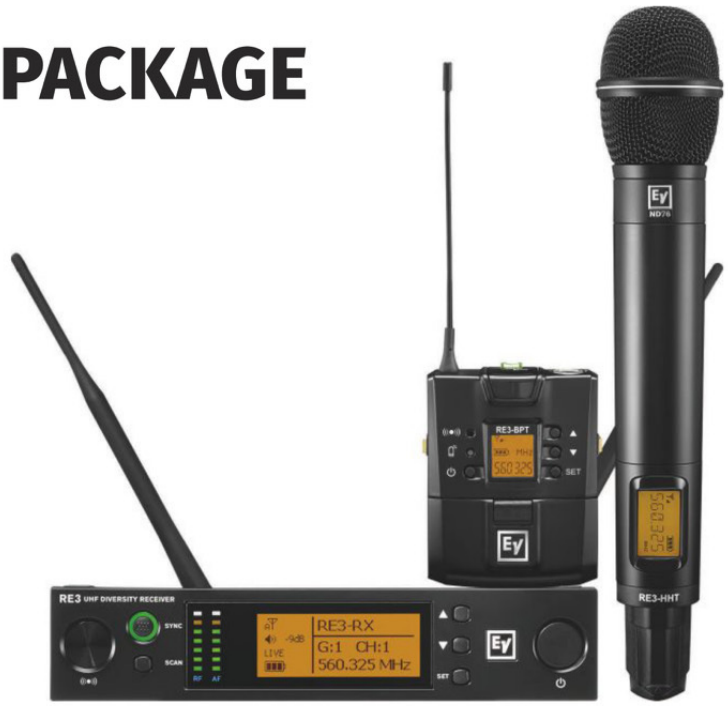
VERSATILE PACKAGE

Evaluating the new RE3 wireless microphone system from Electro-Voice.

by Craig Leerman



The new Electro-Voice RE3 wireless system, available with handheld or beltpack transmitters.

The new Electro-Voice RE3 is a UHF wireless system available in 10 pre-packaged sets that each contain a half-rack-space diversity receiver along with rack-mounting hardware and antennas, a handheld or beltpack transmitter, microphone, and universal power supply.

The RE3-HHT handheld transmitter is available with three of the company's ND elements, including the ND76 dynamic cardioid, ND86 dynamic supercardioid, and ND96 dynamic supercardioid. Two condenser elements are also available – the RE420 cardioid and RE520 supercardioid. The transmitters are outfitted with industry-standard threads and signal contact points, opening up the options for capsule interchangeability.

The three beltpack transmitter options include the model BPOL with OL3 omnidirectional lavalier, BPCL with the CL3 cardioid lavalier, and BPHW with the HW3 supercardioid headworn microphone. For instruments, the BPGC transmitter is offered (including 1/4-inch instrument cable), and there's an option to get the beltpack transmitter without a mic and cable.

The RE3 is available in three frequency bands here in North America, including 488 to 524 MHz (5L band), 560 to 596 MHz (5M band), and 653 to 663 MHz (6M band) that operates within the 600 MHz duplex gap the FCC has dedicated to pro audio wireless systems. There are 1,440 selectable frequencies in the 5L and 5H bands and 400 selectable frequencies in 6M band. Two additional band options are offered, including 8M for use in select areas of Europe and T for use in Thailand only.

RE3 transmitters feature selectable low- and high-output power settings at 10 or 50 milliwatts. The 6M band system offers selectable power of either 10 or 20 milliwatts. All systems offer diversity reception, automated frequency scanning and wireless syncing of the transmitter to the selected frequency, along with eight groups of pre-coordinated frequencies with up to 22 coordinated channels per group.

Available accessories include a two-slot drop-in battery charger for both handheld and beltpack transmitters, active and passive log periodic antenna systems and antenna splitters, an active antenna booster, rack-mount kits, and coax cables in a range of lengths. The receivers can be placed on a table as well as rack-mounted singly (hardware included) or side-by-side, two per rack space, with optional hardware.

