



20-50-10-13

Tri-Band Vehicular Antenna
30-88 / 225-450 / 1325-1850 MHz

FEATURES

- **Three independent outputs**
- **Robust, spring mounted element, can be tied down for stowage**
- **Tested for “Oakbeam” impact survival**
- **Omni-directional azimuth pattern with radiation maximum near horizon**
- **DC grounded element with at least 10 KV high voltage protection**
- **Standard 4 hole NATO mount**
- **Complies with MIL-STD-810 Environmental and MIL-S-901 Shock**

Derived from Cooper Antennas very successful dual band 20-20-13 (AS-4697/VRC) which has been supplied in large quantities to the US Army, this tri-band version adds 1325-1850 MHz capability to a well proven design.

The 20-50-10-13 is a vertically polarized, VHF/UHF/L-band antenna having 35/40 dB filters between each of three RF outputs.

The antenna comprises a UHF dipole surmounted by a stacked L-band dipole integrated within a VHF monopole.

Radiating elements are encased in a high strength, fiber glass tube with filters and matching circuits in the antenna base which has a standard 4 hole NATO mounting plate.



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SPECIFICATIONS

Cooper Antennas Model 20-50-10-13

Tri-band Vehicular Antenna

ELECTRICAL

Frequency Band	30 - 88 MHz 225 - 450 MHz 1325 - 1850 MHz
Impedance	50 ohms (nominal)
VSWR	≤ 3.5:1 over 95% of band 30 - 88 MHz ≤ 3.0:1 over 95% of band 225 - 450 MHz ≤ 2:1 over 95% of band 1325 - 1850 MHz
Polarization	Vertical
Gain	Between -5 dBi and -2.5 dBi over the band 30 - 88 MHz Better than 0 dBi over the band 225 - 450 MHz Typically +2 dBi over the band 1325 - 1850MHz
Isolation	≥ 35 dB VHF/UHF ≥ 40 dB UHF/L-Band ≥ 35 dB VHF/L-Band
Power Handling	65 Watts CW
Connectors	BNC Female VHF TNC Female UHF N Type Female L-Band

MECHANICAL

Height from Mount	82 inches (2083 mm) max
Element Diameter	2.25 inches (57 mm)
Weight	10 lbs (4.55 kg)

FINISH

Lusterless Urethane NATO Green (or Tan as 20-50-10-13F07)
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.