TP9800 Multiband P25 Portable Radio

User's Guide

MPH-00004 - Issue 01 - November 2024

www.taitcommunications.com

1 Contents

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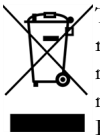

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Tait will comply with environmental requirements in other markets as they are introduced.

About this Guide

Scope of Manual

This manual provides information about all TP9800 Multiband P25 Portable Radios.

To check the radio's firmware version, see Viewing Radio Information on page 68. If the radio does not operate as expected, please contact the radio provider for assistance.

Alerts

Please follow exactly any instruction that appears in the text as an ‘alert’. An alert provides necessary safety information as well as instructions about the proper use of the product. This manual uses the following types of alert:

Warning This alert is used when there is a hazardous situation which, if not avoided, could result in death or serious injury.

This alert is used when there is a hazardous situation which, if not avoided, could result in minor or moderate injury.

Notice This alert is used to highlight information that is required to ensure procedures are performed correctly. Incorrectly performed procedures could result in equipment damage or malfunction.

This alert is used to highlight significant information that may be required to ensure that you perform procedures correctly, or to draw your attention to ways of doing things that can improve your efficiency or effectiveness.

Associated Documentation

The following associated documentation for this product is available on the Tait Partner Portal (https://partnerinfo.taitradio.com/).

- MPD-00002-xx TP8000/TP9000 Battery Charging Guide
- MTA-00011-xx Portable and Mobile Radio Safety and Compliance Information

The characters **xx** represent the issue number of the documentation.

Technical notes are published from time to time to describe applications for Tait products, to provide technical details not included in manuals, and to offer solutions to any problems that arise. Look for new or updated technical notes on the Tait Partner Portal.

Publication Record

Issue	Publication Date	Description
1	November 2024	First release

1 For your safety

Before using the radio, please read the following important safety and compliance information.

1.1 Radio Frequency Exposure Information

For individual safety and to ensure compliance with the radio frequency (RF) exposure guidelines of the United States Federal Communication Commission's (FCC), Industry Canada, and those from other administrations, please read the following information before using this radio.

1.1.1 Using this radio

This radio should only be used for work-related purposes (it is not authorized for any other use) and when the user is fully aware of, and can exercise control over, exposure to RF energy. To prevent exceeding FCC RF exposure limits, the user must control the amount and duration of RF that they and other people are exposed to.

It is also important that you:

- do not remove the RF Exposure label from the radio
- ensure this RF exposure information accompanies the radio when it is transferred to other users
- do not use the radio if you do not adhere to the guidelines on controlling your exposure to RF.

1.1.2 Controlling exposure to RF energy

This radio emits radio frequency (RF) energy or radio waves primarily when calls are made. RF is a form of electromagnetic energy (as is sunlight), and there are recommended levels of maximum RF exposure.

To control your exposure to RF and comply with the maximum exposure limits for occupational/controlled environments, follow these guidelines:

- Do not talk (transmit) on the radio more than the rated transmit duty cycle. This is important because the radio radiates more energy when it is transmitting than when it is receiving.
- When listening and talking on the radio, hold it upright in front of your face so that it is at least one inch (2.5cm) away from any part of your face. Keeping the radio at the recommended distance is important because exposure to RF decreases rapidly the further away the antenna is from your body.
- Keep the antenna at least one inch (2.5cm) from your face at all times.
- If you wear the radio, you must always put it in a carrying accessory that has been specifically approved by Tait for this radio. Using non-approved body-worn accessories may mean you expose yourself to higher levels of RF than recommended by the FCC's occupational/controlled environment RF exposure limits.
- Ensure you only use Tait-approved antennas, batteries, and accessories.

For more information on what RF energy is and how to control your exposure to it, visit the FCC website at www.fcc.gov/oet/rfsafety/rf-faqs.html.

1.1.3 Compliance with RF energy exposure standards

This two-way radio complies with these RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR §§ 1.1307, 1.1310, and 2.1093.
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95.1-1992.
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition.
- European Directive 2004/40/EC on minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields).

This radio complies with the IEEE and ICNIRP exposure limits for occupational/controlled RF exposure environments at operating duty factors of up to 50% talk to 50% listen.

1.1.4 Conformité aux normes d’exposition à l’énergie RF

Cette radio émetteur-récepteur se conforme aux normes et aux règlements d’exposition à l’énergie RF:

- La Commission fédérale de la communication des Etats-Unis, Code de règlements fédéraux (CFR) Titre 47 Sections 1.1307, 1.1310, et 2.1093 (radios portatives).
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992.
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition.
- La directive européenne 2004/40/EC concernant les prescriptions minimales de sécurité et de santé relatives à l'exposition des travailleurs aux risques dus aux agents physiques (champs électromagnétiques).

Cette radio se conforme aux limites d’exposition de l’IEEE (FCC) et ICNIRP pour les environnements d’exposition au rayonnement RF professionnel et contrôlé aux cycles de marche de 50% en mode transmission et 50% en mode réception.

