



Log Periodic Antennas

Yagis run out of gas at around 10% bandwidth. Logs can be built that cover 1000% bandwidth (100 to 1000 MHz). Log periodics can be stacked for more gain and narrower beamwidth. They can be designed for circular polarity. Short boom designs can work over wider bandwidths by tilting the elements forward and "reusing" the longer element.

CHARACTERISTICS

Almost unlimited bandwidth possible with 10 to 1 bandwidth quite practical
All elements are driven and when matched to 50 Ohms, 2:1 VSWR peaks are typical
Gain is typically lower than other antenna types: range 3 dBi to 12 dBi in free space
Linear polarity is typical but can be designed to produce circular polarity, either Right Hand or Left Hand
Log periodics can be stacked in arrays for more gain but broadband matching is difficult

LOG PERIODIC FREQUENCY RANGE

HF 3-30 MHz

VHF 30-300 MHz, 30-100 MHz are typical

UHF 300-1000 MHz and 500-2000 MHz are typical

Of course any combination of HF, VHF and UHF/Microwave is possible.

Stacking two different Logs can be a good solution to wideband coverage.



TRADITIONAL LOGS

MODEL	FREQUENCY	GAIN	F/B	LENGTH
6-10LP5	6-10 MHz	5 dBi	15 dB	30'
10-30LP8	10-30 MHz	6 dBd	15 dB	29'
7 & 10-30LP8	10-30 / 7 MHz	6 / 3 dBd	15 / 6 dB	30'
7 & 10-30LP9	10-30 / 7 MHz	6 / 3.5 dBd	15 / 6 dB	41'
8 & 10-30LP9	10-30 / 8 MHz	6 / 3.5 dBd	15 / 6 dB	41'
15-22LP16	15-22 MHz	6 dBi	15 dB	19'
15-50LP11	15-50 MHz	6 dBd	15 dB	36'
17-30LP7	17-30 MHz	6.5 dBd	20 dB	24'
20-40LP9	20-40 MHz	6.0 dBd	12 dB	15'
20-100LP14	20-100 MHz	6.0 dBi	12 dB	7'
28-100LP16	28-100 MHz	6.0 dBd	12 dB	27'
30-70LP7	30-70 MHz	4.5 dBd	15 dB	13'
40-100LP10	40-100 MHz	6.0 dBd	12 dB	11'
40-50LP13	40-50 MHz	6.0 dBd	12 dB	35'
45-51LP7	45-51 MHz	6.0 dBd	12 dB	12'
75-250LP12	75-250 MHz	6.0 dBd	12 dB	15'
100-450LP14	100-450 MHz	4.5 dBd	12 dB	8'
100-600LP16	100-600 MHz	4.5 dBd	15 dB	8'

V-LOGS, LINEAR & CIRCULAR

MODEL	FREQUENCY	GAIN	F/B	LENGTH
20-100VLP14	20-100 MHz	4.5 dBi	12 dB	7'
90-800VLP22	90-800 MHz	7.5 dBi	12 dB	11'
100-600VLP16	100-600 MHz	7.5 dBi	12 dB	7'
100-1000VLP22	100-1000 MHz	7.5 dBi	12 dB	8'
295-460VLP15	295-460 MHz	7.5 dBi	20 dB	7'