DB212 center-fed antennas, when mounted on the side of a tower, provide the optimum in gain, tower utilization, lightning protection and precipitation static reduction.

- **Tower Mounted** — Antennas must be mounted on, and work against, a metal tower leg or pipe parallel to and longer than each folded radiator. Gain will be reduced on towers with faces larger than 18” to 35” (457.2 to 889 mm).
- **Offset Pattern** — Get maximum directional gain by mounting all elements collinearly on one leg of the tower.
- **Circular Pattern** — Achieved by mounting elements on all legs of the tower.
- **Weather Resistant** — Side mounted antennas have fewer lightning problems than top mounted ones. Metal elements operate at DC ground. Additional protection from static electricity may be achieved by wrapping the antenna with electrical grade poly tape.
- **Easy Mounting** — Mounting clamps and interconnecting cables for tower faces up to 5’ (1.52 m) are included. Larger clamps and cables are also available.

### ELECTRICAL DATA

- **Frequency Ranges** – MHz
  - A = 28-33
  - B = 33-42
  - C = 42-50
  - D = 72-88
- **Bandwidth** –% of frequency
- **VSWR** – 1.5 to 1 or less
- **Nominal Impedance** – Ohms
- **Gain** (over half-wave dipole)
- **Maximum Power Input** – Watts
- **Lightning Protection** – Direct ground
- **Standard Termination** – Captive Type N-Male attached to end of flexible lead.

### MECHANICAL DATA

- **Radiating Elements** – in. (mm)
  - Aluminum 0.75 (19.1) dia. with 0.875 (22.3) dia. socket
- **Mounting Bracket** – Cast aluminum
- **Wind rating:**
  - Survival w/o Ice – mph (km/hr)
    - DB212-2-C: 125 (201)
    - DB212-3-C: 80 (129)
  - Survival with 0.5” (12.7 mm) Radial Ice – mph (km/hr)
    - DB212-2-C: 60 (96)
    - DB212-3-C: 45 (72)
- **Mounting:**
  - Stainless steel banding straps, Kit 11652, is supplied with 30-50 MHz antennas. V-Bolt Mount Kit 11653 is included for 72-88 MHz ranges.
  - *Calculation of wind survivability does not include damage due to flying debris.*

### MINIMUM TOWER HEIGHT RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>DB212-2-C</th>
<th>DB212-3-C</th>
<th>DB212-4-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Span on Tower (approx.) – ft. (m)</td>
<td>35</td>
<td>40 (12.19)</td>
<td>67 (20.42)</td>
</tr>
<tr>
<td>Maximum Exposed Area (flat plate equivalent) – ft² (m²)</td>
<td>35</td>
<td>2.9 (0.07)</td>
<td>4.4 (0.11)</td>
</tr>
<tr>
<td>Wind Load at 100 mph (161 km) – lbs. (kg)</td>
<td>35</td>
<td>116 (52.62)</td>
<td>176 (79.83)</td>
</tr>
<tr>
<td>Minimum Recommended Tower Height – ft. (m)</td>
<td>35</td>
<td>100 (35.53)</td>
<td>130 (38.62)</td>
</tr>
<tr>
<td>Net Weight – lbs. (kg)</td>
<td>35</td>
<td>31 (14.06)</td>
<td>65 (29.42)</td>
</tr>
<tr>
<td>Shipping Weight – lbs. (kg)</td>
<td>35</td>
<td>47 (21.32)</td>
<td>89 (40.37)</td>
</tr>
</tbody>
</table>

Note: The usable height of a tower includes the height of the site above the average terrain at the base of the tower.
Exposed Dipole Quasi-Omni Antenna
28 - 88 MHz / Up to 12.2 dBi Gain

DB212

30-512 MHz

DB212 (1 Element)

DB212-2 (2 Elements)

DB212-3 (3 Elements)

DB212-4 (4 Elements)

Triangular Tower

Collinear Mounting

Square Tower

Collinear Mounting

Collinear Mounting

The graphs show the radiation patterns, in dBi referenced to a vertical half-wave dipole, for several models of the DB212 antennas when mounted on triangular and square 18-24 inch (457-610 mm) towers as measured across the face of the tower.

Antennas are vertically separated (center-to-center) from 0.75 to 1.25 wavelengths, ideally 0.9 wavelength. Two to four antennas mounted at the same height will have patterns similar to those shown but will have reduced gain.