

# BROADBAND PROPAGATION

Antenna Design & Supply

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## FD-150-22m HF BROADBAND Folded Dipole

The folded dipole is a resistively terminated broadband antenna which although inefficient compared with other broadband HF designs\* is low cost, compact, light and easily installed. The antenna is an old design first described in amateur circles in 1951.

Barker and Williamson pioneered commercialization of the design and it is still a popular antenna, in widespread use. The antenna can be installed as a flat top, sloper or inverted "V".

Our folded dipoles are, as with our other antennas, constructed to the highest quality standards with aluminium balun and load cases, UV stabilized fiberglass spreaders, cable strain relief and connector weather shrouding.

**No antenna tuner is required**

### Specifications

Frequency range: 5-18 MHz  
Input Impedance: 50 Ohms nominal  
Power Input: 150 watts PEP  
Input Connector: UHF Socket  
VSWR: Better than or equal to 2:1  
Max.Wind Speed: 250 kilometres/ hour\*

### Dimensions for Inverted Vee mounting

Central Mast height: 6.5 metres.(Minimum)  
Outer Mast Height 2.4 metres (Minimum)  
Outer Mast spacing: 24 metres  
Shipping weight: 6 Kilograms  
Shipping size: 800 x 650 x 200 mm

### Options

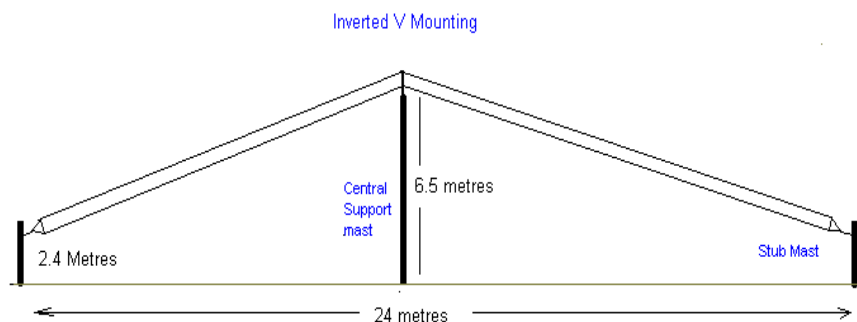
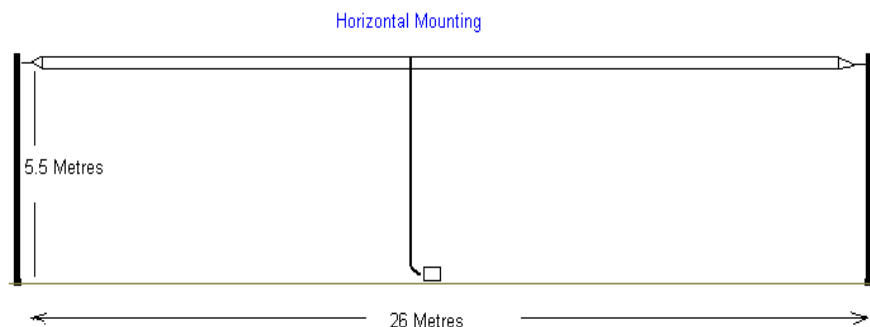
#1 Supplied with nominated length RG58 or RG213 (low loss) coaxial cable fitted with connectors at both ends.

#2 Supplied with Central Mast halyard and pulley

**Please specify (by description) when ordering**

\*In accordance with AS1170.2 SAA LOADING CODE; WIND LOADS 1989

\*Measured at transceiver with 30m of RG 58 feeder



## Folded Dipole Model No. FD-150-22m Specification Sheet

### Construction

Ruggedly constructed to exacting standards using heavy-duty 3.2mm stainless radiating wires with solid UV resistant wire spreaders, and powder coated Aluminium component cases. An integral connector weather shroud is provided to protect the coax-antenna connection.

