



DB212

ORDERING INFORMATION

The DB212 antenna can be ordered as a single element in the -A, -B, -C or -D frequencies, as shown in the Electrical Data table (e.g. DB212-A, DB212-B, DB212-C, DB212-D). This antenna is also available as a 2, 3, or 4 element model in the -C (42-50 MHz) frequency range only.

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	2% of frequency
VSWR	1.5 to 1 or less
Nominal Impedance – Ohms	50
Gain (over half-wave dipole)	See patterns
Maximum Power Input – Watts	500
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)	125 (201)
Survival with 0.5" (12.7 mm) Radial Ice – mph (km/hr)	80 (129)

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

	Frequency (MHz)	DB212-2-C	DB212-3-C	DB212-4-C
Vertical Span on Tower (approx.) – ft. (m)	35 50	40 (12.19) 31 (9.45)	67 (20.42) 51 (15.54)	86 (26.21) 69 (21.03)
Maximum Exposed Area (flat plate equivalent) – ft ² (m ²)	35 50	2.9 (0.27) 1.9 (0.18)	4.4 (0.41) 2.8 (0.26)	5.8 (0.54) 3.8 (0.35)
Wind Load at 100 mph (161 km) – lbs. (kg)	35 50	116 (52.62) 76 (34.47)	176 (49.83) 112 (50.80)	232 (105.23) 152 (69.94)
Minimum Recommended Tower Height – ft. (m)	35 50	110 (35.53) 80 (24.28)	130 (38.62) 105 (32)	260 (79.25) 190 (57.21)
Net Weight – lbs. (kg)	35 50	31 (14.06) 27 (12.25)	65 (29.48) 43 (19.5)	74 (33.52) 60 (27.22)
Shipping Weight – lbs. (kg)	35 50	47 (21.32) 35 (15.88)	89 (40.37) 70 (31.75)	106 (48.08) 76 (34.47)

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

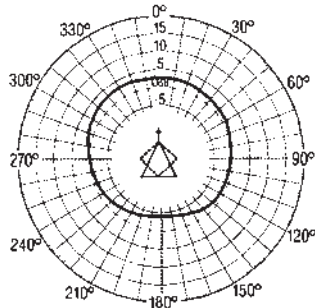
28 - 88 MHz / Up to 12.2 dBd Gain



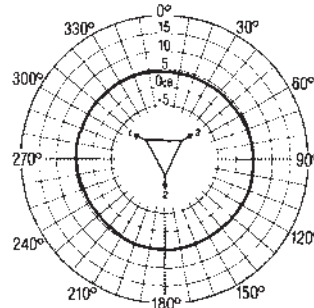
DB212

30-512 MHz

DB212 (1 Element)

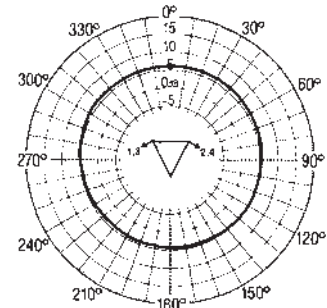


DB212-3 (3 Elements)



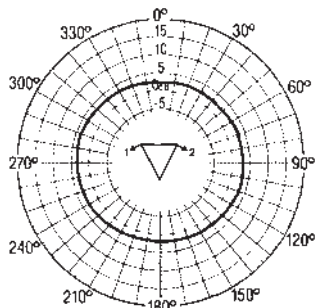
Triangular Tower

DB212-4 (4 Elements)

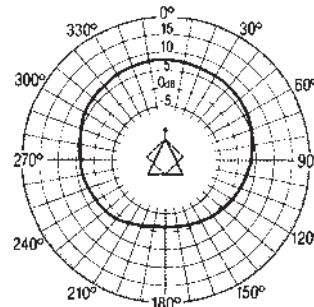


Triangular Tower

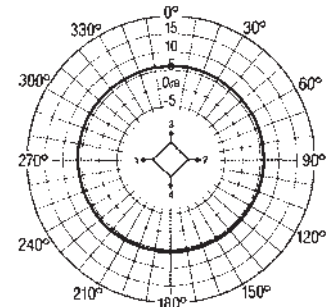
DB212-2 (2 Elements)



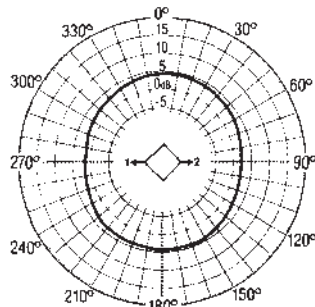
Triangular Tower



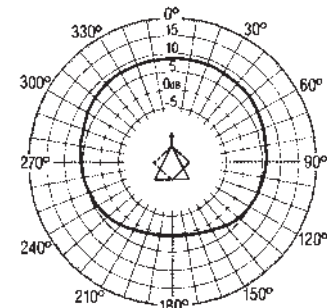
Collinear Mounting



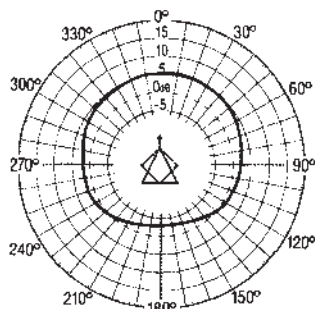
Square Tower



Square Tower



Collinear Mounting



Collinear Mounting

The graphs show the radiation patterns, in dB 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.