

INSTRUCTIONS

FOR
INSTALLATION AND OPERATION

MODEL 2 PRBS-40

P.O. Box 17196

Telephone (813) 932-5321

Tampa, Florida 33612

E-Z WAY PRODUCTS, INC.

RBS-40
8/66

PACKING LIST

ORDER NO. 3479

PACKED BY: *JS*

DATE: 22 May 67

TOWER PACKAGE CONTENTS

1 - Model RBS-40 tower (2 nested sections) with following components pre-installed:

- 1 - 5/32" x 36' Elevating Cable with thimble and clips
- 1 - SH-2,5 Pulley with 3/8" bushing, bolt and nut
- 1 - 12 SR Safety Rest with Pin, spring, wire and cotter pin

1 - HM-1 Mast Assembly (wired inside tower) including:

- 1 - 7' x 1.69" OD Mast
- 1 - Rotor Shaft
- 1 - Collar, 1 - Pin and 1 - Cotter pin

ROTOR HEAD PACKAGE CONTENTS

Parts for Rotor Head

1 - 9RH Rotor Head Assembly with following components pre-installed:

- 1 - RB-1 Radial Bushing
- 1 - TBR Thrust Bearing
- 1 - TBC Thrust Bearing Cover
- 6 - 5/8" Galvanized coupling nuts
- 4 - 1/4" x 3/4" Bearing cover bolts and nuts

4 - RS Rotor Shims, 3/16" x 1" x 5"

6 - Rotor Base spacer washers, 3/8" galvanized

Parts for Tower

- 1 - DL-6826 Elevating Winch
- 2 - 3/8" x 1" Galvanized mounting bolts and nuts
- 1 - 3/16" x 16' Polyethylene Safety Rest release cord

- 1 - Set RBS-40 Installation Instructions

NOTE: Rotor Head Package will also contain parts for Mounting Kit if shipped with this order. Parts list for mounting kit is on following page.

E - Z WAY PRODUCTS, INC.

GPS-40
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PACKING LIST

ORDER NO.

PACKED BY

DATE

PARTS FOR GROUND POST

- ✓ 1 - DL-6826 Tilt-Over Winch
- ✓ 2 - 3/8" x 3/4" Mounting Bolts
- ✓ 1 - 5/32" x 23" Tilt-Over Cable
- ✓ 2 - 3/16" Cable Clips
- ✓ 1 - 3/16" Thimble
- ✓ 1 - 12 LIB Lock-In Bracket
- ✓ 1 - GPC4 Cast Aluminum Lock-In Saddle
- ✓ 1 - UB4 U-Bolt with nuts
- ✓ 1 - Lock-In Pin with Cotter pin
- ✓ 1 - TOP-2.5 Tilt-Over Pulley Assembly (Frame, Sheave, Bushing, Bolt and Nut)
- ✓ 2 - 5/8" x 1 1/4" Hinge Mounting Bolts and Nuts

GROUND POST ASSEMBLY

1 - GP 4-6-5 Ground Post with following components pre-installed:

- 1 - SH-2.5 Pulley Assembly (Frame, Sheave, Bushing, Bolt and Nut)
- 1 - Hinge Plate
- 1 - Hinge Pin
- 1 - Roll Pin

The installation of any equipment is fully as important to satisfactory performance as its design and construction. Please read these instructions through several times before starting installation until the entire procedure is clearly understood.

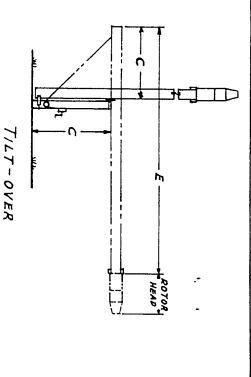
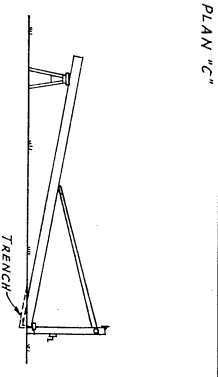
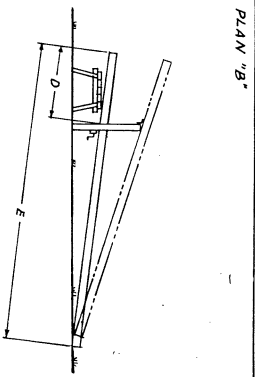
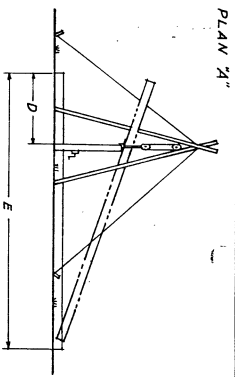
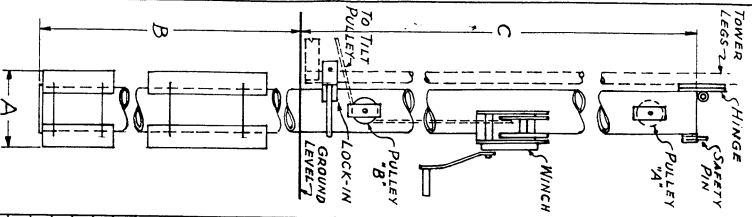
SECTION 1

