



# MODEL LP-1017

**2 KW ROTATABLE HF LOG PERIODIC ANTENNA**  
**NATO STOCK 5985-01-028-8263**

The LP-1017 is a commercial, lightweight, HF log periodic antenna, designed for medium to long range communications. The LP-1017 operating range is 6.2 - 30.0 MHz and is unique as its physical size is reduced over comparable antennas. Power rated at 2kW and 4 kW PEP, the LP-1017 is ideally suited for use in broadband ALE (automatic link establishment) or fixed frequency commercial applications where performance and reliability are major factors. The antenna is constructed of the finest tubular aluminum available, and all elements are tapered aluminum tubing for minimum weight and wind drag.

- Broadband operation available for ALE (automatic link establishment) or frequency hopping operation without complex external tuning units
- Lightweight, compact array
- Low VSWR and high gain across the operating band

## STRUCTURAL CHARACTERISTICS

Boom length	37.75 feet/11.52 m
Longest element	49.4 feet/15.06 m
Turning radius	31.5 feet/9.6 m
Total number of elements	17
Net weight	382 lbs/173.6 kg
Wind loading capability	
No ice	80 mph/128.72 kmph
Radial ice	60 mph/96.54 kmph
Wind surface area	33.24 sq ft/3.09 sq m
Shipping weight	668 lbs/303 kg
Shipping volume	50.7 cubic ft/1.5 cubic m

## ELECTRICAL CHARACTERISTICS

Frequency range	6.2 — 30.0 MHz
Power handling capability	4.0/2.0 kW
PEP/average	
Polarization	Horizontal
Cross polarization	20 dB down
Forward gain over average soil	8dB@6.2 MHz *
conditions (in dBi)	12dB@30 MHz
Front to back ratio	10 dB nominal
Nominal VSWR (with respect to 50Ω)	2.5:1
Input impedance	500
Input connector	N female
Half power beam widths (free space)	
E plane (average)	70°
Vertical angle of maximum radiation	
Low frequency	35°
High frequency	8° *

\* At a phase center height of 80 feet/24.4 meters

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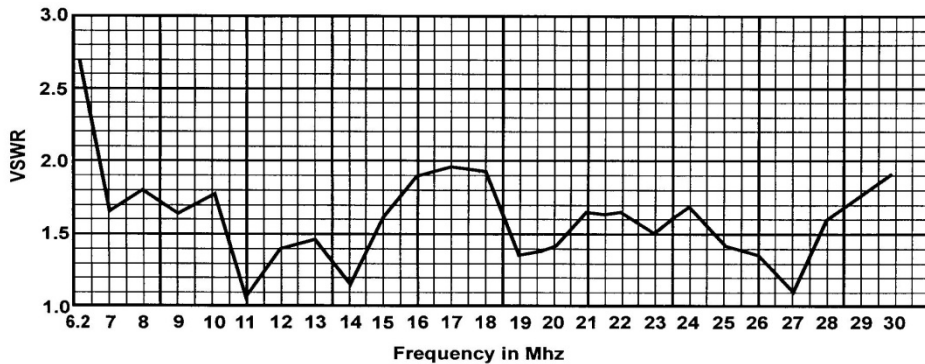
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**National Stock Number: 5985-01-028-8263**

**TAKE-OFF ANGLES AT VARIOUS HEIGHTS ABOVE GROUND AND FREQUENCIES**

Height Above Ground	Frequency				
	6.2 MHz	10 MHz	15 MHz	25 MHz	30 MHz
20 feet	90°	90°	55°	29°	24°
40 feet	80°	38°	24°	14°	12°
60 feet	42°	24°	16°	12°	8°
80 feet	24°	16°	14°	9.50	8°
100 feet	25°	20°	12°	5°	3°

**Typical VSWR Chart**



The LP1017, when purchased, and installed with a USAP R3501 rotor will provide for continuous rotation and remote control wherever you have an internet connection.

United States Antenna Products (USAP) manufactures at our Frederick, Maryland plant. We can install, tune and provide a regular maintenance program for your antenna site operations.

United States Tower Services (USTS) has over thirty years experience in erecting and servicing antennas and antenna tower systems. This includes extensive experience in the installation and maintenance of large HF stationary and rotating arrays.

Combined, USAP and USTS will provide a total antenna system, up and running — just connect your radios to the transmission lines we have installed.

\*VSWR depends upon the height of the antenna above ground, ground conditions, and the influence of other structures or antennas in the vicinity. The specification is for ideal conditions.

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