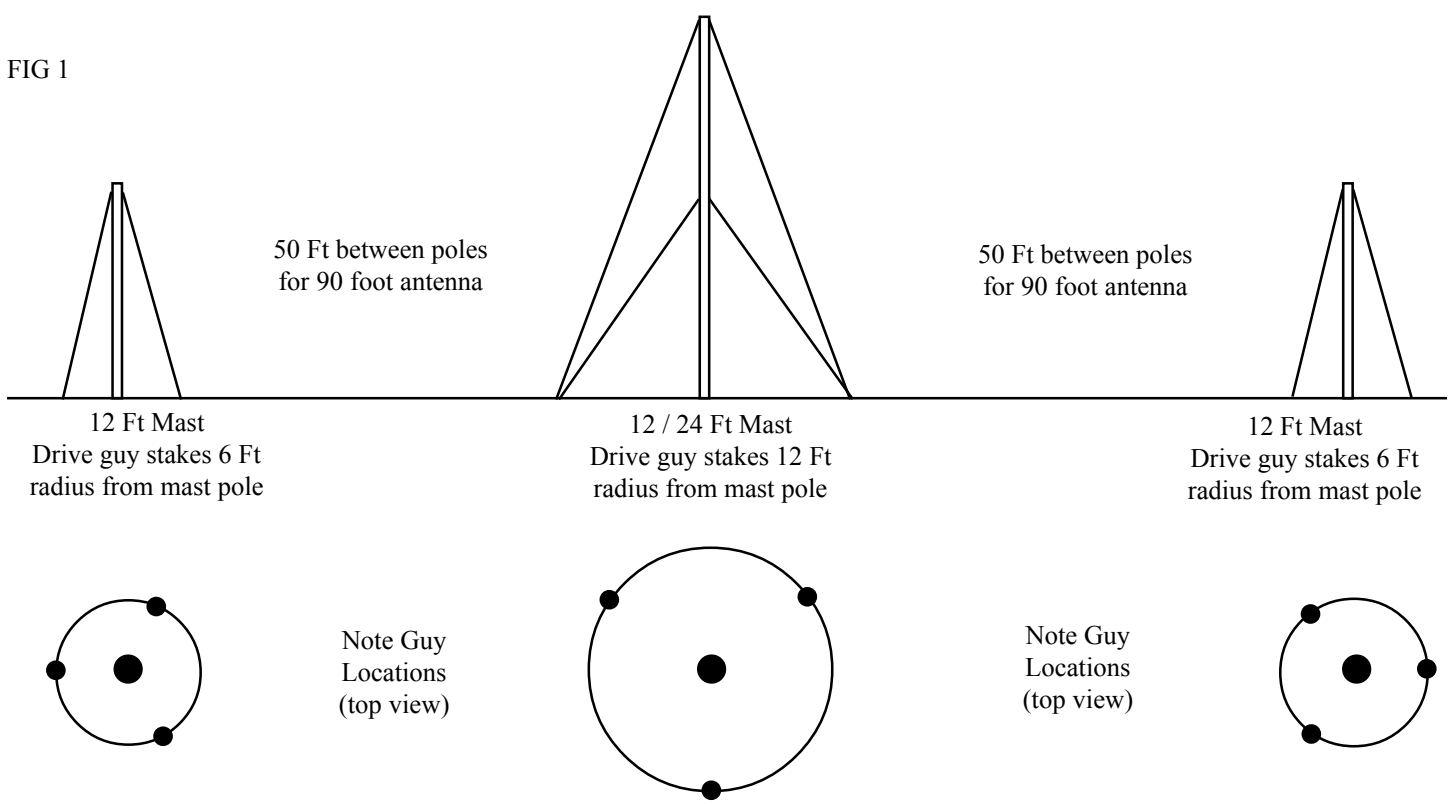


The MK-114 Mast Kits are designed to support the BWD/BWDS/BWDI series of folded dipole antennas as well as the AC/ACS/ACI series of End-Fed Vee antennas, for tactical situations. The kits include materials necessary for rapid field deployment, including camouflage carry bags. Mast poles come in 4 foot sections, and may be assembled up to a maximum of 24 feet of height with two guy rings.

