

# Multi-Band Vertical

No Traps—No Radials

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For almost 7 years I had an unused Sprague "Koolohm" 390-ohm, 100-watt non-inductive resistor on the shelf ready for the T2FD antenna which I never got around to building. Some day—. About a year ago my Nordic friend Eric (W9SOA) nearly wore a slot through the roof of his garage as a result of the innumerable trips he made trying to tame his home-brew 15-meter beam consisting of phased folded dipoles. It occurred to him that he only had another 40 or so years to live—so he bought a commercial tri-band job.

The day had arrived! I "borrowed" one of the folded dipoles, dusted off the resistor and voila!—a multi-band T2FD vertical with no traps, no radials and almost no work, since W9SOA did a very creditable job in fabricating the folded dipole.

The illustration shows what resulted after the hairpins were pulled out as far as they would go. They were not quite long enough to make the over-all length 23.5 feet as specified by Countryman's formula. One would think that Eric could have been more considerate and anticipated this when he was building his beam.

We mounted the very rigid T2FD on an 18-foot 2x2 and lashed the unit to the side of my shack. I then spent about an hour with the SWR bridge finding out where to set the dials on the Matchbox. Rather surprisingly, the "Min-Eric" vertical (I thought this identification was a fine acknowledgment of co-operative effort, but friend Eric unappreciatively protested that it sounded exactly like my last name; confidentially, it does—exactly!) could be loaded not only on 10, 15 and 20 as intended, but on 40 and 80 as well. The SWR was so low that a 200 microamp meter could be zeroed on all phone and cw bands.

Now it remained to find out if all the RF was going into the resistor, as a dummy load, or if the thing really radiated. The BW 5100B was fired up and during a few morning hours before breakfasts last April, the following happened on cw:

10 meters—589 Hawaii; 579 Germany;  
599 Mexico; 589 Puerto Rico

15 meters—589 Florida and California;  
569 Australia; 579 Russia  
20 meters—589 Hawaii; 569 New Zealand;  
579 Haiti; 579 Australia; 459 Japan  
40 meters—569 Ohio and Missouri; 459 California  
80 meters—Bent the needle on Eric's new NC 300 (seven miles away). The sorehead!

Results with the vertical on 40 and 80 are not phenomenal—the radiation angle is too high and it's not even supposed to load on these bands. However, it takes all the power the BW can put out and does well on local contacts. On the other bands, it does better than anything that's been used here short of a beam. ■

