Choke Ring Antenna Calibrations

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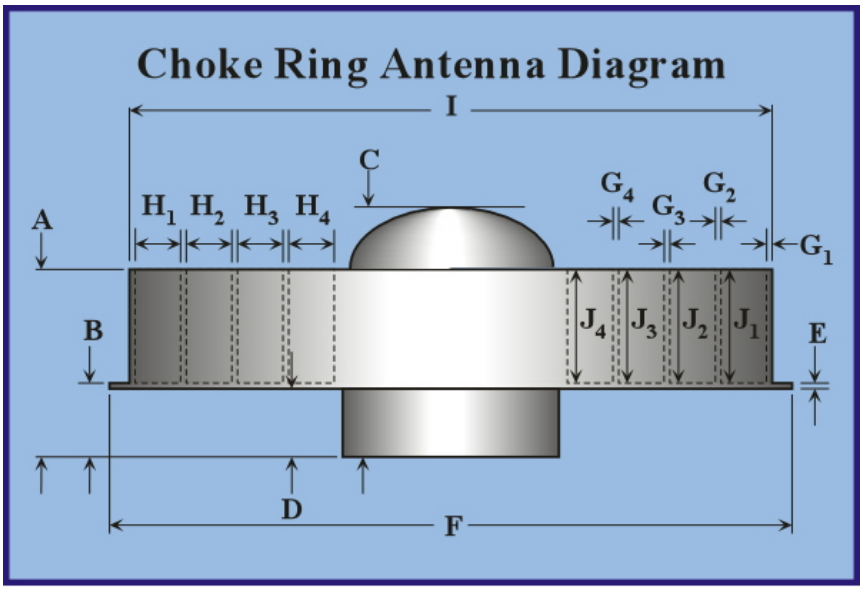
Pictured above from left to right are antennas from Ashtech, Trimble, and Allen Osborne & Associates. With an increase in the number of companies offering a choke ring antenna, it is important that any differences is the dimensions from one antenna to another are noted. UNAVCO measured the dimensions of the Trimble Navigation, Ashtech, Allen Osborne & Associates, and Leika choke ring antennae.



This is a diagram of a generic choke ring antenna, defining the various standard dimensions (which are noted in the table below). Also noted in the table is the Difference in mm from the IGS reported values for those dimensions.

For more information on GPS Antenna Testing and Calibration, please see the The NGS/NOAA Antenna Calibration Page. Inside the table below, the NGS/NOAA test results for each specific antenna model are linked directly to the model number when available. Select the link to see the results.

Also of interest is the SCIGN (Southern California Integrated GPS Network) Website.

Dimensions of Manufactured Choke Ring Antennae

	AOA			Trimble			Leica			Ashtech "D"			Ashtech "E"			Ashtech "B"		
Model	7490582-2			29659-00			10839			700936			700936-02			701945-02		
DMC Element	C 146-6-1 S/N 2243			C 146-6-1 S/N 1993			C 146-10-1 S/N 2839			C 146-10-1 S/N 2821-10			C 146-10-1 S/N 1306			unk		
SCIGN	NO			NO			YES			YES			YES			YES		
Units	Inches	mm	Diff IGS	Inches	mm	Diff IGS	Inches	mm	Diff IGS	Inches	mm	Diff IGS	Inches	mm	Diff IGS	Inches	mm	Diff IGS
"A"	3.988	101.3	0.70	4	101.6	0.40	3.984	101.2	0.81	3.97	100.8	1.16	3.992	101.4	0.60	3.972	100.9	1.11
"B"	1.584	40.2	-2.23	1.497	38.0	-0.02	1.487	37.8	0.23	1.489	37.8	0.18	1.51	38.4	-0.35	1.594	40.5	-2.49
"C"	5.482	139.2		5.508	139.9		5.475	139.1		5.453	138.5		5.475	139.1				
"D"	1.37	34.8	0.20	1.375	34.9	0.08	1.359	34.5	0.48	1.365	34.7		1.38	35.1	-	1.37	34.8	0.20

												0.33			0.05			
"E"	0.12	3.0	-0.05	0.12	3.0	-0.05	0.125	3.2	-0.18	0.119	3.0	-0.02	0.14	3.6	-0.56	0.122	3.1	-0.10
"F"	14.9375	379.4	1.59	15.01	381.3	-0.25	14.9375	379.4	1.59	14.9375	379.4	1.59	14.9375	379.4	1.59			
"G1"	0.139	3.5		0.125	3.2		0.135	3.4		0.13	3.3		0.145	3.7		0.129	3.3	
"G2"	0.139	3.5		0.125	3.2		0.132	3.4		0.13	3.3		0.145	3.7		0.129	3.3	
"G3"	0.137	3.5		0.125	3.2		0.132	3.4		0.13	3.3		0.143	3.6		0.129	3.3	
"G4"	0.137	3.5		0.125	3.2		0.132	3.4		0.13	3.3		0.143	3.6		0.129	3.3	
"H1"	0.999	25.4		0.998	25.3		0.99	25.1		0.994	25.2		0.99	25.1		1.0	25.4	
"H2"	0.981	24.9		1.002	25.5		1	25.4		0.998	25.3		0.988	25.1		1.0	25.4	
"H3"	0.99	25.1		1	25.4		1	25.4		0.998	25.3		0.99	25.1		1.0	25.4	
"H4"	0.994	25.2		1	25.4		0.99	25.1		0.998	25.3		0.99	25.1		1.0	25.4	
"I"	14.1675	359.9		14.173	360.0					14.134	359.0							
"J1"	2.505	63.6		2.500	63.5		2.000	50.8		2.475	62.9		2.490	63.2		2.475	62.9	
"J2"	2.505	63.6		2.500	63.5		2.000	50.8		2.478	62.9		2.491	63.2		2.477	62.9	
"J3"	2.505	63.6		2.500	63.5		2.000	50.8		2.478	62.9		2.491	63.3		2.476	62.9	
"J4"	2.501	63.5		2.500	63.5		2.000	50.8		2.478	62.9		2.491	63.3		2.479	63.0	

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