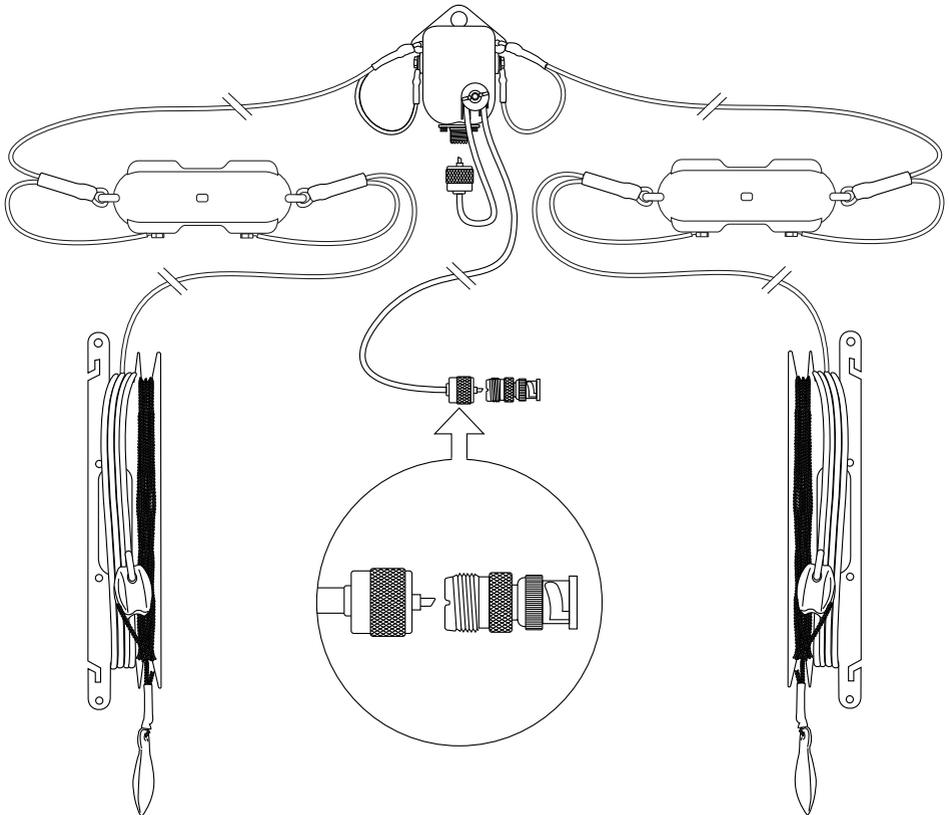


Rapid Deployment Broadband Dipole HF Antenna - 150 W

P/N 2090-02-03 (with 10m coax)

P/N 2090-02-14 (with 20m coax)



BCM209203/05

Introduction

The Barrett Rapid Deployment Broadband Dipole Antenna is a dipole antenna with loading to allow broadband operation. It will operate continuously across the band from 2-30 MHz. The power rating is 150 W PEP. Throwing cords are provided that can be used to elevate the antenna or to secure to the ground. The antenna can be used in a number of configurations (see over), depending on the structures available for elevation. Compatible Barrett masts include, 10m Rapid Deployment Mast (P/N 2090-02-21), 10m Rapid Deployment Composite Mast (P/N 2090-02-24) and 5m Rapid Deployment Mast (P/N 2090-02-04). This antenna is most suitable for HF radio manpack and temporary base station deployment. This guide will indicate the recommended deployment type for each configuration with these symbols.



