

Raising the Yagi Antenna Masts – Quick Reference

IMPORTANT NOTES:

- 1. Antenna cable is fragile:** The 50' antenna cables used with the Yagi antennas are very stiff and can be easily damaged. Be careful unrolling them – do not twist them, and instead unroll by rotating the cable in the opposite direction that it was rolled up in to take the “kink” out.
 - 2. Make tape easy to remove:** When taping up the antenna connector and taping the cable to the mast, please fold over the end of the tape to make it easier to remove when tearing down the mast.
 - 3. Mast overlap markings:** There are 2 markings at the bottom of each section – blue for the 2 foot overlap and black for the 1 foot overlap. While raising the mast, each section should be extended no higher than the 1 foot overlap marking on the mast. If you do not need the full 50' of the mast, leave a larger overlap for the top sections -- 2 feet or more.
- 1. Position and secure the aluminum tripod mast base:**
 - a. Open the base up all the way, fold the feet flat, and place in the appropriate location.
 - b. With the use of the Leveler, use shims so that the base is level. Note -- the Level can be found in the light blue storage bin (the one with the guy lines and stakes).
 - c. Secure each mast leg with one of the red 12” stakes (or 24” stake if using a lot of shims).
 - 2. Install the antenna on the mast:**
 - a. Place the small guy ring on the top section of the mast
 - b. Install antenna on mast – take note of whether the antenna should be pointed up or down hill and orient it appropriately (see step c).
 - c. Set the vertical angle of antenna as indicated for site. It will probably already be set (only Giants needs an angle other than the first position, and they have their own antennas).
 - d. Connect the 50' cable to the pigtail cable at the back of the antenna and carefully unroll the cable.
 - e. Waterproof the connector with electrical tape.
 - f. Tape the antenna cable to the mast just below the connector to act as a strain relief.
 - 3. Place the mast in the base** -- Leaving the mast collapsed, place it in the base and tighten the two base clamps.
 - 4. Add the Guy Lines** -- Tie two sets of guy lines to the appropriate guy rings, generally the 2nd or 3rd ring from the bottom and the top ring. Three guy lines are enough for most applications, although we use 4 for the Reading events. Use the black 3/16” Dacron rope for all guy rings except for the topmost guy ring. Use the white 1/8” Dacron rope for the top guy ring.
 - 5. Raise the Mast** -- standing on a step ladder next to the mast (an 8' step ladder is preferred over a 6' one), raise each section of the mast as follows:
 - a. Place the clamp in the up position, raise the section to the desired height, and place the clamp in the down position to secure it.
 - b. Tug on the section to make sure it cannot collapse. If it does move, use a screw driver to tighten the screw holding the clamp in place, noting that these are reverse thread screws. **DO NOT OVERTIGHTEN.**
 - c. Tape the antenna cable to the mast at the bottom of the section to keep the cable in place.
 - 6. Secure the guy lines:**
 - a. Install silver stakes at each “corner” at a 45 degree angle. If using 3 guy lines, there should be 120 degrees between each stake; if using 4, there should be 90 degrees between each stake
 - b. Secure the guy lines to the stakes so that the line is at a 90 degree angle to the stake. Use the guy tension blocks to tighten the lines.
 - 7. Aim the antenna:**
 - a. Loosen the clamps on the base, and rotate the until the horizontal angle of antenna is approximately as specified by the defined compass course for site
 - b. Tighten the clamps