

ZEROFIVE-ANTENNAS

27 FOOT 10 THROUGH 40 METER

HOA MULTIBAND VERTICAL

INSTALLATION NOTES

Thank you for your purchase of this antenna. We hope that you'll look over the instructions and tips provided before you install the antenna. Taking advantage of this information will help to make your installation easier and much more reliable. The 27 foot HOA multiband vertical antenna was designed to be a usable single antenna solution for most hams. This antenna fills the niche for a multiband vertical that has HF band coverage without lossy traps and tricky adjustments when you install it. The performance varies from band to band when compared to a single band quarter wave vertical for each band it covers, it provides useable transmit coverage from 10 to 40 meters for most types of ham radio use. It also provides good receive coverage on all the bands from 10 to 80 meters.

Mounting and Fold over

The fold over mount included with your vertical is designed to mount to a 2 inch OD water pipe, which will have a 1 1/2 inch ID. A five foot length will do fine and you can buy it at Home Depot, Lowe's or any other good hardware store. When driving the pipe in the ground use a block of wood to protect the end of the pipe so it's not deformed. Put 3 1/2 feet in the ground and leave 18 inches above ground for mounting your vertical.

If you decide to mount the pipe in cement, the hole in the ground should be at least 10 inches in diameter and 3 feet deep. Most home improvement stores carry concrete footer forms that can be used to help center the pipe in the hole and make a neater installation. Use a 5 foot length of pipe. Six inches of the pipe will go in the soil in the bottom of the hole.

The fold over mount has 180 degree rotation, so it will be optimum for most installations. When folding the vertical down remove the top gold colored grade 8 bolt with 3/4 inch box wrenches and slowly walk the vertical down. This normally takes only one person. When raising this antenna, make slow movements in walking it up into place. **The fold over allows a full 180-degree range. This is perfect when mounting on uneven ground or on top of a hill. Make sure when you install the antenna that it stays well away from any power lines or other wiring when raised or lowered and other obstructions in the lowered position. The antenna should be on the ground, NOT propped up on a building or other obstructions.**

Assembly of the vertical

NOTE: Please use caution in tightening the clamps! Over tightening can break the clamps. DO NOT USE POWER TOOLS to tighten the clamps. Hand tools ONLY.

Your multiband vertical comes partially assembled when shipped from the factory. When putting together the vertical sections, Penetrox or OX-guard should be applied to each point where the tubing sections join. The sections should be installed in the next size up to the black mark. This makes a good corrosion free electrical connection that will last for years. DO NOT attempt to lengthen the antenna by reducing the overlap between the sections. Insufficient overall lap of the sections will weaken the antenna considerably.

Matching transformer wiring – Two wires are supplied with ring terminals on each end. The positive side of the matching transformer connects to the quarter inch bolt directly above the black insulator. Make sure this wire does not contact any other metal other than the two connection points. The negative side of the matching transformer connects to the quarter inch bolt just below the black insulator. These wires are preinstalled from the factory.

Even though this is a no radial vertical, radials are recommended for the best performance with any vertical. Your ground radial system is the most important part of vertical antenna performance. When installing ground-mounted radials use radial lengths between 10 and 27 feet, with 27 feet being the choice for best performance. If you must use shorter length radials, put more down. A good place to start is a minimum of 8 and 60 being the best. When choosing radial wire, #14 insulated stranded wire should be used. You can buy it at Home Depot or most local hardware stores. When installing radials on a ground-mounted vertical, they do not have to be cut to resonance. Only when using elevated radials isolated from ground do the radials need to be cut to length for the various bands.

Coax Choice

A good low loss coax should be used with this vertical. For runs up to 150 feet, RG-213 works great. Please remember this antenna system is NOT resonant on any of the amateur bands. As a result, the feed line is operating at a slightly higher than normal SWR most of the time. If you have to bury the coax cable, make sure the jacket material is rated for direct burial. Otherwise, you might be able to use an old garden hose to bury the coax. Simply run the coax cable inside the hose then bury the coax/hose combination. When using an auto tuner, use a coax run of at least 100 feet. When using a manual roller inductor tuner, use a 50 foot or longer run of coax.

Grounding of Antenna

An 8 or 10 foot ground rod should be installed at the base of this vertical. Use # 8 or larger wire from the ground rod to the fold over plate to ensure a good ground.

Maintenance

One critical piece of maintenance on this antenna is to make sure the weep hole (located a few inches above the black insulator at the base) remains open. This hole allows water (rain) or condensation that builds up on the inside surfaces of the antenna to drain away. **Do not block this hole with electrical tape!** In order to provide the strongest possible joint at the insulator, the insulator is machined to precisely fit into the first tube of the vertical. The fit is tight enough that it is essentially a water resistant joint. Water that builds up in the antenna can freeze in colder climates and damage the antenna so be sure to keep the weep hole clear.

It is also a good idea to examine all the bolts and nuts every three to six months to make sure nothing has worked loose. If your area is subject to frequent high winds, examination of the antenna on a more frequent basis is strongly recommended.

DO NOT ATTEMPT TO LOWER THE ANTENNA IF A THUNDERSTORM IS ALREADY UNDER WAY. If you can hear the thunder then the lightning is close enough to strike. Handling a 27 foot lightning rod when a storm is approaching is not a good idea.