

Lightning Rod kit with Aluminum Tapered Point, Mast Clamp, 8' Ground Rod & clamps, & leg Grounding Lug. Order wire separately below.

LR-8400

#4 Ground Wire, order next longer length from tip of mast to ground rod

CW-2540 25 feet

CW-5040 50 feet

CW-7540 75 feet

CW-1040 100 feet

CW-1240 125 feet

CW-1540 150 feet

GR-5080 5/8 by 8 ft. ground rod weight 8lbs

GR-4400 Ground rod wire clamp weight .5lb

TL-0470 Terminal lug, for wire size to 4 /00



Thrust Bearing premium weatherized twin bearing for rotating setups, 1.3 to 2.6 mast diameter; **TB-25**

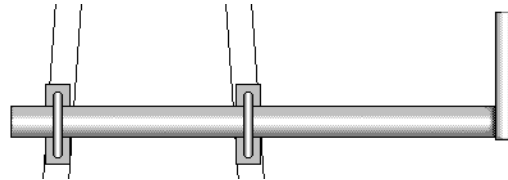


Mast Adaptor for non-rotating setups. Secures masts, 1.3 to 2.1 dia. two required, one at tower top and one at base of mast. **MC-10**

Side Arm for adding other antennas, weather gear, etc. 7" high by 1.31" diameter mast, U bolt mounting hardware included.

24" Long # **RA-6024**

48" Long # **RA-6048**



MASTS Select the mast that matches your needs

MI1049	9' X 1.90" OD X .145 wall galv. steel heavy dty	25 lbs
MA2069	9' X 2.375" OD .154 wall aluminum heavy dty	12 lbs
MA1049	9' X 1.90" OD, .145 wall aluminum medium dty	9 lbs
MA5050	5' X 1.315 OD, .133 wall aluminum light duty	3 lbs
MA1050	5' X 1.90 OD, .145 wall aluminum medium duty	5 lbs



GLENMARTIN
Division of TWR Group

Call (800) 486-1223

<http://www.glenmartin.com>

RT-424

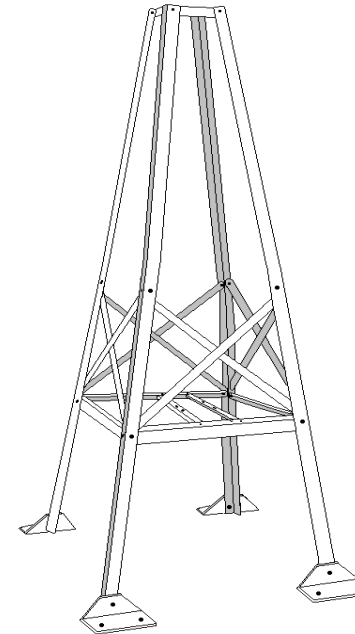
TAPERED TOWER

OWNER'S MANUAL

DATE PURCHASED:

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Rev 8/8/11

RT-424 TOWER SPECIFICATIONS

Maximum Height	4.5 Feet / 1.37 Meters
Maximum Width	24.5 Inches / 0.6 Meters
Material	6061-T6 Al. 1/8"x 1.5"x 1.5" Angle
Stainless steel Hardware	Nylon self-locking Nuts
Maximum Mast Diameter	2-3/8 Inches / 6 cm
Maximum length of Mast	5 Feet / 1.52 Meters
Max. balanced load weight	125 pounds / 55kg (center balanced)
Rotator Plate	Fits most 4-bolt mounted rotators
Distance from rotator plate to top plate	34-3/4" inches

Notes to Loading Chart:

- 1) Tower designed in accordance with applicable IBC, AASHTO, and ANSI/TIA-222 standards
- 2) Tower designed with 3-Second gust, exposure C, structure class II, topographic 1
- 3) Max. projected area is the total equipment wind area the tower can support under a specific wind speed
- 4) Roof elevation assumed to be 100 ft. Wind areas in loading chart based on this assumption
- 5) Specific structure study may be required if roof is significant higher than 100 ft and with heavy loading
- 6) Reactions at tower legs and base are factored per ASCE 7's load combinations
- 7) Roof shall be verified to meet specified reactions listed in loading chart before installation

Wind Load Chart

Wind speed (mph)	85	90	95	100	105	110	115	120
Max. projected area (sq.ft)	10.8	9.6	9.1	8.2	7.8	7.1	6.8	6.2
Down at leg	1.04	1.05	1.07	1.08	1.10	1.11	1.13	1.14
Uplift at leg	0.87	0.88	0.92	0.93	0.96	0.97	1.00	1.02
Shear at leg	0.28	0.28	0.29	0.29	0.30	0.31	0.31	0.32
Shear at base (kip)	0.55	0.57	0.61	0.63	0.67	0.69	0.73	0.75
O.T.M (kip-ft)	2.80	2.82	2.90	2.93	3.00	3.04	3.12	3.15

