BARRETT

HF Radio Communications

2019 Automatic tuning mobile HF antenna

The Barrett 2019 is an automatic tuning mobile antenna, designed to interface with Barrett 2000 series transceivers.

Providing a frequency coverage of 2 to 30 MHz, the Barrett 2019 features rapid tuning (typically <1.5 S) and low power consumption. High radiation efficiency and accurate tuning are assured by maximising antenna current (not minimising the VSWR) on every tune. The Barrett 2019 antenna incorporates a wideband amplifier that is activated in receive mode to enable channel scanning. Due to its rugged RF design, the Barrett 2019 antenna can also be used with high duty cycle applications such as the Barrett 923 or 2020 fax and data system and is compatible with ALE operation.

An optional GPS receiver can be fitted within the 2019 antenna casing and interfaces directly through the RF control cable to current production 2050 transceivers.

The active tuning elements of the antenna are housed in black waterproof, highly impact resistant technical plastic moulding. The housing incorporates a heavy duty anti-vibration mount at its base. Even with its rugged construction, the Barrett 2019 weighs only 3.6 kg.

The Barrett 2019 is supplied standard with a two piece fibreglass MIL-STD whip and a tapered spring. An optional NVIS extension is available in the form of two extra whip sections. The main antenna body has a MIL-STD control cable connector and a UHF RF connector. The 2019 is supplied with a 6 metre composite control and RF cable and connectors to connect it with the transceiver. A 10 metre control RF cable is available as an accessory.

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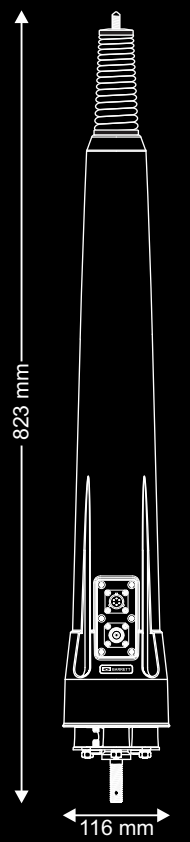
HF Radio Communications

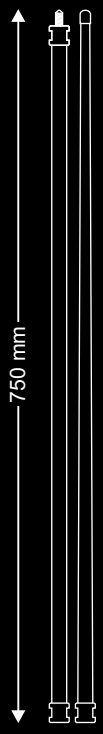
2019 Automatic tuning mobile HF antenna

Specifications

Standards	Complies with MIL Spec. 810 F for drop, dust, temperature, shock and vibration
Frequency range	2 MHz to 30 MHz (continuous)
Power handling capability	150 W PEP
VSWR	Better than 2:1 when tuned
Tuning time	Less than 1.5 seconds (typical)
Operating temperature	-30°C to +60°C
Humidity	95% relative, non-condensing
Environmental	IP68 immersion 1 m for 1 hr
Supply voltage	12.6 V DC (derived from transceiver)
Antenna impedance	50 ohms unbalanced
Mounting	M16 stud with provision for padlock
Input current	Average 80 mA @ +12.6 V input
Shock	MIL-STD-810D method 516.3 procedure VI
Vibration	MIL-STD-810D method 514.3



Main antenna body weight including heavy duty spring 3.2 kg



Standard 2 piece whip kit 0.387 kg

NVIS 2 piece extension whip kit 0.474 kg

Total antenna lengths with standard and NVIS whips

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ISO 9001 BUREAU VERITAS Certification No 149438

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BCB2019/1

BARRETT COMMUNICATIONS
ADVANCED HF SSB EQUIPMENT

910 Automatic Tuning Mobile HF Antenna

The Barrett 910 is an automatic tuning mobile antenna, designed to interface with Barrett 500, 900, and 2000 series transceivers.

Providing a frequency coverage of 2 to 30MHz, the Barrett 910 features rapid tuning (typically <1.5S) and low power consumption. High radiation efficiency and accurate tuning are assured by maximising antenna current (not minimising the VSWR) on every tune. The Barrett 910 antenna incorporates a wideband amplifier that is activated in receive mode to enable channel scanning. Due to its rugged RF design, the Barrett 910 antenna can also be used with high duty cycle applications such as the Barrett 923 or 2020 fax and data system.

The active tuning elements of the antenna are housed in a grey weatherproof, impact resistant reinforced poly-carbonate moulding that incorporates a heavy duty anti-vibration mount at its base, even with its rugged construction, the Barrett 910 weighs only 2.8Kg.