1.2 Radio Frequency Emissions Limits in the USA

1.2.1 CFR Title 47 Part 15.19 (a) (1) - Receivers

Part 15 of the FCC Rules imposes RF emission limits on receivers. This radio complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

1.2.2 CFR Title 47 Part 15.19 (a) (3) - All other devices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

1.3 Radio Frequency Emissions Limits in Canada

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de license. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

1.4 USA Public Safety Bands (764–776MHz and 794–806MHz)

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

1.4.1 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).

1.4.2 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.

1.5 EMC Regulatory Compliance in Australia

This product meets all ACMA regulatory requirements for electromagnetic compatibility (EMC). For more information about EMC compliance, visit the ACMA website at www.acma.gov.au.

1.6 Frequency Band Reserved for Distress Beacons

Frequency band 406 to 406.1 MHz is reserved for use by distress beacons. Transmissions should not be made within this frequency band.

1.7 Health, Safety and Electromagnetic Compatibility in Europe

In the European Community, radio and telecommunications equipment is regulated by Directive 2014/53/EU. The requirements of this directive include protection of health and safety of users, as well as electromagnetic compatibility.

1.7.1 Intended purpose of product

This product is an FM radio transceiver. It is intended for radiocommunication in the Private Mobile Radio (PMR) or Public Access Mobile Radio (PAMR) services, to be used in all member states of the European Union (EU) and states within the European Economic Area (EEA).

1.7.2 Restrictions

This product can be programmed to transmit on frequencies that are not harmonized throughout the EU/EEA, and will require a license to operate in each member state.

This product can be programmed for frequencies or emissions that may make its use illegal. Where applicable, a license must be obtained before this product is used. All license requirements must be observed. Limitations may apply to transmitter power, operating frequency, channel spacing, and emission.

1.7.3 Declaration of conformity

Brief Declarations of Conformity appear under 13 on page 71 of this document. To download the formal declaration of conformity, go to https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity.

1.8 Interference with Electronic Devices

Warning Some electronic devices may be prone to malfunction due to the lack of protection from RF energy that is present when the radio is transmitting.

Examples of electronic devices that may be affected by RF energy are:

- aircraft electronic systems
- vehicular electronic systems such as fuel injection, anti-skid brakes, and cruise control
- medical devices such as pacemakers and hearing aids
- medical equipment in hospitals or health care facilities

Switch off the radio before boarding an aircraft. Using the radio while in the air is not permitted.

Consult the manufacturer (or its representative) of any such electronic devices to determine whether electronic circuits in those devices will perform normally when the radio is transmitting.

Warning If you have a pacemaker:

- immediately turn off the radio if you suspect it is interfering with the pacemaker
- keep the radio at least 6 inches (15cm) from the pacemaker while the radio is on
- use the radio on the side opposite to the pacemaker to minimize interference
- never carry the radio in a breast pocket.

If there is interference between your hearing aid and the radio, please discuss an alternative solution with the hearing aid manufacturer.

1.9 Potentially Explosive Atmospheres and Blasting Areas

Warning Unless the radio is specifically certified for use in a potentially explosive atmosphere, turn off the radio before entering such an atmosphere. An explosion could cause serious injury or death. Examples of potentially explosive atmospheres include filling stations, and any environment where there are flammable liquids, gases, or dusts.

Warning Turn off the radio before approaching blasting caps, a blasting area, or any area where you are instructed to turn off a two-way radio. Obey all signs and instructions. Interference with blasting operations could cause serious injury or death.

1.10 Radio Installation and Operation in Vehicles

Warning Keep the radio away from airbags and airbag deployment areas. Do not install, charge, or place a radio near such areas. An activated airbag can propel a portable radio with sufficient force to cause serious injury to vehicle occupants. An airbag may not perform to specification if obstructed by a radio.

Warning To avoid damage to existing wiring, airbags, fuel tanks, fuel and brake lines, or battery cables, refer to the installation guide for the radio, and to the vehicle manufacturer's manual, before installing electronic equipment in the vehicle.

Using a handheld microphone or a radio while driving a vehicle may violate the laws and legislation that apply in your country or state. Please check the vehicle regulations in your area.

1.11 Vehicle Charger Installation and Operation

For detailed instructions necessary to the safe installation and operation of the vehicle charger, please refer to the documentation supplied with the vehicle charger.

1.12 Multicharger Safety Information

Warning This device must be connected to an earthed mains socket-outlet.

1.13 Electromagnetic Compatibility in European Vehicles

In the European Community, radio equipment fitted to automotive vehicles is regulated by UNECE Regulation R10 Revision 5 and its amendments. The requirements of this regulation cover the electromagnetic compatibility of electrical or electronic equipment fitted to automotive vehicles.

1.14 Unapproved Modifications or Changes to Radio

The radio is designed to satisfy the applicable compliance regulations. Do not make modifications or changes to the radio that are not expressly approved by Tait. Failure to do so could invalidate compliance requirements and void the user's authority to operate the radio.

1.14.1 Attaching of labels

Warning Do not obstruct the vent hole on the battery or the vent hole on the radio chassis label. If the vent on the battery is obstructed, the battery may explode, causing personal injury and/or damage to property. If the vent on the radio is obstructed, audio quality and/or key function may deteriorate and radio seals may be damaged.