Parts List

Part #	Quantity	Description
1	4	1/8x1.5x1.5x 54" (legs)
3	4	15-1/2" (40 cm) long center horizontal braces
4	2	Rotator support bars 15-1/2" long
5	4	5" (12.7cm) long top brace
7	8	Flat diagonal braces 1/8" x 3/4" x 20 1/8" (76.2cm)
8	4	1½x2x5" (.635x5x5x15.25cm) Mounting brackets
9	1	Hardware kit:
	4	-3/8 hex bolts, flat washers & locking nuts
	28	-¼" x 3/4" ss screws and lock nuts

SAFETY RULES

1. Never mount any tower system close to wires or power lines. Stay at least 1½ times the overall height away from any power lines or wires.
2. Never attempt to touch someone who is in contact with power lines or wires.
3. Never climb the tower. Serious injury could result from a fall. This is even more dangerous when you are on a roof top.
4. If you drop something while working on a roof, NEVER try to catch or stop it. Let it fall and keep your own balance secure.
5. Use the buddy system. Always have someone helping nearby.
6. Always keep children away.
7. NEVER attempt to install or attempt to repair equipment while under the influence of drugs, alcohol or any medication.
8. Certain applications may require field drilling.

Please keep these instructions in a safe place after installation. If you sell your tower, pass these instructions on to the new owner.

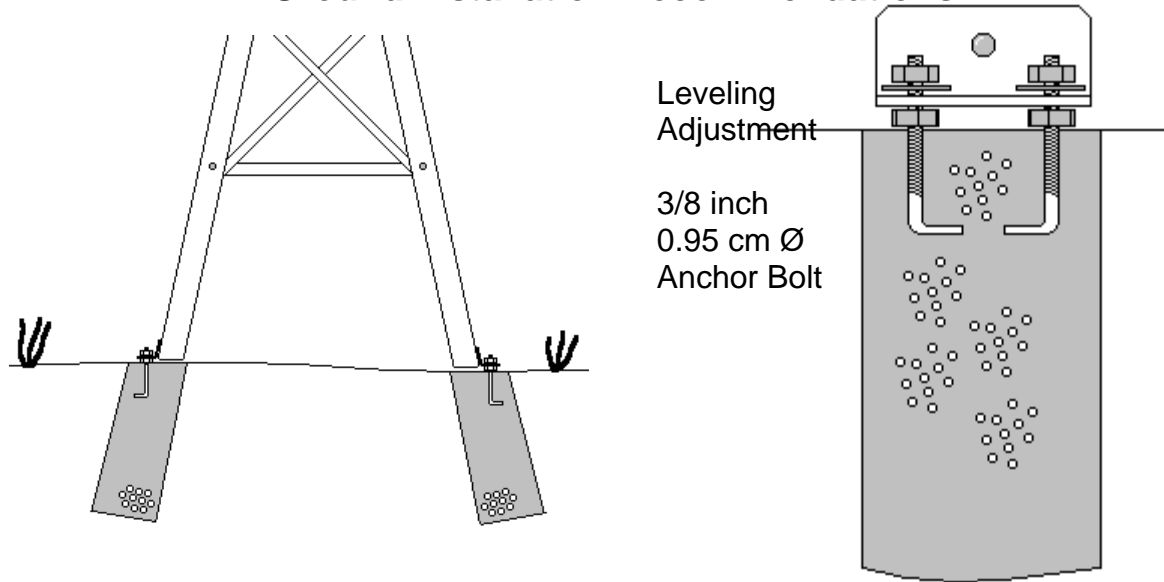
Glenmartin WARRANTY

Glenmartin warrants the RT-424 Roof Tower for one year from purchase. If this tower fails to give the original purchaser complete satisfaction within one year from the original date of purchase, return it to GlenMartin, Inc. and we will repair it, or replace it free of charge. GlenMartin, Inc. will not be liable for loss or damage to property or any incidental or consequential loss or expense from property damage due directly or indirectly from the use of this product.



