

Antenna Design & Supply

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BPV-100-512 VHF/ UHF Vehicle Whip

This is a broadband antenna designed for high performance in the VHF/ UHF bands 100-512 Mhz. Power rating is 100 watts continuous, and gain over the band is comparable to a tuned ¼ wave whip antenna. Tuning is automatic and all tuning elements are incorporated within the antenna and base.

Fabricated from fibreglass, the antenna has high impact survival and incorporates high voltage power line protection via a Polyolefin outer jacket covering the full length of the antenna..

The antenna whip is used in conjunction with a rugged base unit with heavy duty stainless steel spring. The base is fitted with mounting holes of UK/Nato 6 hole, or USA 4 hole pattern.

Specifications

| | |
|--------------------|------------------------------------------------------------------|
| Frequency range: | 100 to 512 MHz (without tuner) |
| Power Rating: | 100 watts |
| Radiation pattern: | Omnidirectional |
| VSWR: | Better than 3:0:1 across band |
| Polarisation: | Vertical |
| Input Impedance: | 50 Ohms |
| Input connector: | BNC Female |
| Whip Diameter: | 12.5mm |
| Overall height: | 0.75m |
| Impact Survival: | Better than 80 impacts at the midpoint of the antenna at 40 kph. |
| Mounting: | UK/Nato 6 hole, or USA 4 hole pattern |
| Colour: | Mil Spec painted to customer designated colour |



The antenna is designed and constructed to meet the requirements of the following standards

- Mil-Std-810F, Method 501.4**
- Mil-Std-810F, Method 502.4**
- Mil-Std-810F, Method 507.4**
- Mil-Std-810F, Method 505.4**
- Mil-Std-810F, Method 506.4**
- Mil-Std-810F, Method 500.4**
- Mil-Std-810F, Method 509.4**
- Mil-Std-810F, Method 510.4**
- Mil-Std-810E, Method 514.4**
- Mil-Std-810F, Method 514.5**
- Mil-Std-810F, Method 516.5**
- Mil-Std-810F, Method 504**

