

### 3. Installation

On receipt of your transceiver, check the contents against the packing list. Ensure all items are available before commencing installation.

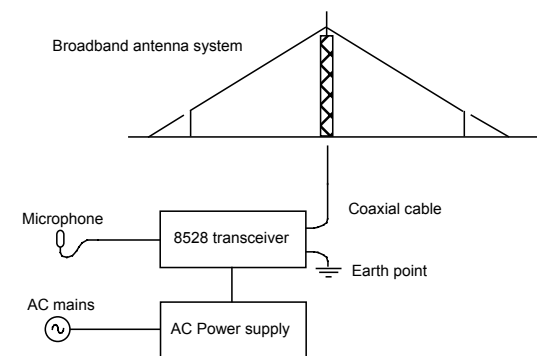
The following notes provide guidance to installation but are not intended to be comprehensive procedures. It is recommended that installation is carried out by qualified and experienced personnel.

There are two types of installation:

- fixed base station
- mobile.

#### Fixed base station

The fixed base station installation (figure 3.1) typically consists of an AC power supply connected directly to the mains. DC output from the power supply is connected to the transceiver, which in turn is connected to an antenna.

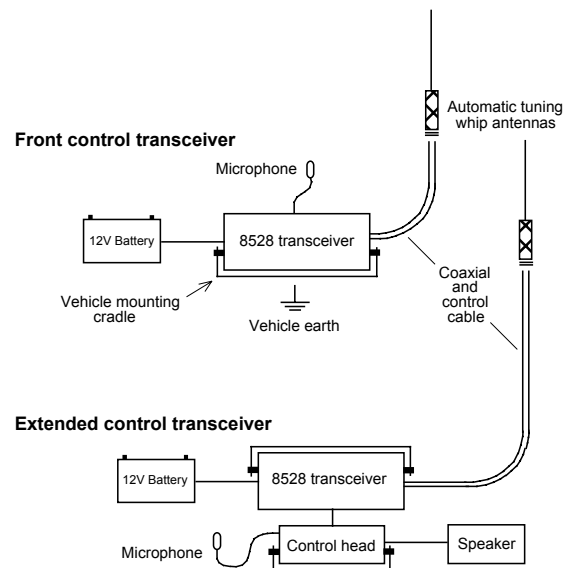


**Figure 3.1: Typical fixed base station installation**

## Mobile

The mobile installation (figure 3.2) typically consists of a 12V DC power supply (battery) connected to the transceiver; the antenna is connected to the transceiver with coaxial cable and, for auto tuning antennas, with a control cable.

Installations may be either with front control transceivers or extended control transceivers which include a separate control head and speaker.



**Figure 3.2: Typical mobile installation**

## Mounting the transceiver



**In mobile installations, the transceiver must be mounted in a position that will not cause injury to occupants in the event of a motor vehicle accident.**

**Mount the transceiver and control head in a position that allows:**

- **easy access to the control panel**
- **a free flow of air through the rear cooling fins.**

There are two types of mounting cradles that can be used when installing your transceiver:

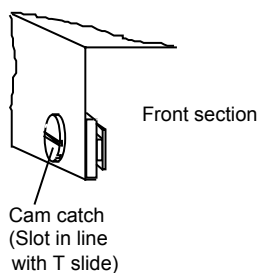
- code 117 mounting cradle—front entry
- code 118 mounting cradle—top/bottom entry.

Both types of cradle (supplied with 6 metres of DC power cable) can be used to mount the transceiver. You must determine the mounting position to best suit your needs.

## Code 117 mounting cradle—front entry

- Step**      **Action**
1.            The cradle can support the transceiver from above or below permitting roof or floor mounting.
- Secure the mounting cradle into position with the rotating cam catches to the front. Ensure there is sufficient space at the rear of the cradle to take the transceiver heat sink and connectors.

2.            Align both cam catch slots with the T-section slides.



3.            Insert the transceiver side rails into the T-section slides and push the transceiver fully into the cradle.
4.            Apply gentle pressure to the front panel of the transceiver and lock into the cradle by turning the cam catches one quarter of a turn in either direction with a suitable tool or small coin.