Tait recommends that you do not affix additional labels to the surfaces between the radio chassis and the battery. The fit between these surfaces is intentionally firm and any added thickness will damage the points of attachment between radio and battery. If you must attach a customized label, use only a thin gummed paper label applied to the bottom 25% of the radio chassis label and/or to the top 25% of the battery label. Do not obstruct the vent holes (see Warning above). Do not allow the paper label to extend beyond the recessed label area or to conceal relevant product information.

1.14.2 Use of lithium-ion batteries

Warning A damaged battery can cause an explosion or fire, and can result in personal injury and/or property damage. To prevent personal injury and/or damage to property, read the important safety information supplied with the battery.

1.14.3 Short-circuiting battery contacts

Warning Do not short-circuit the battery contacts, neither intentionally nor accidentally, e.g. by placing the battery with conductive materials such as keys or jewelry inside a pocket or container. Short-circuiting the battery contacts can heat up the conductive material and cause personal injury and/or damage to property.

2 Before Using the Radio

2.1 For your Safety - Battery Warning

Warning This radio uses a lithium-ion battery. If the battery is damaged or handled in an unsafe manner, it can cause personal injury and/or damage to property. Read the important safety information included with the battery.

2.2 Attaching Labels to the Radio or Battery

Warning Do not cover the battery vent hole or the vent hole on the radio chassis. If the vent on the battery is obstructed, the battery may explode, causing personal injury and/or damage to property. If the vent on the radio is obstructed, audio quality and/or key function may deteriorate and radio seals may be damaged.

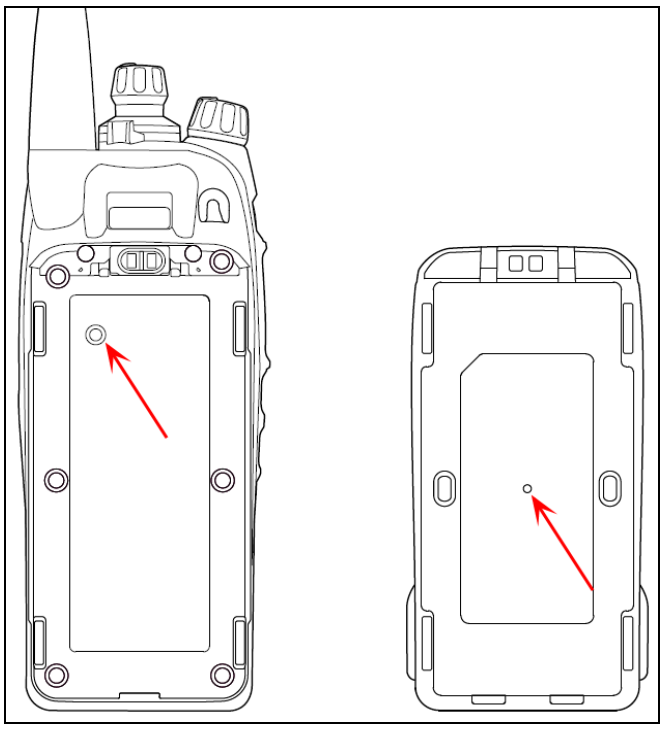


Figure 2.1 Radio chassis and battery vent holes

Notice Tait recommends that additional labels are not applied to the surfaces between the radio chassis and the battery. The fit between these surfaces is intentionally firm and any added thickness will damage the points of attachment between radio and battery.

2.3 Attaching a Label to the Front Panel

If a customer requires an additional label, attach the label in the spare label recess in the bottom surface of the radio front panel. In this position, the label is still visible while the battery is attached to the radio.

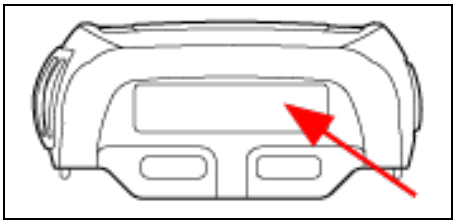


Figure 2.2 Spare label recess

Figure 2.3 below shows the specified dimensions of the label.

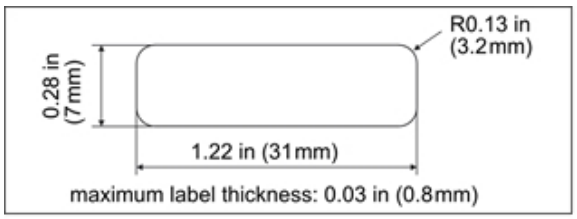


Figure 2.3 Spare label dimensions

4-key models have a specially designed recess for custom labels.

Users can also stick labels over the top of the model label. This recess will accommodate 1/4" label maker labels. Please ensure the labels have a suitable adhesive surface before application.

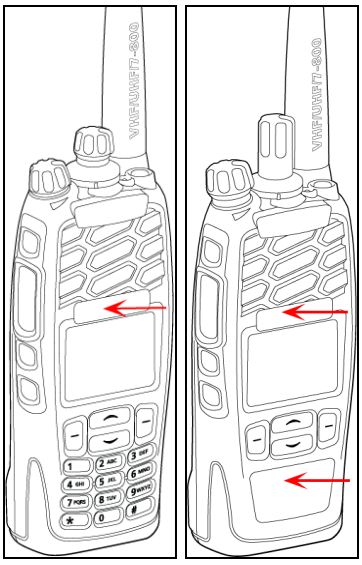


Figure 2.4 Location of model and custom labels

Tait offers custom labelling for TP9800 Multiband P25 Portable Radios. Contact your Tait representative for more information.

