

FT-817 & FT-817ND ACCESSORY SUGGESTIONS

by Barry, W4WB

Adding accessories to your FT-817(ND) [means FT-817 or FT-817ND] is of course a matter of personal desires and needs. Being one of the first 80 hams in the USA to acquire the FT-817 in November 2000, and having almost six years experience in providing accessories to thousands of FT-817 owners, I have developed some suggestions for what accessories most hams find desirable, and the order to purchase them if that is an issue. Since there are several kinds of users, I have divided the suggestions into several groups, viz., **MUST HAVE ITEMS**, primarily a SSB Operator, primarily a CW Operator, CW, SSB, and PSK31 Operator, and primarily a PSK31 Operator.

1. MUST HAVE ITEMS

- a. **FT-817 Pack-It Reference Book** (\$13): This pocket size book contains the information in the User Manual, the FT817 Group FAQ, lots of other stuff, and an INDEX!



- b. **Kranker Knob** (\$20): This is a first-class replacement for the tuning knob on the FT-817(ND) and is easy to install. Once anyone tries this *spinner knob* on my FT-817, they have to have one for their own FT-817(ND)! Tuning is faster and easier.



- c. **OPP-817 2500 mAh Battery Pack** (\$54): World's most powerful and feature filled battery pack for the FT-817 & FT-817ND offers overcurrent and thermal protection, positive and negative leads have self-resetting fuses, self-resetting thermal fuse, fast charge jack, and automatic disconnect with the radio when fast charging. The pack can be slow charged using the radio's internal charger (about 16 hours) or fast charged in about 2-½ hours using the **W4RT One FAST Charger OFC-817** (\$79). The OPP-817 has almost twice the capacity of the Yaesu battery pack.



- d. **Adjustable Tilt Stand** (\$27): Most often when operating the FT-817(ND), it soon becomes apparent that it is difficult to see the display without bending over ... and that gets old quick! The FT-817(ND) stand is really a quite nice addition to the FT-817(ND). The stand simply snaps into the carrying strap brackets and the tilt angle is adjusted by moving the stand arms up or down.



- e. **Radio Mate** (\$149): The bhi Ltd. "Radio Mate" compact keypad for the Yaesu FT-817(ND), FT-857 and FT-897 enables the user to get the best out of their radio. It has been designed to make many of the common functions quick and easy to use. The keypad does this with a number of fast, effective shortcuts. The keypad is mounted on a sturdy aluminum plate giving it a quality robust feel, enabling it to be used in the field. This is a very nice accessory for those who are visually impaired.



2. You are Primarily a SSB Operator

- a. **One BIG Punch Speech Compressor (OBP)** (\$49): Easy to install in your MH-31 microphone (or have us do it for you). This device will improve your talk power by about 5 dB and you really will be heard far better, and you will make more contacts. The tone switch is used to switch the OBP on or off, which allows the microphone to be fine for FM too.



- b. **DSP Noise Reduction** (\$139): After using the bhi, Ltd. DSP Module in my FT-817, there is no way that I would ever want to use a FT-817 without one. The performance is remarkable and definitely superior to another noise cancellation device I have. It works great on both SSB and CW, and essentially eliminates carrier-like QRM and background noise. Having selection of four levels of noise cancellation is most useful. This unit requires some skill to install and many have done it successfully; however, W4RT can install it for you should you desire.



- c. **SSB Filter** (\$124): This excellent filter built by W4RT Electronics for the FT-817(ND) contains a factory-fresh 10-pole Collins Mechanical Filter essentially identical in performance to that Yaesu uses in the YF-122S optional 2.3-kHz SSB filter. Tests have demonstrated that a 2-dB improvement in talk power can be realized by using this filter rather than the stock MuRata ceramic filter. "Hearing" is also improved. Easy to install. When combined with the OBP Speech Compressor, talk power is increased by about 6 dB. Also, helps improve PSK31 performance on both transmit and receive. See "5. You are Primarily a PSK31 Operator" below for the reasons why.



3. You are Primarily a CW Operator

- a. **CW Filter** (\$99 & \$109): 500-Hz and 300-Hz CW filters are available using factory-fresh Collins Mechanical Filter. Essentially identical to the Yaesu YF-122C and YF-122CN. These filters allow the FT-817(ND) to perform nicely in the CW and PSK modes. This filter is properly terminated for best performance in your radio. Easy to install. I prefer the 500-Hz filter as a great compromise for working both CW and PSK.



- b. **DSP Noise Reduction** (\$139): After using the bhi, Ltd. DSP Module in my FT-817, there is no way that I would ever want to use a FT-817 without one. The performance is remarkable and definitely superior to another noise cancellation device I have. It works great on both SSB and CW, and essentially eliminates carrier-like QRM and background noise. Having selection of four levels of noise cancellation is most useful. This unit requires some skill to install and many have done it successfully; however, W4RT can install it for you should you desire.



