

D2000 Series: Muldipol Military Antennas

The MULDIPOL™ Multiple Dipole Collinear Array concept has been specifically developed by TACO for ground-air-ground, air traffic control and base communications applications.

This omni directional concept employs a unique method of shielding the feed cables to improve radiation pattern characteristics. The MULDIPOL™ also has a high degree of isolation between discrete elements within a closely spaced array.

The result is a small, rugged, easy to install antenna. The lightweight and compact design minimizes space and lends itself to tactical transportable use in the most hostile environments.

A minimum of 30 dB isolation is realized between any two antenna elements in every MULDIPOL™ model. The low profile silhouette of this antenna plus the resulting decrease in the number of antennas required at any tower site also gives a much improved radiation pattern coverage.

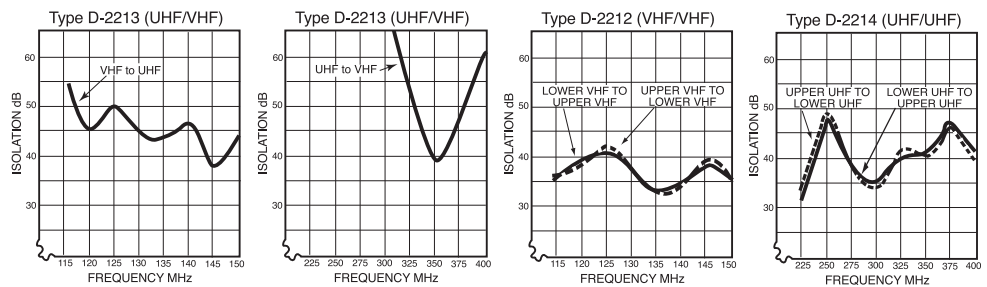
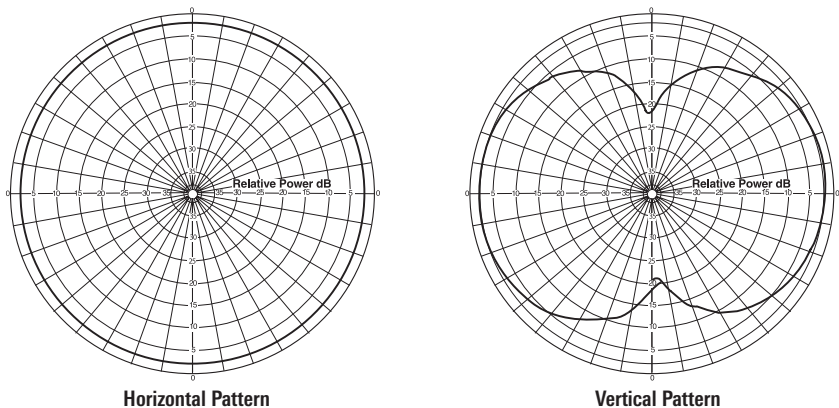
FEATURES:

- Rugged lightweight construction
- Transportable
- Compact
- Combination of UHF and VHF
- High isolation between antenna elements

MISCELLANEOUS OPTIONS

- Connector dust covers
- Various grounding configurations
- Various connector types
- Special colors
- Most models can be adapted to lightning rod and/or obstruction light applications.
- Folding and 2 piece Sectional Antennas available on most models

TYPICAL RADIATION PATTERNS



TACO Antenna's ongoing policy of continuing development may result in specification changes to its products.

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OPERATION

The process employed in the TACO antennas incorporates the patented MULDIPOL™ concept. The utilization of this technique results in a unit which has excellent “broadband” halfwave dipole characteristics over the entire operating frequencies.

The desired “figure eight” radiation pattern is generally constant throughout the band. Through “broadband” suppression of extraneous currents upon the transmission line, the undesirable “Clover Leaf” pattern is avoided.

By design, the outer conductors of both halves of each dipole are at the same DC ground potential. A ground is provided at the base of each antenna for supplemental grounding capability.

Muldipol Military Antenna Specifications

ENVIRONMENTAL

- Built to Military standards
- Rain, salt-fog, sand, dust and fungus to MIL-STD 810F
- Temperature, barometric pressure and humidity to MIL-STD 210C

ELECTRICAL

- Isolation (min.) 30.0 dB
- Polarization Vertical
- Omni Directional +0dB/-1dB
- Uniformity (azimuth)
- VSWR (max.) 2:1 (except D2211, 2.3:1)
- Terminals “N” Female
- Terminal Impedance 50 Ohms
- VHF Applied Power 350 W
- UHF Applied Power 250W
- Vertical Beam Deviation ±10° (horizon)
- Operating Temp -40° to 70° C (-40° to 158° F)