The Barrett 910 is supplied with an integral 2 metre whip and spring. The main antenna body has a 1.5 metre stub control cable, with a 4.5 metre extension cable to connect it with the transceiver. This composite cable incorporates coaxial, power supply and control cables. Additional 4.5 metre or 10 metre extension cables are available if required.

Specifications

Frequency Range	2 to 30MHz continuous
Rapid Tuning	1.5S (typical)
Power Rating	125 Watt PEP - voice and data
Input Impedance	50 Ohm
VSWR	Better than 2.1
Current Drain	600mA (typically)
Dimensions	Length
	Body 610mm
	Whip & coil 1740mm
	Integral whip and spring 2000mm
	Diameter
	Maximum 120mm
Weight	Body 2.6Kg
	Integral whip and spring 0.50Kg
Mounting	0.5" BSW stud, length 45mm

910 automatic tuning mobile HF antenna

www.barrettcommunications.com.au

BARRETT COMMUNICATIONS
ADVANCED HF SSB EQUIPMENT

914 Manual Tapped Whip HF Antenna

The Barrett 914 range of manual tapped whip antennas are designed for land mobile installations where a limited number of frequencies are required.

Frequency selection is achieved by the re-location of a tapping plug to a specific socket for each frequency. Barrett 914 antennas have a maximum of 12 individual frequencies in the range 2 to 30MHz.

The complete assembly consists of a helically wound whip section, encapsulated in a tough polyurethane resin and a separate heavy duty mounting base and spring. Connection to the transceiver is via an integral UHF coaxial connector in the mounting base.

The Barrett 914 antenna is an extremely robust, high efficiency antenna, with no moving parts and is designed for use in the harshest environments.

Specifications

Frequency range	2 to 30MHz
Power rating	125 Watt PEP
Input impedance	50 Ohm
Channel capacity	12
VSWR	1.5:1 (typically)
Dimensions	Length
	Whip 1800mm
	Base & Spring 200mm
	Diameter
	Maximum 60mm
Weight	1 Kg (exc. base & spring)
	3 Kg (inc. Base & spring)
Mounting	0.5" BSW stud

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BARRETT

HF Radio Communications

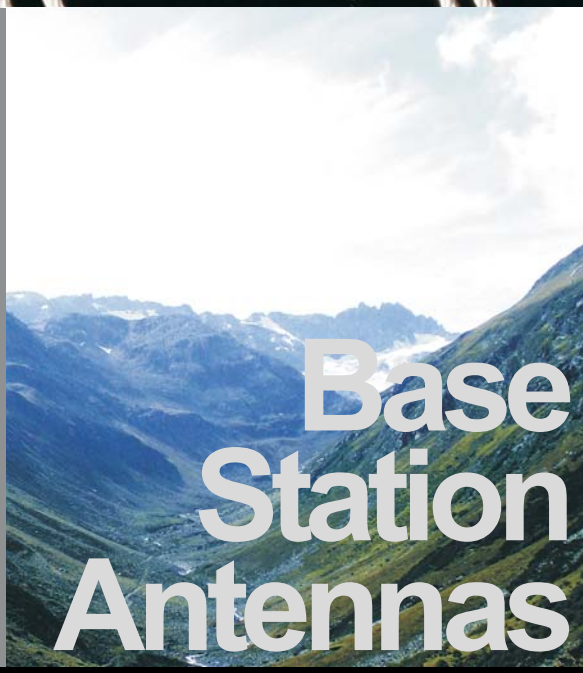
Base Station Antennas

Barrett Communications provide reliable, solidly constructed broadband, as well as single frequency, base station antennas for a variety of uses and in many different configurations to compliment our range of HF transceivers and ensure the success of your base station.

We manufacture our antennas to exacting standards using high quality stainless steel and glass reinforced composites. Our base station antennas are lightweight and corrosion resistant, but are able to withstand wind speeds in excess of 200 km/h. The full range of wire antennas are supplied complete with an inverted "V" mounting harness, 30 metres of coaxial cable and high quality waterproof connectors. Our base station antenna range includes:

- **Multi-wire broadband dipoles**
- **Single-wire broadband dipoles**
- **Single-wire single frequency dipoles**
- **Rotatable log periodics**
- **Deltas**
- **Rhombics**
- **Conical monopoles**

Additionally antenna systems can also be designed and manufactured to suit specific customer requirements.



