TMAA11-02, TMAA11-03 and TMAA11-04 Dual Head Upgrade Kits Installation Instructions

TAIT radio communications

Introduction

The TMAA11-02, TMAA11-03, or TMAA11-04 upgrade kit can be used to convert a single head and body mobile radio to a dual–head radio system. In a dual–head radio system, elements of the user interface (such as display content, internal speaker audio, and LEDs) are duplicated on both control heads. This enables multiple users to share the same radio.

The installation kit provides the following items:

- Graphical–display control–head
- Remote cable (x2)
- Control–head remote interface and mounting bracket (x2)
- Body remote interface
- An additional microphone may also be included, such as standard (TMAA11–02 kits only) or keypad (TMAA11–03 kits only).

control-head remote interface (x2)

multi-head body remote interface

second control head

remote cable (x2)

control-head U-bracket (x2)

Before you start, make sure you have an existing radio body and graphical–display control head to upgrade, with the same firmware as the control head supplied in the upgrade kit. The radio body must also have the software feature for Multi-Head Support enabled. Contact Tait Electronics Limited if unsure whether your radio can be upgraded.

Important: The kits are designed to upgrade either a new radio (not installed), an installed radio with a head mounted locally, or a standard remote installation using TMAA03-16. If upgrading a standard remote installation, the existing head and body remote interfaces do not support dual heads and must not be re–used for the upgrade. For best performance the remote cable should also be replaced, although this may be impractical for some installations.

Refer to the radio installation guide for further information such as mounting the radio body using the U-bracket, and antenna and power connections.

Installation Precautions

⚠️ **_Warning!!_ Mount these products securely in a vehicle. Unsecured radio equipment is dangerous to the vehicle occupants.**
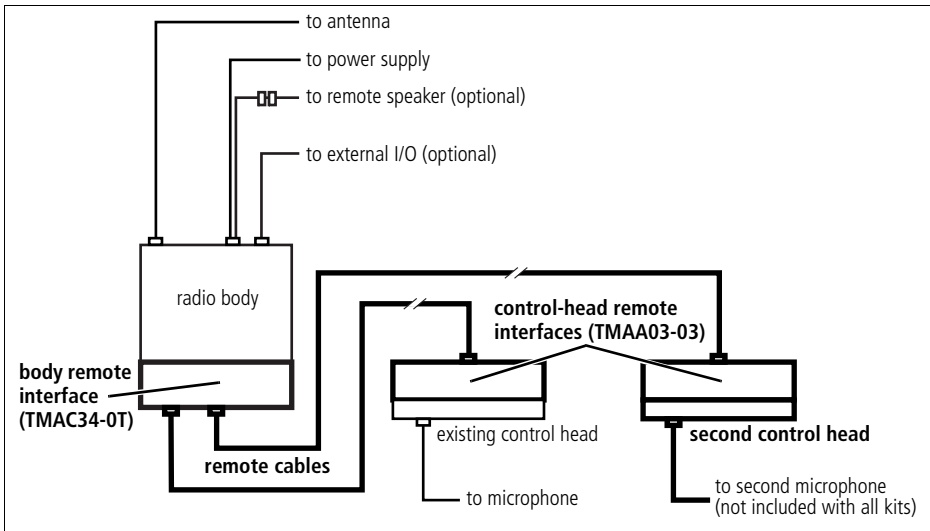
⚠️ **_Caution:_** When drilling holes in a vehicle, check that drilling at the selected points will not damage existing wiring, petrol tanks, fuel lines, brake pipes or battery cables.

Caution: This equipment contains devices that are susceptible to static charges. The procedures outlined in this installation guide should therefore be carried out in a static–safe environment. You can obtain information on antistatic precautions and the dangers of electrostatic discharge (ESD) from standards such as ESD S4.1-1997 (revised) or BS EN 100015-4 1994. The Electrostatic Discharge Association website is http://www.esda.org/.

Installation

The following diagram summarises how the components in a dual-head single-body system are installed. The items named in **bold** are part of the upgrade kit.
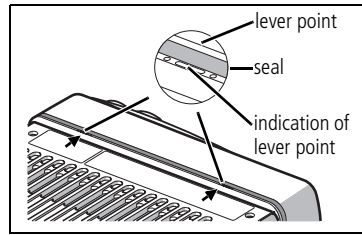

1 Uninstall the existing radio.

One or more of the following steps may not be necessary depending on the type and degree of the existing installation.

   a Remove the radio from its mounting position.

   b Disconnect the cables from the rear of the radio, such as the power and antenna cables.

   c If upgrading a standard remote installation:

      ■ disconnect the remote cable, and remove and discard if the cable is to be replaced (recommended).

