



# Lectrosonics Duet M2

**SIMON CLARK** finds wireless In-Ear Monitoring has grown up

Oh, why is it never simple? I thought I would begin with a brief history of wireless IEM but, depending on whether you hail from Europe or the States it was either invented by Chrys Lindop (Garwood Communications) or Jerry Harvey (Ultimate Ears/JH Audio). Far be it from me to enter that argument but I can tell you I forked out a fortune for a Garwood system in 1996 when wireless IEM became de rigueur on location drama shoots and, for me, nothing since has beaten it in terms of audio quality and transmission range. Until now.

Wireless audio has evolved in fits and starts. Compenders helped the inherently bad dynamic range of miniature FM systems, VHF was supplanted by UHF, Simplex receivers became Diversity, Crystal controlled single frequency units (Like my first Garwood IEM) gave way to wide band synthesised equipment and most recently, radio mics went fully digital. IEM, on the other hand has lagged behind its RF cousins — possibly because radio mics are produced in greater quantities. The Duet which is a giant leap forward in several ways.

The MT2 is a 1U half rack 12V unit containing two discrete twin channel transmitters, giving four independent channels with next to no crosstalk. Bolt two together in a studio or OB rack and you have eight mono audio channels over only four carrier frequencies. The bandwidth is a respectable 470-614Mhz on the European model. On the receiver Lectrosonics use filters just after the antenna, to narrow the operating frequency to one of six 24Mhz blocks depending on the transmission frequency selected. Even a digital system benefits from rejection of spurious RF early in the system.

On the rear panel sit a 12V DC input, BNC's



/ Gain control also acts as on/off switch

for both transmitter antennas, four XLR/Jack combo sockets for the line level analogue inputs and a pair of Audinate Dante connectors. An RJ45 Ethernet port or front panel micro-USB can be used to connect a PC running Lectrosonics' Wireless Designer software. The front panel is dominated by a display screen, in this case a very clear, bright, sharp one. Surrounding this are hardware control buttons. These are the only thing on the whole system to score under 100% for me. They are fiddly and have lousy physical feedback. Connecting to Wireless Designer thankfully does away with the need for them. There is also a physical control for headphone level, a power rocker and an IR port to match that on the receiver.

The MR2 receiver is built like the proverbial tank and shares the company's house style. It's a small point, but a battery door can be the



/ Latency is 1.4ms from an analogue source

undoing of a unit destined for this kind of use. I am a fan of this one; solid, rugged, easy to operate in the freezing cold and dark, it seals in the usual pair of AA's. On the top panel are the matching IR port, standard 3.5mm socket, RF indicator, rotary on/off volume control (very good idea for quick operation but, sadly cannot be 'locked out') and because it uses antenna diversity, two captive quarter wave whips. The display is small but as bright and colourful as that on the transmitter. Below this are four of those pesky little buttons... oh well, nothing's perfect!

As with all contemporary software-based hardware, the options provided in the easy to navigate menu system are very extensive and there is not enough space here to list them all but a few here. Incidentally, the last page on the transmitter screen shows three QR-codes linking to manuals, Lectrosonics' website and, my favourite, a YouTube channel.

After using the receiver to scan a block of RF, it is a simple task to choose a carrier frequency and program the transmitter via the IR link. Set up any HF boost or limiting to your taste on M2R before using the inbuilt mixer facility to blend, separate and choose the two audio channels. You can also use Lectrosonics' proprietary 'Flexlist' feature to store up to sixteen data sets containing transmission frequency, mixer and limiter settings. This would allow a user working in live performance to swap between mixes from other performers or FOH quickly, each transmission having an individual name on the Flexlist display. In my world of location drama, each receiver could store the production mix, private tech crew mix with talkback and even individual channel sends for boom swingers.

First impression of the system is it's loud, capable of driving any set of cans I tried to comfort level and beyond. The audio is pin sharp, and lacks that mushy companded quality we have come to accept from analogue transmission. Lectrosonics specify an end-to-end latency of 1.4ms from an analogue source. Feed the system with Dante and that drops to 1ms. In a walk test the system range matched my analogue radio mics and, at times exceeded it. This is, in my opinion, top class product. My thanks to Roger Patel of Everything Audio for the extended loan, I will miss this kit. 📌

## resolution/VERDICT

**PROS** Excellent uncompressed multi-channel audio. Flexibility. Build quality.

**CONS** Receiver volume control cannot be locked out. Physical buttons fiddly.

**EXTRAS** Wireless Designer software for Microsoft Windows or, using the newly-introduced USB Adapter software package, for Mac OS X El Capitan or later.

[www.lectrosonics.com](http://www.lectrosonics.com)