

The "Tree Antenna"

RCC Aug & Oct 2006 – Dave/WB7ESV

Aug 2006 Article

What is unique about this antenna is that it is only a tree. The tree is used as a Gamma or Shunt fed vertical. To make this work, we drove a 3 ½" deck screw into the tree (you need to make contact with the sap vein), at about 15' above the ground (15' to 20' will work). We attached a wire to the screw, extended the wire 2' perpendicular to the tree, tied a rope to the wire at the 2' point, tied the other end of the rope to a tree limb and dropped the wire to the ground.



At the ground we drove a 3' ground rod 2 feet out from the base of the tree and attached a rope to the ground rod and to the wire to keep the wire tight.

At the feed-point end of the wire we connected an MFJ-901B tuner strapped for "WIRE" operation and connected the tuner ground to the ground rod.

Coax was connected and run to the operating position in a tent. To tune the antenna, an MFJ-269 SWR Analyzer was connected to the tuner input and the tuner adjusted for minimum SWR at the center of the operating band. The antenna is capable of operation on 10 - 80 meters. Many contacts were made including: Hawaii, Texas, Oklahoma, Montana, Wyoming, Utah, Idaho, California, VE6 and VE7.

The tree height should be no shorter than 30 feet and any wire antenna tuner will work.

Oct 2006 Article

Those who are building or have built it are: Jeff, KB6IBB, in The Dalles, OR; Tom, KD7ZOS, in Portland, OR; Dave, W0OXB, in Stillwater, MN; and Larry, KE7HGC, in Vancouver, WA.

Those who have it up and running have made contacts all over the U.S. and have stated that: .If I can hear them, I can talk to them.

If you are in an area that frowns on antennas and you have a tree that is at least 30. tall, give it a try. What you will need to build the Tree Antenna is: A tree that is at least 30' tall, a 3# nail or wood screw, (not galvanized), 20' - # 12 - # 16 AWG copper wire (can be solid or stranded, un-insulated or insulated), a 4' ground rod, wire clamp for the ground rod, 2-egg insulators and an antenna tuner that can be remotely adjusted, (ICOM AH-4, SGC SmartTuner, Home Brew with small motors to operate the variable capacitor(s) and inductor, etc). If you decide to 'Home Brew' a tuner, there are several in the ARRL Amateur Radio Handbook that will work very well.

Solder one end of the copper wire to the nail/screw. At about 15'- 18' up the side of the tree drive the nail/ screw into the tree so as to penetrate the sap vein of the tree. (This is important for RF conduction.) Draw the wire out 2' perpendicular from where you drove the nail/screw and support the wire with an egg insulator tied to a rope which is tied off to a limb of the tree and let the rest of the wire drop down to the ground.





Drive the ground rod into the ground 2' out from the base of the tree leaving about 3' of the rod above ground level. Attach a short piece of rope to a egg insulator and attach the other end of the insulator to the copper wire so that the insulator/wire is about 6' above the top of the ground rod. Leave enough wire to connect to the tuner.

Attach a short piece of rope to a egg insulator and attach the other end of the insulator to the copper wire so that the insulator/wire is about 6' above the top of the ground rod. Leave enough wire to connect to the tuner.

Attach the rope to the ground rod and install the antenna tuner to the end of the wire and place the tuner in a plastic container to protect it from the weather.

Connect a short ground wire from the ground side of the tuner to the ground rod with a clamp and make sure all connections are tight and sealed from weather.

If you are wondering where the "Tree Antenna" Comes from, it's from a WWI/WWII Army Signal Corps Emergency Communications Manual.