LOG PERIODIC DIPOLES
TRANSMIT - RECEIVE

LINEARLY POLARIZED

Our **LPD series** antennas are lightweight, medium gain, log periodic dipoles designed to transmit and receive signals over a broad frequency range. These antennas are characterized by a high front-to-back ratio, excellent SWR and power gain at all frequencies in the band.

High quality aluminum construction with all stainless steel hardware make for a lightweight, high strength antenna that will provide years of trouble-free operation. Also available is an assortment of low-profile **LPD**'s constructed on cost saving copper-clad dielectric material. These antennas exhibit the same performance standards as our other antennas, but with cost savings to the consumer.

All **LPD antennas** are linearly polarized. Polarization adjustment is possible, in any plane, with a universal joint. Standard **LPD antennas** are intended for relatively permanent installations. **LPD series** antennas operating below 400 MHz are also supplied in a kit form for compactness in packaging and ease of transportation. Antennas in the kit form assemble easily with minimum tool requirements. Log Periodics operating above 400 MHz are designed for end mount installations. The end support makes them ideally suited for use in high-gain, directional log periodic arrays.

LPD-2010/C

DUAL POLARIZED

LPC series antennas comprise two planar log periodic structures in quadrature on a common axis. Standard **LPC antennas** are supplied with two output connectors. Switch assemblies and switch control units are available, for use with **LPC antennas**, to yield vertical, horizontal, right circular or left circular polarizations. These antennas are characterized by a high front-to-back ratio, excellent SWR and power gain at all frequencies in the band.

ARRAYS, HIGH GAIN

LPA series log periodics are high gain log periodic arrays comprising two or more log periodic elements. The **LPA series** antennas operating below 400 MHz are packaged in a kit form for compactness and ease of transportation. One person in the field can easily assemble these antennas.

The Vee configuration **LPV series** log periodic antennas give greater power gain than that obtainable with a planar log-periodic antenna of the same length and taper. The **LPV-2010/C** consists of a set of printed circuit board panels that attach to a rigid Vee-shaped frame with thumbscrews. The short length of the **LPV-2010/C** antenna restricts the movement of the active region as a function of frequency to a relatively small volume, which is desirable in RFI measurements. The antenna disassembles in a few minutes without the use of tools, for storage or transportation.
The **LPD**, **LPC** and **LPA** antennas covering other frequency bands are also available. Individually calibrated linear and dual polarized log periodic antennas, for FCC, VDE, MIL-STD and TEMPEST testing are also available. For a complete listing of individually calibrated antennas, please refer to the last section of this catalog.

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SPECIFICATIONS: ELECTRICAL IMPEDANCE: 50 OHMS POLARIZATION: LINEAR

MODEL	FREQUENCY (MHZ)	GAIN (DBI)	FRONT/ BACK (DB)	VSWR (MAX)	POWER CW	POWER PEAK	3 DB BEAMWIDTH (TYP) E	3 DB BEAMWIDTH (TYP) H
LPD-310/A	30 - 100	6.0	20	2 : 1	1 kW	2 kW	75º	120º
LPD-3100/A	30 - 1000	6.0	20	2 : 1	500 W	1 kW	75º	120º
LPD-475	40 - 75	7.0	20	2 : 1	500 W	1 kW	70º	110º
LPD-811/A	80 - 110	8.0	20	1.8 : 1	300 W	800 W	60º	90º
LPD-8130/A1	80-1300	6.5	20	2.5 : 1	1500 W	1500 W	75º	115º
LPD-140/A	100 - 400	6.0	20	2.5 : 1	300 W	800 W	75º	120º
LPD-140/B	100 - 400	5.0	20	2.5 : 1	1 kW	2 kW	85º	135º
LPD-1011/A	100 - 1100	6.0	20	2 : 1	1 kW	1.4 kW	75º	120º
LPD-2010/C	200 - 1000	7.5	20	1.5 : 1	1 kW	1.4 kW	65º	100º
LPD-2020	200 - 2000	6	20	2 : 1	500 W	1 kW	75º	120º
LPD-2240/A	225 - 400	7.0	20	2 : 1	200 W	500 W	70º	110º
LPD-3500	300 - 5000	4.5	18	2 : 1	5 W	25 W	90º	120º
LPD-4510/A	450 - 1000	7.5	20	2 : 1	200 W	500 W	65º	100º
LPD-4780/A	470 - 800	7.0	20	2 : 1	50 W	100 W	70º	110º
LPD-612/A	600 - 1200	8.0	20	2 : 1	200 W	500 W	60º	90º
LPD-820/A	750 - 2000	6.5	20	2.5 : 1	125 W	300 W	60º	90º
LPD-112/A	1.0 - 12.4 GHz	7.0	18	1.5 : 1	5 W	50 W	70º	110º
LPD-118/A	1.0 - 18.0 GHz	7.0	18	2 : 1	5 W	50 W	70º	110º