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BARRETT

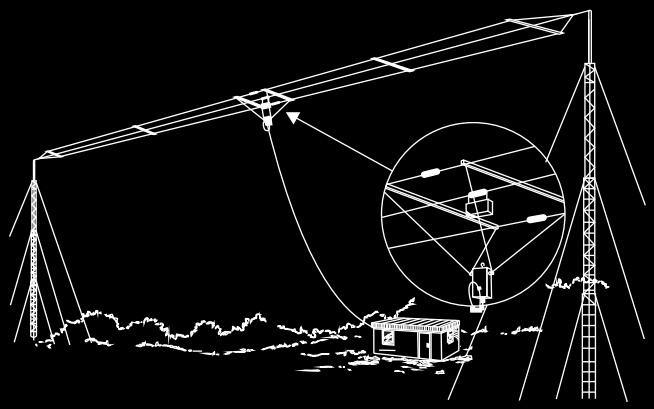
HF Radio Communications

912 Series broadband dipoles

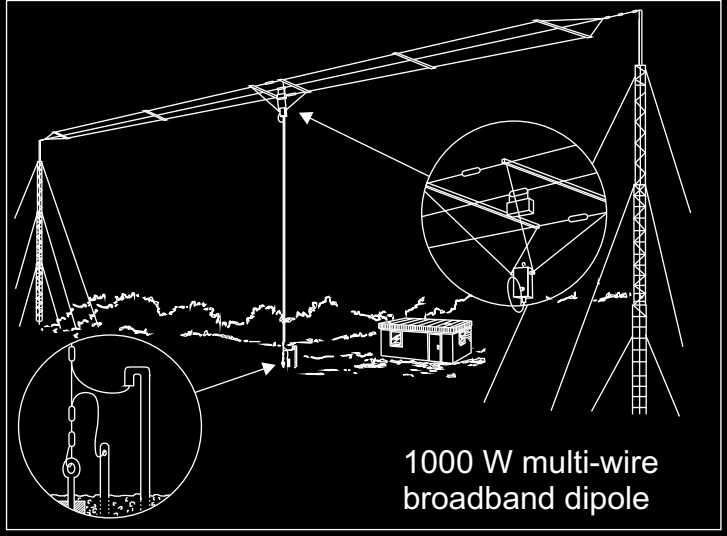
The Barrett 912 series of broadband base station antennas are designed for use in either an inverted "V" configuration using a single mast, or a standard dipole configuration between two masts.

In the inverted “V” configuration the 912 provides a more omni directional radiation pattern. All broadband antennas in the series are designed to provide optimum performance over a wide HF spectrum, without the need for antenna tuners.

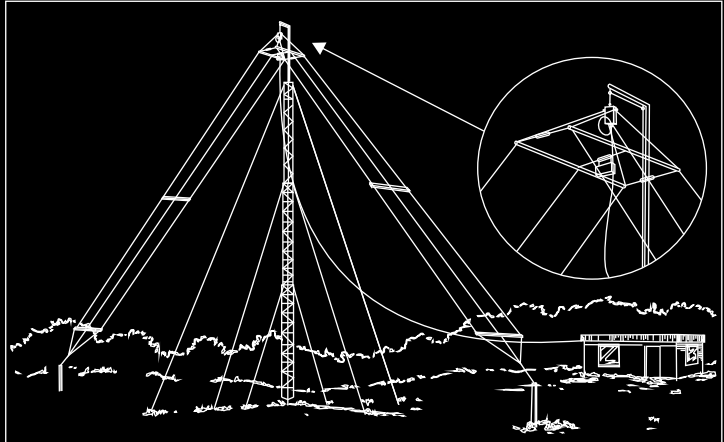
Using high quality stainless steel and glass reinforced composites the 912 series of broadband antennas are lightweight and corrosion resistant, but are able to withstand wind speeds in excess of 200 km/h. The antennas are supplied complete with an inverted "V" mounting harness, 30 metres of coaxial cable and high quality waterproof connectors.