INSTALLATION OF GROUND POST

NOTE: Please refer to Drawing No. 235 on reverse side of this sheet. The chart on this drawing indicates depth and diameter of the hole required for the ground post used with your model tower. Also indicated are clearance required for tilt-over to enable you to select a site for your tower which will allow adequate working space around your tower when it is in the horizontal position. In addition, clearance should also be provided for the mast and antenna system.

The ground post is shipped with Pulley "B", and the tilt-over hinge pre-installed at factory. After the post has been set in place and plumbed, the remaining hardware, (packaged with the rotor head of your tower) may be installed. Check your packing list to be sure all parts have been received.

- (a) When a suitable site for the tower has been selected, and the direction of tilt has been established, dig a hole for the ground post to dimensions indicated on the chart. An auger or clam shell post hole digger can be used.
- (b) Set the black end of the post in the hole. Be sure that the hinge faces in the proper direction (toward clearance dimension "C"). On large size ground posts, an "A" Frame with block and tackle or chain hoist rigged over the hole will be of assistance.
- (c) Back fill the hole, tamping around the post and water pack as you fill. **CHECK THE POST WITH LEVEL AND/OR PLUMB LINE FREQUENTLY AS YOU BACK FILL. IF THE GROUND POST IS NOT PLUMB, THE TOWER WILL BE OUT OF PLUMB.** If your soil has a high clay content or tends to be plastic when wet, mix in about 50% sand and water pack, or fill the hole entirely with sand. Write for special instructions for rock or marshy soil.
- (d) Attach the Lock-in Bracket just below Pulley B as shown on Drawing #235 and on the Installation Detail Sheet. Use the cast aluminum saddle and U-bolt to mount the Lock-In Bracket. Be sure the bracket is on the hinge side of the post, and that it is parallel to the hinge pin. (Note: On heavier model Ground Posts, the Lock-in Bracket is welded in place at factory, and this attachment procedure is not required.)
- (e) Bolt the winch to the angle iron which bracket is welded on the ground post. The winch should be mounted so that the drum is uppermost and the crank handle faces away from the tower and post. See Installation Detail Sheet.
- (f) Insert one end of tilt-over cable through hole in winch drum flange and clamp end securely.
- (g) Lace cable down under sheave of Pulley "B", pull through and coil up excess cable temporarily. See Cable Lacing Diagram on Installation Detail Sheet.



TOWER MODEL	"A"	"B"	"C"	"D"	"E"	Rotor Head
HD-40	12"	54"	61'-0"	71'-0"	----	----
RBS-40	13"	60"	61'-0"	71'-0"	21'-0"	31'-6"
CRS-40	14"	60"	61'-0"	71'-0"	21'-0"	31'-6"
RBS-40	19"	72"	81'-0"	91'-0"	21'-0"	51'-0"
RBS-50	14"	72"	81'-0"	91'-0"	26'-0"	31'-6"
RBS-50	19"	72"	81'-0"	91'-0"	21'-0"	51'-0"
6046	13"	60"	61'-0"	71'-0"	21'-0"	----
RBX-60-3	14"	72"	81'-0"	91'-0"	21'-0"	31'-6"
CRX-60-3	19"	72"	81'-0"	91'-0"	21'-0"	31'-6"

