E-Z WAY TOWERS, INC

TAMPA, FLA.

INSTALLATION INSTRUCTIONS

Model GPRBS 40-45

READ INSTRUCTIONS THOROUGHLY BEFORE YOU START ASSEMBLING.

This tower will support a 3 element 20 M Full beam at 41' in winds up to 60 MPH without guys, or a 4 Element tribander in winds up to 60 MPH. Beam should bemounted directly above the top of the tower. Heavy icing will create 3 to 6 times the normal load so proper precautions should be taken.

1. PRE-ERECTION INSPECTION. Place tower in horizontal position, using appropriate rests. Check tower manually, sliding inner section in and out several times. Relieve all binds. Points to check for binding are:
   a. Horizontal and diagonal braces.
   b. Skid supports bent in.
   c. Pulley hanger at top of outer section.
2. ASSEMBLY.-
   a. Assemble crank-up winch on plate attached to side of tower as per drawing TW . NOTE: Crank handle should be toward ladder side for "BA" & "GIN" types, away from ladder side for "GP" & "FO" type installations.
   b. Assemble safety on the 2 lugs near the top of the outer section - see drawing SR.
   c. Slide inner section to fully extended position leaving 4' of overlap.
   d. Pass one end of long cable through pulley at top of outside section dress down between sections and enter inner section at a point above first diagonal above the eye.
   e. Secure end of cable to eye welded to cross-straps near base of inner section, using 2 cable clamps provided, making sure that the nuts are on the inside of the tower.
   f. Slide inner section into fully telescoped position.
   g. Uncoil balance of cable and dress down the outside of tower to the crank up winch, passing end through the hole in winch drum and tie a retaining knot in end of cable. Crank up slack.
   h. Attach the trip wire to the safety, dress wire down outside of tower and attach in hole of winch pawl so trip wire & pawl can be released by one hand.
3. LOCATING THE GROUND POST. The following clearances are required when operating the tower. NOTE: Hinge is on side of ground post opposite the long end of tower. See drawing TOT 1
   a. 20' on long side of hinge point.
   b. 6'6" on short side of hinge point. (Hinge side of post)
   c. 2' along horizontal length.
   d. Adequate clearance at end for beam elements to swing the arc. 5' by width of beam.

4. SETTING GROUND POST:
   a. Dig a hole 14" in diameter and 4'10" deep.
   b. Set ground post into hole. NOTE: Hinge plate is on the post toward the short end of the tower.
   c. With ground post properly oriented with respect to direction to tilt and clearances required; fill hole with soil, tamping often and maintaining plumb. Adding water makes sand or clay pack better.
   A PLUMB TOWER WILL RESULT ONLY WITH A PLUMB GROUND POST.
   d. Bolt tilt winch assembly to the ground post, selecting a convenient height. Orient tilt winch assembly so that center of winch drum is directly over the pulley located at the base of the ground post. The axis of the tilt winch drum will be approximately 45° away from that of the ground post hinge pin. Be sure crank handle is away from hinge side. (See drawing GPW).
   e. Bolt tower locking device on the ground post, 2" below the pulley, on the hinge side and parallel to the hinge. Cable eye is on side opposite pulley. (See drawing LI).
5. ERECTION OF TOWER. With tower telescoped to minimum length;
   a. Leave top end rest on ground and raise lower end so that it rests on to pf ground post in a position to permit bolting the ground post hinge plate to the mounting plate on the ladder side. Bolt securely.
   b. Using a step ladder as a rest for the top end of the tower, place tower in horizontal position.
   c. Install tilt pulley in base of tower as follows: (See drawing TP).
      (1) Remove pulley retainer pin and pulley from hanger.
      (2) Place pulley hanger around the horizontal rod at base of tower.
      (3) Replace pulley , bushing and retaining pin.
   d. The expanded head is shipped as a separate piece, bolt to the tower using 1 nut above coupling and 1 nut below. This permits you to align the head without difficulty.
   e. Run one end of the short cable through the hole in the tilt winch drum and tie a knot.
   f. Pass free end of cable through pulley at base of ground post (directly under tilt winch) and through the tilt pulley at base of tower.
   g. Loop free end of short cable to back eye welded to lock in and secure with 2 cable clamps. Crank up slack.
   h. Operate tilt winch to crank tower to a vertical position. (Still telescoped)
   i. With tower vertical, insert lock pin through the tower. Adjust locking device so that lock pin is about 1" above the 2 horizontal pipes at bottom of tower, tighten nuts on locking device. These 2 pipes on the bottom of the tower are part of the hinge for "BA" types'DO NOT ATTEMPT TO INSERT THE LOCK IN PIN THROUGH THESE PIPES" or tower will NOT be PLUMB. (See Drawing DR LI-)
   j. Operate the crank-up winch to extend the tower to its full height. Lower tower to rest on the safety.
6. LOWERING THE TOWER. -Raise tower sufficiently to permit the safety to be released. (approximately 2").
   a. Keeping the tension on the trip wire, and with the ratchet pawl disengaged lower the top section to the fully telescoped position. Then crank section back up one step. This is to give clearance for tilt-over cable. Raise and lower several times to get the feel of it.
   b. Hold winch and remove locking pin from the locking device.
   c. Lower tower to horizontal position by operating tilt winch. You are now

7. INSTALLATION OF MAST AND ROTOR. - This tower has a mounting plate drilled for a CDR HAM rotor. You will need a longer rotor shaft when you use a CDR TV type rotor - AR22, TR2 or TR4. Adaptors are available for other make rotors. (See Drawing RH)
   a. To install any CDR rotor remove bottom casting and bolt rotor to mounting plate. Use a few washers to shim the rotor off the plate.
   b. Bolt thrust bearing and housing in place as shown.
   c. Mast is shipped assembled, remove pin and insert long pipe 1.9 OD through top bushing.
   d. Replace collar, short pipe 1.32 OD and pin.
   e. Insert mast through bearing and try for fit. It may be necessary to cut the short pipe so that it will seat properly in the rotor. Collar of mast should rest on lower bearing.
   f. Tighten rotor securely to mast using the 2 - 3/16 x 1" x 3" shims on each side between the Vee of the rotor and the 1.32 OD Mast.
8. INSTALLATION OF P.P.M. -
   a. There are 3 lugs welded to boxing in center of rotor head, bolt P.P.M. to these lugs.
   b. The thrust bearing is not used with a P.P.M.
   c. The mast is shipped assembled; remove pin, collar and short pipe.
   d. Insert long mast through top bushing and couple to P.P.M., the short pipe is not used.
   e. Attach beam to mast.
   d. You can run the coaxial and rotor lead down through the center of the tower, coming out between the 2 bottom ladder rungs. When tower is lowered sufficiently, slack will result to permit tilting.