High Performance, Heavy Duty, Omni Base Station Antenna
Model ASP-600

- Rugged — heavy duty construction for maximum strength and long life
- Field Proven — thousands in service providing years of long reliable performance
- High Performance — end-fed half wavelength design produces low-angle, unity gain radiation pattern for maximum system range
- Field Tunable — available in three models to cover entire 25-50 MHz range

SPECIFICATIONS

**Electrical**
- Power: 500 watts maximum
- Gain: Unity
- Frequency Range:
  - 20-30 MHz (ASP600): 30-40 MHz (ASP6000)
  - 40-50 MHz (ASP6000)
- Bandwidth: 3% (nominal) of operating frequency
- VSWR: Less than 1.5:1
- Impedance: 50 ohms nominal
- Vertical Beamwidth: 77 degrees
- Lightning Protection: Dic ground through support pipe
- Termination: SO-239 (accept PL-239)
- Transformer: Space-wound, fiber glass reinforced

**Mechanical**
- Rated Wind Velocity:
  - ASP600: 65 mph (104 km/h) at 25 MHz
  - ASP6000: 92 mph (148 km/h) at 30 MHz
  - ASP6000: 100 mph (161 km/h) at 40 MHz
- Lateral Thrust:
  - ASP600: 50.8 lb (23.1 kg) at rated wind of 74 mph (119 km/h) at 25 MHz
  - ASP6000: 68.9 lb (91.3 kg) at rated wind of 92 mph (148 km/h) at 30 MHz
  - ASP6000: 67.0 lb (30.4 kg) at rated wind of 100 mph (161 km/h) at 40 MHz
- Bonding Moment:
  - ASP600: 386.3 ft-lb (53.5 kg-m) at rated wind of 74 mph (119 km/h) at 25 MHz
  - ASP6000: 464.5 ft-lb (61.3 kg-m) at rated wind of 92 mph (148 km/h) at 30 MHz
  - ASP6000: 356 ft-lb (49.2 kg-m) at rated wind of 100 mph (161 km/h) at 40 MHz
- Equivalent Flat Plate Area:
  - ASP600: 2.25 ft² (0.21 m²) at 25 MHz
  - ASP6000: 2.01 ft² (0.19 m²) at 30 MHz
  - ASP6000: 1.67 ft² (0.16 m²) at 40 MHz
- Length:
  - ASP600: 236 to 295 inches (6 to 7.5 m) adjustable (ASP600) 178 to 255 inches (4.5 to 6.5 m) adjustable (ASP6000) 139 to 186 inches (3.5 to 4.7 m) adjustable (ASP6000)
- Weight: 16 lb (7.2 kg)
- Mounting: 1¼ inch (31.8 mm) extra strong pipe to comply with RS-329, threaded 1/4 inch (31.8 mm) NPT (not furnished)

**Shipping Information**
- Weight: 20 lb (9 kg)
- Dimensions: 3½ x 3½ x 7.79 inches (8.4 x 12.9 x 200.7 cm)

*See Catalog sections for mounting brackets, coaxial cable, couplers and other materials required for complete installation.*
1/2 WAVE LOW-BAND
VERTICALLY POLARIZED
OMNI-DIRECTIONAL
ANTENNA

25-30 MHz
30-40 MHz
40-50 MHz

power rating: 500 watts
impedance: 50 ohms
VSWR: 1.5:1 or better
ASSEMBLY INSTRUCTIONS

1. Assemble radiator onto hub and tube assembly as shown in Fig. 1.
   NOTE: The overall length of the radiator and the number of tubes it contains varies with each frequency range. Consult chart below for correct radiator, hub and radial assemblies.

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>RADIATOR</th>
<th>HUB &amp; TUBE ASSEMBLY</th>
<th>RADIAL 3 Req'd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-30 MHz</td>
<td>1981713-1</td>
<td>19C1714-1</td>
<td>1981710-1</td>
</tr>
<tr>
<td>30-40 MHz</td>
<td>1981713-2</td>
<td>19C1714-2</td>
<td>1981710-2</td>
</tr>
<tr>
<td>40-50 MHz</td>
<td>1981713-3</td>
<td>19C1714-3</td>
<td>1981710-3</td>
</tr>
</tbody>
</table>

2. Adjust radiator (collapse largest tubes first) to length shown on proper chart. Use chart corresponding to frequency range stamped on the hub only.

Fig. 1

DO NOT ADJUST LENGTH AT THIS POINT

Hub & Tube Assy.
3. Thread cable through pipe. (Use heavy wall 1 1/4" pipe with standard pipe thread. Pipe and cable are not supplied with the antenna.) Cable must have PL-259 connector on the antenna end. Use 50 ohm cable such as RG-8/U or "hardline" with short flexible "pig-tail" at the antenna end for long runs.

4. Connect cable to antenna and secure pipe onto hub as shown in Fig. 2. Silicone grease may be used on all threaded portions of the antenna to retard corrosion and ease disassembly.

**Fig. 2**

Set Screw

SO-239

Pipe (1 1/4", not supplied)

Connect PL-259 to SO-239. Screw pipe onto Hub

(Pipe wrench may be used)

Tighten Set Screw to secure the pipe. Avoid damage to pipe threads—do not overtighten.

5. Following the corresponding chart below, adjust radials to required length.

NOTE: The lengths shown on the charts are approximate. For finer tuning, a VSWR meter may be used. Attach radials to the antenna and place it in a vertical position. Adjust radials and/or radials slightly until best VSWR is reached. While adjusting, make sure no objects are within 20 feet of the antenna.

6. Mount the antenna and attach the radials. (See Fig. 3 on back page)

7. Route cable from antenna to set. Secure cable to eliminate strain on connectors. Re-check VSWR.

**THIS IS A SHUNT-FED ANTENNA AND WILL SHOW A DC SHORT FROM GROUND TO THE RADIATOR OR COAX CENTER CONDUCTOR.**
FIG. 3

1-1/4" Pipe (NOT SUPPLIED)

Screw radial into hub and tighten with open end wrench.
Radial Rod

Screw radial into hub and tighten with open end wrench

Loosen clamp to adjust length

FIG. 3

1-1/4" Pipe
(NOT SUPPLIED)

45 = 130" RADIATOR TO COLLECTOR

45 MHz = 65"

ANTENNA MOUNTING

Mounting Structure