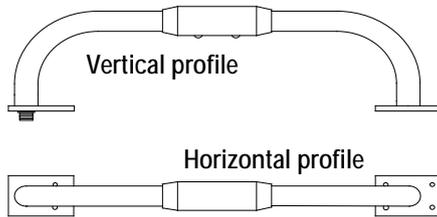




Type LPD S/L

Low Profile Disguise Heavy Duty VHF or UHF Semi Loop Antenna System

The Moonraker type LPD S/L is designed to provide efficient VHF or UHF communications where visual impact or covert requirements restrict the use of standard antennas and where conventional systems are prone to damage due to hostile environments and harsh use.



The antenna fits snugly on the top or side of vehicles, where it blends in well, resembling a typical vehicle hand rail and may even be used as a hand hold. The profile extends only 122mm (4.8 in) from the vehicle. It is especially suitable for heavy vehicles from military transports to underground mine machinery and trains.

The antenna elements are housed within the semi loop and protected by a central external nylon shroud. This extremely rugged housing is designed to withstand shock impact from external objects, such as accidental scraping on mine tunnel ceilings and walls and attempts to render it inoperative by vandals and thieves. Construction is of brass finished with a high durability epoxy based coating, highly resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation.

The vehicle roof or bodywork provides the antenna ground plane. The antenna is mounted flush to the vehicle roof via a brass plate at either end. Cable entry is via a UHF, N type or other suitable connector at one end. The connection may be made externally at the side of the vehicle by overhanging the mounting plate sufficiently, or through the vehicle roof.

The antenna may be supplied tuned to any frequency in the range. Antenna length and bandwidth vary according to frequency. At standard frequencies 148-175 MHz and 400-512 MHz antenna length is 460mm (18 in).

Specifications

Frequency Ranges	Standard: VHF 148-174 MHz and UHF 400-512 MHz; also available 118-137 MHz and 70-75MHz
Bandwidths	148-175 MHz 20MHz at <5:1 VSWR, 3MHz at <1.5:1 VSWR; 118-137 MHz 3 MHz at <2:1 VSWR; 70-85 MHz 1 MHz at <2:1 VSWR 400-512 MHz 20 MHz at <2:1 VSWR;
Antenna Height	122mm (4.8 in)
Antenna Length (footprint)	148-174 and 400-512 MHz: 460mm (18 in); 118-137 MHz 600mm (24 in); 70-85 MHz 900mm (36 in)
Gain	Unity
Power	100w CW; higher power to order
Polarisation	Predominantly vertical
Radiation Pattern	Omnidirectional
Impedance	50Ω (nominal)
Connection	UHF, N type or other suitable connector (please specify)
Mountings	Via screws through mounting plates to the metal roof
Weight (Antenna)	1.6 kg (3.52 lbs)
Packed Weight	2 kg (4.4 lbs) approx

Specifications subject to change – Issued 07/13



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TYPE CMGP INSTALLATION INSTRUCTIONS

Mounting

The antenna is designed to provide omni-directional VHF or UHF coverage when mounted against a ceiling looking down over the area of coverage.

1. Select a position clear of metallic objects such as light fittings, air-conditioning ducts, etc.
2. The surface on which the antenna is mounted must be flat and non-conducting. This type of antenna may suffer from de-tuning if mounted against a large conducting surface such as a metal ceiling or plate.
3. To allow freedom of placement of the mounting screws, 8 equally spaced hole positions are marked around the edge of the mounting flange. It is recommended that 4 of these positions be used and drilled for the mounting screws.
4. After locating the mounting position, drill a hole large enough to allow the coaxial connector to pass through the ceiling/mounting surface.
5. Connect the coaxial cable via a connector to that on the antenna and, as a precaution, tape or seal the connection against moisture ingress, vibration, etc.
6. Fasten the antenna to the ceiling, taking care not to over tighten the screws.

Important Factors

1. The antenna is sealed against ingress from insects and vermin
2. There are no field serviceable parts inside and it is not designed to be opened.
3. The antenna is factory pre-tuned to the specified frequency. Mounting close to conducting surfaces and nearby metal objects may result in de-tuning the antenna. This is particularly relevant to VHF versions.



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