



M O O N R A K E R

## Type MRA RX-Transformer

### Matching transformer for receiving antennas

The MRA RX-Transformer is a wideband (0.3-30 MHz) impedance transformer, designed for matching either whip or long wire antennas to the coaxial cable and receiver. It is ideally suited for 7 metre (23ft) whips (types 23B/3, 23B/3C and 23H/S) and long wire antennas.



The transformer converts the widely varying antenna impedance to a constant 50ohms, permitting long or variable lengths of coaxial cable to be used between the antenna and the receiver. Low loss cable is recommended for lengths exceeding 40 metres (130 feet).

It is designed primarily for shipboard use, but is equally suitable for land based systems, to allow location of receiving antennas to be situated as far as practically possible from transmitting antennas or other high noise areas, such as power lines.

The antenna is DC grounded via the transformer to prevent static build-up and the connecting cable is DC isolated to prevent electrolysis. In addition a gas discharge device is also provided to allow for nearby lightning strikes.

Electrical connection to the antenna is by way of insulated cable to the antenna feedpoint and an earth cable connected to ground. Mechanical mounting is by way of two screws or small bolts through the holes in the PVC mounting plate. The unit should be fixed near to the feedpoint of the antenna. The transformer components are housed in an insulated fully marinised PVC box designed to withstand the harsh marine conditions. As a further guard against water ingress, the components are completely encapsulated in a silicone material.

Units are also available to meet military specifications, being housed in additional zinc anneal box, NATA tested to IP66 standard, and finished in pebble grey. Single outlet (type RXT1N) and dual outlet (type RXT2N) models with cable glands to internal coaxial connectors.

## Specifications

<b>Dimensions</b>	Transformer Housing: 112 x 62 x 31 mm (4.4 x 2.5 x 1.2 in) military types: 300 x 150 x 120 mm (11.8 x 5.9 x 4.7 in); Mounting Plate 182 x 57 mm (7.2 x 2.2 in)
<b>Frequency Range</b>	0.28-30 MHz
<b>Bandwidth</b>	Full
<b>Impedance</b>	50Ω nominal
<b>Antenna Types</b>	7 metre(23ft) whips or long wire antennas
<b>Mountings</b>	Via a PVC plate and screws (not provided); distance between mounting holes 143mm (5.6 in), hole diameter 5mm (3/16 in)
<b>Connection</b>	UHF SO239 (in base of unit), allowing direct 50 ohm coaxial feed to receiver; military types: N type connector
<b>Packed Weight</b>	0.26 kg (0.57 lbs)

Specifications subject to change – Issued 07/13



Moonraker Australia Pty. Ltd. ABN 70 162 868 475  
Tasmanian Technopark, Dowsing Point, Tasmania, Australia 7010

Website: [www.moonraker.com.au](http://www.moonraker.com.au) Tel: 61 (0)3 6273 1533 Fax: 61 (0)3 6273 1749 Email: radiocom@moonraker.com.au





## **TYPE MRA RX TRANSFORMER**

### **Installation Instructions**

For best results the MRA RX should be mounted close to the feed point of the antenna.

For ease of mounting the unit is fitted with a mounting plate at each end.

1. Select a suitable mounting position on a rail or other structure close to the antenna feedpoint.
2. Using the unit and mounting plate as a template, mark the position of the two bolt/screw holes.
3. Drill the two holes to suit your bolts or screws.
4. Fasten the unit securely with the bolts or screws.
5. Connect the earth cable which is near the coaxial connector at the bottom of the unit, directly to earth or a nearby steel rail. Ensure this is a good electrical connection. It may be possible to utilise one of the unit's mounting bolts or screws for this.
6. Using good quality low loss coaxial cable and connector, connect the unit to the radio receiver directly via the coaxial socket. Waterproof the joint using a sealing compound or tape.
7. Ensure the coaxial cable is secured to prevent strain on the connector.
8. Connect the wire antenna cable at the top of the unit directly to the antenna feed point. Waterproof this connection using a sealing compound and tape.
9. The unit is completely sealed internally to prevent water and insect ingress.



Specifications subject to change – Issued 07/13

**Moonraker Australia Pty. Ltd.** ABN 70 162 868 475  
**Tasmanian Technopark, Dowsing Point, Tasmania, Australia 7010**

Website: [www.moonraker.com.au](http://www.moonraker.com.au) Tel: 61 (0)3 6273 1533 Fax: 61 (0)3 6273 1749 Email: radiocom@moonraker.com.au

