7 TMAA10-02 Handset

The TMAA10-02 handset provides the user with privacy and also improves the audio quality in noisy environments. The handset uses a dynamic microphone capsule, so the TMAA02-06 support kit for dynamic microphones must also be installed and configured for dynamic microphone operation.

When your radio receives a call and the handset is mounted in its locking cradle, the radio unmutes and you can hear the call from your radio's internal speaker and from any connected remote speaker.

If you remove the handset from its cradle when you receive a call, the radio unmutes and you can hear the call from your radio's internal speaker, from any connected remote speaker and from the handset earpiece.

Using private handset mode, the radios internal and external speakers are muted and the call can only be heard from the handset earpiece.

handset
push-button
locking cradle
mounting plate
radio to handset cord
grommet

7.1 Installation

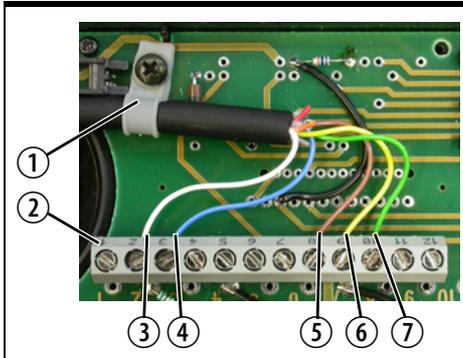### 7.1.1 Installing the TMAA02-06 Dynamic Microphone Support Kit

Refer to Section 5 "TMAA02–06 Support Kit for Concealed & Dynamic Microphones" for installation details.

7.1.2 Handset Wiring

1. Drill a hole in the chosen mounting surface for the radio to handset cord and pass the cord through the hole.

2. Prepare the radio to handset cord, as follows.
   - Cut the radio to handset cord to the required length.
   - Strip away about 60 mm (2 inches) of the cable outer sheath on the end without a connector.
   - Cut off the exposed orange, red and grey wires.
   - Strip about 6 mm (0.2 inches) of the coating off each of the five remaining wires.

3. Secure the radio to handset cord in the handset PCB P–clip ①, as shown in the diagram on the following page.

4.   Connect the five wires to the handset PCB connector ②.

Table 7.1   Handset PCB connector wiring

Handset PCB Connector	Colour	Reference
2	white	③
3	blue	④
8	brown	⑤
9	yellow	⑥
10	green	⑦

7.1.3   Handset Installation

1.   Press the pushbutton and remove the handset from the locking cradle.

2.   Disassemble the locking cradle by removing the four locking cradle screws.

3.   Screw the handset mounting plate to the required mounting surface. Note that mounting screws are not provided in this kit.

4.   Clamp the top part of the locking cradle onto the mounting plate, and secure it with the four locking cradle screws.

### 7.1.4   Connecting the Handset to the Radio

Important   The handset microphone grommet must be installed when–ever the handset to radio cord is plugged into the microphone socket. When installed, the grommet has two functions:

■   to prevent damage to the microphone socket when there is movement of the microphone cord, and

■   to ensure that the control head is sealed against water, dust and other environmental hazards.

1.   Plug the radio to microphone cord into the microphone socket on the radio control head.

2.   Slide the grommet along the cord and push two adjacent corners of the grommet into the microphone socket cavity.

3.   Squeeze the grommet and push the remaining corners into position.

4.   Check that the grommet is seated correctly in the cavity.

Figure 7.1   Correct handset microphone grommet seating
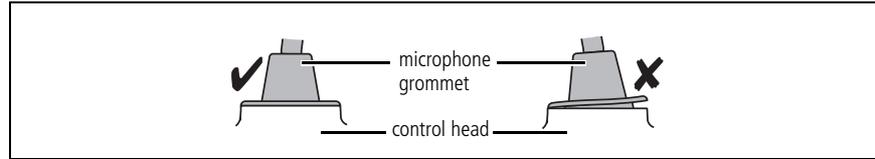
7.1.5   Radio Programming

Dynamic Microphone Support

The Dynamic Mic Support setting in the UI Preferences form of the TM8000 Programming Application must be selected. Refer to the online help of the programming application for more information.

Table 7.2   Handset settings in the UI Preferences form

Field	Setting	Selected/Cleared
Audio Setup	Dynamic Mic Support	selected

Private Handset Mode

If private handset mode is required, the radio needs to be programmed to mute the audio power amplifier when the handset is out of the cradle. The audio path is then only through the RX AUDIO line to the handset earpiece.

The following table shows the settings required in the Programmable I/O form of the TM8000 Programming Application. Refer to the online help of the programming application for more information.

Note   If private handset mode is programmed, then no audio will be heard from the speakers if the handset is unplugged.

Table 7.3   Handset settings in the Programmable I/O form

Pin	Direction	Label	Action	Active	Debounce	Signal State	Mirrored To
CH_GPIO1	Input	None	Audio PA Off	High	25	None	None

7.2   Interface Specification

The following table and diagram summarizes the signals used for the handset on the radio's microphone connector and shows the interface between the handset and the radio.

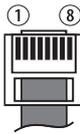**Table 7.4   Handset microphone connector - pins and signals**

Pin	Signal	Handset PCB Connector	Colour	Description
1	RX_AUD	8	brown	receive audio to handset
2	—	—	—	not connected
3	—	—	—	not connected
4	PTT	2	white	PTT and hookswitch
5	MIC	9	yellow	audio from the handset to dynamic-mic support board
6	GND	10	green	analogue ground
7	—	—	—	not connected
8	CH_GPIO1	3	blue	programmable line controlling private mode

Figure 7.2   Handset to radio interface