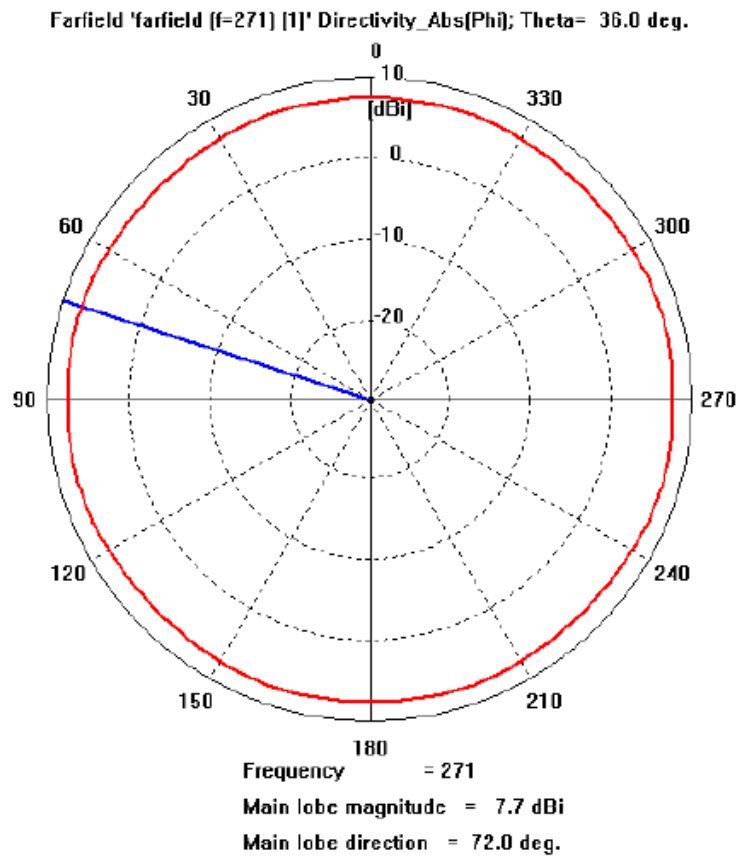
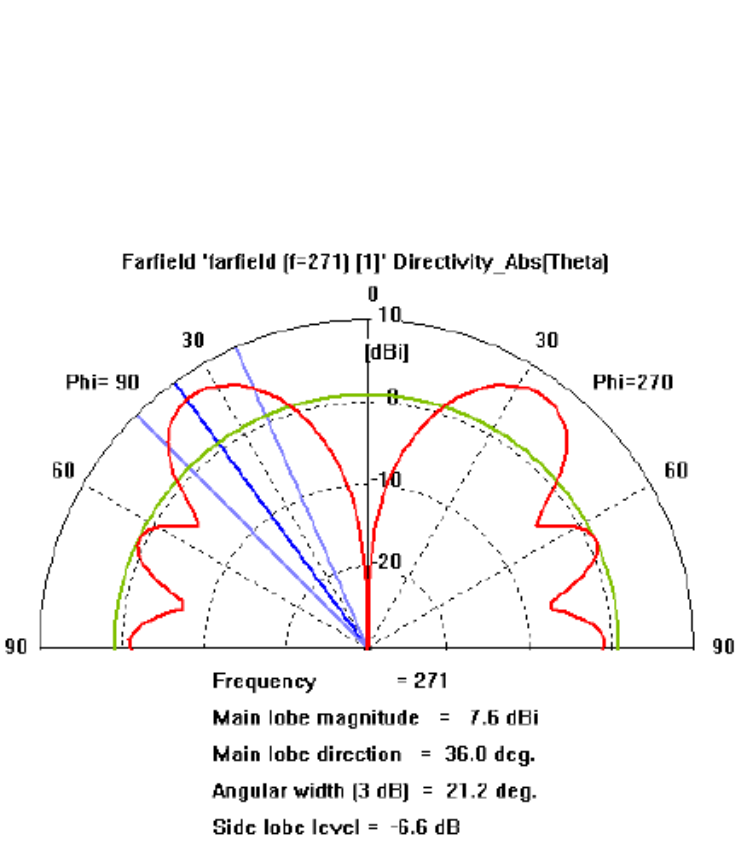
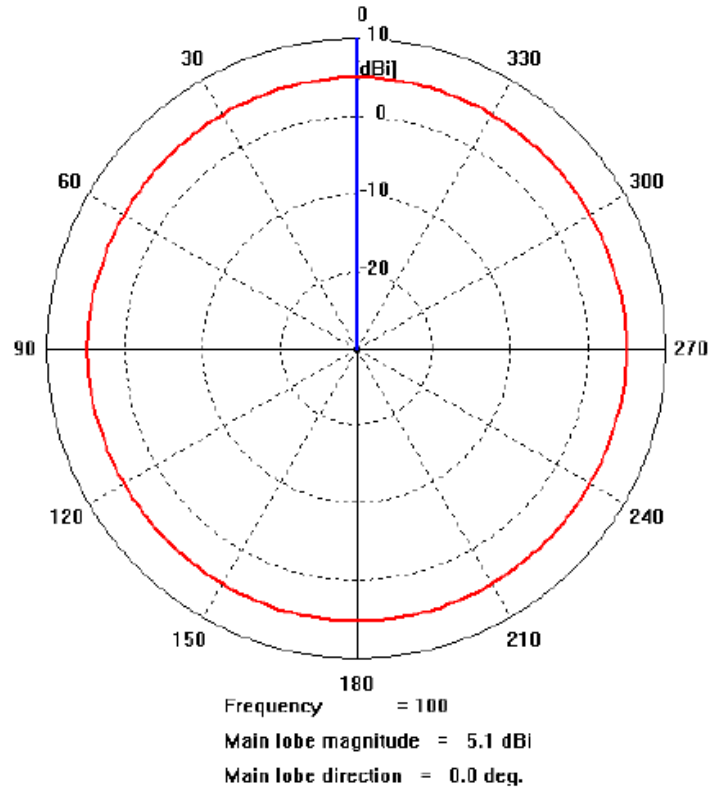
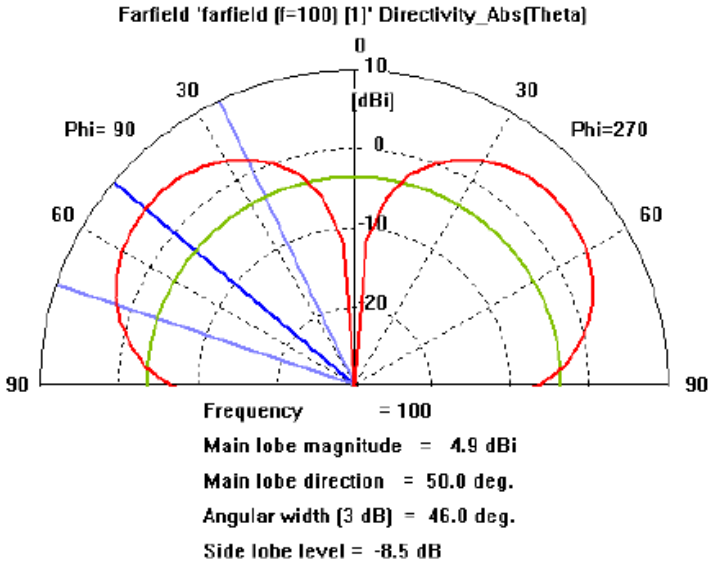
Antenna Base includes mounting holes to suit UK/Nato 6 hole or USA 4 hole pattern