125/500 W multi-wire broadband dipole

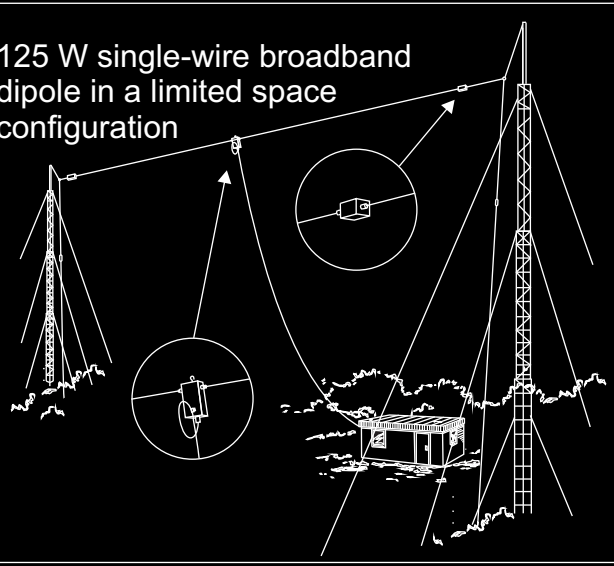


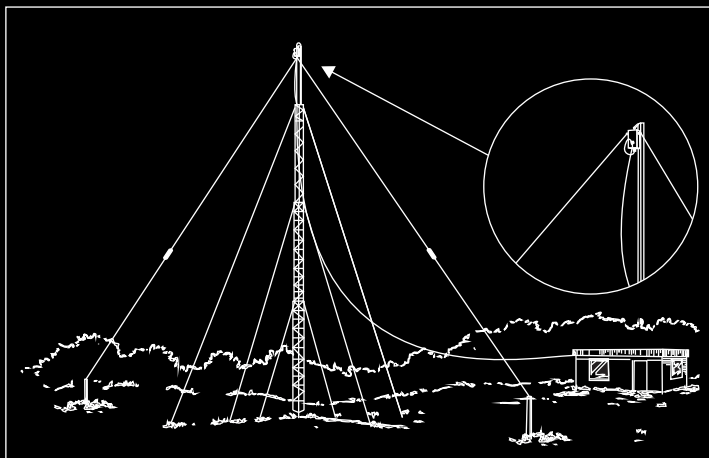
1000 W multi-wire broadband dipole



125/500 W multi-wire broadband dipole in an inverted "V" configuration

125 W single-wire broadband dipole in a limited space configuration





125 W single-wire broadband dipole in an inverted "V" configuration

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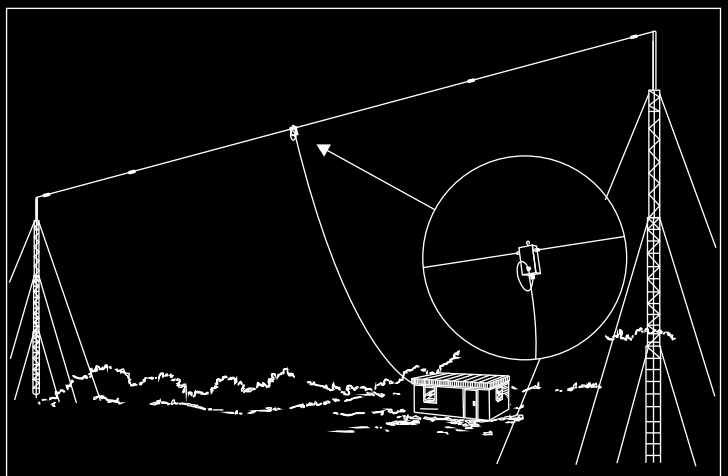
Base Station Antennas



125 W standard single-wire broadband dipole

General Specifications

Frequency range	2 to 30 MHz
VSWR	Less than 2.5:1
Impedance	50 ohm
Max wind speed	207 km/h

BC91200 125 W multi-wire broadband dipole

Length insulator to insulator	28 metres
Width	1.3 metres
Power handling	125 W CW, 250 W PEP
Packed weight	6 kg
Packed dimensions	1.4 m x 150 mm x 100 mm

BC91202 500 W multi-wire broadband dipole

Length insulator to insulator	28 metres
Width	1.3 metres
Power handling	500 W CW, 1250 W PEP
Packed weight	13 kg
Packed dimensions	1.4 m x 300 mm x 150 mm

