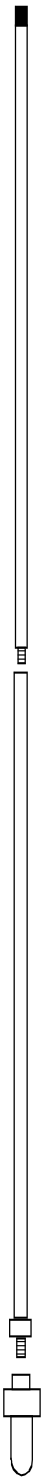
MOONRAKER

Type 15BC

Land and marine MF broadcast receiving antenna system



Designed to provide efficient broadcast reception in the MF broadcast band (530-1650 KHz) where reception is difficult.

The 15BC, a 4.7 metre (15 ft) whip, is tuned and matched to coaxial cable to provide a feed system to receivers in difficult locations, such as crew quarters in ships, large buildings and high noise areas, and is especially suitable for schools, betting shops, motels and weak signal areas.

The antenna is comprised of two sections of aluminium alloy tubing, coated with black PVC, the longest section being 2.8m (9 ft). The sections are quickly assembled using a stainless steel stud and lock washer. The matching transformer screws into the base of the whip.

The system is suitable for broadband reception and can easily be tuned on site to the station required.

Specifications

Colour	Standard is Black. Optional White.	
MF Broadcast Band	530-1650 KHz	
Length	4.7m (15 ft)	
Pattern	Omnidirectional	
Polarisation	Vertical	
Frequency Range	May be tuned to frequency required or be left broad banded	
Impedance	75Ω	
Wind Loading	3.4 kg at 100 km/h (7.54 lbs at 60 mph) 5.8 kg at 130 km/h (12.74 lbs at 81 mph)	
Mountings	Land: rubber blocks and galvanised saddles	Marine: 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
Connection	Small diameter 75Ω RF type coaxial cable (not supplied)	
Packed Weight	2 kg (4.4 lbs)	

Specifications subject to change – Issued 01/09/13

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TYPE 15BC INSTALLATION INSTRUCTIONS

Assembly

1. Assemble the antenna by screwing the sections together until the locking washer is fully compressed. Loctite or similar should be used on thread. Note some grades of Loctite will not allow disassembly. We suggest 242 grade.
2. Screw the transformer into the base of the antenna using silicone sealant around the joint.

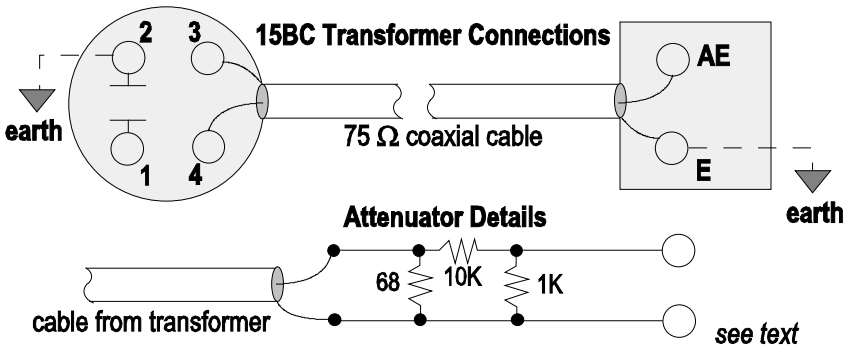
Mounting

1. Mount the antenna as high as possible in a position allowing the coaxial cable to be kept short and direct, and clear from power wiring.
2. Rubber mounts should be spaced not less than 23cm (9in) apart on buildings and nylon mounts 45cm (18in) in marine applications.

Tuning

Spot Frequency

1. Remove the plastic cap and make connections as shown below. Use ceramic capacitor of appropriate value connected to pins 1 and 2. Capacitor values are shown on transformer label.
2. Thread cable through side hole in cap and make cable and earth connections as shown. Earth connections should be as short and direct as possible to a good earth point. Cable from transformer to receiver may be any good quality small diameter 75 ohm RF type coaxial cable.
3. Tune the receiver to the station required and adjust the tuning screw of the transformer for maximum signal.



Broadband

1. Set the tuning screw either midway or to favour the required part of the band. No capacitor is required. Replace the cap after sealing with silicone sealant.

Important Factors

1. The signal available from this antenna system is so thigh that some transistor type receivers may be overloaded if there is a fairly strong station adjacent to the required station frequency. This results in spurious signals appearing at various spots throughout the receiver tuning range and may be overcome by inserting an attenuator as shown below.
2. For maximum noise reduction it may be better to connect the earth lead to the transformer earth point instead of at the receiver earth terminal, or to both points. Every situation is different and frequently no earth at all is necessary, but if only for lightning protection, a good earth should be used, connected to the transformer.
3. Retune the transformer after each earth connection change.
4. Use flexible cable such as 30/0.025mm plastic insulated for the earth lead.
5. Use only neutral cure silicone sealant. Other types may corrode metal parts.
6. Observe correct minimum mount spacings.