

ZEROFIVE-ANTENNAS
30 AND 40 METER MONOBAND VERTICALS

Installation instructions

Thank you for your purchase of our 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.

MOUNTING AND FOLDOVER MOUNT

The foldover mount that is included with your vertical is designed to mount to a 2 inch OD water pipe, which will have a 1 1/2 inch inside diameter. A 5 foot length will do fine. You can buy this at Home Depot, Lowe's or almost any good hardware store. We recommend pipe with a heavy side wall for the best resistance to high winds if you experience them frequently in your area.

When driving the pipe in the ground use a block of wood to protect the end of the pipe so it is not deformed. Put 3 1/2 feet in the ground and leave 18 inches above to mount your vertical to. When cementing the pipe in the ground the hole should be at least 10 inches in diameter and 2 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, 18 inches of the pipe will go in the soil in the bottom of the hole.

In areas where the ground heaves from freezing, make sure your hole is deep enough and the mounting pipe is long enough to reach below the freezing level. Check with your local home improvement center. They may know what your local building regulations recommend in your area.

When folding the vertical down remove the top gold grade 8 bolt with 3/4 inch box wrenches and slowly walk the vertical down. **The foldover mount has 180 degree rotation, so it will be optimum for most installations.** This normally only takes one person but in cases where the antenna is being lowered in high winds you should have a second person to safely lower it.

When raising this antenna, make slow movements in walking it up into place. Fast or jerky movements could over-stress the tubing and cause one or more sections to fail. Take your time getting the antenna into place and you shouldn't have any problems raising it.

The foldover 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 so that it stays well away from any power lines or other wiring when raised or lowered and other obstructions in the lowered position. We recommend laying out the antenna on the ground then walking it up into place when you are finished assembling it. This will help to ensure that there's clearance for lowering it again when you need to do so.

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 please!** Replacement clamps are available at most hardware and automotive stores if you happen to damage one during installation. Please use stainless steel clamps if you need to replace a damaged clamp. They provide the longest life when exposed to outside weather conditions. Your antenna comes partially preassembled for shipping from the factory. When

putting together the vertical section, Penetrox or OX-guard should be applied to each point where the tubing sections join. Your vertical is shipped with a tubing pack in which the sections are staggered in two bundles. Start with the smallest size with the black plastic cap. This section will telescope into the next larger size in the other bundle. Repeat this process until the element is fully assembled. The sections should slide into the next size up to the black mark. DO NOT attempt to lengthen the antenna by reducing the overlap between the sections. You'll weaken the antenna considerably if you try it.

Guying

This vertical is freestanding so no guys are normally needed in most areas. If the antenna is subjected to constant high winds you should consider guying it however. At least one set of guys are appropriate in areas where the winds are consistently above 60 miles per hour or under conditions of repeated ice loading. It is recommended when very high winds and storms threaten the vertical be folded down for safety if no guys are used.

We have guy collars in different sizes to use with this vertical. Please call us for price and size. Our contact information is available on our web site at <http://www.zerofiveantennas.com>

Radials are required

Your ground radial system is the most important part of vertical antenna performance. When installing ground-mounted radials use radial lengths between 20 and 33 feet, with 33 foot being the choice for best performance. If you have to use shorter length radials, put more down. A good place to start is a minimum of 32 with 120 being sufficient. 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 the radials need to be cut to length for the band in use. A radial ring should be used and all connections soldered and coated with liquid electrical tape. These are just some guidelines. Just get as many radials down as you can, each as long as you can make it.

RADIAL RING

You can make your radial ring from 3/8 inch soft copper tubing 3 feet long. Bend it in a circle and connect the ends together with a compression coupler. The tubing and coupler can be bought at Home Depot or other well-stocked hardware stores for around \$12.00 (US). All the radials are then soldered to the ring like spokes on a bike wheel. A wire coming from the radial ring must be connected to the base plate of the vertical to ensure proper grounding. Solder all connections and seal them with liquid electrical tape.

COAX CHOICE

A good low loss coax should be used with these verticals. For runs up to 150 feet, LMR 400 works great. For longer runs with legal-limit operation use LMR 600 or 1/2 inch heliax. 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 hose.