

Project No. 7 — Multiple-Band Scanner Antenna

This antenna is for the really ambitious builder who wants a three-band scanner antenna. This antenna design combines the elements for three frequency bands into a multiple-band antenna. It takes advantage of the harmonic relationships between the business bands. It also uses the same construction techniques as for the previous vertical quarter-wavelength ground-plane antenna in *Figure 11-5*. The frequencies chosen are again 150 MHz, 450 MHz and 800 MHz. The construction details are shown in *Figure 11-7*. There is a center radiator with two stubs mounted to it. Note that the element lengths are the same as the antenna in Project No. 6, except there is added length needed to attach the stubs to the main center element.

The main center element is a quarter-wavelength tuned to 150 MHz. This gives a good response from 140 to 170 MHz for the VHF bands. The attached stubs are too small to be resonant at 150 MHz and do not affect the antenna.

► **Figure 11-7. Three-Band Scanner Antenna for 150, 450, and 800 MHz**