2.4 Charging the Battery Before First Use

Before using the battery for the first time, it must be charged. Follow the instructions included with your Tait charger.

For best charging performance, switch off the radio before placing it in the charger.

2.4.1 Li-ion batteries

Fully charge a Li-ion battery before using it for the first time. This will take up to 3 hours. It is not necessary to prime a Li-ion battery.

2.5 Attaching the Battery

Warning Use only genuine Tait manufactured batteries with Tait radios. Fitting a battery that is not Tait-approved may damage the radio or cause harm.

1. Rotate the power/volume control switch counterclockwise to turn off the radio.
2. Holding the radio firmly, align the back of the battery with the back of the chassis.
3. Place the two lugs at the bottom edge of the battery into the two slots in the bottom of the front panel.
4. Lightly press the top of the battery towards the radio until the battery catch clicks.
5. Make sure that the battery is firmly in position.

If the battery has been attached while the radio is turned on, turn the radio off and then on again before use.

2.6 Removing the Battery

Warning Do not change the battery in a hazardous location. An explosion could cause serious injury or death.

The battery is secured to the radio by a battery catch in the radio's rear panel.

To remove the battery from the radio so that the battery can be charged or replaced:

1. Rotate the power/volume control switch counterclockwise to turn off the radio.
2. Slide the battery catch up.
3. From the sides, pull (tilt) the top end of the battery away from the radio.
4. Lift the lugs at the bottom of the battery upwards out of the mating features at the bottom of the radio body.

If the battery has been removed while the radio is turned on, turn the radio off and then on again before use.

2.7 Attaching the Antenna

Before using the radio, screw the antenna clockwise into the antenna connector. The antenna should be screwed sufficiently tight so that it doesn't unscrew easily. This is important as it creates a seal.

2.8 Removing the Antenna

Warning Do not change the antenna in a hazardous location. An explosion could cause serious injury or death.

Use a firm grip and turn the antenna counterclockwise half a turn. Use a lighter grip to fully unscrew the antenna, and carefully remove it.

2.9 Attaching a Belt Clip

2.9.1 To attach a belt clip to the radio

1. Slide the belt clip into the two grooves at the top of the battery.
2. Press down on the belt clip until it snaps into place.

2.10 Removing a Belt Clip

The belt clip has been designed to prevent accidental removal, but it can be removed, if required.

To remove a belt clip from a battery:

1. Insert a flat screwdriver blade or similar flat object under the lip of the release lock (that is, between it and the metal slider).
2. Lift the release lock up (away from the metal slider) and hold it in position.
3. Slide the belt clip out.

2.11 Installing an Audio Accessory

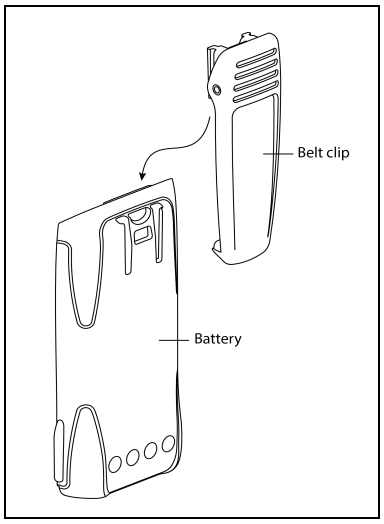
Warning Use only Tait-supplied, or Tait-approved audio accessories with Tait radios. Fitting an audio accessory that is not Tait-approved may result in a poor user experience. For an up-to-date list of approved audio accessories, contact your regional Tait office.

Audio accessories plug into the radio's accessory connector. The accessory connector is protected by a cover, which needs to be removed before an accessory can be installed.

Notice The accessory cover protects the accessory connector from electrostatic discharge. Keep the cover in place unless the connector is in use.

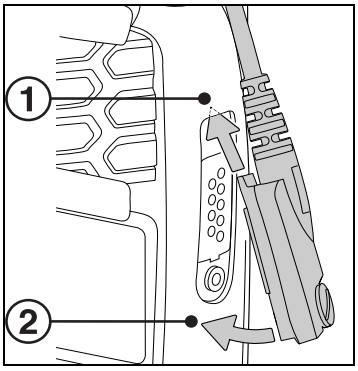
2.11.1 Removing the accessory cover

1. Use a coin or other blunt object to loosen the screw that secures the accessory cover to the radio.
2. Remove the accessory cover and store it in a safe place.

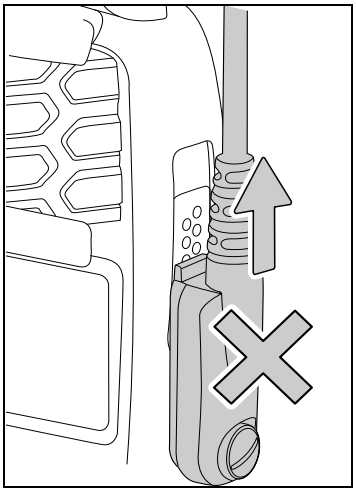


2.11.2 Installing an accessory connector

1. Insert the top part of the connector (①) into its designated groove (see 2 on page 16).
2. Press the bottom part of the connector (②) into the pins.
3. Tighten the screw (it only needs to be finger-tight).



