver for sync of receivers
Input impedance:	Line: 2k Ohm
Headphone jack	1/8 inch stereo jack
Power Requirements:	9-18V DC
Power Consumption:	5 Watts
Weight:	2.2 lbs (997.903 grams)
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.