- c. **MIC-to-CW Cable** (\$13): Depending upon how you have mounted the FT-817(ND), plugging in the cable on the back of the FT-817(ND) for the keyer can be difficult to reach in some cases. The MIC-to-CW cable allows you to take advantage of a special feature in the FT-817(ND) that lets the user connect the key through the MIC jack. Operation is simple.



4. You Operate CW, SSB, and PSK31

- a. **One BIG Punch Speech Compressor (OBP)** (\$49): Easy to install in your MH-31 microphone (or have us do it for you). This device will improve your talk power by about 5 dB and you really will be heard far better, and you will make more contacts. The tone switch is used to switch the OBP on or off, which allows the microphone to be fine for FM too.



- b. **One Board Filter – CW & SSB Filters** (\$239): The One-Board Filter (OBF) provides both factory-fresh Collins CW and SSB mechanical filters in your FT-817(ND)! The OBF utilizes Collins Mechanical Filters that are the same as used in the optional Yaesu filters for the FT-817(ND). No one else offers you the opportunity to have BOTH filters in your radio. Also, helps improve PSK31 performance on both transmit and receive. See “5. You are Primarily a PSK31 Operator” below for the reasons why. Also available with the 300-Hz CW filter.



- c. **DSP Noise Reduction** (\$139): After using the bhi, Ltd. DSP Module in my FT-817, there is no way that I would ever want to use a FT-817 without one. The performance is remarkable and definitely superior to another noise cancellation device I have. It works great on both SSB and CW, and essentially eliminates carrier-like QRM and background noise. Having selection of four levels of noise cancellation is most useful. This unit requires some skill to install and many have done it successfully; however, W4RT can install it for you should you desire.

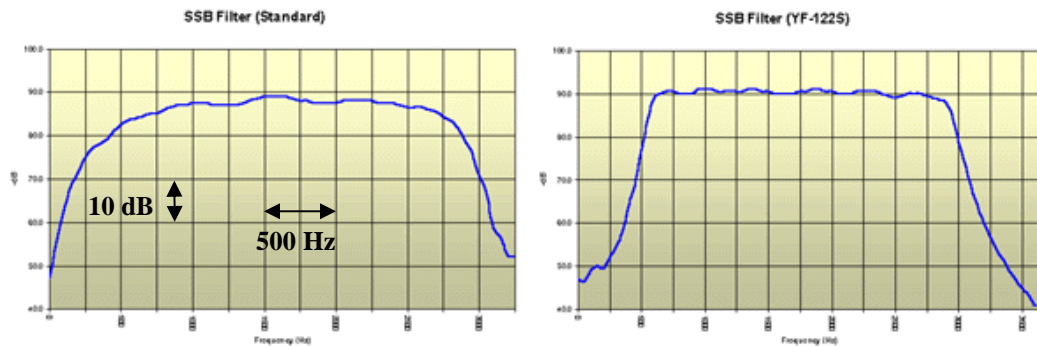


5. You are Primarily a PSK31 Operator

- a. **One Board Filter – CW & SSB Filters** (\$239): The One-Board Filter (OBF) provides both factory-fresh Collins CW and SSB mechanical filters in your FT-817(ND)! The OBF utilizes Collins Mechanical Filters that are the same as used in the optional Yaesu filters for the FT-817(ND). No one else offers you the opportunity to have BOTH filters in your radio. Also available with the 300-Hz CW filter.



So now why does the OBF help improve PSK31 performance on both transmit and receive? The following plots are for the stock MuRata ceramic filter (left plot) that comes in the FT-817(ND)



and the right plot is for the 10-pole Collins Mechanical filter used in the W4RT filter packages. As you know, the PSK31 bands are typically a couple of kHz or so wide, and basically fit in the SSB filter passband. Regardless of the mode (other than AM and FM), the FT-817(ND) uses the SSB filter when it transmit even if you have the CW filter activated. With this in mind, look at the MuRata filter (left) and notice that it has anything but a flat passband, i.e., the filter response decreases either side of the central peak response. In contrast, the W4RT filter package containing the Collins Mechanical filter is *very* flat across the 2.3 kHz passband. Since you typically don't tune across the PSK31 band with the radio's tuning knob, but instead use the PSK software to select the desired frequency to operate upon, the amount of power you transmit and receive is strongly determine by where you are within the MuRata filter's passband, while you get full performance over the passband with the Collins Mechanical filter. Let me put it another way ... when the filter response drops just 5 db your signals are now less than 1/3 of what they could be! Moral is to use a flat passband filter like the Collins Mechanical filter. So what value is the CW filter to you in PSK31? Basically, it is useful as a roofing filter when the band has strong signal and you are trying to work a weak station. The FT-817(ND) allows the use of the CW filter in this digital mode. With NAR turned ON, you simply use the IF Shift control to move the filter passband over the desired signal. This can help NOT getting the "blue screen" due to a strong station being nearby (has to be more than ± 250 Hz from the desired signal. The OBF really does make the radio a greater performer when used for PSK31 or any of the several other digital modes (PSK63, MSK, RTTY, etc.).