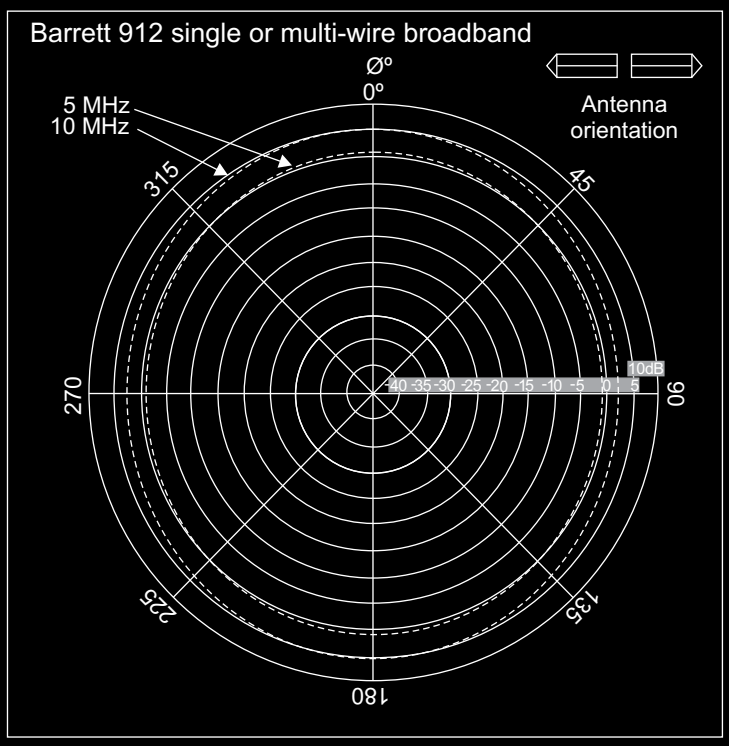
BC91203 1000 W multi-wire broadband dipole

Length insulator to insulator	28 metres
Width	1.3 metres
Power handling	1000 W CW, 2500 W PEP
Packed weight	20 kg
Packed dimensions	1.4 m x 300 mm x 150 mm

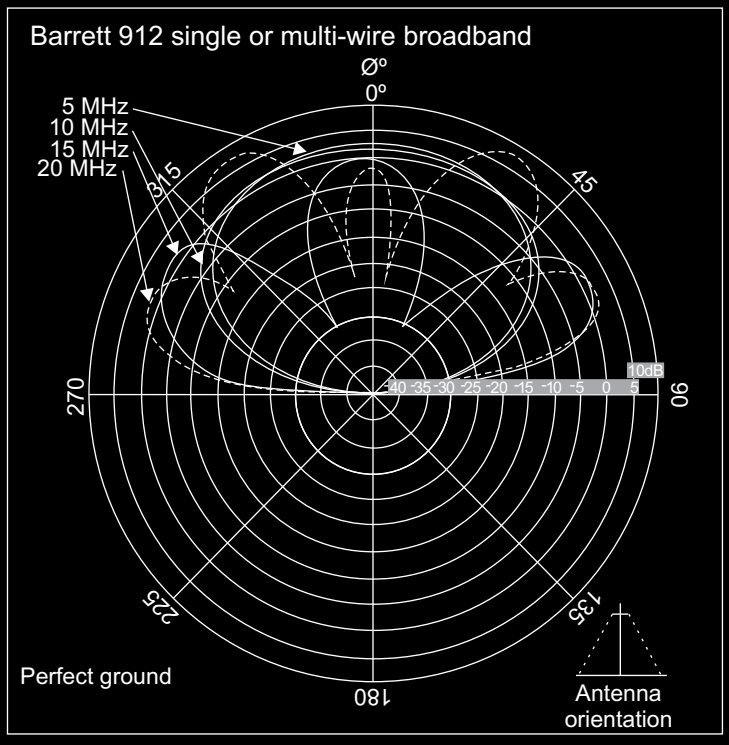
BC91201 125 W single-wire broadband dipole

Length insulator to insulator	48 metres
Width	n/a
Power handling	125 W CW, 250 W PEP
Packed weight	2 kg
Packed dimensions	250 mm x 300 mm x 75 mm

Typical azimuth pattern



Typical elevation radiation pattern



Base Station Antennas

BARRETT

HF Radio Communications

915 Single-wire dipoles

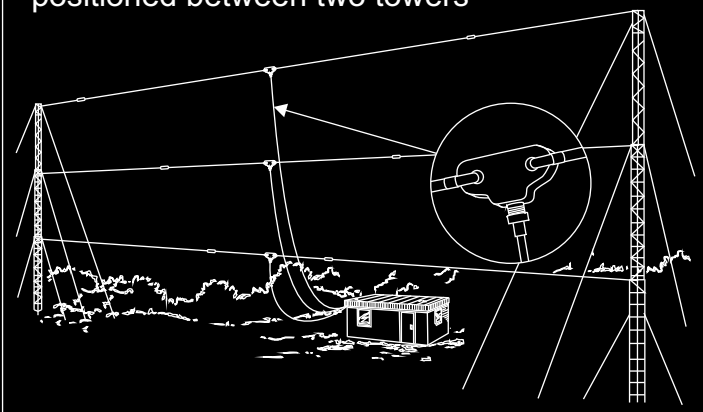
Single-wire dipole antennas, spot-tuned to the required operating frequency, are the most efficient antennas for use in HF base stations. They are simple to install and have a relatively narrow bandwidth and requires only minimal maintenance.

