How do 1? An occasional series

This week: Upgrading a VHF or VHF/UHF mobile rig (add a Heil [™] Headset)

Another article in the series Fun with VHF



WARNING! DO NOT USE A HEADSET while operating a motor vehicle! Not only is it dangerous, it is against the law in every state, including those states that do not class ham radio use as equivalent to using a cell phone while driving. DISTRACTED DRIVING KILLS!

Well, this is a been fun! You earned your Technician License, your came back to this website and eventually you acquired a VHF or VHF/UHF dual-band mobile transceiver. You may use this transceiver in your vehicle or you might use it in your radio shack as a ‰ase station+. (see https://www.radioclub-carc.com/wp-content/uploads/2018/09/VHF-mobile.pdf

Either way that equipment configuration provides a good way to check into local nets like the



Cumberland Amateur Radio Club Two-Meter net on 146.490 MHz FM Simplex at 1900 (7:00 p.m.) Eastern Time on Sundays.

Your radio most likely came from the factory with a stock hand-held microphone. Some radios come with two mics: a standard microphone and a DTMF microphone with a numbered keypad for manually transmitting DTMF tones. These microphones are usually very good, they last a long time, and are more than satisfactory.

A few HF radios come with a hand microphone, especially % ntry level+radios like the Icom 718 and Yaesu 450D (see <u>https://www.radioclub-carc.com/wp-</u> content/uploads/2020/05/How-do-I-ICOM-718.pdf).

But many HF radios do not come with a microphone. Why not? Many users prefer to add an after-market or OEM microphone, often a desk mic or a headset.

Picture 1 Yaesu DTMF microphone



Headsets are really nice, and if you begin using your VHF/UHF mobile rig for public service work or your local net, like the CARC two-meter net, you may find that holding a hand mic and trying to write or type can be complicated.

The solution? Add a headset! Even better, you can perhaps get double duty out of one you already own!

Bob Heil K9EID is the founder of Heil Sound. Bob began his career assembling sound system packages for the commercial music industry for tours and studios. Bob used his audio and electronics experience

to begin manufacturing microphones for amateur radio operators and became the number one brand. Bob then had clients wanting to use his amateur mics on stage, so the line was expanded and now many of the microphones you may see on stage at live performances or worn by TV commentators at sporting events are Heil products. Heil makes both desk mics and headsets for amateur radio operators. It is an upscale (premium) line, but today we are going to look specifically at the BM-

10, as it is perhaps best suited for VHF/UHF work.

Why the BM-10? It is light-weight, comfortable, extremely portable headset and it has a built in pushto-talk (PTT) switch. The BM-17 is nearly identical but does not have a PTT switch and requires a hand switch or a foot switch. That may be your preference, and in an athome shack this configuration may work well, but for field use I prefer the BM-10.



If you have an Icom radio you probably need a microphone that has been engineered specifically for the Icom requirements . e.g. BM-10iC or BM-17iC. These radios require an electret microphone element.

If your radio is another brand (Kenwood, Yaesu, Alinco, etc.) you want the dynamic microphone element version . e.g. BM-10DYN or BM-17DYN. It matters!

Check the Heil website and/or your dealer website to make sure you order the correct headset and cables!

Here at KB3PQT the shack uses mostly Yaesu radios. When I bought my first Heil headset, I wanted to get as much play value as I could out of it, so I ordered the Heil AD-1Y cable for Yaesu and any adapters needed to connect to the radios I owned at that point in time. The information at that time said I needed an AD-100 cable to connect to the Yaesu FT7800/7900/8800/8900 series of radios and the AD-1Y cable to connect to the headset. The AD-1 is heart of the Heil system. This allows the microphone to be used with any radio (see difference between the Icom brand and the other brands in the sidebar).

Instead of having a Kenwood-specific mic or a Yaesu-specific mic, you buy one microphone and the corresponding AD-1 cable for that radio. Some radios use a round mic connector, some a RJ-45 plug and some use an RJ-11 plug to connect the microphone, so most radios require a cable to get from the radio to the AD-1 and the AD-1 to connect the mic to that cable. Heil even color codes the cables so you can tell which is which! In general, RED cables are for Kenwood, YELLOW is for Yaesu, BLUE is for Icom.

Since I didnd use a two-meter base station rig in the shack the AD-100 languished in a parts box. Then I began wanting to use my headset with the Yaesu FT-8900 for the CARC two-meter net when I was net control. I dug out the AD-100 and plugged it in.

I plugged the headset into the AD-100 and had audio but the PTT did not work! I never figured out what was wrong, as that is what the Heil website recommends.

After a year or so of frustration and being told it was ‰ possible+, I stumbled on the Heil HSTA YM-6. It is sold as an adapter for the discontinued Traveler headset. The Traveler was sold as the Traveler/BM-10 for some time and now is just the BM-10. I believe the Traveler was sold as two versions -- with PTT and without -- and to end confusion and disappointment, the line was split into the BM-10 and BM-17.



Picture 2 top Heil AD-100 ; bottom Heil HSTA-YM6 adapter cables.

The Heil HSTA YM-6 works well. Plug the RJ-11 cable into the microphone jack on the radio, attach the AD1-Y to the 8 pin round microphone connector, then plug the 2 cables from the BM-10 into the AD-1 and plug the audio cable from the BM-10 into the headset/speaker jack on the radio.

(Note: The AUDIO cable on the HSTA YM-6 is not used with some rigs. This cable is intended for use with certain radio models that provide their headphone audio from an External Speaker jack on the radio. This arrangement is needed in cases where the radio microphone jack does not provide received audio on any of the pins in the microphone jack.)

So there you are - Happily using a headset on your VHF/UHF mobile rig.

Come back another time and we will talk about using a headset with your HT or dig deeper into headsets and desk microphones for HF rigs.

Catch + a on the air!