TM9100 and TP9100 User's Guides Insert Sheet

TAIT radio communications

1 Introduction

This insert sheet contains information about enhancements to the operation of TM9100 mobiles and TP9100 portables. The topics covered in this document are:

■ additional compliance information (TP9100 only)

■ using encryption

■ voting operation.

2 Additions to "For your safety" chapter (TP9100 only)

The following compliance information has been added.

USA public safety bands (764–776 MHz and 794–806 MHz)

Part 90R of the FCC Title 47 of the Code of Federal Regulations (CFR) deals with the use of frequencies in the 764 to 776 MHz and 794 to 806 MHz bands.

Low-power channels

This radio complies with §90.531 (b) (3) and §90.531 (b) (4) of 47 CFR. These sections state that only low–power transmission is permitted on the following channels:

■ Regional Planning channels, as defined in §90.531 (b) (3).

■ Itinerant channels, as defined in §90.531 (b) (4).

Use of encryption

This radio complies with §90.553 (a) of 47 CFR. This states that:

■ Encryption is not permitted on the nationwide Interoperability calling channels.

■ These channels are defined in §90.531 (b) (1) (ii).

■ Radios using encryption must have a readily accessible switch or control to allow the radio user to disable encryption.

3 Additions to "Safeguarding you and your radio" chapter

About encryption

Note: This feature is available for digital and dual–mode channels only.

Your radio may be programmed to use encryption to make your communications completely private. You may be able to turn encryption on and off and change the encryption key that your radio uses when you make a call.

The radio receiving your call must have the same encryption key in order to decode your encrypted call.

The encryption symbol 🔑 remains in the display while encryption is turned on.

Turning encryption on and off

Using the Main menu

To turn encryption on and off using the Main menu:

1. Press **Menu** and select **Security** > **Encryption**.

2. Scroll to **On** (or **Off**) and press **Select**.
   The message **Encryption activated** (or **Encryption deactivated**) appears in the display.

Using a function key

To turn encryption on and off using a function key programmed for encryption.

1. Press the function key to turn encryption on.
   The message **Encryption activated** appears in the display.

2. Press the function key again to turn encryption off.
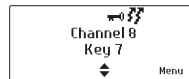   The message **Encryption deactivated** appears in the display.

Using the 3-way selector (TP9100 only)

To turn encryption on and off when the 3-way selector is programmed for encryption:

1. Turn the 3-way selector to either position A or B.
   The message **Encryption activated** appears in the display.

2. Turn the 3-way selector to position C to turn encryption off.
   The message **Encryption deactivated** appears in the display.

Making an encrypted call

1. Select the required channel and group.

2. Check that encryption is on (the encryption symbol 🔑 is showing in the display).

3. Check that the channel is free (green LED is off).

4. Press and hold the PTT key to transmit.
   The name of the encryption key that your radio is using for the transmission may appear briefly:
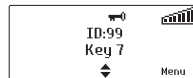

   While you are transmitting, the LED glows red and the transmit symbol 📶 appears in the display.

Receiving an encrypted call

When you receive an encrypted call, your radio unmutes and you can hear clear speech if the received call is encrypted with a key that matches a key stored in your radio.

The name of the encryption key used in the transmission may appear briefly:

If the key required to decode the call is not present in your radio, then the radio remains muted.

'Proper Key Detect' feature

Your radio may be programmed so that you can only hear the encrypted call if the key used to encrypt the call matches the encryption key that currently encrypts your transmissions.

In this case, your radio remains muted even if the received call is encrypted with a key that matches another key stored in your radio.

For example, you are encrypting your transmissions using encryption **key 7**. Although **key 1** and **key 2** are also stored in your radio, your radio has been programmed so that only calls encrypted using **key 7** unmute the radio.

Changing your radio's encryption key

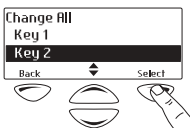You may be able to use the Change All menu to change the encryption key that encrypts your transmissions.

Note: Once you change the encryption key, it may also automatically update the encryption keys used to encrypt calls on other channels.

You can use the Preset Keys menu to change the encryption keys back to the default encryption key for each channel.

Using the Change All menu

To change the encryption key using the Change All menu:

1. Press **Menu** and select **Security** > **Change All**. A list of all the encryption keys stored in your radio appears.

2. Scroll to the key you want and press **Select**.

   The message **Global Key Selected** appears in the display.

Using the Preset Keys menu

To change to the default encryption key for each channel:

1. Press **Menu** and select **Security** > **Preset Keys**.

   The message **Select Preset Keys?** appears in the display:

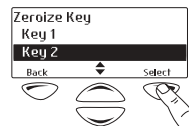2. Press **OK** and the message **Preset Key Selected** appears in the display.

Removing encryption keys from your radio

It may be possible for you to delete encryption keys from your radio.

Note: When emergency mode is activated or when your radio is immobilized ('inhibited'), your encryption keys may be automatically deleted from your radio.

To delete an encryption key:

1. Press **Menu** and select **Security** > **Advanced** > **Zeroize Key**.

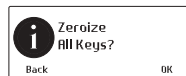2. Scroll to the key you want and press **Select**.

   The message **Single Key Zeroized** appears in the display.

To delete all encryption keys:

1. Press **Menu** and select **Security** > **Advanced** > **Zeroize All.**

   The message **Zeroize All Keys?** appears in the display:

2. Press OK and the message **All Keys Zeroized** appears in the display.

4 Additions to "Listening to channel traffic" chapter

Using your radio in different repeater areas

Your radio may have a group of channels programmed as a voting group. The channels in the voting group all carry the same traffic, but from different repeaters. As your radio moves in and out of different repeater coverage areas, the best communication channel is automatically selected for you to use.

This channel is known as the 'home' channel, and is the channel you make and receive calls on until another channel is voted the home channel. While voting is active, the LED glows amber and the scanning symbol ☺ appears in the display.

Selecting a voting group

A group is collection of channels that are grouped together for either voting or scanning. Select a voting group either by using a function key or by using the main menu.

On TP9100 portables, you may be able to use the 16-way channel selector (refer to your user's guide for details).

Using a function key

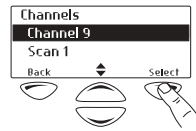Press the function key to select and activate a preset voting group.

The programmed group name may now appear in the display.

The LED glows amber (TM9100 mobiles only) and the scanning symbol ☺ appears in the display.

Using the Main menu

You may be able to select a voting group using the Main menu:

1. Press **Menu** and select **Channels**.

2. Scroll to the group you want and press **Select**.

The LED glows amber and the scanning symbol ☺ appears in the display.

Suspending a channel from a voting group

You may be able to use the function key programmed for 'nuisance delete' to temporarily remove one of the channels from the voting group, if the radio is continually stopping on an undesired channel (for instance, if there is interference) while voting.

To remove a channel from a voting group:

1. Wait until the radio has stopped on the channel that you want to remove from the voting group.

2. Press the function key programmed for nuisance delete.

    If the channel has been successfully been removed, the message **Channel deleted from group** appears in the display.

    The channel remains removed from the voting group until you either select another voting group or the radio is turned off and then on again.

Note: The function key programmed to activate a voting group may be programmed so that a short key press activates voting and a long key press activates nuisance delete.

5 More Information

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