MECHANICAL

MODEL	BOOM LENGTH	WIDTH	WEIGHT (LBS / KG)	CONSTRUCTION	MOUNTING	CONNECTOR TYPE
LPD-310/A	142"	200"	44 / 20	Aluminum	Center	N female
LPD-3100/A	210"	197"	54 / 23	Aluminum	Center	N female
LPD-475	96"	130"	35 / 15.8	Aluminum	End	N female
LPD-811/A	60"	75"	7.6 / 3.5	Aluminum	Center	N female
LPD-8130/A1	65”	75"	11.1 / 5	Aluminum	Center	N female
LPD-140/A	69"	59"	8 / 3.6	Aluminum	Center	N female
LPD-140/B	35"	59"	7 / 3	Aluminum	Center	N female
LPD-1011/A* **	60"	60"	7.6 / 3.5	Aluminum	Center	N female
LPD-2010/C* **	51"	29"	4 / 1.8	Aluminum	Center	N female
LPD-2020	50"	29"	5 / 2.3	Aluminum	Center	N female
LPD-2240/A	40"	29"	3 / 1.4	Aluminum	Center	N female
LPD-3500	16.5”	20”	1.0 /.45	Copper Clad	Center	N female
LPD-4510/A	19"	13"	7.6 / 3.5	Aluminum	End	BNC female
LPD-4780/A	15"	12.5"	< 1 / .45	Copper Clad	End	BNC female
LPD-612/A	23"	10"	4 / 1.8	Aluminum	End	BNC female
LPD-820/A	10"	7.5"	2 / 0.9	Aluminum	End	BNC female
LPD-112/A	8.5"	8"	< 1 / .45	Copper Clad	End	SMA female
LPD-118/A	9"	8"	< 1 / .45	Copper Clad	End	SMA female

*** For ordering in kit form, add a subscript "K" at the end of the model number.

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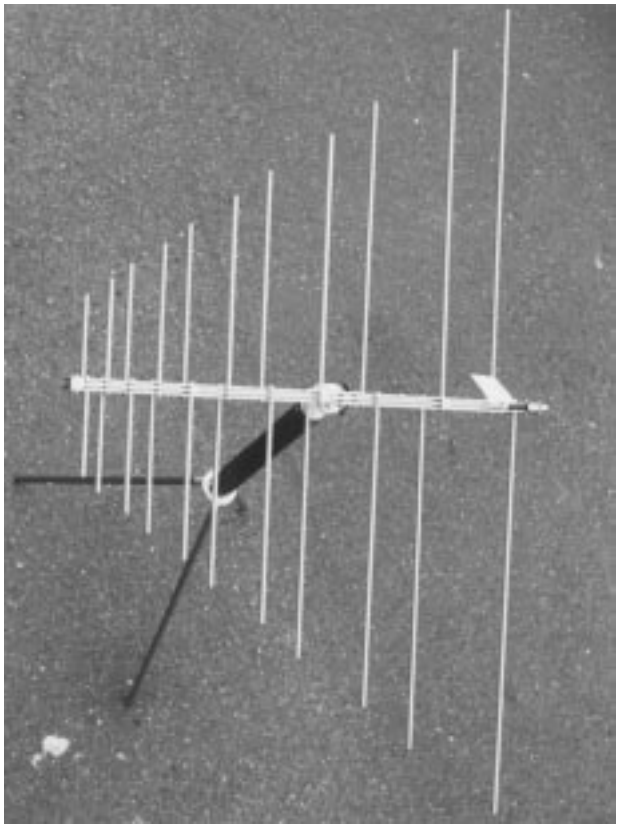
Typical Gain (dBi)		
Frequency (GHz)	LPD-112/A	LPD-118/A
1	7.2	6.7
2	7.4	5.0
3	7.4	6.0
4	7.8	8.0
5	7.8	7.2
6	8.25	8.6
7	8.6	8.2
8	8.95	8.2
9	9.2	9.6
10	9.2	9.3
11	9.6	8.6
12	9.9	7.9
13	10.0	7.8
14		9.0
15		8.5
16		8.8
17		7.6
18		4.9

