

VHF3088T/L

VHF/L-Band tuneable vehicle antenna, monopole/dipole, 1 m,
30-88 MHz, 1200-2000 MHz

Tactical Antennas: Vehicle Mount



Application

The VHF3088T/L is an affordable high-gain low-profile antenna for use on vehicles. In VHF the antenna has an equivalent performance to a 3.5 m whip although less than a third of the height.

The antenna has been designed to resolve all the problems associated with long whips on vehicles such as breakages, interference with high voltage lines or the need to be tied down when travelling at speed.

The antenna is a direct replacement for existing VHF whip antennas and uses the same NATO base support.

The very high performance of the antenna over the complete 30 to 88 MHz range is obtained through the use of low loss PIN diode switching of a low-loss radiating system. An excellent VSWR is assured through the use of a digitally controlled automatic control circuit.

The added L Band passive radiating element has class leading performance due to a stacked radiator system.

In VHF the antenna tuning time is less than 60 μ s and so can be used with all modern tactical VHF radios.

Electrical Specifications

Frequency Range	VHF: 30-88 MHz (tuned) L-Band: 1200-2000 MHz (passive)
VSWR	VHF: < 2.5:1 on tuned frequency L-Band: < 3.0:1
Port to Port Isolation	> 30 dB within bands
Nominal Impedance	50 Ω
Power Rating	75 W CW
Gain	See diagrams
Instantaneous Bandwidth	VHF: > 300 KHz
Radiation Pattern	Azimuth: Omnidirectional Elevation: VHF: As per a $\frac{1}{4}$ wave whip L-Band: See diagram
Polarisation	Vertical when vertically installed
Power Supply	Average 5 W @ 24 VDC
Connector	VHF: BNC female L-Band: SMA female Control: See diagram

Mechanical Specifications

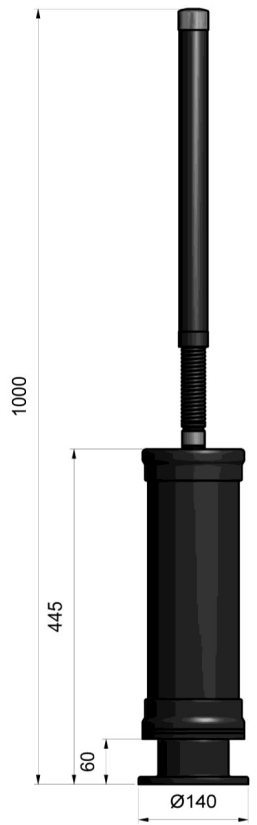
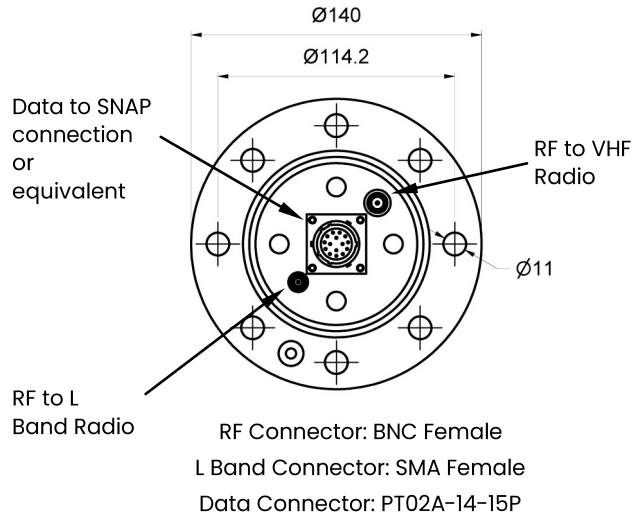
Design	Low loss PIN diode tuned element with passive radiator for VHF and passive stacked dipole elements for L band.
Length	1 m
Weight	3.8 kg
Wind Rating	55 m/s = 201 km/h
Finish	Polyurethane lacquer, black drab. Black base. Other colours on request
Temperature Range	- 55°C to + 71°C

Interface Description

The antenna is extremely efficient because it is a narrow-band high-Q antenna. The required frequency information to tune the antenna is obtained in digital format from the radio.

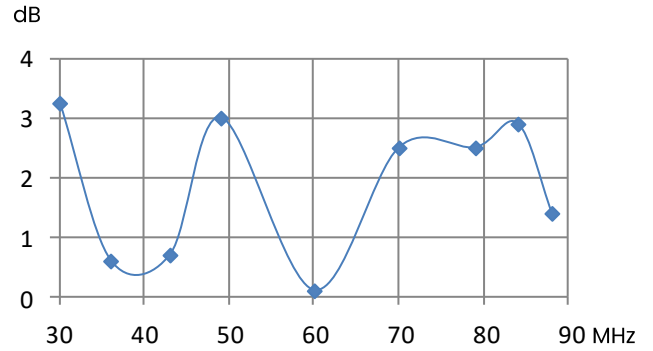
The standard antenna interfaces directly to any tactical radio having a SNAP output such as all US Army SINCGARS compatible radios.

For radios which do not have a SNAP output, Comrod can adapt the antenna to the required digital format.



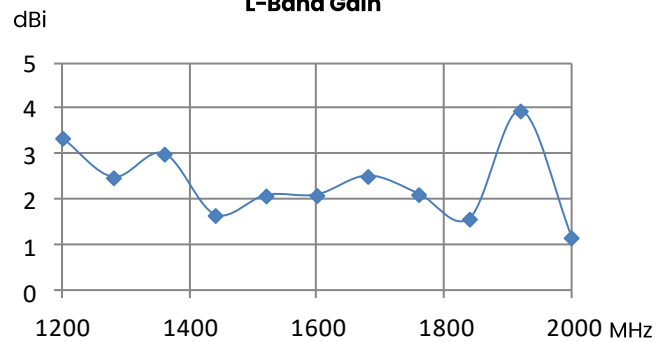
Gain and Patterns

VHF Gain

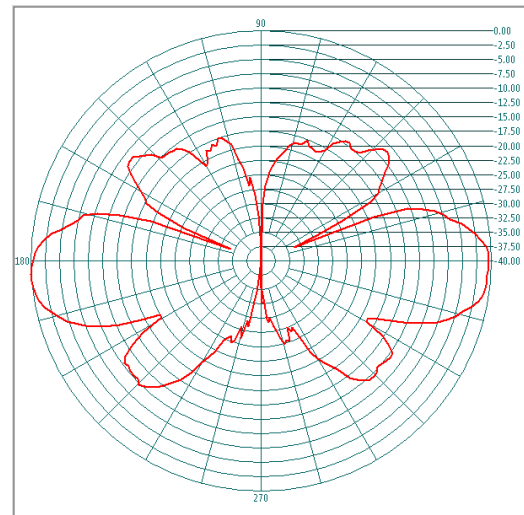


(relative gain compared to a Comrod 3.4 m centre-fed antenna)

L-Band Gain



Typical L-Band Radiation Pattern



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