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Ground Installation Recommendations

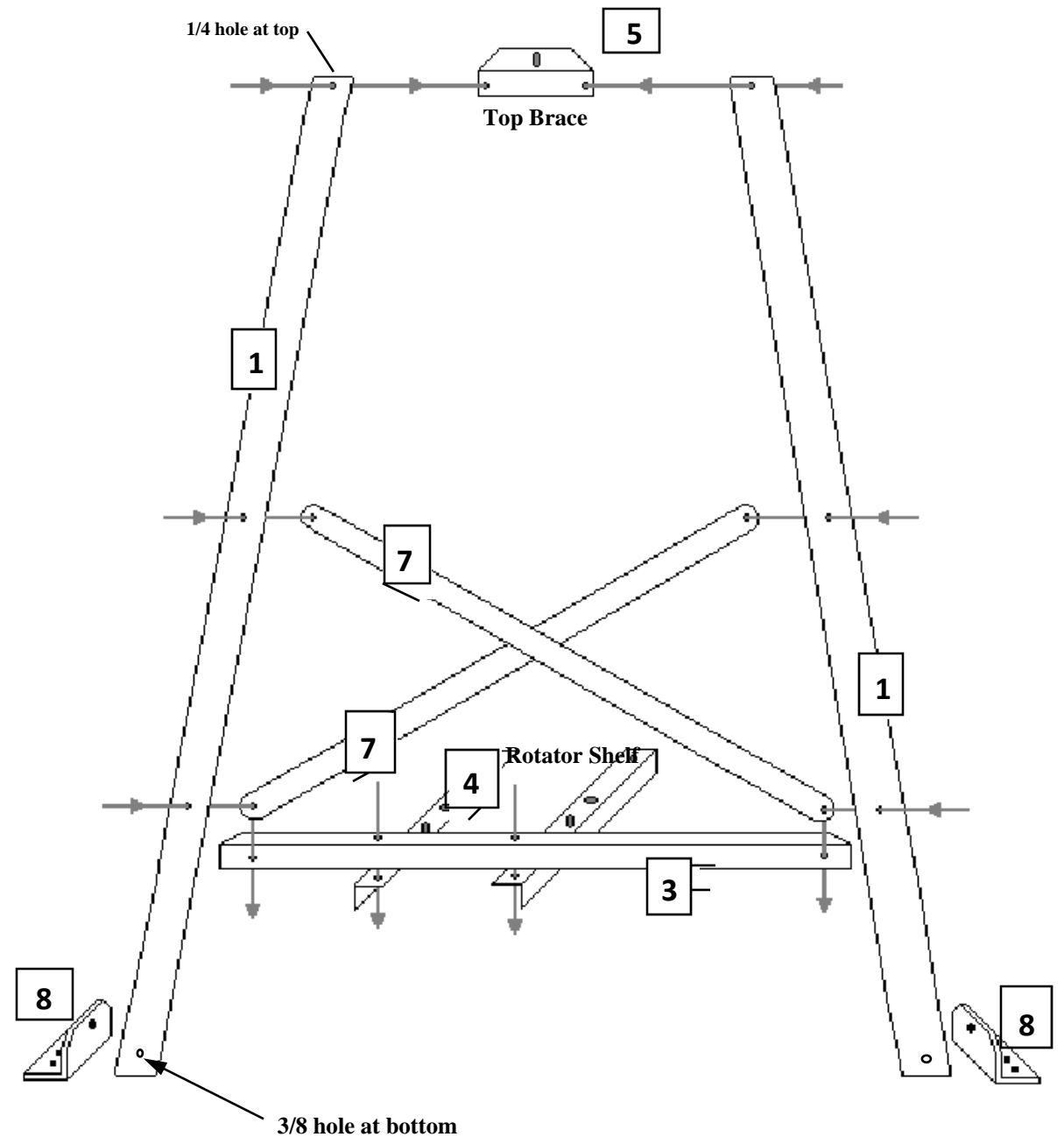


GROUND INSTALLATION RECOMMENDATIONS

1. Place 4 concrete post holes 6" (10-15cm) in diameter 24" (61cm) deep, or AT LEAST 6" (15cm) below the frost line.
2. Use 3/8" (0.95cm) anchor bolts with leveling nuts (order our Part # EL-3755) to secure mounting brackets. Ensure at least 1½" of the threaded portion of the anchor bolt is above the concrete surface.
3. Always install adequate grounding on your tower. (See back page.)

RECOMMENDATIONS ON MOUNTING ANTENNAS

1. Mount rotator on rotator shelf.
2. A Thrust Bearing should be used whenever using a rotator.
3. Use the shortest mast necessary to match installation.
4. Always keep tower, mast & antennas 1½ times the height away from overhead power lines.
5. Adjust rotator, thrust bearing and mast so they are concentric (centered).
6. We **strongly** advise lightning protection for your new tower. Ground your system to achieve a goal of ground resistance at 25 ohms or less. See our tower accessories on Page 8 of this manual.