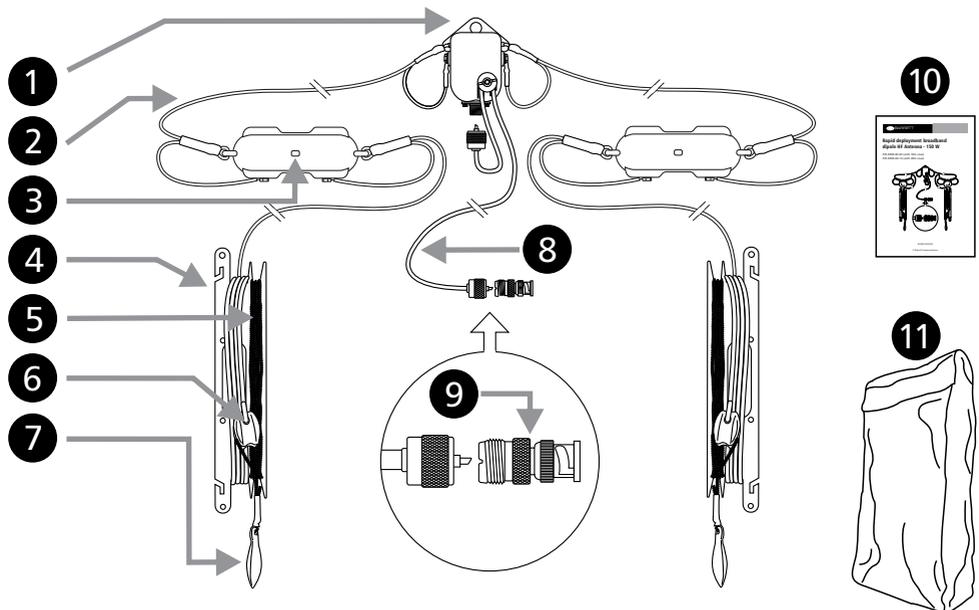
Manpack



Temporary base station

Contents Overview

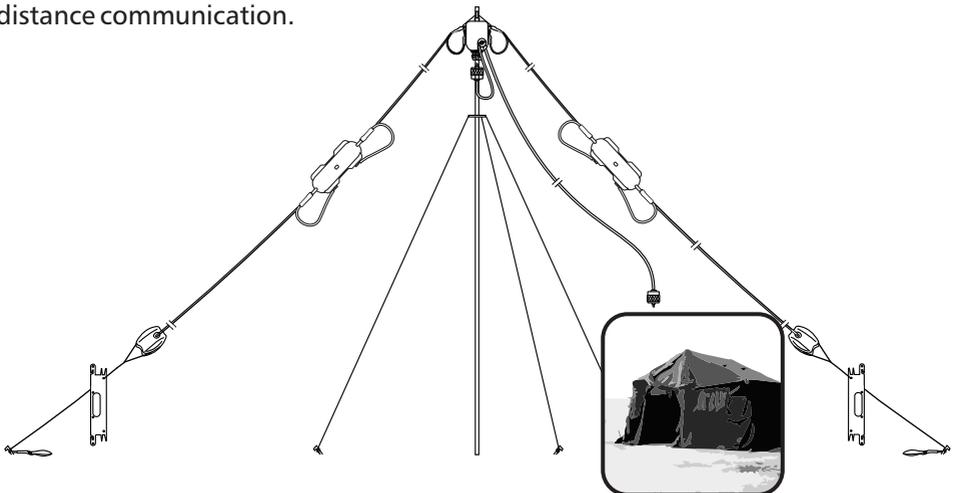
- | | |
|--------------------------------|----------------------|
| 1 Balun | 7 2 x Throw weights |
| 2 2 x Kevlar core antenna wire | 8 RG-58 coax |
| 3 2 x Loads, knotted | 9 UHF to BNC adaptor |
| 4 2 x large winders | 10 Instruction sheet |
| 5 2 x 10m Throwing cord | 11 Carry bag |
| 6 2 x Insulators | |



Horizontal Configuration Horizontal configuration has maximum gain on the broadsides of the antenna and reduced gain along the axis. Therefore, the broadsides should point in the direction of the receiving stations, if possible. Antenna height above ground affects radiation angle. Lower heights give higher radiation angle which is better for NVIS (shorter distance) operation. Greater heights give a lower radiation angle, which is favourable for longer distance communication.

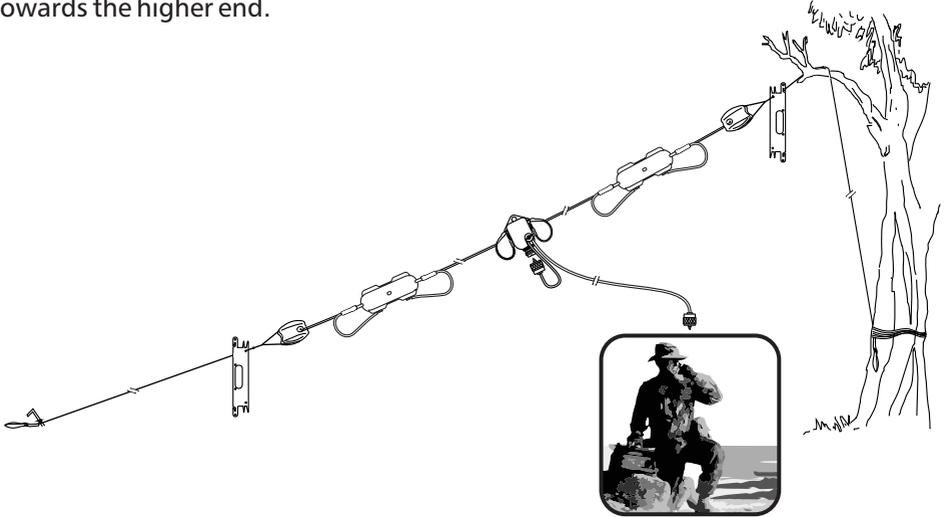


Inverted V Configuration The inverted-V configuration has a more omni-directional pattern than the horizontal configuration, with lower maximum gain. The ends of the antenna should be at least 0.5m above ground. Suitable mainly for NVIS and medium distance communication.



