

Assembling the Jungle Tower

All Fremont CERT district containers are now stocked with a j-pole antenna for 2-meter operation, a Jungle Tower kit for raising the antenna, 75 ft of coax cable, and a short adapter cable to connect the main coax to an HT. Instructions for assembling the jungle tower should be with the kit, but are repeated below for reference.

Safety Rules

* Manpower

Be sure to have enough people to raise the antenna tower. At least three people are required to assemble the tower with the tripod adapter. At least four people are needed if the tripod adapter is not used. Everyone should wear hard hats and safety glasses. Work gloves will also be helpful.

* Power Lines

Keep antennas away from power lines. The distance from the base of the tower to the nearest power line should be at least twice the height of the tower plus antenna. In addition to being a safety hazard, power lines can make your signals noisy.

* Generators

Generators create RF noise. Keep antennas as far away from generators as possible. Do not use the 12 VDC output of a generator to power your equipment. Use a 12 VDC power supply running off the 120 VAC output, or use the generator to charge a battery.

* Pedestrian Safety

Flag all guy wires and stakes to prevent people from walking into them.

* Aircraft

If the staging area has a helo-pad, be sure the antenna is set as far from the pad as possible. Attach a flag to the top of the antenna to alert aircraft.

SAFETY FIRST!

Wear Hard Hats and Safety Glasses

Assembling the Jungle Tower with the Tripod Adapter

A Jungle Tower assembled with the tripod adapter will quickly raise your antenna up 18 feet. The tower configuration consists of three legs with two mast sections each to form a tripod base. Raising vertical from the tripod are an additional two mast sections. This assembly will withstand 25 mph winds without guying. As a safety precaution, guying is recommended.



1. Slip the guy fasteners onto the metal guy stakes. Use the metal stakes in most types of earth. Use the wooden stakes in loose or sandy soil.
2. Set three guy stakes out 15 ft from the center, 120 degrees apart. Three assembled mast sections are 15 feet long; you can use this to measure the distance. There is a flat metal plate know as the Mast Base Plate in the Jungle Tower kit. It may have lines on it indicating 120 degrees.
3. Insert 1 mast section into the tripod adapter for each of the three legs.
4. Assemble 2 masts sections and insert the guy plate over the top section.
5. Attach three 32 ft (blue) guy lines to the guy plate.
6. Attach the antenna to the top mast. Hose clamps work well for this. Your tower kit may include a PVC adapter for attaching a J-pole to the antenna. Be sure to prevent the horizontal element of the j-pole from touching the tower.
7. Attach the coax cable to the antenna. Use tie-wraps or tape to fix the coax to the tower mast.
8. Adjust the tripod so the legs are pointing between the guy stakes.
9. Insert the antenna mast into the tripod adapter.
10. Raise the tripod and insert an additional mast section into each leg of the tripod.
11. Attach guy wires to the guy fasteners on the stakes and tighten the guy lines so the mast remains in a vertical position.

Assembling the Jungle Tower without the Tripod Adapter

Assembling all the mast sections into one, linear tower will allow you to raise your antenna to a height of about 40 feet. Guying is required in this configuration, and a bit of care is required to get the tower straight and vertical.

1. Drive the Mast Base Swivel Ground Stake into the ground through the Mast Base Plate.
2. Slip the guy fasteners onto the metal guy stakes. Use the metal stakes in most types of earth. Use the wooden stakes in loose or sandy soil.
3. Set three guy stakes out 25 ft from the center, 120 degrees apart. Five assembled mast sections are 25 feet long; you can use this to measure the distance. The Mast Base Plate may have lines on it indicating 120 degrees. The swivel must face the front guy.
4. Connect 3 mast sections and insert a guy plate over the third section. Insert the mast into the Mast Base Swivel Ground Stake. The mast must lay opposite the front guy. The mast assembly will be raised by tilting it up toward the front guy.
5. Assemble 2 more sections and insert a guy plate over the fifth section.
6. Assemble 3 more sections and insert a guy plate over the eighth section
7. Attach three 32 ft (blue) guy lines to the bottom guy plate.
8. Attach three 42 ft (gold) guy lines to the center guy plate.
9. Attach three 52 ft (black) guy lines to the top guy plate.
10. Attach the antenna to the top mast. Hose clamps work well for this. Your tower kit may include a PVC adapter for attaching a J-pole to the antenna. Be sure to prevent the horizontal element of the j-pole from touching the tower.
11. Attach the coax cable to the antenna. Use tie-wraps or tape to fix the coax to the tower mast.
12. Attach guy wires to the appropriate guy stakes



13. Raising the assembly will require a minimum of four people. *Wear hard-hats!*
14. Position one team member near the top of the antenna. Position a team member at each of the three guy stakes. Make sure the guy lines are not tangled.
15. The team member who is at the top of the assembly will start raising the mast by slowly walking toward the base, holding the mast above his or her head.
16. As the mast is going up, the team members at each side guy stake will keep tension on their top guy line.
17. The team member at the front stake will assist in raising the mast by pulling on the top guy.
18. When the mast is vertical, a team member not manning the guy lines will advise members how much tension to have in their respective guy lines to hold the tower straight and vertical.