For my evaluation, EV supplied two systems, one including the handheld transmitter with ND76 and RE520 elements and the other with a BPT bodypack transmitter and OL3 lavalier.

The ND76 dynamic mic head has a large Mylar diaphragm shock-mounted capsule that minimizes handling noise, and it's designed for all-around vocals. Stated frequency response is 30 Hz to 17 kHz (when used close) and maximum SPL is 135.5 dB. The RE520 self-biased condenser head comes with a stated frequency response of 40 Hz to 20 kHz and is specified to handle a whopping 139 dB. It sports a multi-stage pop filter to reduce breath and wind noises and has an internal shock mount that isolates the element from vibration and handling noises. Also included is a high-pass switch that can be set to flat or to roll-off frequencies below 150 Hz. The OL3 self-biased condenser lavalier, very small, has a stated frequency response of 60 Hz to 15 kHz, carries a max SPL rating of 130 dB, and

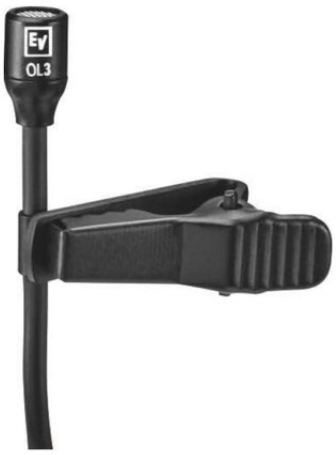
ships with a rugged metal clothing clip, a few windscreens and a zippered pouch.

The RX receiver is very easy to use. There's a large, easy-to-read LCD screen centered on the front panel. To the left are Sync and Scan buttons joined by an IR signal emitter to sync transmitters. To the right are menu navigation buttons and the power button. The rear surface offers dual BNC jacks for the supplied half-wave whip antennas, XLR balanced output jack, 1/4-inch unbalanced output jack and DC power input.

GETTING STARTED

As usual, the first stop in my review process was my test bench in the shop, where I make sure everything is working properly and familiarize myself with controls and operation before taking the gear out to gigs. I unboxed the systems and installed AA batteries (supplied) in the handheld, and then equipped it with the ND76 element. The transmitter body is machined metal, felt solid and well built, and rested comfortably in my hand.

I hooked up the receiver to my bench PA, attached the antennas and navigated through the menus. The menu is quite intuitive, and it took me less than 30 seconds to figure out the system operation, including scan. Pressing the scan button initiates a thorough scan of the area and provides a clear frequency, and it also lets the user know how many open (available) channels are in each group.



An OL3 omni lav is supplied with one of the beltpack choices.

From there it was just a simple matter of pointing the transmitters Sync port at the receiver's Sync emitter and pressing the Sync button. In a few seconds the transmitter was tuned to the receiver's frequency. Setting frequencies manually was also a very simple operation. On larger gigs, I set the frequencies that were picked by coordination software, but on smaller shows with only a few wireless systems, it's nice to have comprehensive scanning technology onboard.

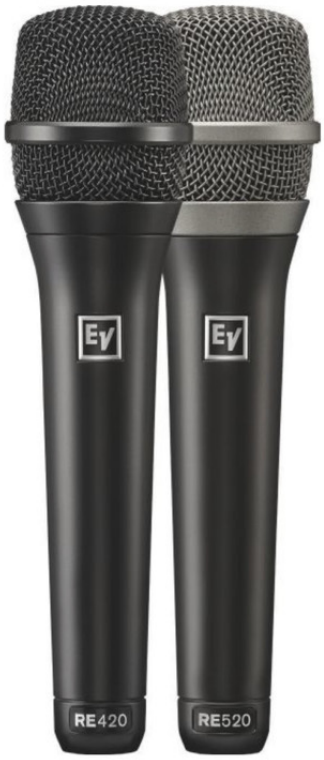
The ND76 element sounded good, just like the wired versions I have in my inventory.