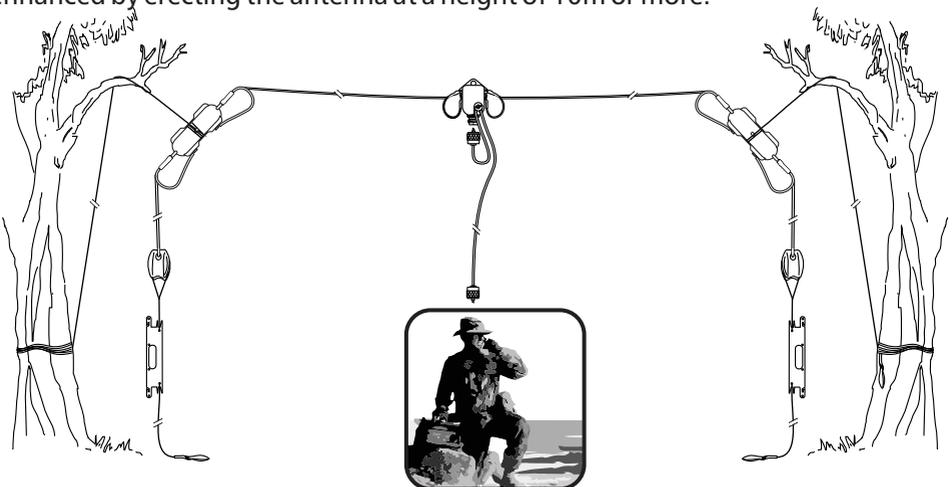
Sloping Configuration

Radiation with the Sloping configuration becomes more directional, with increased gain in the direction of the lower end of the antenna, and reduced gain towards the higher end.



Inverted U Configuration

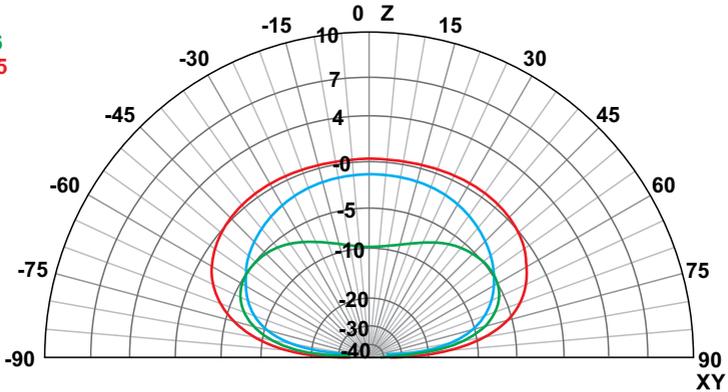
The inverted U configuration has a radiation pattern between that of horizontal configuration and an inverted V configuration. For optimum performance, the radiating elements should be fully unwound, and should not touch the ground. Suitable for NVIS to medium distance. Longer distance performance will be enhanced by erecting the antenna at a height of 10m or more.



Radiation Pattern (Horizontal Configuration 8m height)

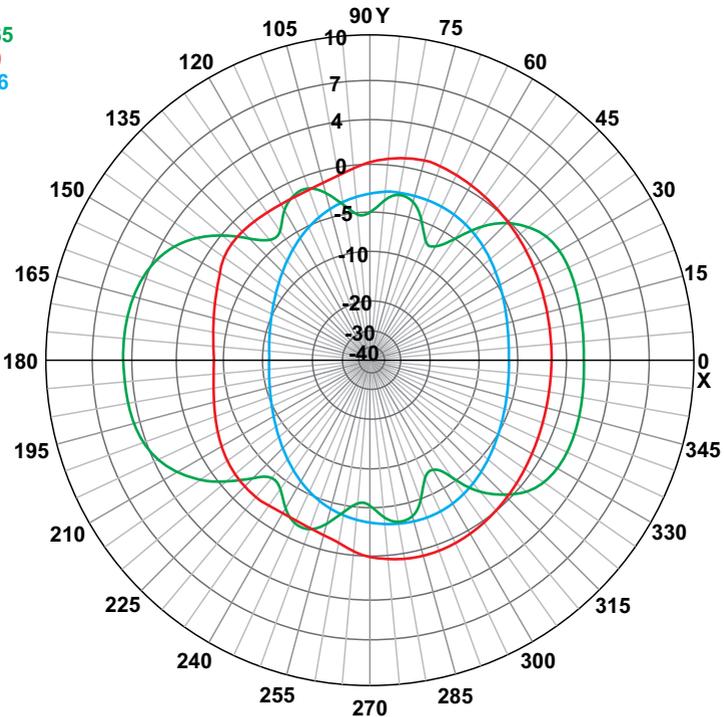
Vertical Plane - Total Gain (dBi)