Antenna is supplied fully assembled and includes necessary hardware for mounting as an inverted vee.

### Specifications

Frequency range: Recommended	6-18 MHz, Useable 5-18 MHz
Input Impedance:	50 Ohms nominal
Power Input:	150 watts PEP, 100 watts CW
Input Connector:	UHF Socket
VSWR:	Better than or equal to 2:1
Max.Wind Speed Rating:	250 kilometres/ hour

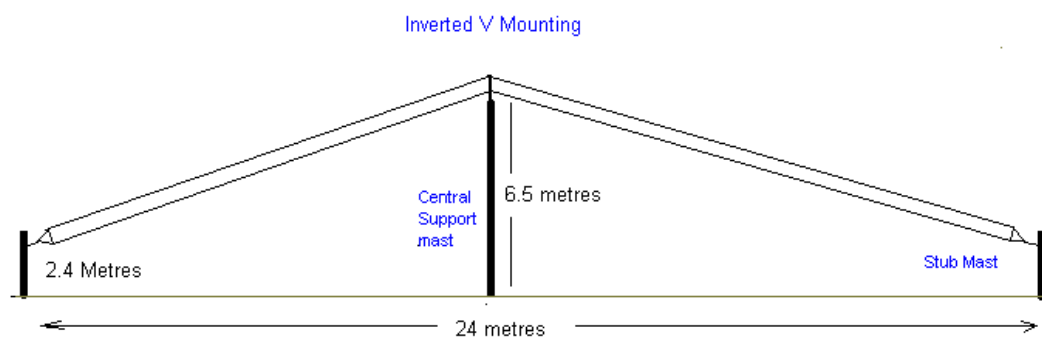
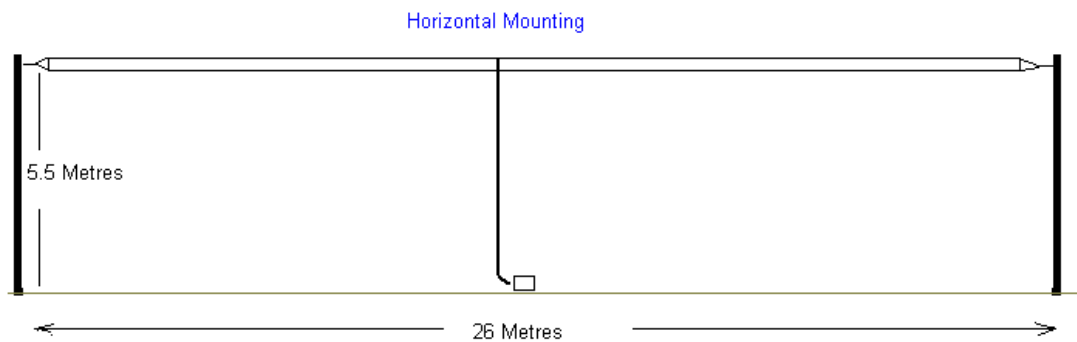
### Dimensions for Inverted Vee mounting

Central Mast height:	6.5 metres.(Minimum)
Outer (Stub) Mast Height	2.4 metres (Minimum)
Outer (Stub) Mast spacing:	24 metres (Using above minimum heights)
Minimum Overall Mounting Space Required	24 metres (Using above heights & spacings)

Shipping weight:	10 Kilograms
Shipping size:	800 x 650 x 200 mm

### Options

- #1 Supplied with nominated length of RG58 or RG213 (low loss) coaxial cable fitted with connectors at both ends. (Please specify connector type)
- #2 Supplied with Central Mast halyard and pulley

