- **Nec code**
- **Model**
- **Pattern**
- **sweep-130-160**
- **Results**
- **Links**

CM CM 2-metre Lindenblad PARASITIC Array, converted with 4nec2 on 7-Oct-15 8:47 CM Based on lindnbld.ez file download: http://nec-archives.pa3kj.com/EZNEC_FILES CM Four Passive Elements at 45-deg Angles, L=37.61-in, assuming 13.3-in from Center. CM holl_ands mods: Add FR/RP, Just ONE vs Multiple LD Cards, Convert All SYmbols. CM Parasitic Array mod: Add 37.93-in Vertical Dipole, which is ONLY Active Element. CM Angle of the Parasitic Array Elements must be REVERSED to return to RHCP. CM Active & Passive Element Lengths adjusted for Min SWR and Min LHCP at 145 MHz. CM CMD--EVAL --auto-segmentation=0 --char-impedance=50 --num-cores=7 CMD--EVAL -s(130,5,7) --total-gain --publish CE SY freq=145 SY Cond=3e+07 ' ' Half of Stick Dipole Length (in Wavelengths): SY Zmax=0.233 ' Radius of Stick Dipole Element (in Wavelengths): SY RSD=0.0005 ' ' Half-Length of Parasitic Diagonals (in Wavelengths): SY Ldiag=0.231 ' Distance of Diagonals from Center of Antenna (in Wavelengths): SY Sep=0.25 ' Angle of Diagonal wrt X-Y Plane: SY Alpha=-45 ' Projection of Parasitic Diagonal Half-Length onto X-Y Plane: SY Proj1=Ldiag*cos(Alpha) ' Projection of Parasitic Diagonal Half-Length onto Z-Axis: SY Z1=Ldiag*sin(Alpha) ' ' Height of Antenna's Center above Ground Plane: [No effect on FREE SPACE Performance] SY Zh=0 ' Radius of Diagonal Elements: [ALSO IN WAVELENGHT UNITS] SY Rdiag=0.0005 ' ' # segs X1 Y1 Z1 X2 Y2 Z2 radius ' SIMULATED BALUN SOURCE ON GW1: GW 1 15 0.0 0.0 -Zmax+Zh 0.0 0.0 Zmax+Zh RSD ' GW 2 15 -Proj1 -Sep -Z1+Zh Proj1 -Sep Z1+Zh Rdiag GW 3 15 Proj1 Sep -Z1+Zh -Proj1 Sep Z1+Zh Rdiag GW 4 15 Sep -Proj1 -Z1+Zh Sep Proj1 Z1+Zh Rdiag GW 5 15 -Sep Proj1 -Z1+Zh -Sep -Proj1 Z1+Zh Rdiag ' GS 0 0 299.8/freq' Convert above in Wavelengths to meters for NEC2. GE 0 GN -1 EK LD 5 0 0 0 Cond 0 ' EX 0 1 8 0 1 0' GW1 is SOURCE wire ' ' FR 0 1 0 0 145.8 0 ' fm Original ' ' FR choices: ' FR 0 1 0 0 52 ' Fixed Frequency for 6-metes ' FR 0 1 0 0 146 ' Fixed Frequency for 2-meters ' FR 0 1 0 0 443 ' Fixed Frequency for 70-cm ' ' FR 0 21 0 0 40 1 ' Freq Sweep 40-60 every 1 MHz for 6-meters FR 0 31 0 0 130 1' Freq Sweep 130-160 every 1 MHz for 2-meters ' FR 0 41 0 0 420 1 ' Freq Sweep 420-460 every 1 MHz for 70-cm ' ' FR 0 121 0 0 131 3 ' Freq Sweep 131-471 every 3 MHz for 2-m & 70-cm ' FR 0 61 0 0 50 2 ' Freq Sweep 40-160 every 2 MHz for 6-m & 2-m ' FR 0 146 0 0 36 3 ' Freq Sweep 36-471 every 3 MHz for 6-m, 2-m & 70-cm ' ' RP choices in order of increasing calculation time: ' RP 0 1 1 1510 90

90 1 1 0 0 ' 1D Gain toward 0-deg Azimuth - SIDE GAIN ' RP 0 1 1 1510 90 0 1 1 0 0 ' 1D Gain toward 90-deg Azimuth - FORWARD GAIN ' RP 0 1 1 1510 90 180 1 1 0 0 ' 1D Gain toward 270-deg Azimuth - REVERSE GAIN ' RP 0 1 37 1510 90 0 1 5 0 0 ' 2D (Left only) Azimuthal Gain Slice ' RP 0 1 73 1510 90 0 1 5 0 0 ' 2D Azimuthal Gain Slice - PREFERRED RP 0 73 1 1510 90 0 5 1 0 0' 2D Elevation Gain Slice ' RP 0 73 73 1510 90 0 5 5 0 0 ' 3D Lower Hemisphere reveals antenna (Fixed Freq) ' RP 0 285 73 1510 90 0 5 5 0 0 ' 3D Full Coverage obscures antenna (Fixed Freq) EN

	--- Gain ---			-- Ratios --		-- Impedance --			
Freq	Raw	Net	SWR	BeamW	F/R	F/B	Real	Imag	AGT corr
130.0	2.18	-3.50	12.70	180.0	-0.16	0.00	33.39	-133.13	1.00 -0.01
135.0	2.24	-1.45	7.21	180.0	-0.29	0.00	33.22	-92.79	1.00 -0.01
140.0	2.25	0.82	3.24	180.0	-0.51	0.00	33.73	-48.51	1.00 -0.01
145.0	2.09	2.02	1.28	180.0	-0.77	0.00	39.24	1.33	1.00 -0.01
150.0	1.81	0.83	2.62	180.0	-0.84	0.00	56.26	52.77	1.00 -0.01
155.0	1.66	-0.41	4.21	180.0	-0.69	0.00	84.00	95.42	1.00 -0.01
160.0	1.63	-1.11	5.33	180.0	-0.51	0.00	112.11	125.87	1.00 -0.01

Model Link:

Model Link that will be displayed inline on DHC:

sweep-130-160 chart viewer link

pattern viewer link

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