> ⚠ Do not slide the accessory's connector along the radio connector's pins; doing so will damage the radio's connector and may prevent a reliable connection to the accessory.



3 Getting Started

This section provides an overview of the TP9800 Multiband P25 Portable Radio. It describes the radio's controls and indicators, and explains how the radio menus are organized.

3.1 Setting and Viewing the Radio's Time and Date

The radio may be programmed to use its internal real-time clock. It may be possible to view the time and date via a function key or via the radio menu. Other features may also make use of the radio's time and date by showing entries based on the current clock setting.

3.1.1 Setting the time, date, and time format

> The radio may be programmed to allow you to set time and date manually, or time and date can be updated using a GPS source.

1. Press **Menu** and select **Time and Date** and the corresponding option.
2. Follow the prompts on the display.

3.1.2 Viewing the time and date

1. Press **Menu** and select **Time and Date** > **View clock**

> Depending on how the radio is programmed, it may be possible to press a function key to view the time and date.

3.2 About the Radio

TP9800 Multiband P25 Portable Radios are available in multiple colors. Radio color does not affect functionality.

The TP9800 supports both digital and analog modes.

Differences between digital and analog calls can be noticed in terms of static noise in low signal areas and radio coverage in marginal reception areas.

3.2.1 Lack of static noise

On digital networks there is no static noise, even in low signal areas. This lack of static is because the digital radio removes the 'noise' from the call, so that only clear voice is audible.

3.2.2 Active noise cancellation

Active noise cancellation uses a secondary microphone to actively filter out background noise in loud and noisy environments. This feature is available in both analog and digital modes. When the radio's internal speaker is being used, a microphone on the back of the radio is utilized as the secondary microphone.

When a wired accessory speaker/microphone is being used, the radio's internal front speaker is utilized as the secondary microphone.

When using a Bluetooth® audio device, active noise cancellation (secondary microphone) is not enabled. To optimize its performance, Tait recommends positioning the microphone 1 - 2 inches (2.5 - 5 cm) from the mouth and speaking directly into it. Additionally, it is essential that the rear microphone remains uncovered by your hand or clothing during calls.

Active noise cancellation can be left on regardless of environment. However, for better audio performance, Tait recommends turning it off in quiet areas.

3.2.3 Coverage

With digital networks, a call remains clear and then drops off quickly at the border of a coverage area. The reason for this is that a digital call is either received or it isn't. With analog networks, the background noise in a call gets
progressively worse when the user is in fringe areas or even slightly outside normal coverage areas.

3.3 About the Radio Controls

The radio controls and their functions are described in subsequent sections.

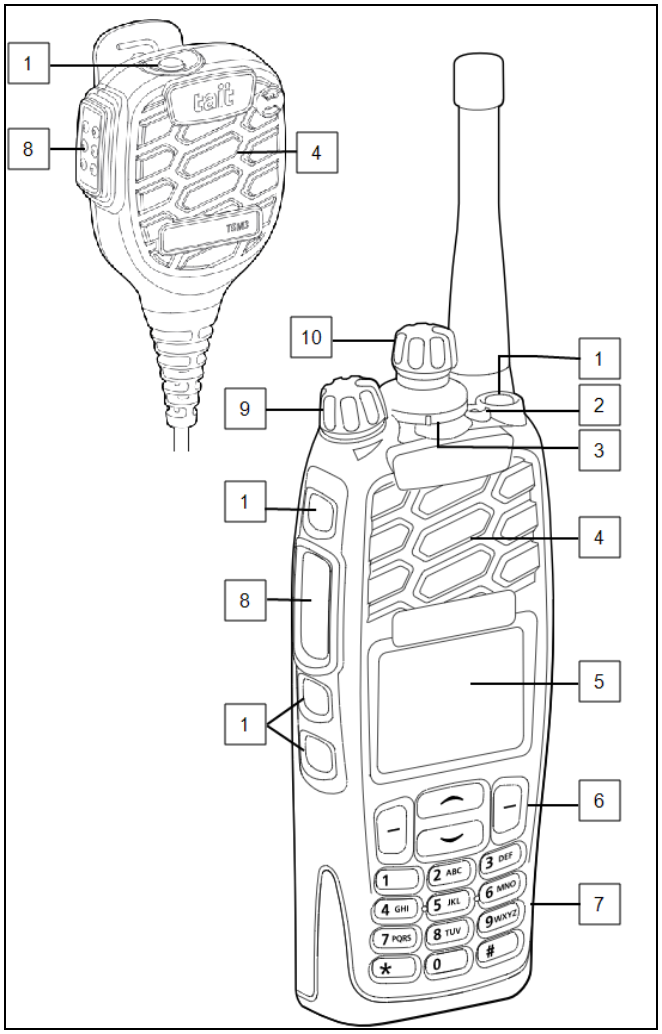


Figure 3.1 Radio control functions

Table 3.1 Radio controls

	Name	Function
1	Function keys	As programmed
2	Status LED	To provide information about the state of the radio
3	3 way selector	To select frequent functions
4	Speaker/microphone	Where audio signals are played
5	Display	Screen that shows menus and messages
6	Scroll and selection keys	To select a menu option or scroll
7	Alphanumeric keys	To enter numbers and letters
8	Push-To-Talk (PTT key)	Press and hold to speak, release to listen
9	Power/volume control	Turn to the right to switch on or increase the volume. Turn to the left to switch off or decrease the volume
10	16 way selector	Turn to select channels

3.4 Understanding the Radio Display

The messages and icons on the radio display depend on the mode in which the radio is operating and the way it is programmed.

