



# INSTALLATION INSTRUCTIONS

## EM-MG11006-SP

### NMO/GPS Antenna Combination Mount

#### 3/4" Hole Mount

*Congratulations on your selection of another quality antenna product from E/M Wave.*

*E/M Wave is committed to continually provide the greatest antenna VALUE for your wireless applications.*

**Parts:** Verify all parts are included as shown in Figure 1.

- Antenna Base Mount with 17 ft. (5.1 m):
  - RG-174/U GPS Cable (SMA Connector Attached)
  - RG-58/U NMO Cable (Connector Sold Separately)
- Rubber Gasket
- Multi-tooth Lock Washer-Nut (24 mm Hex)

**Tools Required:**

- Drill and Hole Punch, 3/4" (19.05 mm) Diameter
- 24 mm Socket Wrench or Open/Adjustable Wrench
- Torque Wrench with 15 to 20 ft-lb capacity (Recommended)
- Cable Stripping Tools for RG-58/U



FIGURE 1: PARTS

**Pre-Installation:**

- GPS/NMO Base Mount will install on any panel with thickness up to 1/4" (6.35 mm) maximum.
- NMO Mount will accommodate all NMO antennas with operational frequency bands up to 1000 MHz.
- **NMO Antenna: Sold separately.** Refer to manufacturer's antenna instructions to verify proper installation and tuning requirements.
- For best GPS Antenna performance, verify installation area has clear view of sky in all directions.
- Mounting locations that contain obstructions within low view angles (near horizon) may be permissible, however, to ensure performance is acceptable, the antenna may be tested in the desired mounting location by setting the base mount upright on the mounting surface and connecting the GPS receiver to determine performance.
- Choose mounting surface with minimal curvature to optimize the rubber gasket sealing against rain and weather.

**Installation:**

1. Drill or punch a 3/4" (19.05 mm) hole through the mounting surface.
2. Clean surface area near mounting hole, removing grit, moisture and oil residue to ensure proper gasket seal.
3. Remove Lock Washer-Nut from the threaded stanchion.
4. Feed antenna cables through the top of the hole.
5. Verify gasket is properly aligned and seated to mount base and perimeter. **Note:** Gasket is not symmetrical.
6. Insert threaded stanchion through the hole.
7. Before attaching Lock Washer-Nut, verify gasket is seated firmly against the mount base.
8. Apply firm downward pressure to mount base, ensuring gasket is fully seated against mounting surface.
9. Gently pull cables downward, then horizontally into the cable relief slot as shown in FIGURE 2. **NOTE:** It may help to temporarily tape the cables to the bottom side of the mounting surface in order to hold them in the slot location until the nut is completely fastened with proper torque.



FIGURE 2: BOTTOM SIDE INSTALLATION SURFACE



FIGURE 3: CABLE ROUTING

10. Attach and thread the Lock Washer-Nut to the threaded stanchion using hand torque only until toothed lock washer stops against the bottom side of the mounting surface. See FIGURE 3.
11. Determine the final rotational position of the base mount and begin to apply light torque with wrench.
12. Verify final position of base mount. Firmly secure the assembly by using a torque wrench. Torque the Lock Washer-Nut to a minimum of 15 ft-lbs./maximum 20 ft-lbs.
13. Route cables to radio/receiver locations.
14. Cut and Strip RG-58/U cable. Attach connector (sold separately).