When several frequencies are required at a base station, several dipoles can be stacked one above the other between two towers. An antenna switch box BC91600 can be used to switch to the required dipole depending on the channel.

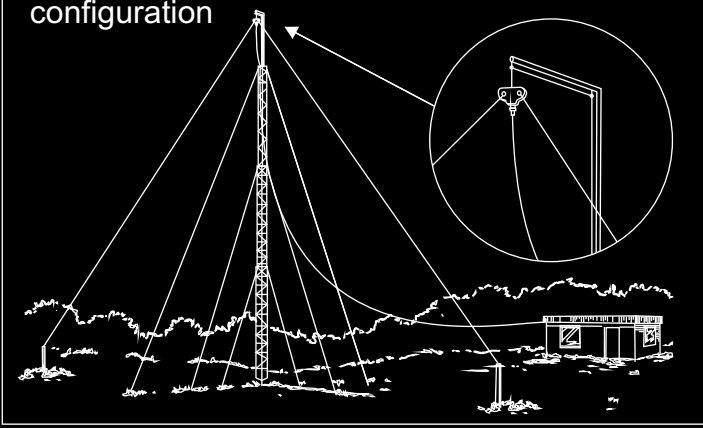
General Specifications

Frequency range	500 KHz to 30 MHz
VSWR	Less than 1.5:1
Impedance	50 ohm
Construction	Stainless steel radiators

Several single frequency wire dipoles positioned between two towers



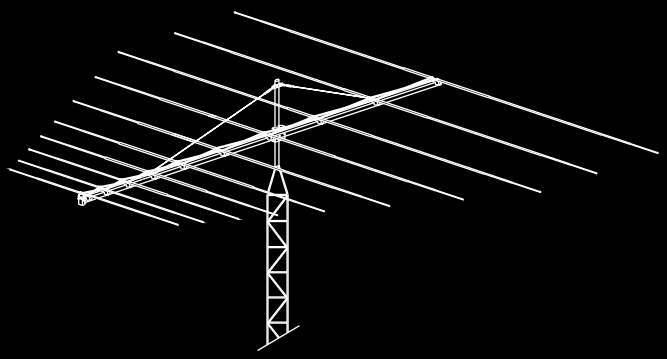
Single frequency wire dipole in an inverted "V" configuration



818 Log periodic antennas

Steerable antenna with high directional gain suitable for long distance communications. Broadband input from either 13 to 30 MHz or 10 to 30 MHz. 918 Log periodic antennas come complete with rotator and thrust bearing. Optional feeder coaxial or rotator control cable is available to length separately.

10 Element 918 Log periodic antenna



General Specifications

Barrett 918 Log periodic antenna 8 element - 13 to 30 MHz

Frequency range	10 to 30 MHz continuous
Typical gain	6-7 dBi 10 to 30 MHz
Front to back ratio	Typical 15-20 dB 10 to 30 MHz
Beamwidth	60°
Feed impedance	50 ohms unbalanced
VSWR	Less than 2.5:1
Input connector	UHF type socket standard
Power handling	1 kW PEP
Boom length	6.0 m
Max. element length	11.55 m
Turning radius	6.48 m
Wind survival	120 km/h
Packed size	1.8 m x 0.2 m x 0.2 m
Weight	20 kg

Barrett 918 Log periodic antenna 10 element - 10 to 30 MHz

Frequency range	10 to 30 MHz continuous
Typical gain	6-7 dBi 10 to 30 MHz
Front to back ratio	Typical 15-20 dB 10 to 30 MHz
Beamwidth	60°
Feed impedance	50 ohms unbalanced
VSWR	Less than 2.5:1
Input connector	UHF type socket standard
Power handling	1 kW PEP
Boom length	8.0 m
Max. element length	11.55 m
Turning radius	7.27 m
Wind survival	120 km/h
Packed size	1.8 m x 0.4 m x 0.2 m
Weight	40 kg

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