3.4.1 Radio display icons

3.4 above lists some of the icons you may see on the radio display:

Table 3.2 Icon descriptions

Icon	Meaning
	Battery indicator: shows how much charge is available in the battery
	Scanning: the radio is monitoring a group of channels or talkgroups for activity
	Silent operation: the radio's audible tones have been turned off
L/L	Low-power transmit: the radio is set to transmit on low power. When radio is not transmitting, the letter 'L' in red font is displayed. When the radio is transmitting, a single arrow appears beside the 'L'

Icon	Meaning
	Transmit: the radio is transmitting
	Bluetooth Audio Device Connected: there is a Bluetooth audio device connected to the radio Flashing: the radio is attempting to connect to a Bluetooth audio device, or the device connection has been lost
	Encryption: the radio's transmissions are encrypted
	Signal strength indicator: the more bars, the stronger the signal being received by the radio
	Scrolling: you can use  or  to move through a list, or access a pre-programmed menu
Trunked mode icons	
	Scanning: scanning has been turned off
	Homegroup: the radio has been returned to the homegroup using the homegroup toggle function key
	Trunking system available: the radio is operating on a P25 trunking system
	‘Full’ queuing activated: all calls and messages are sent directly to the queue
	Trunking: the radio has established a call and you are now able to speak to the other radio user
Conventional mode icons	
	Monitor or squelch override: monitor or squelch override is turned on
	Scanning: the radio is monitoring a group of channels or talkgroups for activity, and the currently selected channel or talkgroup is a member of the scanning group
	Repeater talkaround: the radio is operating in repeater talkaround mode, or you are on a simplex channel
	Zone: this letter represents the zone in which the radio is operating, where A is zone 1, Z is zone 26

3.5 Understanding the Radio Indicators

The status LED indicator and the radio's audible tones - together with the radio display - all combine to provide information about the state of the radio.

The most common way the indicators work is described in the following sections.

> The way these indicators behave may be affected by the way the radio is programmed.

3.5.1 Status indicators

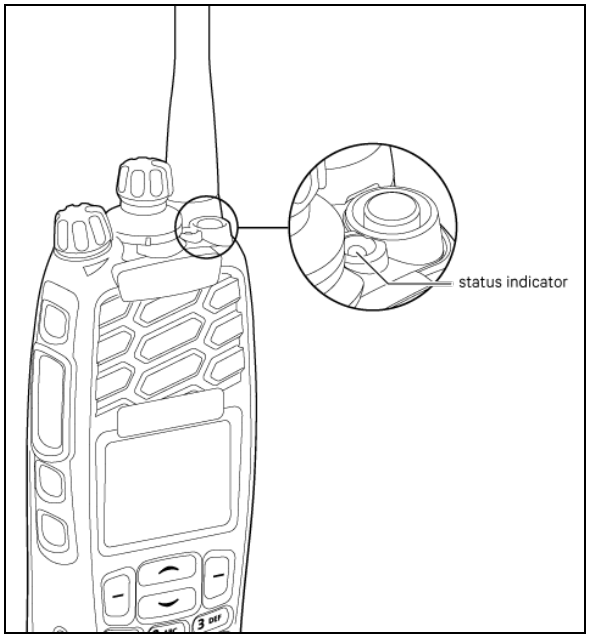
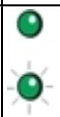


Figure 3.2 Location of LED status indicato

Table 3.3 LED indicator types

Color		Meaning
Red (transmit)		Glowing: the radio is transmitting Flashing: the transmit timer is about to expire
Green (receive)		Glowing: the current channel is busy Flashing: the radio has received a call (analog channel only)
Orange (network)		Flashing: the radio is registered on a trunked network
All LEDs off		Trunked: network not available, or the radio is attempting to register on a trunked network Conventional: receive standby

3.5.2 Audible tones

The radio uses audible tones to alert the user to its status:

- Radio controls and keypress tones—the tones and beeps that are audible when the radio's keys are pressed or the controls are used.
- Incoming call tone—when the radio is receiving a call.
- Warning tones—when there is an error, or the battery is low, for example.

Warning If quiet or silent mode is turned on, you will not hear any alert tones.

Some of the more common audible tones are described in 3.5 on the previous page.