GROUND POST INSTALLATION

Date 10/8/63 F.L.L. Appvd. *[Signature]*

Revised 1/3/67 KRP Appvd. *[Signature]*

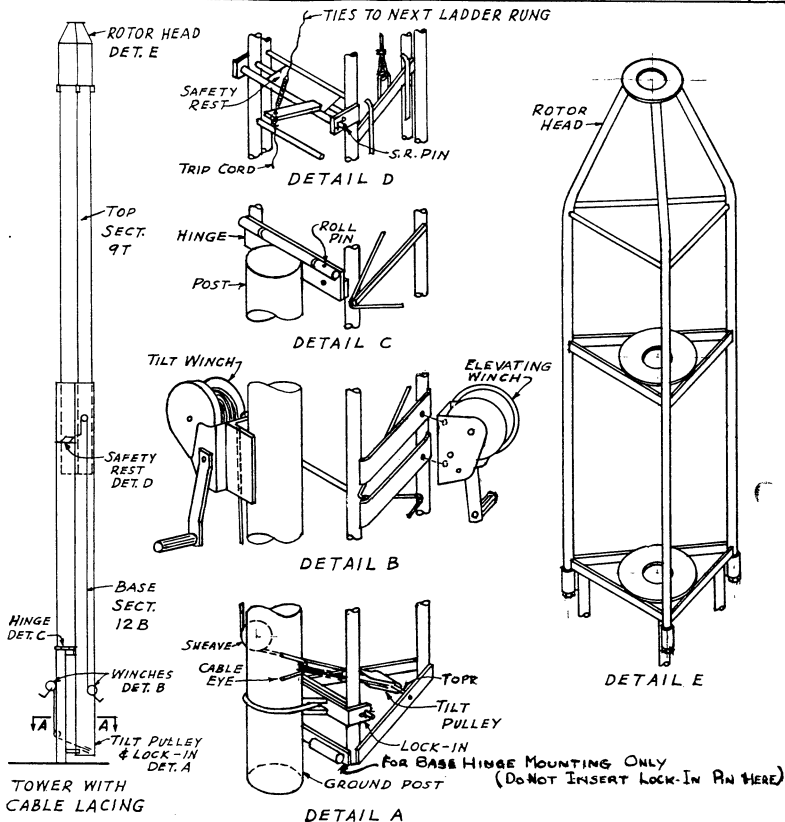
E-Z WAY PRODUCTS, INC.
TAMPA, FLORIDA

DWG. NO. 235

SECTION 2ASSEMBLY OF RBS-40 and RBS-50 TOWERS

Note: To simplify installation, your tower has been partially pre-assembled at the factory. The elevating cable, top pulley, and safety rest have already been installed. To avoid damage in shipment, however, the safety rest has been inverted, so that its arm will not project outward. It must be reversed as explained below. Complete the assembly of your tower as follows:

- (a) Lay tower on two saw horses, remove tie wires and mast assembly wired inside tower.
- (b) Remove safety rest by withdrawing pin, and set aside temporarily. See Detail D on Installation Detail Sheet (Dwg. #712).
- (c) Slide inner section in and out of outer section as far as it will go to determine whether any binding occurs due to possible rough handling in shipment. Excessive friction between sections may usually be relieved by slight bending of interfering members, and adequate lubrication. If this does not correct binding, report condition to the carrier so that a claim for damage in transit can be filed.
- (d) Lubricate skids and cable with heavy grease, and oil pulley bearings.
- (e) Push inner section all the way into outer section.
- (f) Re-install safety rest so that trip tab projects outward. See Detail D on Installation Detail Sheet.
- (g) Tie the light wire from the safety spring to the ladder rung immediately above allowing enough tension in the spring to insure positive engagement of the flap with the ladder rungs.
- (h) Attach one end of the polyethylene trip cord to the trip tab of the safety rest and tie the other end to a ladder rung near the winch mounting plate on the tower.
- (i) Mount the winch on the right hand side of the winch mounting plate with the winch drum uppermost so that the crank handle extends to the right side. See Detail B (elevating winch).
- (j) Insert end of elevating cable through hole in winch drum flange and clamp securely. Crank up slack cable.
- (k) Your tower is now ready for attachment to its mounting. See Section 3.



INSTALLATION DETAIL SHEET
 RBS-40 - RBS-50

Date 6/23/66 H.P.	Appvd.
Revised	Appvd.

E-Z WAY PRODUCTS, INC.
 TAMPA, FLORIDA

DWG. No. 712

SECTION 3

ATTACHMENT OF TOWER TO GROUND POST

NOTE: Drawing #235 illustrates three alternative methods for erection of the tower and attachment to the Ground Post. Plan "C" is appropriate for heavier model towers, but is not feasible with Ground Posts having hinge heights (Dimension C) less than 8 feet. For lighter models with hinge heights of 6 feet, Plan "A" or Plan "B" should be used.

PLAN A

You will need an A frame, a 5' or 6' foot step ladder and chain fall, cable hoist or block and tackle. The A frame can be made up of 2 pieces of hardwood 4 x 4, long enough so that the X will be at least 4' above the top of the Ground Post.