      ■ remove and discard the control–head remote interface.

d Remove the control head (if upgrading a local installation) or body remote interface (if upgrading a standard remote installation) from the radio body. Use a 5mm (3/16in.) flat-bladed screwdriver in the positions shown.

e Unplug the loom from the radio body.

f If upgrading a standard remote installation, discard the existing body remote interface.
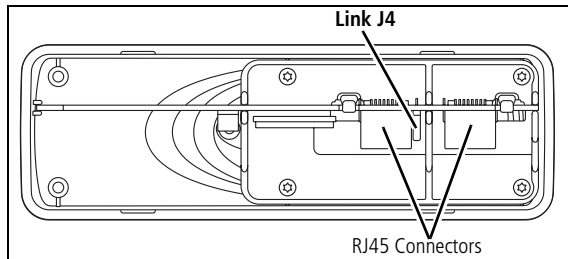
Important: There are several remote interfaces available that are similar in appearance, but are configured differently and serve different purposes. It is important that you only use the components supplied in this kit for dual-head single-body installations.

2 Remove link J4

Use your fingernail (or similar) to remove the termination resistor (link J4) on the body remote interface (TMAC34-0T). Link J4 is located between the two RJ45 connectors.

Removing link J4 ensures the radio system, which is based on a standard RS485 multi-drop network, is correctly terminated at the network ends.

3 Assemble the remote interfaces.

a Assemble the body remote interface (TMAC34-0T) to the radio body. Ensure the earthing tag is attached to the left screw boss on the radio chassis.

b Assemble the control–head remote interfaces (TMAA03-03) to both heads.

Refer to the instructions included with the control head remote interface and U-bracket.

4 Mount the radio body and control heads.

a Mount or re-mount the radio body using the preferred method, such as U-bracket, slide-in cradle, or security bracket.

Refer to the relevant sections in the installation guide, or the installation instructions included with the mounting kit.

b Use the remote U-brackets and screws provided to mount the control heads.

Refer to the instructions included with the control head remote interface and U-bracket.

5 Install the remote cables.

a Remove the connector seals from the body remote interface.

b Drill any holes required for the cables and install suitable grommets or bushings in the holes.

c Use one of the remote cables to connect the rear RJ45 socket of the primary control head (see note below) to the left RJ45 socket of the body remote interface.

Note: When upgrading, the existing head typically has the lower MAC address and is therefore the primary head. The primary head adjusts remote-speaker volume (if a remote speaker is attached), and must be used to read and program the radio system and upgrade radio firmware.

Note: You can connect the primary head to either socket. However, it can help with identification (for example, when connecting the system for programming) if the primary head is connected to the first socket.

d Use the other remote cable to connect the rear RJ45 socket of the secondary control head to the right RJ45 socket of the body remote interface.

6 Check the installation.

Apply power. If the radio does not power on, press the On/Off key on one of the control heads. Check that both heads sound the power-up tone and both displays are showing the same information.

If a "Duplicate MAC Address" message appears, you must uninstall the radio to a single-head system and use the multiple device configuration utility to change the MAC addresses (click Tools > Multiple Device Configuration from the programming application). For more information, refer to the online help from within the utility (Help > Contents and Index).

7 Program the radio system.

a Connect the microphone socket of the primary control head to your PC.

b Connect the radio body to a power source and turn the power on.

c Open the programming application.

d Click Radio > Read.

e In the Select Device(s) dialog, select the radio body (TMAB22-) and the primary control head (the first "TMAC40-" item in the list) and click OK.

f Change settings as required. For example:
  ■ Select the multi-head menu options. For the TM8200 Programming Application, select the Multi Head Info check box on both the Conventional Menu and MPT Menu forms (located under Radio Settings > Radio Information).
  ■ Select the Listen In check box (UI Preferences form) for microphone audio from a transmitting control head to be routed to the speaker of the other control head.

g Click Radio > Program.

h In the Select Device(s) dialog, check that the radio body (TMAB22-) and both control heads (TMAC40-) are selected, and click OK.

For more information, refer to the online help from within the programming application.

More Information

Refer to your radio provider for more information about this product.