

## Double Bazooka Antenna

Chapter 9 of the 19th Edition of *The ARRL Antenna Book* gives a high-level review of the controversial Bazooka antenna. Here's a short history of the term "bazooka." Because it resembles the shoulder-held rocket launcher used by foot soldiers against tanks, the quarter-wave detuning sleeve shown in Figure 2A has been called a "bazooka balun." It is also known as a "sleeve balun."

The so-called "Double Bazooka" antenna was developed as a means to broadband the frequency response of a dipole. See Figure 2B. The need is to cover a wide amateur band, such as the 80-meter band from 3.5 to 4.0 MHz. This antenna is also known as a "coax dipole" and does achieve a moderate amount of broadbanding. As Frank Witt, AI1H, wrote in Chapter 9 of *The ARRL Antenna Book*: "The antenna offers a 2:1-SWR bandwidth frequency range that is only 1.14 times that of a simple dipole with the same feeder. And the bandwidth enhancement is partially due to the 'fat' antenna wires composed mostly of the coax shield. No improvement in antenna gain or pattern over a thin-wire dipole can be expected from this antenna."

With the moderate amount of broadbanding comes disadvantages of cost and weight of the coax, not to mention the loss in the cable. Chapter 9 of *The ARRL Antenna Book* provides a number of other alternatives, including the TLR (transmission-line resonator), developed by AI1H.