I was eager to check out the RE520 element because I've never used one. It too has a pleasing sonic signature and supercardioid pattern is very controlled. A quick unscrew of the grille revealed a small switch that for switching between a flat frequency response or attenuating frequencies below 150 Hz.

The handheld includes a sliding cover that protects the menu navigation buttons and a mute/power button that's accessible if you know where to look – at the bottom of the barrel by the antenna – a location that helps avoid the button being accidentally pressed. My older eyes had no problem reading the unit's LCD screen.

With the receiver on my bench I began to walk around the shop with the transmitter, placing metal pallet shelving in between the two, and didn't experience a single dropout.

Next up was the system with the beltpack and OL3 lav. The beltpack is compact and also made of machined metal. The wire clip on the rear holds well to belts and clothing and can be easily replaced if damaged. A nicely sized LCD screen on the front is flanked by recessed control buttons, and there's a mute button at the top of the pack that glows green for audio and red for mute. A flexible antenna about 4 inches long is attached to the top of the pack on one side of the mute button and a TA4F socket sits on the other side of the mute. The battery compartment is secured with a nifty magnetic latch and lock cover.



Both the RE420 cardioid and RE520 supercardioid are condenser handheld options.

The lav is truly tiny – 0.2-inch diameter – and I can see many stage managers and clients liking it because it's not very visible live onstage or on camera. Plugged into the bench PA it performed very well. With everything checked out, it was time to deploy the systems in the field.

THE REAL WORLD

Our first stop was a show at a school featuring a variety of child performances presented by two teachers. I supplied one of the female teachers with the ND76-equipped handheld, finding that very little EQ was needed for her voice to sound natural. I opted for the cardioid pattern in this case because many non-professional presenters aren't used to a tighter pattern. A male faculty member also used the transmitter during the show and sounded natural as well. There wasn't a single dropout during the 1-hour performance, and the battery meter showed a full charge.

A few days later we ventured to work a government meeting with a moderator who I normally put on a headset mic. She agreed to switch to the OL3 lav this time out, so I clipped the mic to her shirt and we did a sound check before the meeting. The mic's pick-up of her voice proved solid, even when she turned her head from side to side. She commented on just how small the mic is and also liked the top-mounted, color-changing Mute button on the beltpack that allowed her to have private conversations during breaks between presenters.

A youth concert at a local church proved a good opportunity to utilize the handheld with the RE520 condenser element. Both male and female singers utilized it, and every voice sounded natural to my ears. I engaged the roll-off switch to attenuate everything below 150 Hz and did minor EQ adjustment on the console for each user, and that was it.

WRAPPING IT UP

Our final gig was a wedding held in an event space with an adjacent outdoor patio area. The receiver was placed at front of house, a distance about 50 feet from the patio door. During the proceedings, the DJ carried the transmitter around the room to get comments from the crowd while everyone waited for the bride and groom to arrive from the church.

My attention was diverted for a minute by a question from the event coordinator and to my surprise, the DJ gone out to the patio to talk to folks. The system took zero hits despite a path blocked by both a brick wall and glass door, and the transmitter was even running on the lower power setting. Following this multi-hour event, the receiver showed two bars on the battery meter, indicating we had from 20 to 40 percent of battery life left.

The RE3 wireless system is impressive. The handheld transmitter is rugged and so solid that it feels like it should cost much more. The beltpack also has a very durable feel – my only wish is that the controls were located on the inside of the pack – having them on the outside makes the unit look "busy," and if the tech forgets to lock the controls, a presenter could possibly change a setting or turn the pack off.

The optional drop-in charger for use of rechargeable batteries in both transmitters are a big plus. A small investment in this option can lead to a big savings in terms of battery expenses.

Anyone in the market for a quality, versatile wireless microphone system should put the RE3 at the top of the list of choices. And with 10 system packages to choose from, there's likely to be at least one for most applications. LSI

U.S. MAP for pre-packaged sets: $459 to $749

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