

A Simple TEFV Antenna for a backyard or park – June 25 Edition – Canada

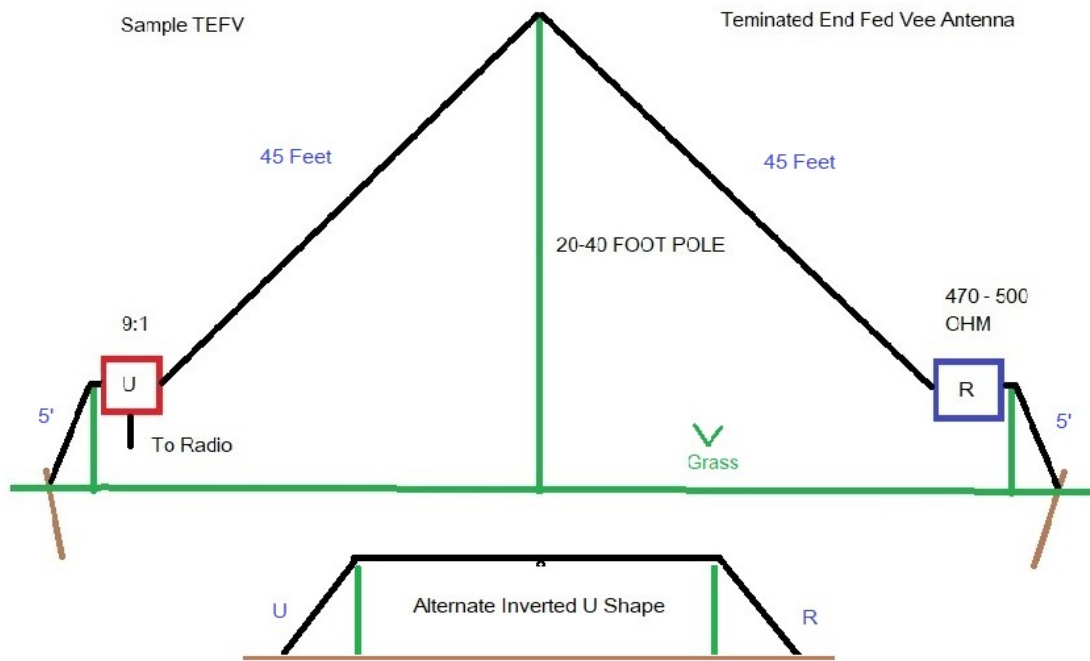
Materials –

100 feet of 14 or 16 gauge coated stranded copper wire, 6 wire end lugs, 2 wood stakes 4 feet long, 2 metal ground rods 3 to 4 feet long and 3/8 to 1/2 inch thick, two rust resistant metal clamps to fasten to top of ground rods, one center pole 20 to 33 feet (10m) tall made of fiberglass ideally with at least the top 4 feet being non-conductive, at least 25 feet of rope to help support pole, a couple sturdy tent pegs, one 9:1 unun rated at 100 watts SSB and suitable for 1.8 to 29 MHz, one 470 to 500 ohm resistor capable of at least 33 watts (suitable heat sink / ventilation) and ideally non-inductive and mounted in a weather resistant box, a few screws to fasten boxes to stakes, coaxial cable to go from unun to radio for example 50 feet of RG-8X, a pair of plastic antenna insulators, about 10 UV resistant plastic wire zip ties, maybe a cup of exterior wood stain to protect the wood stakes.

Tools –

Wire cutters, trimmer, crimper, soldering iron, screw driver, measuring tape, mallet to drive stakes, some bright colored electrical tape and ohm tester. Borrow an antenna analyzer if practical.

- 1 Look over the area to install the antenna – mark pole location etc.
- 2 Cut 90 feet of antenna wire. Save remainder for connection to ground stakes. Cut remaining 10 feet of wire into 2 five foot end pieces.
- 3 Mark center of wire with a piece of electrical tape.
- 4 Assemble center pole and fasten center of wire radiator to it. Fasten guy ropes to pole about 2/3 up. Use a couple wire ties so it does not slip. Improvise if needed.
- 5 Make a 6 inch hole in ground so base of pole does not slip.
- 6 With the help of an assistant, raise and fasten the pole vertical.
- 7 Install wire lugs as needed.
- 8 Spread out radiator wire as per drawing. Install two end wood stakes, one foot into dirt.
- 9 Attach Unun to wood stake nearest operating position and Resistor box to far wood stake.
- 10 Connect one end of radiator wire to antenna jack of the Unun box and the other end of the radiator wire to a terminal on the Resistor box.
- 11 Connect five foot wires to other end of each box and extend out to mark location of ground stakes.
- 12 Drive in ground stakes leaving 6 inches showing. Connect a small metal clamp to top of each stake, making sure there is an electrical connection.
- 13 Fasten far end of five foot wires to ground stakes.
- 14 Inspect the installation. Test antenna on low power.
- 15 Take a break.
- 16 Have fun and talk to someone.



Picture as requested

Chuck McAllen - June 25, 2024