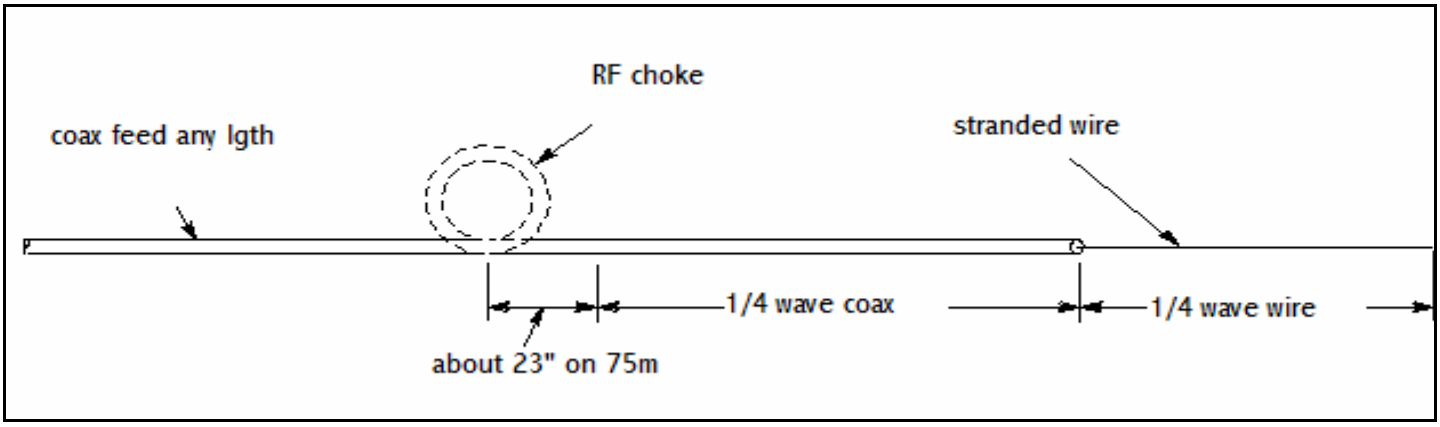
Quick Easy portable HF antenna

Do you want an HF antenna that is both easy to build and very portable? One that can be strung up quickly? While looking at an older copy of the ARRL Radio Handbook, I came across a "Resonant Feedline Dipole" that is made out of one piece of coax and a piece of stranded wire. I made one cut for 75m out of RG-58a/u and have tried it a couple different times with good success. The first time was camping (near Bryson City) where it was strung through the trees and bushes about 5 feet off the ground. The second time was at WCARS Field Day (Asheville) where I strung it as a "sloper" up over and down a tree. About 70% was sloping and the remainder vertical. During FD I made contacts both locally, across NC to the coast and regionally with good signal reports.

The antenna consists of a coax feedline, a choke wound into the feedline, a 1/4-wave section of coax, and finally a 1/4-wavelength section of stranded wire soldered to the center conductor ONLY of the coax. While the original article said to use a 1/4-wave length feedline, several "experts" have said any length will work. I used the 1/2 wavelength feedline because I made it before further discussions. I plan to cut off most the feedline and put in coax fittings so I can use whatever length coax feedline I need at the time. The diagram shows the form of the antenna and the tables the dimensions.

In simple terms this antenna works due to skin effect. RF travels out the 1/4 wavelength radiator section of coax on the inside of the shield. When it "hits" the end of the shield it simply comes back on the outside thus forming the "other half" of the dipole. The RF is stopped by the choke wound into the feedline.

Dick, K8SKX



Choke Dimensions

Freq	RG-213, RG-8	RG-58
3.5	22 ft, 8 turns	20 ft, 6-8 turns
7	22 ft, 10 turns	15 ft, 6 turns
10	12 ft, 10 turns	10 ft, 7 turns
14	10 ft, 4 turns	8 ft, 8 turns
21	8 ft, 6-8 turns	6 ft, 8 turns
28	6 ft, 6-8 turns	4 ft, 6-8 turns

Dipole Dimensions

Freq mHz	Overall length	Leg Length
28.4	16' 6"	8' 3"
21.1	22' 2"	11' 1"
18.1	25' 10"	12' 11"
14.1	33' 2"	16' 7"
10.1	46' 4"	23' 2"
7.1	65' 10"	32' 11"
3.6	130' 0"	65'

Note: based on 1997 ARRL Handbook page 20.17

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