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MK114-306T MAST KITS MAN PACK USE

The MK114-306T Mast Kits are designed to support the MP series of Man Pack antennas in tactical situations for NVIS use. These masts were specifically designed to break down to small enough size for man pack use. Masts come with all materials necessary for rapid field deployment. Mast poles come in 18 inch sections, and are assembled to either 6 feet of height for a flat top for NVIS, or a single 15 foot center mast for inverted vee longer range use.

Figure 1 shows the layout of a three mast installation for a standard 90 foot folded dipole antenna for NVIS. Figure 2 shows a single 15 foot center mast for inverted vee. 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.

WARNING: The man pack masts do not have locking pins between sections, to save space and weight, and due to low overall height. Caution should be exercised before guying so that a section does not fall off. NEVER release guy lines with a load attached. Personnel should wear protective gear.

FIG 1

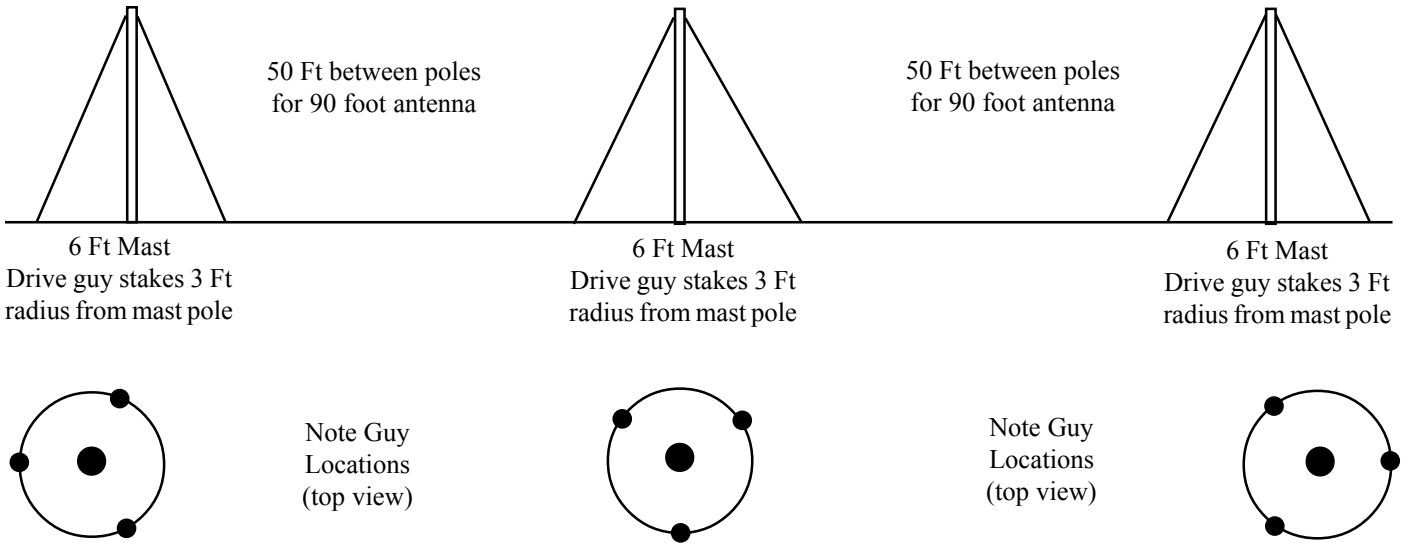


FIG 2

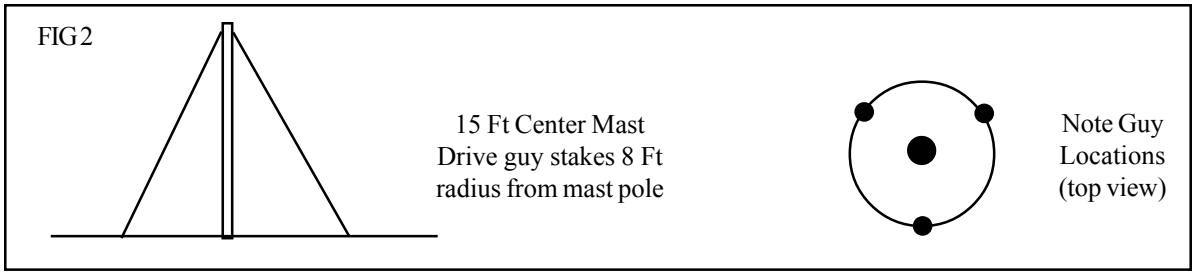
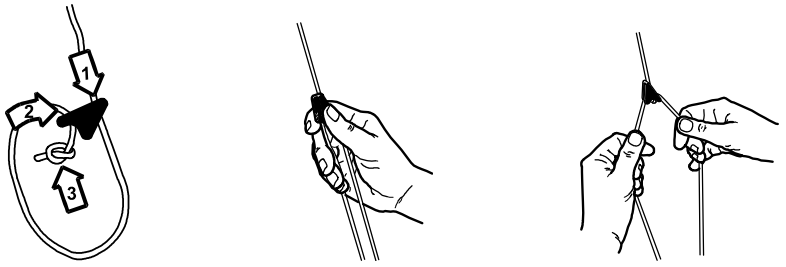


FIG 3

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.



RIG TENSION RELEASE

NVIS - Set up 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). Place the first pole piece on top of the locator pin that you drove into the ground. Use the white joiner pieces in between mast pole ends to stack them up. You will use 4 pole sections to make the 6 foot mast. The top sections for the ends have the pulleys and lanyards. The top for the middle mast has the snap clip to hold the antenna center.

(3) Place the guy ring on top of the mast (Figure 5). Clip the guy lines onto the guy ring(s). A 6 foot mast uses 10 foot guys.

(4) Loop the guy lines over the stakes, and use the tensioners to snug the lines. Refer to Figure 3 for instructions on using the tensioners. Use the line tension to get the mast standing straight, but do not overtighten. Only about 5 pounds pull should do.

(5) Hang the antenna center (body) from the center mast snap clip. Clip the halyard lines 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.

(6) Connect the coaxial line to the balun.

Inverted Vee - Set up in the Field

(1) Drive the locator pin and ground stakes into the ground according to the layout in figure 2. 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). Assemble all 9 'blank' mast sections with a top pole with pulley and halyard, laying on the ground. Use the white joiner pieces in between mast pole ends to stack them up.

(3) Place the guy ring on top of the mast (figure 5). Clip one set of three guy lines ontp the guy ring. Now clip another set of guy lines onto the bottom loop of these, daisy-chaining them for double length.

(4) Take one more guy line and daisy-chain it onto the end of the lanyard line which has the line tensioner on it (not the snap hook end).

(5) Now stand the entire assembly up, and set it on the locating pin that is in the ground. Be careful, as nothing is holding the sections together except friction. Keep the assembly straight up and down while handling.

(6) Loop the guy lines over the stakes, and use the tensioners to snug the lines. Refer to Figure 3 for instructions on using the tensioners. Use the line tension to get the mast standing straight, but do not overtighten. Only about 5 pounds pull should do.

(7) The antenna may now be clipped to the lanyard hook. Set it at a comfortable height, attach all wires to it, and then hoist it up. Attach the remaining guy lines to the antenna end rings, drive ground stakes at each end, and tension the antenna wires.

FIG 4

FIG 5