VHF FREQUENCIES ONLY

MODEL	VHF FREQUENCY (MHz)				GAIN (dBi)	# OF OUTPUTS	HPBW DEGREE	MOUNTING DIAMETER	LENGTH INCHES	LENGTH CM	WEIGHT LBS	WEIGHT KG	COLOR	WIND LOAD
	108-174	116-150	118-136	150-174										0.5" RADIAL ICE
D2212		XX			2.0	2	75	1	152.5	386.7	12.5	5.7	Green	2.0
D2212A				XX	2.0	2	75	1	152.5	386.7	12.5	5.7	Green	2.0
D2216		X			2.0	1	75	2	54.5	138.4	5.5	2.5	Green	0.7
D2260			XXX		2.0	3	75	1	196.5	499.1	25.0	11.3	2 Piece Green	2.6
D2260A				XXX	2.0	3	75	1	193.5	491.5	25.0	11.3	2 Piece Green	2.5
D2261A			XX		4.5	1	40	1	140.5	356.9	19.0	8.6	Green	1.7
D2261A1*			XX		4.5	1	40	3	140.5	356.9	19.0	8.6	White	2.1
D2268	XXX				6.0	1	25	1	200.0	508.0	23.5	10.7	Green	3.0
D2272*			XX		2.0	2	75	3	152.5	386.7	17.5	8.0	White	2.3
D2272A			XX		2.0	2	75	2	152.5	386.7	17.0	7.7	Green	2.3
D2276*			X		2.0	1	75	3	54.5	138.4	5.5	2.5	White	0.7

X – Denotes number of active elements
 * COTS Product

MOUNTING DIAMETER KEY

(1) = 3 inch Mast Size O.D. Also available for 2.875 upon request
 (2) = 1.5 to 3 inch Mast Size O.D.
 (3) = 2.875 inch Mast Size O.D. / 1.66 inch adapter also included

Muldipol Military Antenna Specifications



UHF FREQUENCIES ONLY

MODEL	UHF FREQUENCY (MHz)				GAIN (dBi)	# OF OUTPUTS	HPBW DEGREE	MOUNTING DIAMETER	LENGTH INCHES	LENGTH CM	WEIGHT LBS	WEIGHT KG	COLOR	WIND LOAD
	225-400	380-470	400-470	400-500										0.5" RADIAL ICE
D2214	XX				2.0	2	75	1	84.5	214.0	10.0	4.5	Green	1.3
D2217	X				2.0	1	75	2	32.5	81.9	4.0	1.8	Green	0.4
D2219	XXX				2.0	3	75	1	114.5	290.2	13.0	5.9	Green	1.6
D2221	XXXX				2.0	4	75	1	168.5	427.4	17.5	7.9	Green	2.2
D2231			XXXX		2.0	4	75	1	120.0	300.0	14.0	6.4	White	1.8
D2236			XXXX		6.5	1	22	1	84.0	213.4	18.0	8.2	Green	1.2
D2262	XX				4.5	1	40	2	68.0	172.7	13.0	5.9	Green	1.0
D2262A*	XX				4.5	1	40	3	68.0	172.7	13.0	5.9	White	1.1
D2263	XXXX				6.5	1	20	1	134.5	341.0	20.0	9.1	Green	1.8
D2266	XXXXXX				8.0	1	13	1	200.0	508.0	32.0	14.5	Green	2.6
D2266D	XXXXXX				6.0	2	25	1	200.0	508.0	32.0	14.5	Green	2.6
D2274*	XX				2.0	2	75	3	84.5	214.0	11.0	5.0	White	1.3
D2274A	XX				2.0	2	75	2	84.5	214.0	10.0	4.5	Green	1.3
D2277*	X				2.0	1	75	3	32.5	81.9	4.0	1.8	White	0.4
D2284		XX			2.0	2	75	1	57.0	144.8	8.0	3.6	Green	1.0
D2288				XXXX	2.0	4	75	1	114.5	290.2	13.0	5.9	White	1.5

VHF & UHF FREQUENCIES

MODEL	VHF (MHz)				UHF (MHz)		GAIN (dBi)	# OF OUTPUTS	HPBW DEGREE	MTG. DIA.	LENGTH INCHES	LENGTH CM	WEIGHT LBS	WEIGHT KG	COLOR	WIND LOAD (0.5" RADIAL ICE)
	108-174	116-150	118-136	138-174	225-400	400-470										
D2118		X			XX		2.0	3	75	1	114.5	290.2	12.5	5.7	Green	1.5
D2211	X				X		1.5	1	75	1	111.0	281.9	14.0	6.4	White/Green	2.0
D2213		X			X		2.0	2	75	1	84.5	214.0	10.0	4.5	Green	1.3
D2218		XX			X		2.0	3	75	1	168.5	427.4	16.5	7.5	Green	2.2
D2218A		XX			X		2.0	3	75	1	168.5	427.4	16.5	7.5	2 Piece Green	2.2
D2241	X				X		2.0	2	75	3	106.0	269.3	14.0	6.4	White	1.6
D2243				X	X	X	2.0	2	75	3	140.0	350.0	16.5	7.5	2 Piece Green	2.1
D2273*			X		X		2.0	2	75	3	84.5	214.0	11.5	5.1	White	1.3
D2295		X			XX		2.0	3	75	1	125.0	317.5	23.0	10.4	White	2.0
D2296		XX			X		2.0	3	75	1	196.0	497.8	28.0	12.7	White	3.0

X – Denotes number of active elements

* COTS Product

D2295 has lightning rod.

D2296 has lightning rod and obstruction light.

MOUNTING DIAMETER KEY

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