Table 3.4 Tones

Tone	Meaning
One short beep	Valid keypress: the action you have attempted is permitted Function activated: a function has been turned on (using a function key)
One short, low-pitched beep	Function deactivated: a function has been turned off (using a function key)
One long, low-pitched beep	Invalid keypress: the action you have attempted is not permitted Transmission inhibited: you have attempted to transmit, but for some reason you cannot make a call at this time
Two short beeps	Radio turned on: the radio is powered on and ready to use Radio is revived: the radio has been made operable by your service provider
One short, high-pitched beep	Radio is stunned: the radio has been made inoperable by your service provider
Two low-pitched beeps	Radio's temperature is high: the radio's temperature is in the high-temperature range, but the radio will continue to operate
Two high-pitched beeps	Radio's temperature is very high: the radio's temperature is in the very high temperature range and all transmissions will now be at low power; if the radio's temperature rises outside this range, transmissions will be inhibited. Turn off the radio and allow it to cool down
Continuous low-pitched tone	Radio system error: a system error has occurred and the radio may be inoperable. Contact the radio provider
Two long high-low pitched tone pairs	Synthesizer out-of-lock: the radio's synthesizer is unstable, causing frequency drift and signal issues, preventing operation on the current channel (display shows "Out of lock"). Contact the radio provider

3.5.3 Voice annunciation

Your radio may be programmed to play a pre-recorded message for the start-up zone and channel, when changing the zone or channel, for the battery condition, or when loneworker monitoring has been turned on or off.

3.6 Using Function Keys to Access Frequently Used Features

Some keys have functions assigned to both short and long key presses: a short key press is shorter than 1 second, while a long key press is longer than 1 second.

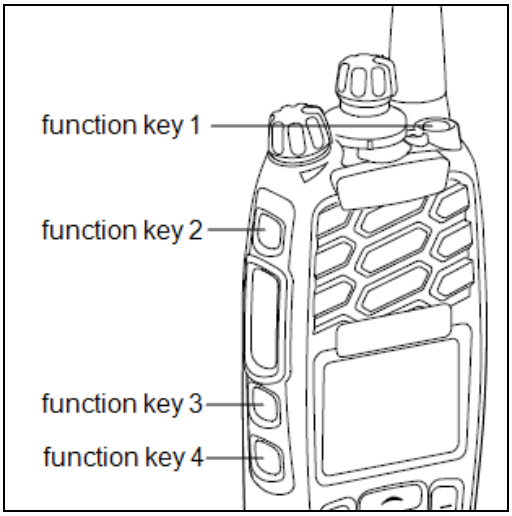


Figure 3.3 Function keys

3.6.1 Viewing the function key settings

Use the Main menu to check the features assigned to the radio's function keys:

1. Press **Menu** and select **Radio settings** > **Radio info** > **Key settings**.
2. In the **Key Settings** menu, scroll through the list of function keys.
3. Press **Select** to view details of the function associated with a particular function key.
4. Press **Back** to return to the **Key Settings** menu.

Use 3.6 above to record the function keys programmed for the radio:

Table 3.5 Programmed function keys

	Short key press	Long key press
F1		
F2		
F3		
F4		
F5[1]		
F6[1]		

For more information about the function keys that can be programmed on the radio, contact the radio provider.

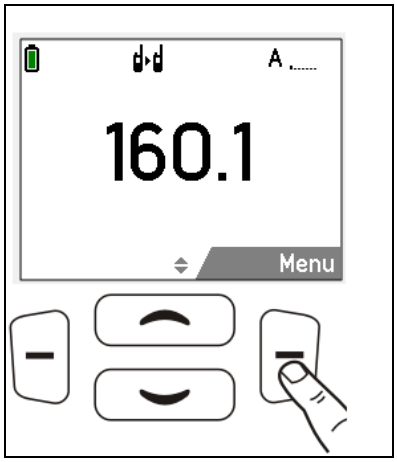
[1] On speaker microphone (if fitted)

3.7 Navigating the Radio's Menus

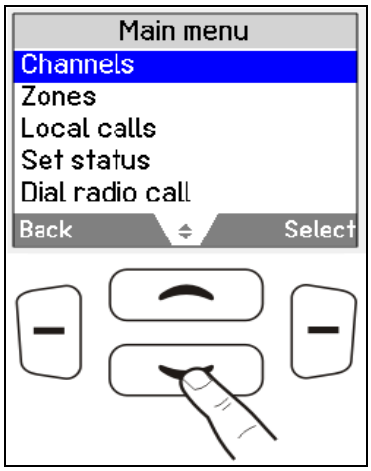
The radio has a number of menus, each containing lists or sub-menus. The menus available depend on the way the radio is programmed.

3.7.1 Using the main menu

1. To access the Main menu, press the right selection key whenever **Menu** appears above it.



2. Use the scroll keys to move through the menu list.



3. When the desired menu item is highlighted, press **Select** to open.

The radio may be programmed to use the scroll keys or the left selection key to directly access a menu.

> To quickly exit the menu system, press and hold the left selection key when the word **Cancel** or **Back** appears above it.

4 Basic Operation

This section describes the basic operations of the radio.

4.1 Turning the Radio On and Off

Rotate the power/volume control switch clockwise to turn the radio on. Rotate the switch counterclockwise to turn the radio off.

When the radio is first turned on, the status LED briefly glows red, and the radio gives two short beeps.

> The radio may not turn on if its battery is very low. See 1.1 on page 1.

4.1.1 Security lock on power-up feature

The radio may be automatically locked each time it is powered-up. If the message **Enter PIN** appears on the display, enter your assigned PIN (personal identification number) to unlock the radio.

