



- **1.5 - 30 MHz Tuning Range**
- **Compact Size**
- **150 W (Digital, Voice and Data)**
- **Internal GPS**
- **ALE 2G/3G Compatible**
- **Memory Tune (100 ms)**
- **Mil-STD 810G**

The Barrett 4049 Automatic Tuning Mobile HF Antenna (P/N 4049-00-01) is specifically designed to interface with Barrett 4000 series HF transceivers.

The Barrett 4049 ATU is fitted with an internal GPS. This internal unit can be used to provide GPS data as part of a GPS tracking network without the need to install a separate GPS, simplifying the system installation.

Providing a frequency coverage of 1.5 to 30 MHz, the Barrett 4049 features rapid tuning (typically less than 1.5 s) and low power consumption capabilities.

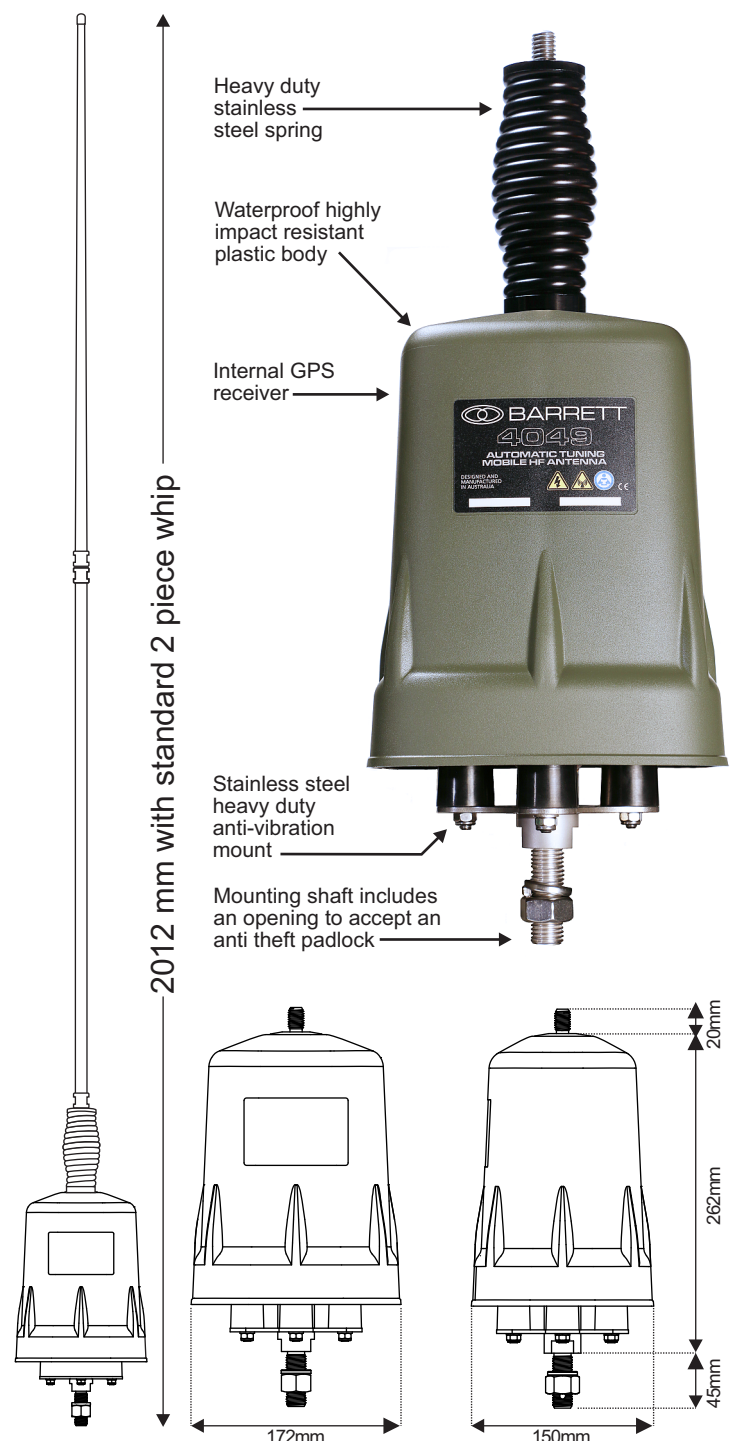
When paired with a Barrett 4000 series HF Transceiver, the 4049 memory tune feature eliminates the need to retune an antenna after a channel change. When returning to a previously tuned channel, the transceiver sets the 4049 with a stored tuning result in less than 100 ms.

The active tuning elements of the antenna are housed in a waterproof, high-impact resistant moulding. This housing incorporates a heavy duty anti-vibration mount at its base. Even with its rugged construction, the Barrett 4049 weighs only 3.65kg.

The main antenna body has RF and control connectors. The 4049 is supplied as standard with a 6 metre composite RF control cable. A 10 metre RF control cable is available as an optional accessory (P/N 4019-00-05) as is an extension adapter kit (P/N BCA401914).

