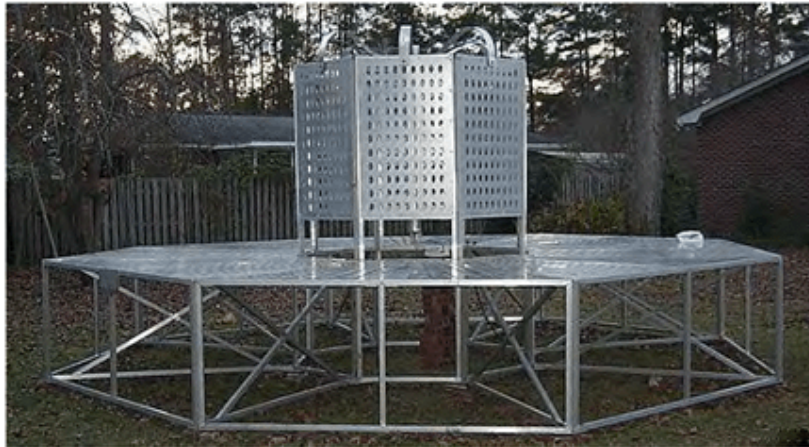


# WB4ENE MRA (Minimal Reactance Antenna)

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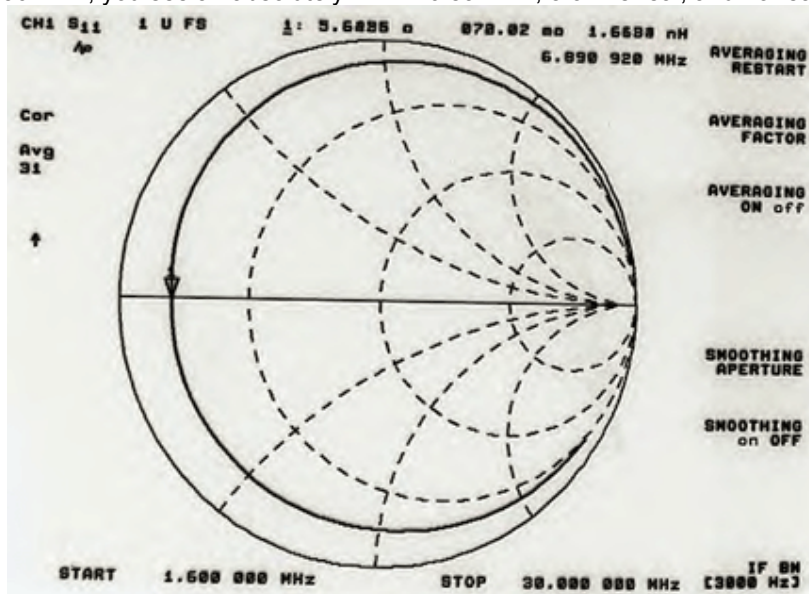
I call this antenna the MRA (Minimal Reactance Antenna). It works on 160 through 10 Meters. It is a top-loaded monopole. I don't think there has EVER been a top-loaded monopole as loaded as this MRA. The mast is a 6-inch cylinder, 6-feet long, that is surrounded by a 6-foot diameter octagonal group of panels of aluminum sheet. The metal conductivity is optimum, and every scrap of efficiency is gotten from how it is put together.

Matching will be with a remote-tuned LC network (on order from Bliss in Colorado). At the present, I match it with a standard MJF pi-network tuner in the shack. Yes, a high vswr exists, because the structure behaves like a 7-foot length of 180-ohm air dielectric coax cable (the 6-inch conductor in the 6-foot cylinder). The "trampoline" base is 18 feet in diameter (essentially a 12-foot radial torus, which is connected to the shield side of the feedline). Longer radials are not required.



When you look at the network analyzer plot of the antenna from 1.6 - 30 MHz, you see an absolutely

smooth semi-circle plot, with self-resonance at 6.89 MHz, 5 ohms real, and no reactance.



75 feet of coax goes from the antenna to the shack. The coax is laying on the ground. Moving the coax around does not affect the impedance plot on the network analyzer, nor does connecting wires to the antenna tuner ground. This implies the antenna is not being tuned by nearby conductive objects.

If you would like a sked to hear the antenna, contact me at [wb4ene@bellsouth.net](mailto:wb4ene@bellsouth.net) (delete spaces, add .) - Ken WB4ENE -

**73!**

Credit Line:

<http://www.smeter.net/wb4ene/mra-antenna.php>