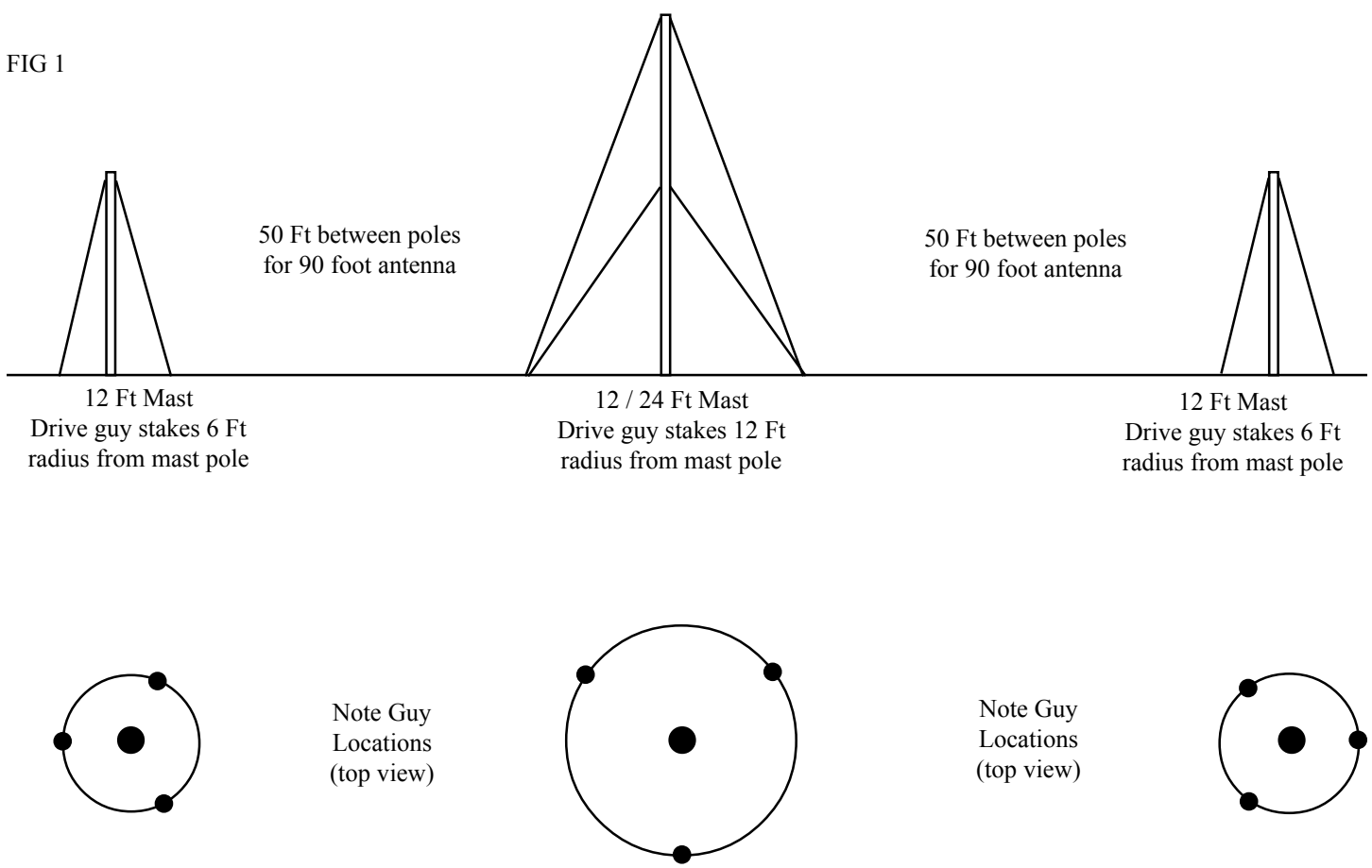


The MK-112 Mast Kits for base use are designed to support the BWD/BWDS/BWDI series of folded dipole antennas as well as the AC/ACS/ACI series of End-Fed Vee antennas, for permanent or semi-permanent situations from the ground. Mast poles come in 6 foot sections, and may be assembled up to a maximum of 24 feet of height with two guy rings.

The sketch below shows the layout of a three mast installation for a standard 90 foot folded dipole antenna. The middle mast could be only 12 foot high for NVIS use, or up to 24 feet for medium/long range work. Note that the sideways load strength comes from the guy lines. It is important that they be staked at a 45 degree angle (or greater) to the mast. Masts over 12 feet must use 2 guy rings. These should be set at middle and top height.