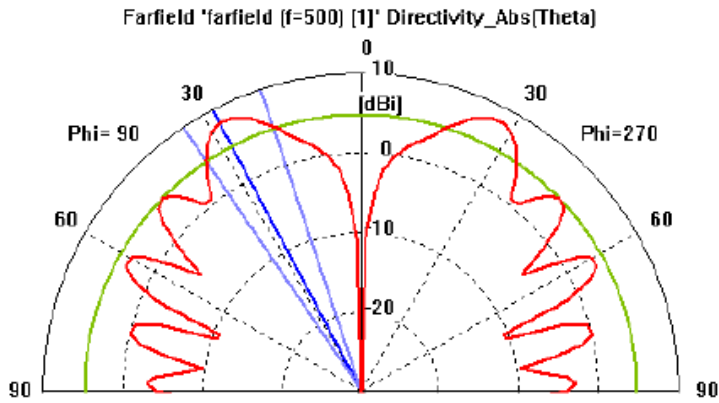
BPV-100-512 MHz Broadband VHF/ UHF Vehicle Whip

Antenna mounted vertically on 3m x 3m conductive base plane.

Representative Radiation Patterns

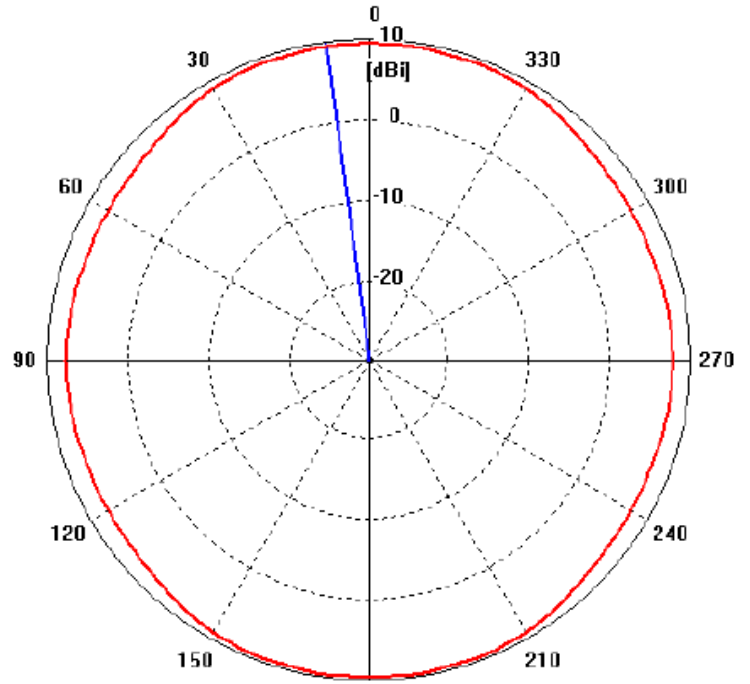
Frequencies in MHz





Frequency = 500
 Main lobe magnitude = 8.2 dBi
 Main lobe direction = 28.0 deg.
 Angular width (3 dB) = 15.4 deg.
 Side lobe level = -3.3 dB

Farfield 'farfield (f=500) [1]' Directivity_Abs(Phi); Theta= 30.0 deg.



Frequency 100 = 500
 Main lobe magnitude = 9.5 dBi
 Main lobe direction = 8.0 deg.