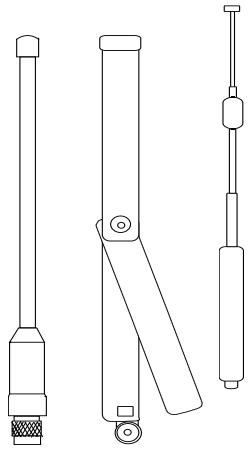
MOONRAKER

Type PLB

VHF/UHF Flexible 3 or 5 Frequency Antenna System for Personal Locator Beacon and EPIRB marine and airborne emergency communications

A series of ground dependent monopole antennas designed to provide efficient and reliable VHF/UHF Omni-directional communications, being compliant with military and COSPAS-SARSAT requirements.



Left: EPIRB type
Centre: folding type
Right: telescopic type

Modern EPIRBs transmit on 121.5, 243 and 406 MHz, the internationally agreed distress frequencies monitored by satellite as well as by military and civilian transport aircraft and ships, to provide accurate positioning and facilitate rescue. As these transmitters have limited power supplies maximum efficiency is all important. Moonraker PLB antennas are designed with this in mind to assist with extension of battery life and hence the opportunity for rescue of the user.

The antennas are lightweight, unobtrusive and easily mounted. When not in use, they are designed to either telescope or fold down, dependent upon type, so as to fit with the particular manufacturer's PLB. Versions are also available for fitting into the seat of an aircraft, together with a three frequency EPIRB type.

Construction of all types is from materials to suit the environment they have to survive in. Standard units are typically manufactured from marine grade

Rugged and lightweight, PLB antennas are completely sealed for maximum protection from the marine environment, airborne dust and sand and ultra violet radiation. They are designed to be resistant to vibration, shock, and damage due to accidental transit dropping or striking of overhead objects while being carried by the operator, and will provide reliable performance even after stored for extended periods prior to deployment.

Specifications

VHF/UHF Band	121-407 MHz
Length	300mm (11.8 in), dependent upon type)
Base Dimensions	Dependent upon antenna and PLB type
Pattern	Omnidirectional
Polarisation	Vertical
Frequency Range	International Distress Frequencies 121.5, 123.1 and 406.025 MHz, including 243.0, 282.8 MHz when required
VSWR	Meets or exceeds COSPAS SARSAT specifications
Gain	Unity
Impedance	50Ω nominal
Mounting & Connection	To suit manufacturer's requirements
Weight	EPIRB type 60g folding type 60g (2.1 oz) telescopic type 40g (1.4 oz)

Specifications subject to change – Issued 07/13

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MOONRAKER

warrendi pbl
taking the search out of search and rescue

maximum probability of detection through simultaneous multi frequency alerting

- primary operating mode utilises internationally agreed distress frequencies of 121.5, 243 and 406 MHz, which are monitored by satellite as well as by military and civilian transport aircraft/ships
- maximum effectiveness is gained from employment of the COSPAS/SARSAT satellite system which provides global detection of emergency signals and can provide accurate positioning anywhere on earth.
- also offers alternative operating (voice transmission/reception) modes using military distress frequencies and methods of operation optimised for DF search

embedded gps receiver

- the gps position of the beacon can be broadcast to the COSPAS/SARSAT satellites for pinpoint rescue accuracy
- can use synthetic voice to broadcast gps coordinates to listeners on 121.5 and 243 MHz
- for a local navigation function, the beacon can locally transmit gps coordinates via synthetic voice using an earphone or speaker

synthetic voice (in language of choice) broadcasts beacon location

- means s&r vessels don't have to have specialised data receivers as fully compatible with existing ship and aircraft vhf/uhf radio receivers

extended endurance

- through optimisation of design of electronics and antenna, the endurance can be extended to over 48 hours under certain operating conditions. Optional battery packs to suit operational requirements

ruggedised military design performs well

- under all conditions
- after many years in storage
- after being exposed to hostile marine environment
- temperature vibration shock and waterproofing

high reliability/low maintenance

- fully sealed electronic enclosure means limited need for maintenance over service life of beacon
- built in test facilities can be used periodically to verify full operational readiness

adaptable to user needs

- can modify/adapt to wide range of military requirements in house

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Specifications

Antenna Type	MD	MD-G3
Colour	Standard is Black	
VHF Marine Band	156-163 MHz (channels 1-88)	
Overall Length	1.22 metres (4 ft). Option of 1.67metres (5.5 ft)	2.6 metres (8.5 ft)
Radiator	Length: 0.9 metres (3 ft Diameter: 12.7mm (0.5 in)	Diameter: 10mm (0.4 in)
Base Mount	Diameter: 32 mm (1¼ in) threaded stud type	
Base Section	Diameter: 25.4 mm (1 in)	
Frequency Range	Pre-tuned to International Marine Frequency Band. Other frequencies to order.	
Bandwidth	7.0 MHz at 1.5 VSWR points	10.0 MHz at 1.5 VSWR points
VSWR	Better than 1.2:1 at centre frequency	
Gain	2.2 dBi	5 dBi
Impedance	50Ω nominal	
Wind Loading	1.64 kg at 100 km/h (3.6 lbs at 60 mph) 3 kg at 130 km/h (6.6 lbs at 81 mph)	2.35 kg at 100 km/h (5.2 lbs at 60 mph) 3.56 kg at 120 km/h (7.8 lbs at 75 mph)
Power Capability	80 watts	75 watts
Mountings	Either: as per type MD-G3; or Swingdown mount adjustable in both planes, with base adaptor; or ½ in Bolt base mount adaptor	Either two 63 mm (2.5 in) nylon clamp type insulators, 35 mm diameter (1 3/8 in), threaded to take 3/8 UNC Whitworth bolt (not supplied), or straps or hose clamps. Recommended insulator spacing not less than 25 cm (9.8 in) apart
Connection	5 metres RG58 co-axial cable with PL259 (UHF) plug; or with UHF or N Type female connector fitted in base of mounting tube (please specify)	Female N Type connector permanently fitted into base
Packed Weight	2 kg (4.4 lbs)	3 kg (6.6 lbs)

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