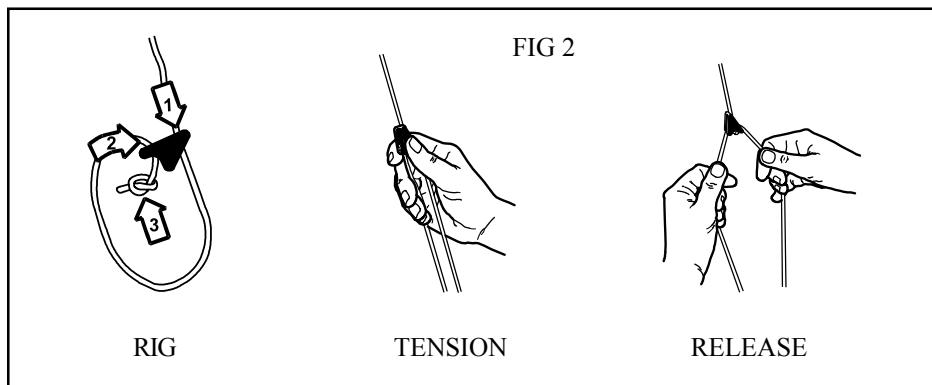
The sketch below shows the layout of a three mast installation for a standard 90 foot folded dipole antenna. The middle mast could be only 12 foot high for NVIS use, or up to 24 feet for medium/long range work. Note that the sideways load strength comes from the guy lines. It is important that they be 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 pole with a load attached. 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.



USING LINE TENSIONERS

See drawings at right. Rig according to diagram. If your rope is too long, simply tie another half hitch without disturbing the existing rope end. Tension by sliding the cleat up. Simply spread the lines apart to release.



Preparation Before Going Out

If you are using a folded dipole (BWD/BWDS/BWDI), assemble the MK114-CM center mount to the antenna. Refer to the separate instruction sheet that comes with the mount. This will hold the center of the antenna up by the halyard line on the center mast. Once assembled, this should always be left attached to the antenna.

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.

Out in the Field

(1) Drive the locator 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 push the pins all the way through (the pins are held to the mast sections by lanyards). 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 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. A 24 foot mast uses 20 foot guys for the lower ring, and 30 foot guys for the upper ring. The longer guys have a color marker on them at the snap hook end (guy ring end) for easy identification: 20 footers are marked blue, and 30 footers are marked red. The 16 foot guys for the short masts do not have any color marker. 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.

(4) Stand up the mast, and place it on the locator. Rotate the mast to line up the hole and insert the pin. After pinning, further rotate if necessary to align the direction of pull of the halyard line with the direction that the antenna will run. The 12 foot mast may be easily stood up by one man. The 24 foot mast should have at least two men, one at the bottom and one stabilizing the top by holding the guy lines to prevent whipping.

(5) Loop the guy lines over the stakes, and use the tensioners to snug the lines. Refer to Figure 2 for instructions on using the tensioners. Use the line tension to get the mast standing straight, but do not overtighten. Only about 5-10 pounds pull should do.

(6) Clip the halyard lines to the ring on the antenna ends. Tie the middle halyard line to the top of the center mount. Connect the coaxial line to the balun. Pull the center up first, and tie off the halyard line. There is an extra ground stake supplied for tying off this line on 24 foot masts. Now 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.

When changing the height of the center of an antenna, always loosen the end lines first, and then retension afterwards.

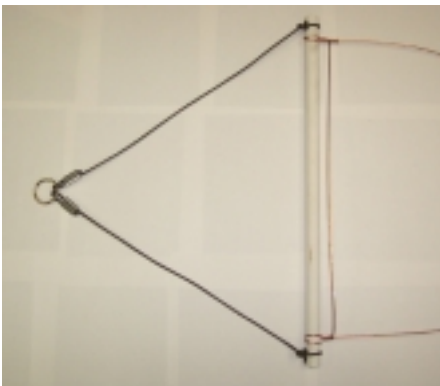


FIG 3



FIG4



FIG5



FIG6