15MHz -4.6
 10MHz 0.55
 5MHz -1.1



Horizontal Plane - Total Gain (dBi)

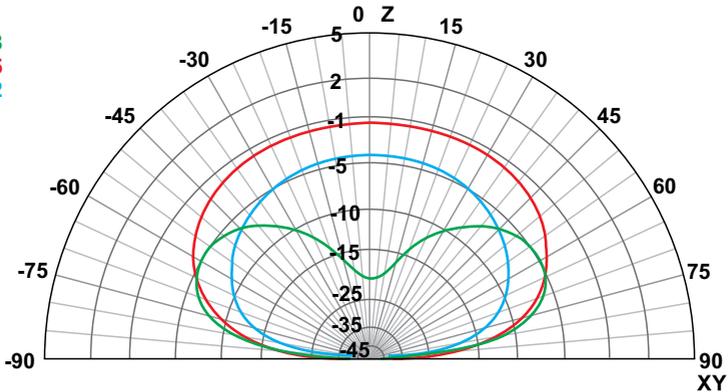
15MHz 4.65
 10MHz 1.0
 5MHz -2.6



Radiation Pattern (Inverted V Configuration 8m height)

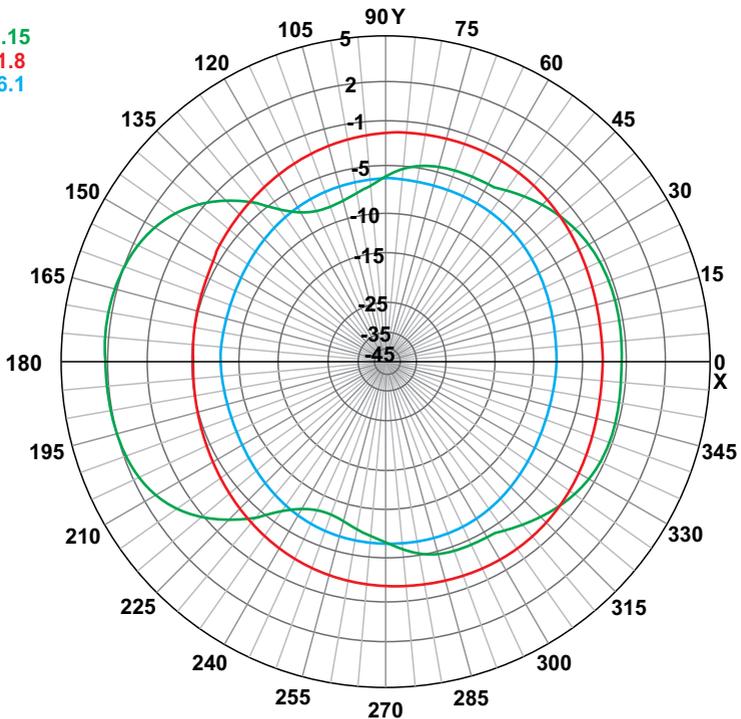
Vertical Plane - Total Gain (dBi)

15MHz -4.8
 10MHz -1.5
 5MHz -4.2



Horizontal Plane - Total Gain (dBi)

15MHz 2.15
 10MHz -1.8
 5MHz -6.1



Specifications

Electrical

Frequency Range	2 - 30 MHz
Input Impedance	50 ohms
Power Rating	150 W PEP
Connector	UHF female with BNC adaptor
Polarisation	Horizontal
Radiation Pattern	Essentially Omni-Directional (when mounted as an inverted-V)

Mechanical

Material	Kevlar core, copper braid, pvc sheath, UV Stablized Re-inforced Nylon housings
Length	48m
Weight	1.2kg
Packed size	37cm x 18cm x 5cm
Colour	Radiating wire elements - NATO green Balun housing - black

Environmental

Wind	160 km / hour survival, 120 km / hour operational
Temperature	-40° C to +70° C operational -40° C to +85° C storage
Humidity	0% to 97% relative humidity
Ingress Protection	To IP67 (dust and water)

