



Short Takes

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Kolin Industries 2Q-Lite Headset

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I was surprised to find that the founder of Kolin Industries is a local ham operator. Jay Kolinsky, NE2Q, had been making products for hams since the early 1960s. Jay was disappointed with the quality and production consistency of lightweight headsets available to hams and decided he could do better. He teamed with an old line Japanese manufacturer of commercial quality broadcast headsets to build products that meet stringent specifications. The result was the 2Q-Lite.

What Do You Get?

Upon opening the box it was apparent that this was a very different sort of headset. I immediately noticed that the headband was stainless steel, not plastic. The transducers were clearly precision components and I discovered that they had been individually tested for audio response (a frequency response plot is provided with each unit). The transducers are replaceable, if needed. That's a good thing because this headset is hardly a "use and toss" item — especially at this price point!

The 2Q-Lite is available with an electret or a dynamic microphone element, and I had an opportunity to test both mic versions at W1ZR. The mic boom is attached to a swivel that allows it to be used on either side of the head, although, per the usual stereo convention, the left side is the plan. In addition to the swivel, the mic boom itself is flexible and can be moved to any position — and stays there until you move it again. The headphones and mic are both terminated in plated 3.5 mm phone plugs, stereo for the headphones and mono for the mic.

How Do They Work?

This was the first time I had used a lightweight headset in my station and I must admit that I was impressed, both with how the headset sounded and how well others heard me. I found the 2Q-Lite very comfortable, even after extended periods of use.

The two microphone elements have somewhat different characteristics. The electret has a sensitivity of about -43 dB and a roll off of about 2 dB/decade, while the dynamic has a lower sensitivity (about -55 dB) and an increase in response with frequency of about 4 dB/decade, over the usual 300 to 3000 Hz voice range. The difference in frequency response is not very significant, especially for those who use transmit audio equalizers.

The lower sensitivity of the dynamic mic element should not be a problem for most radios. It could fully modulate the Yaesu FTDX1200 transceiver I happened to have under test at the same time. My usual Elecraft K3 rig has front and back mic jacks, with a possibility of an additional mic preamp stage via the front. The front jack worked fine with the MIC GAIN set at 14 (out of 60). When using the rear jack without the added preamp I could modulate fully, but only with the MIC GAIN all the way up and the mic quite close to my mouth.

Electret or Dynamic?

Both of the 2Q-Lite microphone elements are of high quality and work well — and are the same price. So how do you choose? Check your radio's user manual. Some transceivers have provisions for electret, others for dynamic. If you plan to use the headset with just one particular rig, its requirements will be the deciding factor.

However, if you are considering the headset for computer applications such as *Skype* or *EchoLink*, choose carefully. Most PC sound equipment that I've encountered is designed to work with electret mic elements with the bias applied directly to the audio leads, which is perfect for this electret headset. Be careful not to apply a bias voltage to a dy-



amic mic, though. You run the risk of damage to the microphone element or distorted audio at the very least.

As noted above, because electrets have a built-in preamp, they can provide high output from a small device. Dynamic mics, have an output proportional to their diaphragm surface area. While the two mics look similar with their blast shields on, removing them makes this

apparent. While the electret element housing has a diameter of only $\frac{7}{16}$ inch, the dynamic is more like $\frac{3}{8}$ inch.

Some radios, such as my Elecraft K3, have a bias voltage available either on the audio lead as well as on a separate pin on the eight pin front MIC connector. Others, including the Yaesu FTDX1200, only have the bias voltage on a separate pin. In the later case an adapter will be needed between the eight pin connector and the mic plug to route the voltage. The solution is as easy as adding a tiny circuit with one resistor and one capacitor as shown in the "Doctor is In" column in the November 2012 issue of *QST*. For those radios with an eight pin MIC connector, the Heil mic adapter for the correct radio (most radios use different connections on the "standard" eight pin round mic jack) can be used for either the dynamic mic element or for the electret, but only if the radio can provide bias on the audio lead.

Regardless of the mic element choice, the Kolin Industries 2Q-Lite provides outstanding performance. This is an expensive headset by any measure, but the quality seems to match the price.

Manufacturer: Kolin Industries, PO Box 300, Pound Ridge, NY 10576-0300; tel 914-764-5775; www.2qlite.com; ne2q@2qlite.com. Price: with either electret or dynamic mic element, \$389.95, including shipping.