Typical Gain (dBi)		
Frequency (GHz)	LPD-1011/A	LPD-2010/C
100	5.0	
200	6.4	7.0
300	7.5	8.2
400	6.7	8.3
500	8.0	9.1
600	8.0	8.7
700	6.8	7.9
850	6.6	7.5
1000	7.1	7.1
1100	6.2	

LPD-3500 - Typical Gain	
Frequency (GHz)	Gain (dBi)
0.3	4.6
0.4	6.1
0.5	5.7
0.6	6.0
0.7	5.9
0.85	6.3
1.0	6.1
2.0	4.1
3.0	4.3
4.0	6.4
5.0	4.8



LPD-140/B

LPD-3500

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LOG PERIODIC DIPOLES
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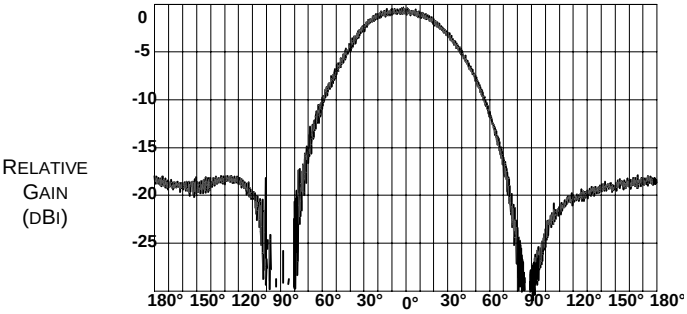
TYPICAL GAIN (DBI)		
FREQUENCY (MHZ)	LPD-310/A	LPD-475
30	6.2	---
40	6.8	---
50	7.4	7.8
60	6.9	7.5
70	6.3	6.6
75	6.4	6.4
80	6.2	---
90	6.7	---
100	6.7	---

