



20-50-10-3  
VHF/UHF (SINGGARS/EPLRS) & L-Band  
Spring Mounted Antenna  
with Detachable Element  
30 to 88, 225 to 450 & 1250 to 2000 MHz

## FEATURES

- **Spring mounted - can be tied down for stowage**
- **Fits standard CECOM 4 hole mount**
- **Robust weather-proof element detachment joint above spring**
- **Designed to sustain 25 mph “Oak Beam” Test**
- **100 Watts CW Power**
- **Very high (55-75 dB) isolation between bands**
- **Complies with MIL-STD-810 Environmental and MIL-S-901 shock**
- **High Voltage protected**
- **Omni-directional in azimuth - gain optimized near horizon**

The 20-50-10-3 is a vertically polarized, omni-directional VHF/UHF/L-Band antenna. It is compatible with radios operating in the 30 to 88 MHz, 225 to 450 MHz and 1250 to 2000 MHz frequency ranges. The antenna can handle 100 Watts of power, has separate VHF, UHF and L-Band coaxial connectors and requires no external tuning.

The antenna comprises a VHF monopole surrounded at its top by a UHF/L-band dipole. Design of the elements is such as to minimize coupling between bands and additional in-line diplexing and filtering is included in the antenna base to achieve between 55 to 75 dB isolation (see over). Radiating elements are totally encased in high strength fiberglass tubing which provides insulation in the event of accidental contact with 10kV RMS (minimum) high voltage power lines. Rugged design ensures reliability in arctic, jungle or equatorial desert environments. The antenna is spring mounted for vehicular use and has a mounting base compatible with standard CECOM mounting brackets, having four 7/16 inch dia. holes on a 4.5 inch circle.



### Cooper Antennas Ltd for non-USA customers

Thames Industrial Estate, Unit K, Fieldhouse Lane,  
Buckinghamshire SL7 1TB, UK  
Tel: +44 (0) 1628 482 360  
Email: [sales@cooperantennas.com](mailto:sales@cooperantennas.com)  
[www.cooperantennas.com](http://www.cooperantennas.com)



### Australian Representatives

**ROJONE, PTY LTD.**

Tel: 02 9829 1555  
E: [sales@rojone.com.au](mailto:sales@rojone.com.au)  
[www.rojone.com.au](http://www.rojone.com.au)

**SPECIFICATIONS**  
**Cooper Antennas Model 20-50-10-3**  
**VHF/UHF (SINGARS/EPLRS) & L-Band Spring Mounted Antenna**  
**with Detachable Element**

