

Base Docking Station

Introduction

The PRC-2090 base docking station incorporates the PRC-2090 vehicle docking station plus an AC Power supply module P/N 2090-06-01.

A MIL-STD high speed HF Modem (P/N 2090-04-10) with software to suit is also available as an optional extra.

This section provides instructions for the installation of land based HF communication equipment.

Most of the installation work can be performed by non-technical personnel if they carefully follow the instructions given in this handbook. It is however recommended that the completed installation be checked by a suitably qualified technician. In some equipment configurations, technical adjustment is required for the equipment to operate correctly.

Note:-Some equipment has specific instructions supplied with it. When this is the case those instructions over-ride the general guidance of this handbook, and must be followed in detail.

Unpacking and Inspection

When unpacking the transceiver, check the contents against the packing note provided. Before discarding the carton, check that all accessories have been removed and are not mislaid in the packing material. Inspect the equipment for any transit damage. If damage has occurred notify your supplier immediately and gain their advice on further action. Failure to do this could affect the warranty covering the equipment.

Fixed Station Installations

Transceiver Position

The following should be considered when choosing a position for the transceiver.

Operating Convenience

The transceiver should be placed so that the operator is comfortable and any facilities he may require are easily accessible.

Air Circulation

Most transceivers rely on air flow around cooling fins to dissipate heat generated by the transmitter. The mounting position must allow free air flow around these fins.

Proximity of Transceiver to Antenna

When using RG-58 coaxial cable from the transceiver to the antenna a cable length of no more than 30 metres is recommended. Should a run of more than 30 metres

be required it is recommended that a low loss coax such as RG-213 or RG-8 be used.

It is recommended that the transceiver chassis is connected to ground using the bolt on the rear panel to stop pick-up of unwanted noise from local power supplies and electrical equipment.

Power Supply

All Barrett transceivers require a supply voltage of 13.8 VDC. In most vehicles or vessels this is available from the battery, in the case of vehicles with a 24V system a 24V to 12V converter rated at 25 amps should be used (Barrett P/N 2090-06-02). In fixed station installations where mains power between 88VAC and 256VAC is available, a Barrett power supply (P/N 2090-06-01) should be used.

In base station installations where no mains supply is available a Barrett solar power supply is available.

Note:- Some installations use an AC battery charger to float charge the supply battery. Battery chargers can produce electrical noise from the rectifier diodes. This noise causes a static type of interference in the receiver. It may be necessary, therefore, to switch off the battery charger whilst the transceiver is in use. If float charging of batteries is required for installations with unreliable AC power supply, it is recommended that a Barrett power supply (P/N 2090-06-01) be used as this provides a boost and float charge facility to maintain a battery without the noise problem described above.

Voltage Drop

The average current consumption of the transceiver is low but during transmission of voice peaks, high current is needed for short intervals. This means that the power supply cable must be heavy enough to supply these short duration current peaks without excessive voltage drop. Preferably use only the power cable supplied with the transceiver. If extra cable is required use a cable with a conductor square area of no less than 8mm. Unwanted voltage drop will also occur if incorrect wiring techniques such as poor choice of connection points and incorrect use of terminal lugs are used.

Protection Fuse

The transceiver is provided with adequate internal protection. However, the fitting of an external fuse is considered necessary, not for protection of the transceiver itself, but to ensure that in the event of damage to the cable, a fire risk does not exist. The fuse used must be installed in the active wire as close as possible to the battery, and must be of a type which has a low voltage drop at the peak currents expected.

Note:- in-line 3AG glass fuses are not suitable. An ATC automotive blade type fuse rated at 25A with a suitable high current ATC fuse holder rated at 30A or more should be used. These type of fuses and holders are contained in our standard installation kit (Barrett P/N BCA20004) or are available individually (Barrett P/N BCA20021)

Antenna

The antenna is a most critical part of the complete radio installation. It must accept the output power from the transmitter, radiate that power with minimum loss and in the receive mode, accept weak signals for input to the receiver.

Incorrect antenna installations will yield poor system performance and are often the cause of complaints of poor transceiver performance.

A range of antennas is available from Barrett to suit most small fixed stations. Detailed instructions are included with each antenna.

PRC-2090 Tactical HF Transceiver and Docking Station (2090-05-00)

Front View - 2090 Not Fitted



Front View - 2090 Docked



Steps for Docking the PRC-2090 Transceiver into the Docking Station

- 1) Select where the handset clip is to be placed. The clip can be placed on the side of the docking station or on the top of the docking station. The clip can only be moved when the PRC-2090 transceiver is not fitted.



Side mount handset clip

To put the handset clip on top of the docking station unscrew the 2 screws holding the handset clip.

