MOONRAKER

Type 122BB/S

High power capability broadband Naval HF whip antenna for ships over 50 metres (164 feet) and base stations

The type 122BB/s is a longer, higher gain version of the type 107BB/S, providing improvements of 2dB gain at lower (3.0:1) SWR. The 12 metre (40 ft) heavy duty free standing tactical whip has a continuous power capability of up to 5 kW. The system is intended for use in high power ECM (electronic counter measure) systems and designed to provide reliable high performance broadband communications for transmit and receive over the HF frequency band from 1 to 30 MHz without the use of an antenna coupler. With a suitable multicoupler, multiple transmitters may be used into the one antenna.

The system is extremely rugged, being designed to meet military standards for vibration (167-1 Type 1) and shock (901-1 Grade A). Main construction is of heavy gauge marine grade aluminium alloy, creating a large low loss surface area for maximum radiating efficiency. The antenna is base mounted and designed to withstand wind speeds of up to 225 km/h (140 mph) without permanent deformation. Minimal maintenance is required.

For ease of transport, the radiator comprises two tapering sections which slip together and then fasten by set screws. The epoxy fibreglass base insulator uses the accepted uinternational footprint for 10.7 metre (35ft naval whips. The radiator and base flange are finished with a high durability based coating, which is highly resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation. This provides a high degree of strength ensuring a long operational life. Standard colour is navy grey with other colours to order.

Specifications

Frequency Range	1-30 MHz.
Overall Length (approx)	12 metres (40ft)
Radiator Diameter	127mm (8.25 in) tapering to 50.8mm (2 in) at tip
Base Diameter	344mm (13.5 in)
Impedance	50 ohms nominal
Power Capability	4kW CW up to 5kW CW
VSWR	<3.0:1, typically <2:1>
Pattern	Omnidirectional in azimuth plane
Polarisation	Vertical
Wind Survival	Designed to withstand wind velocities of 224 km/h (140 mph) without ice; ice loading 22kg/sq m (4.5 lbs/sq ft)
Temperature	-50 to +65^{O}C (-60 to +150^{O}F);100% humidity (high temperature version under development)
Connector	LC type on base (side feed)
Mounting	Flange base with 8 equally spaced 17.5mm (0.69 in) holes on 273mm (10.75 in) circle, identical to current 107BB/S pattern
Weight	160 kg (350 lbs); packed 250kg (550 lbs)

Specifications subject to change 04/11

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