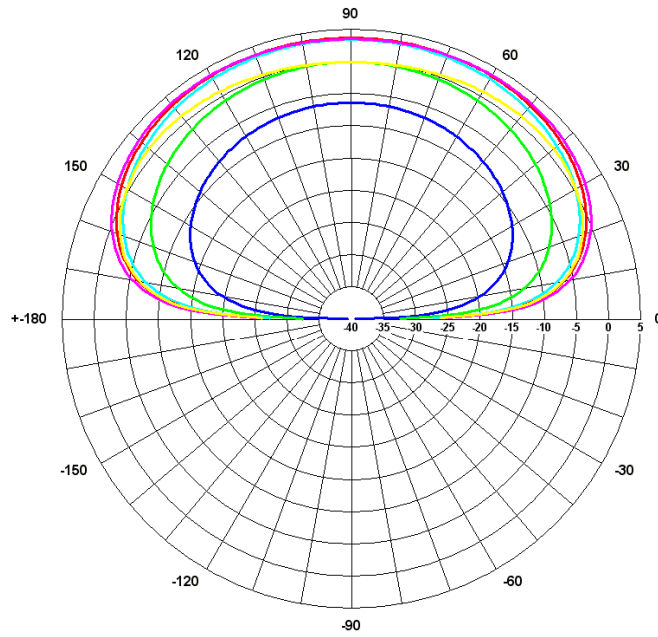
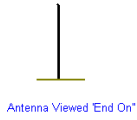


# Terminated Folded Dipole FD-150-22m, Radiation Patterns

Antenna length 22m antenna height 6m

RADIATION PATTERN,  
HORIZONTAL MOUNTING

TERMINATED FOLDED DIPOLE FD-150-22m  
Elevation Pattern at 0.0deg Azimuth

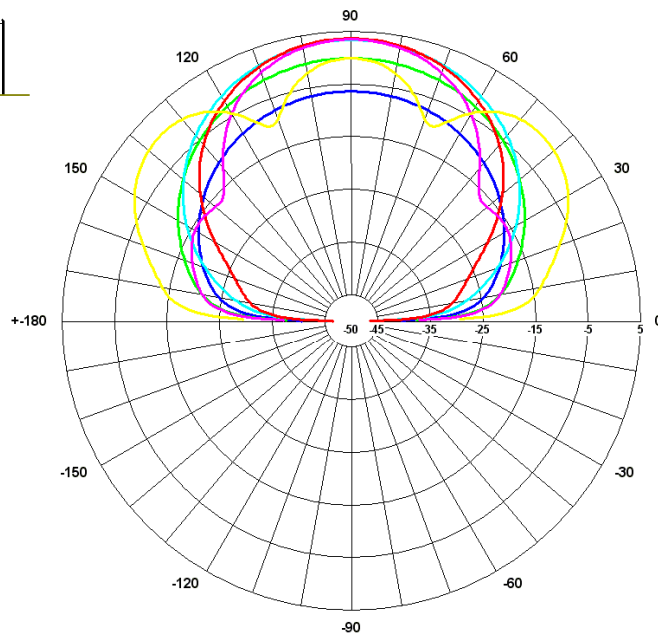
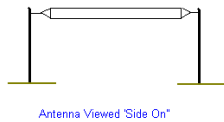


Modelled over 'Average Ground'  
Dielectric Constant 13  
Conductivity 0.005 S/m

- Total Gain, Azimuth=0, Freq=5 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=0, Freq=7 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=0, Freq=11 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=0, Freq=13 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=0, Freq=15 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=0, Freq=19 MHz, File=folded\_dipole\_qmac

RADIATION PATTERN,  
HORIZONTAL MOUNTING

TERMINATED FOLDED DIPOLE FD-150-22m  
Elevation Pattern at 90deg Azimuth



Modelled over 'Average Ground'  
Dielectric Constant 13  
Conductivity 0.005 S/m

- Total Gain, Azimuth=90, Freq=5 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=90, Freq=7 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=90, Freq=11 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=90, Freq=13 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=90, Freq=15 MHz, File=folded\_dipole\_qmac
- Total Gain, Azimuth=90, Freq=19 MHz, File=folded\_dipole\_qmac