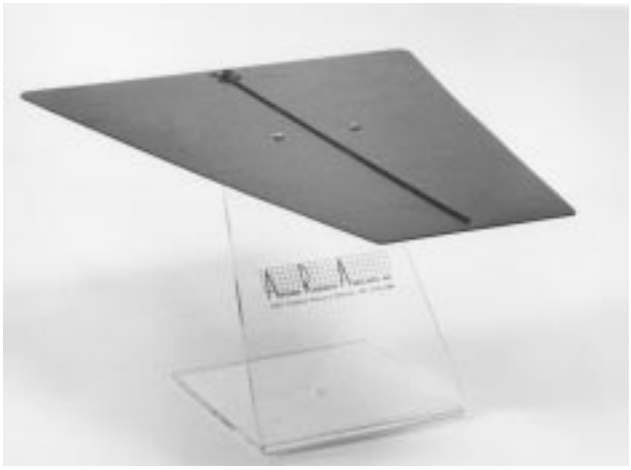
LPD-475

LPD-310/A

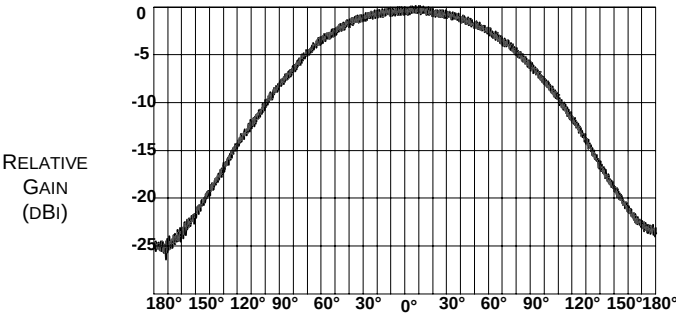


47 MHZ - E-PLANE

MODEL LPD-475 - RADIATION PATTERNS



LPD-4780



47 MHZ - H-PLANE

LOG PERIODIC DIPOLES
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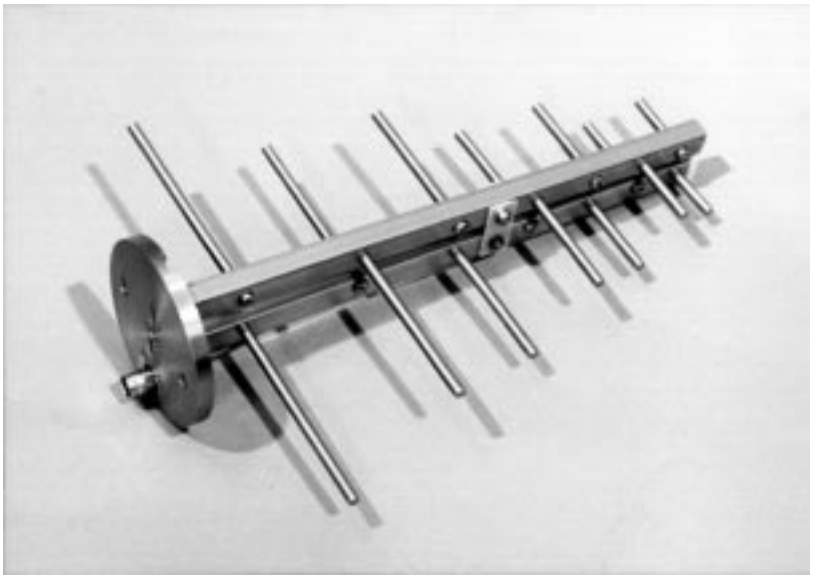
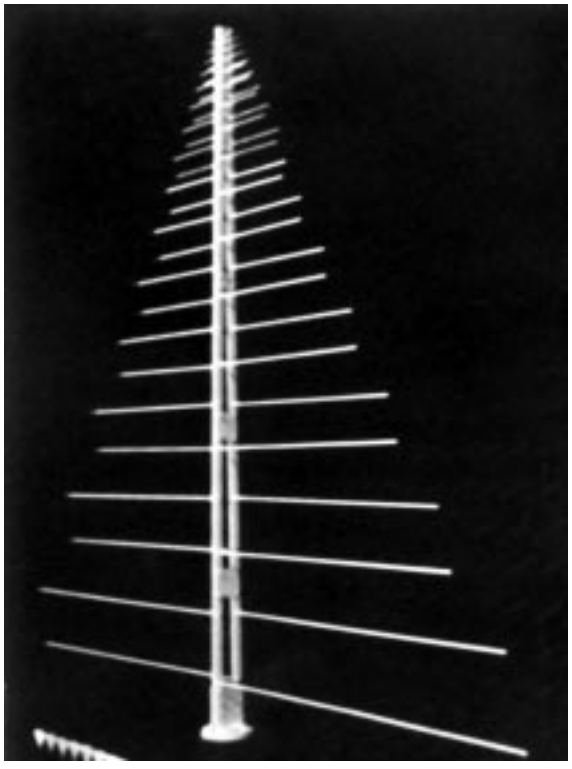
LPD-8130/A1
TYPICAL ANTENNA FACTOR AND GAIN

FREQUENCY (MHz)	AFE (dBi M-1)	GAIN (dBi)
80	2.4	5.9
100	3.8	6.4
150	7.3	6.5
200	9.5	6.8
250	11.2	7.0
300	12.5	7.3
400	14.8	7.5
500	16.1	8.1
600	18.0	7.8
700	19.9	7.2
850	20.7	8.1
1000	21.5	8.7
1100	23.4	7.7
1200	24.4	7.4
1300	26.1	6.4



LPD-820/A



LPD-8130/A1

TYPICAL E-FIELD ANTENNA FACTOR AND GAIN

FREQUENCY (MHz)	MODEL LPD-820/A AFE (dB M-1)	MODEL LPD-820/A GAIN (dBi)	MODEL LPD-2020 AFE (dB M-1)	MODEL LPD-2020 GAIN (dBi)
200			9.6	6.7
250			11.2	7.0
300			12.7	7.1
400			14.8	7.5
500			16.2	8.0
600			17.6	8.2
700			19.7	7.4
850	21.0	7.8	21.0	7.8
1000	22.5	7.7	22.5	7.7
1100	23.6	7.5	23.6	7.5
1200	25.6	6.2	25.6	6.2
1300	26.4	6.1	26.4	6.1
1400	26.3	6.9	26.3	6.9
1500	26.5	7.3	26.5	7.3
1600	27.8	6.5	27.8	6.5
1700	28.2	6.6	28.2	6.6
1800	29.0	6.3	29.0	6.3
1900	29.9	5.9	29.9	5.9
2000	31.7	4.6	31.7	4.6

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