



# WA7000 wide range receiving aerial

The WA7000 aerial is designed for a very wide receive range of 30kHz to 2GHz. The aerial is active on the lower band 30kHz - 30MHz using a Power MOS FET amplifier for superior performance in the HF range.

The aerial amplifier contains a protection neon tube. This will help prevent damage to the FET when encountering high RF fields or static discharge. Remember however like all active aerials, there is only so much a protection device can do, for this reason make sure the aerial is sited well away from a transmission aerial, power cables etc. Consider future accessibility should you need to service the amplifier at some later stage.

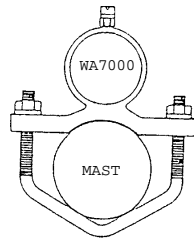
The WA7000 should be sighted as high as possible and in clear space. Operation from a low laying location of loft space could be disappointing.

### Caution:

This aerial is designed for receiving ONLY. Please do not attempt to transmit through it as damage to the aerial and possibly transmitter will occur which will not be covered by warranty.

### Assembly:

Fit the two amplifier attachment clamps to the amplifier pole using the provided lock screws. Ensure you have identified the TOP of the amplifier... this is the shorter of the two threads with a washer in place (the bottom of the amplifier has a longer thread and a flange).



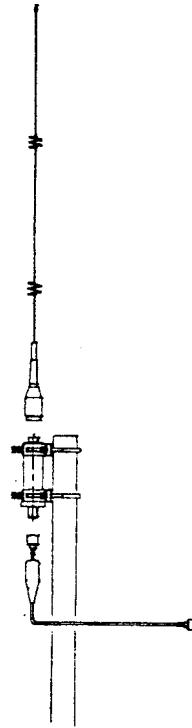
Fit the whip aerial by gently screwing into the top of the amplifier. The top whip is secured into the loading coil by a grub screw, ensure it is tight and if necessary use screw-lock or a dab of super glue to ensure wind vibration cannot loosen the whip.

Attach the 'hood' end of the coaxial patch lead to the bottom of the amplifier by screwing into place. Apply the adhesive material around the plug to make the connection water-tight and the 'hood' fit tightly. Ensure the tape is fully extended when wrapping to ensure the tightest fit. It is common practise to make a small drain hole at the bottom of the 'hood' to allow water build up due to condensation to drain... make sure you do not damage the coaxial cable.

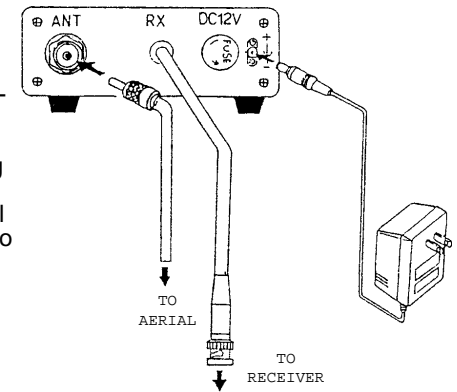
Attach the aerial to a mast of about 40mm diameter (not supplied) using the two supplied "U" clamps and nuts, the mast should be mounted vertically and as high as possible.

Run the coaxial cable to your listening location, the path should not be important but avoid power cables, TV downloads and computers. Should you need to remove the 'M' type metric PL259 make sure you have a spare to re-fit, if you have difficulty in locating a plug then another is obtainable from AOR UK for a small charge.

If you need to extend the cable, always use a good quality 50 OHM coaxial cable such as UR43 or UR76 (or quality RG58/U) and low loss connectors. If a long lead is required (20m plus), consider replacing the entire run with a heavier duty low loss cable such as UR67 or RG213.



Before entering the building, make a drip loop to help prevent water intrusion into the control box. Connect the coaxial connecting lead via the 'M' type metric PL259 connector to the control box. Connect the BNC lead / plug to a suitable receiver. Insert the DC power connector to the control box and plug the mains supply into an outlet socket.



Should you wish, you may use a different regulated power supply. It should have a regulated output of at least 100mA and voltage of 12 to 13.8V. Connection is via a 2.1mm dual concentric plug wired positive centre. A DC fuse is fitted to the rear of the control box rated at 800mA. Never connect the WA7000 or control box directly to a mains outlet.

### Operation:

When correctly connected, depress the front panel band change rocker switch (see-saw) to select 0.1 - 30MHz. The red light (L.E.D.) will illuminate to indicate power is being fed to the amplifier. The receiver can now be tuned across the shortwave and lower frequency bands.

For operation above 30MHz depress the front panel selector, the light will go out. In this condition no power is provided to the amplifier and the receiver may be tuned across the upper coverage of 30MHz to 2GHz. The whip is base and centre loaded for a **wide coverage** with peaks being at 150MHz and above 800MHz.

Should the wrong band be selected, a large drop in received signal will be experienced.

If the WA7000 is only to be used on the VHF-UHF bands, the control box can be by-passed by connecting the coaxial feeder directly to the receiver (a coaxial gender adaptor may be required).

### Troubleshooting:

No Light - Check the mains power supply is correctly functioning (12V DC output) and connected to the control box. Check the fuse is intact and has not blown due to a short circuit in the coaxial lead.

Poor reception - Check that the amplifier is the correct way up! Test for continuity and short circuits in the coaxial cable, carefully check plugs especially if they have been changed during installation.

## Specification:

Useable frequency range:	30kHz to 2GHz
Gain:	6dB maximum 30kHz to 30MHz 0dB maximum 30MHz to 2GHz
Impedance:	50 OHM
Wind endurance:	50m per second
Acceptable support mast:	25 - 60mm diameter
Total length:	825mm
Coaxial cable:	15m of Quality RG58/U with 'M' type metric PL259
Power source:	12V DC @ 100mA (AC adaptor supplied)