- (a) Remove the bolt and nut from the TOP-2.5 Tilt-Over Pulley Assembly and slide sheave out of pulley housing.
- (b) Install Pulley Assembly on diagonal rod (TOPR) welded across base straps of outer section (See Fig. 3) by sliding pulley housing over rod and reassembling sheave with bolt and nut.
- (c) Set the A frame up to straddle the Ground Post across the line of tilt. Guy forward and back. Hang chain fall or hoist from the X of the A frame.
- (d) Place the tower, ladder side down, beside the Ground Post in the line of tilt as shown in Plan A, Drawing #235.
- (e) Hook the chain fall to the tower at the hinge point, and lift tower to a point where the hinge plate on the Ground Post can be bolted to hinge plate on the tower. Bolt securely with the two 5/8" x 1-1/4" galvanized bolts and nuts.
- (f) Lift top end of tower and set on step ladder.
- (g) Lace tilt-over cable from Pulley B on the ground post through the tilt-over pulley and back to the cable eye on the ground post (See Fig. 3). Fasten cable end securely to cable eye using thimble and two cable clips.
- (h) Crank tower up to vertical position and insert lock-in pin. See Figure 1.
- (i) Do not attempt to insert Lock-In pin through the two bushings at the base of the tower. These bushings are used only to mount a base hinge when a building attachment bracket is used.

PLAN B

You will need a scaffold and a 5 or 6' step ladder. The top platform should be about 3' below the top of the post. If you can arrange 2 or 3 steps alongside the scaffold so you can raise the tower in 3' jumps it will be easier than high jumps when the post is 8' or higher.

- (a) Install tilt-over pulley on diagonal rod across base of tower as in (a) and (b) in Plan A above.
- (b) Place the scaffold on the hinge side of the ground post across the line of tilt as shown in the Plan. B. Drawing #235.
- (c) Place the tower, ladder side down, beside the ground post in the line of tilt as shown.

Section 3

G. P.

Page two

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Plan B - continued

- (d) Raise bottom end of tower and place it on first step on scaffold until it can finally be set on top of the ground post.
- (e) Line up hinge plate on tower with hinge plate on ground post and bolt together with two $5/8"$ x $1-1/4"$ galvanized bolts and nuts.
- (f) Complete attachment by following steps (f), (g), (h) and (i) in Plan A above.

OPERATION OF TOWER AND GROUND POST

Raise and lower

- (a) Crank the tower to full height, then back down until Safety Rest engages. Adjust tie point of release cord to position where Safety Rest may be tripped conveniently while operating winch.
- (b) Lower tower by first cranking it up about 3 inches, reverse pawl in winch to lowering position while holding crank handle firmly.
- (c) Pull Safety Rest release cord and hold with one hand while cranking down tower with other hand.
- (d) Repeat this action several times to get the feel of it.

Tilt-Over

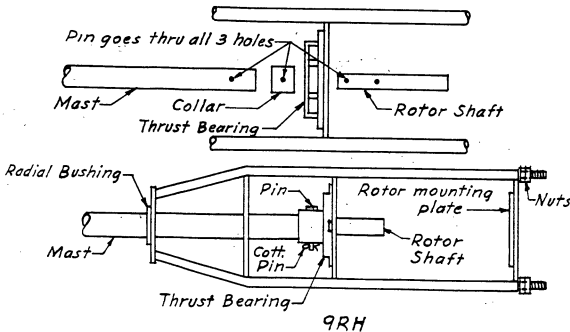
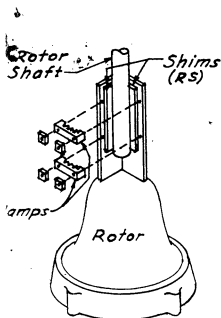
- (e) Lower tower as far as it will go, and then crank up about 12 inches until Safety Rest engages.
- (f) Let off about 3 feet of cable from the tilt-over winch and secure winch pawl to prevent further motion of winch drum.
- (g) Withdraw Lock-In Pin and pull bottom of tower out to break it off plumb.
- (h) Continue tilt-over by cranking winch until tower is in horizontal position.
- (i) Set end of tower on step ladder or other support to remove strain from tilt-over cable.
- (j) You are now ready to add the rotor head and antenna system.