**WARNING: NEVER** attempt to raise the mast with a load attached, except as directed in these instructions. **NEVER** release guy lines with a load attached. **AVOID** rough handling while erecting the pole - it could cause excessive whipping, and failure of the fiberglass at the joint. Personnel should wear protective gear.



## Antenna Preparation

If you are using a folded dipole antenna (BWD/BWDS/BWDI), assemble the MK112-CM center mount to the antenna. Refer to the separate instruction sheet that comes with the mount. For permanent mounting, attach the clamps to the back of the mount and to the top mast pole. In this case, the halyard line and pulley on the top mast pole are not used. Attach the end lines to the antenna (Figure 3). Tie the line through the holes in the end spreader. The line to the top of the antenna should be tied approx 3 inches shorter than the bottom line. This will pull harder on the top antenna wire and prevent windmilling. Once the antenna is up on the masts, if it does not hang vertically, you may need to further shorten that top line.

The End-Fed antenna (AC/ACS/ACI) does not need any preparation, and is simply pulled up with the halyard line.

## Mast Setup

(1) Drive the ground pins and ground stakes into the ground according to the layout in figure 1. Your guy radius should be half the mast height. Make sure that the stakes are driven at a 45 degree angle to prevent the lines slipping off the stake heads.

(2) Assemble the mast sections together (Figure 4). The joiner pieces go into the mast pole ends. Line up the holes, and assemble the 1/4-20 bolts and locknuts. If you are assembling a 24 foot mast, the middle guy ring must be placed onto the mast end before joining the next piece (Figure 5). The mast pole with the halyard pulley goes on top.

(3) Place the guy ring on top of the mast, near the pulley (Figure 6). Clip the guy lines onto the guy ring(s). A 12 foot mast uses 16 foot guys (yellow marker). A 24 foot mast uses 20 foot guys (blue marker) for the lower ring, and 30 foot guys (red marker) for the upper ring. If needed, use the 50 Ft line (black marker) for the halyard on the 24 Ft mast, and the 25 Ft lines (white marker) for the halyards on the 12 Ft masts. Straighten out all lines along the mast, including halyard lines, in preparation for standing the mast up. Now is the time to get rid of any tangles. Attach the coaxial cable to a hard affixed folded dipole at this time.

(4) When all is ready, raise the mast. You must have people pulling on both the middle and top guy lines to keep the mast straight while raising. Do not allow the top of the mast to whip when it gets near vertical.. When it is stood up straight, lift it onto the center pin, and tie the guy lines over the stakes. Use the line tension to get the mast standing straight, but do not overtighten. Only about 5-10 pounds pull should do. Insert the bolt and nut through the bottom.

The guy lines must be at a 45 degree angle to the mast, or greater.

If you do not pull the mast up carefully, keeping it straight and supported with all of the guys, you will break it.

(5) For halyard mounted folded dipoles, tie the middle halyard line to the top of the center mount. Connect the coaxial line to the balun. Pull the center up and tie off the halyard line. There is an extra ground stake supplied for tying off this line on 24 foot masts.

(6) Clip the halyard lines on the end masts to the rings on the antenna ends. Pull the end lines just enough to snug the antenna. Do not try to make the antenna wires perfectly straight - you will use too much tension. A little droop is okay. Retension the mast guy lines at this time if necessary to keep the masts vertical.

(7) Raising the end-fed antenna (AC/ACS/ACI) is quite simple. After unrolling, tie the halyard line to the insulator that is preassembled onto the antenna wire. Hoist the antenna to the top with the lanyard.

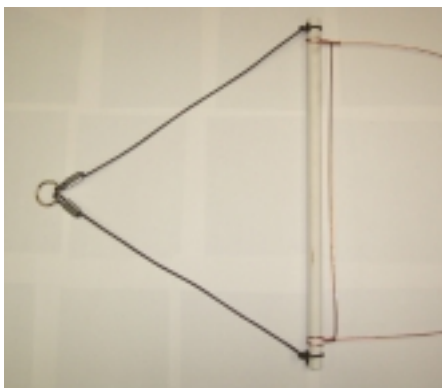


FIG 3



FIG 4

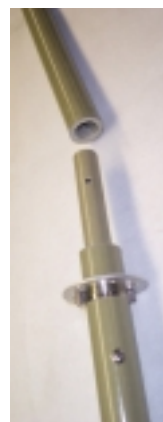


FIG 5



FIG 6