

# ZEROFIVE-ANTENNAS MULTIBAND GROUNDPLANE VERTICAL ANTENNA

## INSTALLATION TIPS MANUAL

This manual is for models 6-30, 10-40 and 17-80 meter GP verticals

### Unpacking your vertical

Your vertical comes shipped in 1 carton with 4 packs inside for models 10-40 and 17-80. The 6-30 has 3 packs. There are 2 radial packs and a vertical element pack. The assembled base section with transformer is the 4th pack. Unwrap the bubble packing from the base section and put it aside. Unpack the vertical section and slide the tubing into the next smaller size up to the black marks for all the sizes. Next slide the whole element into the base section and tighten the clamp. Make sure you do not over tighten the clamps. Unpack one of the radial packs and start with the 3 smaller pieces of tubing and slide them into the next bigger 3 sizes up to the black marks. The next 3 pieces are the inner elements which have a clamp on each end. Slide the sections you just prepared into one end of the inner element up to the black mark. Now you have 3 complete radials. Assemble the next radial pack the same way and you will now have six.

### MOUNTING

Your ground plane will work best mounted in your yard on a pole cemented in the ground. It is best to keep it at 6 to 10 feet off the ground to reduce the risk of coming in contact with the ends of the radials. It will also be better for cutting the grass under the vertical. The ground plane accepts up to a 1 5/8 inch outside diameter mast up into the base tube. It is secured by tightening the two 5/16 bolts with a 1/2 inch box wrench. Only tighten the bolts enough to hold the vertical in place. DO NOT OVERTIGHTEN THESE BOLTS.

### Elevated mast mounting

You can mount your 10-40 ground plane higher for better performance if you follow these important tips. When mounting on a mast 20 to 30 feet high, you have to use metal guy wires attached 4 feet below the radials of the antenna. This serves to raise the effective ground under the antenna for best performance.

## **SUPPORT MAST, GROUND MOUNTING**

Use a 10 foot length of 1 1/2 to 1 5/8 inch outside diameter strong pipe. This should be cemented 4 feet in the ground and 6 feet sticking out. The hole should be 12 inches diameter and 48 inches deep. Back fill with 2 inches of gravel at the bottom and pack it down. You can use a 12 inch round Sona tube form 48 inch long sold at Home Depot. Put your pipe in the center of the hole and plumb it straight. You may want to tie it off so it does not shift while you pour the cement. You can use regular bags of cement to fill the hole up. Once it is dry you are ready to mount your new ground plane vertical. You will mount the base section with the vertical element first. You will need a step ladder to reach the top. Stand the vertical upright and slide it over the top of your mast and tighten the two 5/16 bolts. DO NOT OVERTIGHTEN THESE BOLTS. Next you will be installing the radials. Do one at a time by sliding the big end with the clamp over one of the solid mounting pegs. Tighten the clamp and repeat for the last 5 radials. After the radials are installed, check to see if the feed wire is touching any of the radials. It should be centered between 2 of them. You do not want this wire to touch any metal and arc over to ground.

## **SELECTING YOUR COAX**

Good quality coax is a must for any high power, high performance installation. 100 feet is the minimum required length to use for these verticals. Times Microwave makes the LMR400UF coax suitable for use with this vertical. It is low in loss and flexible.

## **SELECTING A TUNER**

You will need a wide range tuner for this vertical to run Legal limit power. Palstar has a great line of tuners that will work with this vertical. You can also run a remote tuner at the feed point, but will require a model capable of handling the maximum power you intend to run.