## Code 118 mounting cradle—top/bottom entry

- | Step | Action                                                                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | Secure the mounting cradle into position with its spring clips nearest the front. Ensure there is sufficient space at the rear of the cradle to take the transceiver heat sink and connectors.                                      |
| 2.   | Remove the front and rear fixing screws of the transceiver side rails (the centre screw to be left untouched).<br><br>Note: Adaptor plates have to be fitted to the transceiver side rails to secure the transceiver to the cradle. |
| 3.   | Secure the adaptor plates flush to the transceiver side rails with the new screws provided, and fit one 'O' ring over each projecting stud. The adaptor plates projecting studs fit into the slides in the cradle.                  |
| 4.   | Insert the transceiver adaptor plate studs into the cradle slides and push fully into the cradle.                                                                                                                                   |
| 5.   | Secure the transceiver into the cradle with the spring clips.                                                                                                                                                                       |



## Mounting the extended control head



**The control head must be connected to the transceiver before power is applied. Failure to do this may result in damage to the transceiver in the following ways:**

- **the internal fuse blows and must be replaced**
- **the control head fails to operate. The power must be disconnected from the transceiver and then reconnected and switched on.**

Step	Action
1.	Remove the two cradle screws and washers securing the mounting cradle to the control head.
2.	Secure the mounting cradle into position. Ensure there is sufficient space at the rear of the cradle for the control cable.
3.	Secure the control head to the mounting cradle with the two screws and washers.
4.	Mount the transceiver (refer to <i>Mounting the transceiver</i> on page 3-3).



**Step      Action**

5. Connect the interface cable between the control head and transceiver. Ensure the cable connectors are securely fastened to the control head and the transceiver.

Notes: The extended control head is supplied with a cable approximately 6 m long. To enable correct installation, the cable has different connectors at each end.

If necessary, remove the cover from one connector to pass the cable through restricted openings.

If the cable is too long, gather the excess neatly at one point.

6. Connect the extension speaker cable to either the control head or the transceiver.



## Power supply

Ensure that the power supply to operate your transceiver is 12V DC. Transceiver series 8528H operating with the 400 watt PA (type 4404) will require a 24V DC supply.

Power can be provided by either a 12V battery (for mobile installations) or a suitable AC power supply (for base station installations).

All installations should be checked by a qualified technician before power is applied to the transceiver.

The heavy duty six metre length of power cable—supplied with the vehicle mounting cradle for mobile installations—has been selected to minimise the voltage drop between the battery and transceiver when in transmit mode. Installation using a smaller core cable size is not recommended.

All cables should be protected from sharp edges and mechanical abrasions.

For mobile installations, it is recommended that a suitable cartridge fuse (32 Amp-accessory code 711) is fitted in the active wire, close to the battery, to protect the power cable from the possible risk of fire through damaged insulation coming in contact with the vehicle chassis. Normal glass in-line automotive fuses are not recommended. The transceiver is fitted with adequate internal protection.

Connect the power cable between the transceiver and the battery or the transceiver and AC power supply.

**Note:** In extended control installations where the power and control cables are long and follow a common path, keep the cables separate by a minimum of 200 mm. The cables can be brought together for short distances, for example, to pass through the same hole in a bulkhead. Failure to observe this warning will cause distortion of the transmitted audio signals.





## Grounding

In all installations an adequate ground, or earth, is essential for satisfactory operation of the transceiver.

A chassis ground or earthing position is provided on the rear panel of the transceiver.

The control head should also be earthed.

In fixed installations, install an earth cable between the transceiver ground screw and an earth point. Use copper braid or heavy duty cable.

## Antennas and antenna tuners

Correct installation of these two units is of prime importance to the operation of your transceiver.

To obtain the best performance and good radiation efficiency from your transceiver installation, it is important to consider the physical location-distance from the transceiver-and earthing of the antenna and tuner.

Detailed and specific installation instructions are provided with each antenna and antenna tuner. These instructions must be used to gain the best possible results from your antenna, antenna tuner and transceiver.

