The WINDOM Antenna

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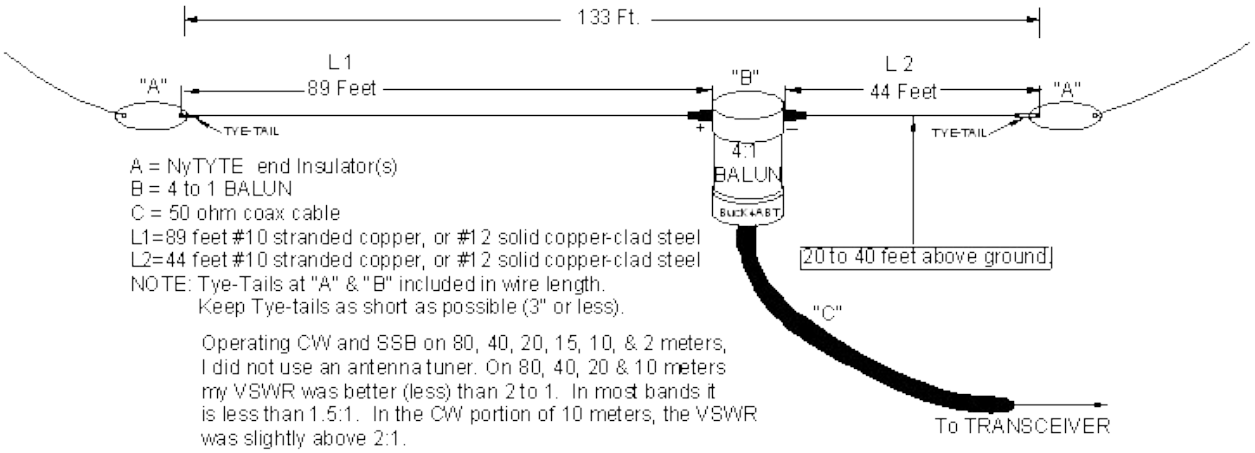
In September of 1949, I was tired of climbing poles and trees to move, remove, add, or change my single-band HF antenna's. In those younger years of my HAM radio career, I had used single band dipoles and doublets for almost every HF Amateur band. I had tried long-wires, doublets, dipoles, and Zepps, but again, operation was restricted to single band operation, maybe two bands at most.

I had heard of the "Windom" and read a few articles about the Windom, but most of my thoughts were just another dipole fed a bit off-center. Then one evening at a meeting of the GARC in the old "Sea Scouts" club house near the Coosa River in Gadsden, Alabama, I heard others discussing the Windom all-band HF antenna. It was when Jack mentioned using one (Windom), on most all HF bands "without an antenna tuner" that caught my attention.

That last phrase caught my undivided attention - "most all HF bands, without an antenna tuner".



To think that I could put up a Windom, and no longer have to climb the poles and trees to hang another (single band) HF antenna was great news to me. To be able to use it without an antenna tuner was icing-on-the-cake. For a kid without extra funds, an antenna tuner was a luxury that I could not afford. Even my transmitter was a single 807 rig I homebrewed on an old Atwater-Kent radio chassis, my grand-father had given me.

In those days, a BALUN was unheard of. My Elmer's described, a means of connecting the coax to the off-center fed antenna using a nine (9) turn coil of the coax feed-line at the feed point. This coil of feedline coax formed a "de-coupling" loop. The de-coupling loop provided a crude means of matching the feed coax to the antenna, and at the same time, it would reduce the "re-radiation" (RF currents) along the outside (shield) of the feeder coax.

Today we have toroid cores and BALUN devices that provide a more efficient means of coupling RF energy to the antenna (reducing the VSWR, "standing-waves"), while

performing better impedance matching. In the drawing shown above, I've drawn the exact dimensions of the Windom I built in 1949. The only differences in my Windom of 1949 and today are:

1. Material the insulators are made of

2. Substituted a 4 to 1 BALUN for the 9 turn, 8 inch diameter, decoupling loop

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Determine the length of each section using the same old formula that I used in 1949.

Long side = 468 divided by the frequency - then multiply by .64 (= Feet)

Short side = 468 divided by the frequency - then multiply by .36 (= Feet)

Lowest Band	**L1** 468/freq x .64	**L2** 468/freq x .36
7,100 khz	42.19 feet	23.73 feet
14,100 Khz	21.24 feet	11.95 feet
18,100 Khz	16.55 feet	9.31 feet

12% offset

Impedance decreases at resonance as the height above ground decreases