ROTOR HEAD ASSEMBLY AND INSTALLATION - CDR ROTATORS

Section 5

Rotator and mast should be assembled in rotor head before attaching to tower in accordance with the following procedure (refer to Drawing 9RH, below):

- (a) Remove base casting from rotator; discard; remove mast clamps from rotator.
- (b) Bring rotator control cable through hole in rotator mounting plate; attach wires to rotator per manufacturer's instructions.
- (c) Bolt rotator to mounting plate using (4) 3/8" washers at each bolt so that rotator is raised from plate to provide clearance for wiring.
- (d) Check rotator wiring by trial operation.
- (e) Bolt thrust bearing and cast housing on intermediate mounting plate with inner race up; tighten lightly.
- (f) Remove pin from mast assembly; slide end of mast with connecting pin hole through top bearing; reassemble rotor shaft and collar to mast with connection pin (Note: use upper hole on rotor shaft for Ham M rotator, lower hole for other CDR models).
- (g) Slide mast and rotor shaft through lower bearing until collar rests on thrust bearing and rotor shaft sets in rotator.
- (h) Insert (2) shims (3/16" x 3" x 1") on each side of rotor shaft in Vee of rotator; replace mast clamps and secure.
- (i) With tower tilted over, bolt rotor head to tower using one nut above and one below each coupling.
- (j) Loop the rotator control cable and tape to one leg of rotor head.



SECTION 6
MAINTENANCE

Section 6
Maintenance
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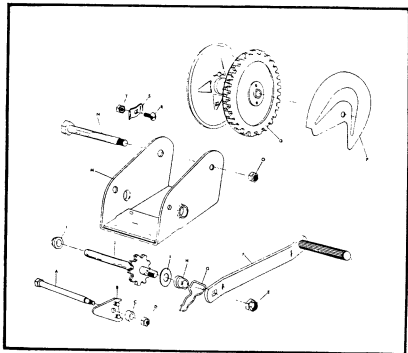
Your E-Z Way tower is ruggedly designed and constructed to give years of satisfactory service with a minimum amount of care. As with any equipment, however, periodic inspection and maintenance procedures will prolong service life and insure trouble free operation. We suggest the following maintenance routine at least once every three months.

1. Lubricate cable and skids with heavy waterproof grease.
2. Lubricate bearings and all moving parts on following components:

Winches	Safety Rest Assembly
Tilt-Over Hinge	Lock-Down Assembly
All Pulleys	Cable Tension Spring (if used)
3. Tighten all bolts and nuts.
4. Replace any cotter pins showing wear or damage.
5. If tower is mounted on Tilt-Over Post, clean bleeder flange openings to prevent accumulation of water in legs of TOP.
6. Repaint Ground Post and any other painted parts at least once each year.
7. Observe lubrication and maintenance instructions for Moto-Winch unit, when tower is electrically operated.
8. Always relieve stress on elevating cables and winch by making sure that safety rests are engaged and cable slacked off when tower is in extended position.
9. Relieve stress on tilt-over cable and winch by supporting top end of tower on step ladder or other support when tower is tilted to horizontal position. Be sure tower is fully retracted before tilting.
10. When high winds are anticipated, or when leaving tower site for extended periods, lower the tower to fully retracted position. If hurricane winds are expected, lower tower and remove antennas to safe storage.

PARTS LIST

MODEL 6826 WINCH



Ref. Let.	Part Name	Part No.
A	Ratchet Bolt	242-66
B	Ratchet	1047-66
C	Ratchet Spacer	237-66
D	Ratchet Nut	243-66
E	Handle Nut	645-66
F	Handle	1112-66
G	Ratchet Spring	267-666
H	Oillite Bearing	445-66
I	Spacer Washer	253-66
J	Drive Shaft Assembly	1057-66
L	Oillite Bearing	450-66
M	Winch Base	1027-66
N	Shoulder Bolt	295-66
O	Locknut	315-66
P	Gear Cover	533-66
Q	Reel	1013-66
R	Cap Screw	345-66
S	Rope Clamp	330-66
T	Nut	355-66

SPECIFICATIONS

A high quality, all purpose winch. Frame is of one piece design with level winding reel, oillite drive shaft bearings, two way ratchet, ribbed handle grip, all copper brazed construction. Baked enamel or plated finish.

Enclosed gear, 4:1 gear ratio. **Load Capacity** - 1200 lbs.
Drum Capacity - 1/4" dia. cable, 280 ft.; 3/16" dia. cable, 130 ft.; 5/16" dia. rope, 40 ft.; 3/8" dia. rope, 30 ft.

LUBRICATION

This winch has been fully lubricated at the factory but for continued maximum performance and increased life, occasional additional greasing of gears and hub shaft and a drop of oil on drive shaft bearings is recommended.