**ELECTRICAL**

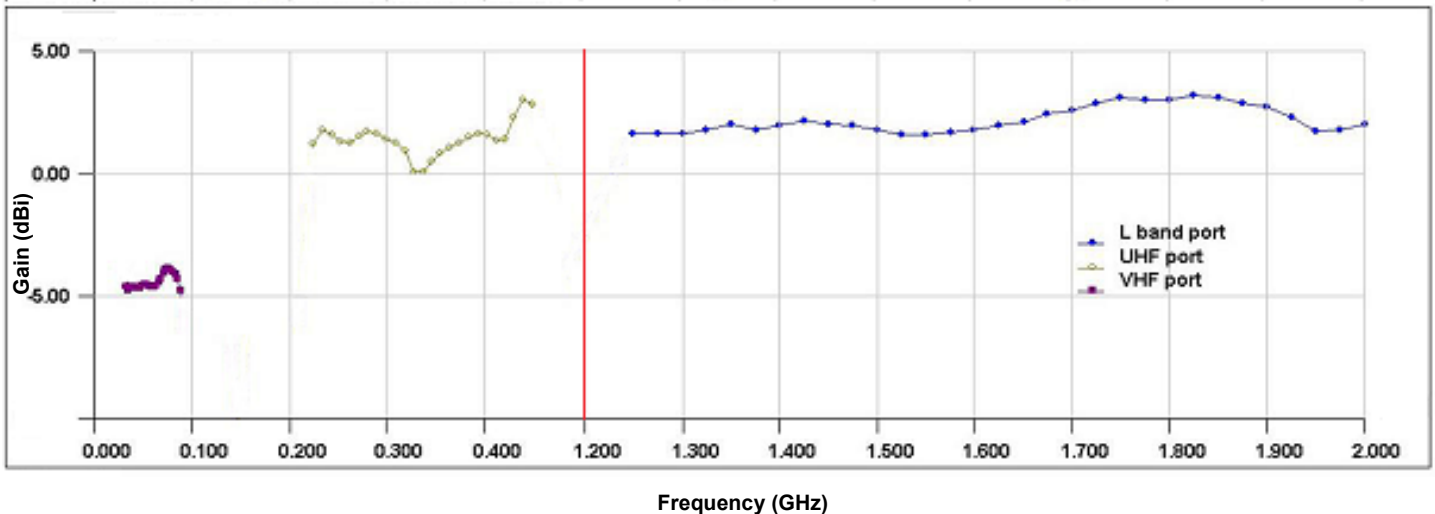
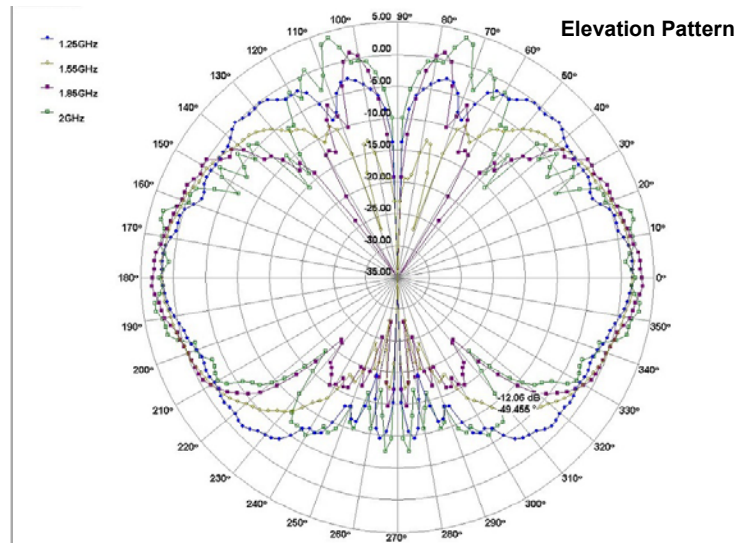
**MECHANICAL**

Frequency	30-88/225-450 1250-2000 MHz
VSWR	≤ 3:1 VHF ≤ 3:1 UHF ≤ 2.5:1 L-Band
Gain (at horizon on 4'x 4' ground plane )	30-88 MHz between - 5dBi and -2.5dBi 225-400 MHz ≥ 0dBi 401-450 MHz ≥ 1dBi 1250-2000 MHz between +1dBi to +2dBi (see chart below)
Isolation	VHF to UHF    30-88 MHz    ≥ 60 dB 225-450 MHz    ≥ 65 dB VHF to L Band 30-88 MHz    ≥ 65 dB 1200-2000 MHz ≥ 55 dB UHF to L Band 225-450 MHz ≥ 75 dB 1200-2000 MHz ≥ 55 dB
Impedance (nominal)	50 Ohms
Power	100 Watts CW
Polarization	Vertical
Antenna RF Connectors	BNC Female (VHF) N Female (UHF) TNC Female (L-Band)
Operational Temperature	-51°C to +71°C

Weight	14.4 lbs (6.5kg)
Overall Height	72 inches (1828mm)
Element Diameter	3 inches (75mm)

**FINISH**

**MIL-DTL-14072E(CR), MIL-DTL-53039, 383 GREEN**  
**Other finish options are available. Please specify finish required when ordering.**



**Note: Cooper Antennas Ltd has a policy of continuous product improvement and data herein is therefore subject to change. Please check with Cooper Antennas Ltd that this data sheet is at latest issue before initiating contract activity.**