The Barrett 4049 is supplied with a two piece fibreglass MIL-STD whip, and spring. An optional NVIS Kit (P/N 2019-01-10) is available in the form a single flexible whip section of 3.5 metres (see over).

Due to its rugged RF design, the Barrett 4049 antenna can be used with high duty cycle applications such as HF Data Systems.



4049 Automatic tuning HF antenna - General Specifications

Frequency range	1.5 - 30 MHz (continuous) with whip 3.2 m or longer / NVIS 2 - 30 MHz (continuous) with Barrett 1.6m, 2 piece whip
RF Input Power	150 W PEP (digital, voice and data)
VSWR	Better than 2:1 when tuned
Tuning time	Less than 1.5 seconds (typical) From memory, less than 100ms
Operating temperature	-30°C to +70°C
Humidity	95% relative, non-con-densing
Environmental	Ip67
Supply voltage	12-13.8 V DC (derived from transceiver)
Supply current	Average 80 mA @ +12.6 V input
Antenna impedance	50 Ω typically with <2:1 SWR
Mounting	M16 stud with provision for padlock
Case construction	Moulded Nylon-66 glass-filled with powder-coated stainless-steel base

Weight	3.90 kg
Colour	Nato Green



NVIS Kit for 4049 antenna - P/N 2019-01-10

The Barrett Near Vertical Incidence Skywave (NVIS) antenna whip is designed to enhance the short range communications efficiency of the Barrett 4049 Automatic Tuning Mobile HF Antenna. The increased whip length combined with its horizontal orientation (once installed) provides a significantly higher take off angle and radiation efficiency.

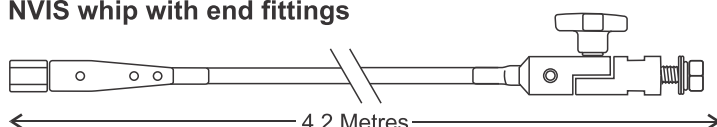
Communications paths over the range 0 - 1000 km, particularly in hilly and mountainous terrain, can be greatly improved through the use of the NVIS kit.

The NVIS kit comprises of a single flexible whip section of 4 metres in length. It attaches at one end to the 4049 antenna and the other end to the supplied Gutter Mount Bracket (P/N BCA201912). An optional NVIS Kit Magnetic Mounting Base (P/N BCA201911) is also available and detailed below. The whip can also be secured to the vehicle by using a custom made bracket with a 13mm hole (sourced by end user). This option may be preferable if the vehicle is fitted with a roof rack for example.

Specifications NVIS whip antenna

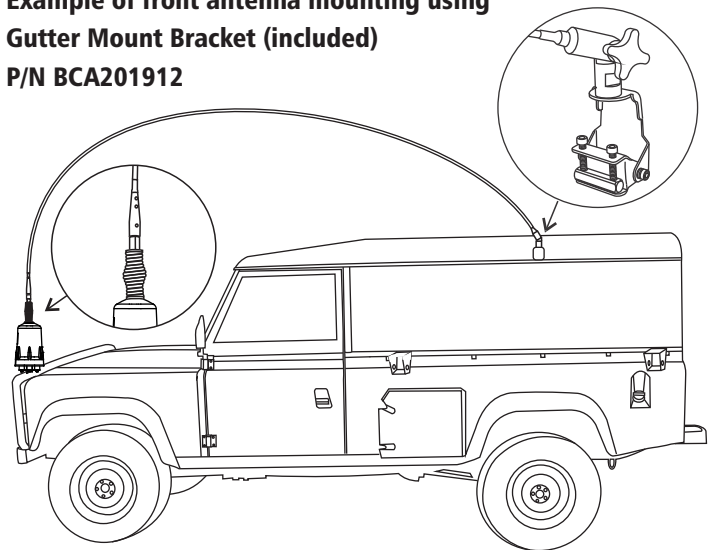
Antenna Length	4.2 metres (including fixings)
Antenna Weight	2.8 Kg
Colour	Matte Black UV stabilized
Packed Size	L75 x W75 x H7.5 cm
Packed Weight	3.0 Kg

NVIS whip with end fittings



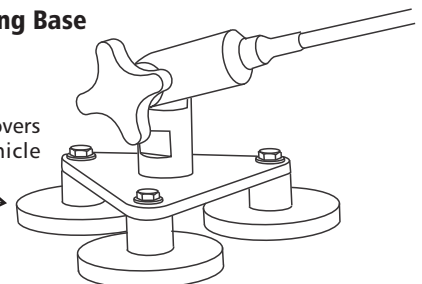
Specifications are typical. Equipment descriptions and specifications are subject to change without notice or obligation.

Example of front antenna mounting using Gutter Mount Bracket (included) P/N BCA201912



NVIS Kit Magnetic Mounting Base (optional) P/N BCA201911

Magnetic feet have rubber covers to prevent damage to vehicle paintwork



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