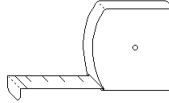
TOOLS YOU'LL NEED FOR ASSEMBLY AND INSTALLATION



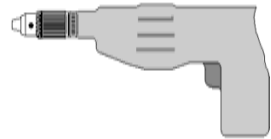
SOCKET SET



**ADJUSTABLE
END WRENCH**



TAPE MEASURE



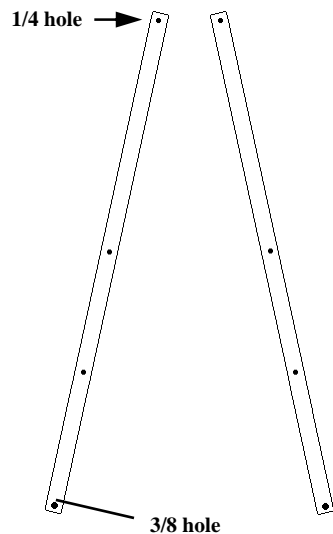
**ELECTRIC DRILL
5/16"/79mm DRILL BIT**



CAULKING GUN

ASSEMBLY

1. Lay out two legs (part #1) with the two large 3/8" holes at the bottom for attaching legs to mounting brackets (part #8).



2. Bolt braces #,3,5, and 7 between two legs with 1/4-20 stainless steel screws and nuts. The braces bolt to the inside of leg angle. Roof brackets (part #8) bolt on outside of the legs at the bottom with 3/8" bolt, washer and nut.

3. Lay out two more legs (part #1) and repeat step 2.

4. This is getting easier now. Join the previously assembled sides with the remaining parts (#2,3,5 and 7) in the same fashion as in step number 2.

5. Bolt the rotator support bars (part #4) in place between the part 3 pieces.

6. Tighten all nuts.

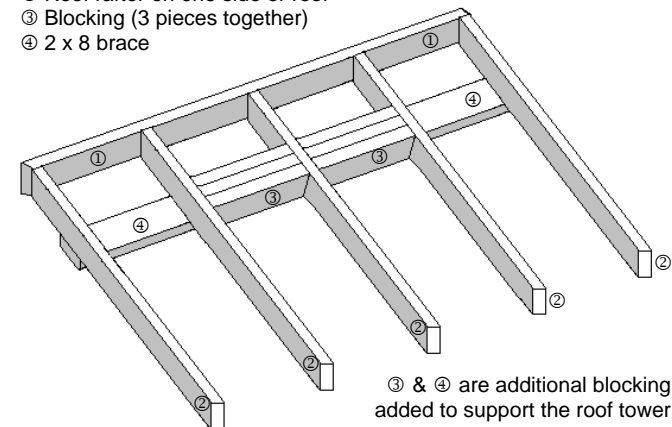
7. Bolt mounting roof brackets (part 8) to outside of each leg so base of brackets can match pitch angle of roof.

TYPICAL ROOF INSTALLATION

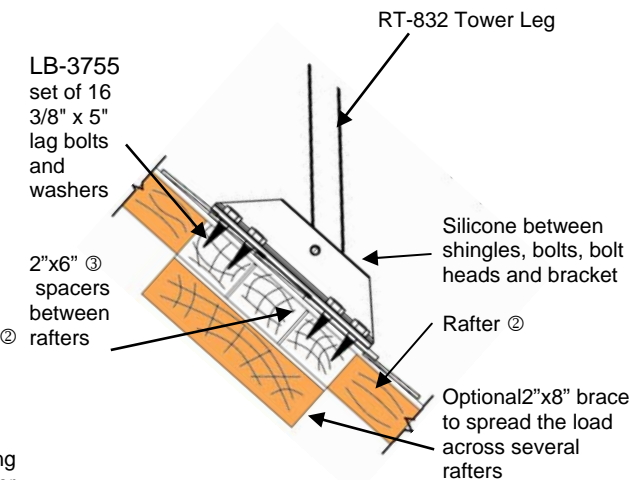
1. These instructions assume a composition shingle roof on wood.
2. When possible, it is best to bolt the mounting brackets directly to the center of rafters. If that is not possible, bracing should be added as in the drawing shown below.
3. Silicone mastic is applied under & between the shingle flaps, then under the tower mounting brackets.
4. Drill pilot holes for the lag bolts. Fill the pilot holes with silicone before inserting lag bolts.
5. Once lag bolts are tight, caulk heads of bolts with additional silicone.
6. Use a level across the thrust bearing plates to ensure plumbness.

TYPICAL ROOF INSTALLATION PICTURE

- ① Ridge rafter at peak of roof
- ② Roof rafter on one side or roof
- ③ Blocking (3 pieces together)
- ④ 2 x 8 brace



③ & ④ are additional blocking added to support the roof tower



LB-3755 set of 16 3/8" x 5" lag bolts and washers

2"x6" ③ spacers between rafters

RT-832 Tower Leg

Silicone between shingles, bolts, bolt heads and bracket

Rafter ②

Optional 2"x8" brace to spread the load across several rafters