Locking the radio

1. Press **Menu** and select **Radio settings** > **Functions** > **Lock radio**
2. Scroll to either **On** or **Off** and press **Select** (the current setting is highlighted). The radio is now locked, and the message **Enter PIN** appears on the display. The radio remains locked until the correct sequence of keys is pressed. If you forget the unlock sequence or you do not know it, contact the radio provider for assistance.

> Depending on how the radio is programmed, you may be able to press a function key to turn radio lock on and off.

4.2 Adjusting the Speaker Volume

Rotate the power/volume control clockwise to increase the speaker volume and counterclockwise to decrease the volume.

> The volume control also changes the volume level of the radio's audible indicators.

4.3 Securing the Keypad

The keypad lock feature prevents keys being pressed accidentally. The number of keys that are locked depends on the way the radio is programmed.

4.3.1 Locking or unlocking the keypad

1. Press and hold the right selection key for about one second.

> Depending on the radio model and the way it is programmed, the radio may have a 3-way selector that can be used to lock the keypad, or the left selection key can be configured to lock the keypad.

The message **Keypad locked** briefly appears on the display, and **Unlock** appears above the right selection key, in place of **Menu**. When any of the locked keys are pressed, the message **Keypad lock active** appears.

4.4 Holding the Radio

To ensure that effective communication is not hindered:

1. Grip the radio with your hand so that your thumb is on one side, and your fingers are on the other side.
2. Hold the radio vertically in front of your face, angled slightly away, about 1 - 2 inches (2.5 - 5 cm) from your mouth.

> In this position, the mic and speaker are at the correct distance, and the antenna is facing straight up to maximize range.

> Do not hold the radio speaker directly against your ear. This can damage your ear.

> Do not pick up or hold a radio by the antenna. This can damage the antenna.

4.5 Speaking into the Radio

Press and hold the PTT key, wait a few seconds, then speak slowly and clearly. Some radios will have a beep, so wait for the beep before you begin speaking.

> Push and hold the PTT key throughout transmission. Avoid speaking before pressing the PTT key to prevent cutting off the start of your sentence. Refrain from shouting for clear transmission. Speaking near an active noise-canceling microphone may cancel ambient noise and voice. See 4.7 on page 36 for details.

4.6 Using a Bluetooth Audio Device

A Bluetooth audio device may be connected to a radio using the **Bluetooth audio device** menu or a function key.

> This feature, controlled by a software feature license (SFE), may not be available with the radio. Active noise cancellation (secondary microphone) is disabled when using a Bluetooth audio device (see "Active Noise Cancellation" under 3.2 on page 22 for details). When a menu option is selected in the Bluetooth audio device menu, calls can still be received and replied to without interrupting the selected operation.

4.6.1 Bluetooth audio compatibility with Tait radios

Bluetooth audio devices may operate with Tait radios, provided the accessory is compatible with the Bluetooth Specification Version 2.0 or higher. Tait recommends Bluetooth Specification Version 2.1 or higher. Additionally, the accessory must include Bluetooth Headset Profile (HSP) version 1.1 or 1.2, or Bluetooth Handsfree Profile (HFP) version 1.5 or 1.6.

4.6.2 Wearing the Bluetooth audio device

With a device worn over the head, place it on the ear. Depending on which ear the device is worn, simply adjust the ear hook accordingly.

> Ensure that the rear microphone is not covered by your hand or clothing when making a call. **This does not apply when using Bluetooth.**

4.6.3 Pairing and disconnecting a Bluetooth audio device with the radio

> Before attempting to connect a **Bluetooth audio device**, Tait recommends that the device be fully charged. Refer to the **Bluetooth Audio Device** installation instructions for charging instructions.

Pairing creates a unique and encrypted wireless link between the Bluetooth-capable radio and the **Bluetooth audio device**. To use a **Bluetooth audio device** with a radio, the devices must first be paired.

4.6.4 Pairing a Bluetooth audio device with the radio for the first time

1. Turn on the radio.
2. Put the **Bluetooth audio device** into pairing mode.
3. Press **Menu** and select **Bluetooth audio device** > **Find new devices**.

The **New devices** menu opens, and while the radio searches for the new device, the message **Searching ...** appears.

4. Select **Connect** when the required accessory appears in the list of new devices, then **Yes** to add the **Bluetooth audio device** to **My Headsets**.

The message **Connecting** appears, while the radio attempts to pair with the device.

5. When the message **Calling. Answer on headset** appears, press the **Answer** button on the **Bluetooth audio device** to confirm the connection.
6. Repeat the previous steps to add other Bluetooth audio devices.

> While the **Bluetooth audio device** is connected, the **Bluetooth audio device** icon appears on the display.

4.6.5 Managing your Bluetooth audio devices

Once a Bluetooth audio device has been added to **My Headsets**, the **Manage headsets** menu item appears under the **Bluetooth audio device** menu. The **Manage Bluetooth audio devices** menu shows the devices currently in **My Headsets**, along with the following information:

- **+** this device is currently connected.
- **a** this device will be automatically connected.
- **c** the radio will ask for confirmation before connecting this **accessory**.

Press **Options** to disconnect or connect a **Bluetooth audio device** (**Disconnect**, **Connect**), change the priority order of the devices (**Move down**), or remove a device from **My Headsets** (**Remove**, **Remove all**).

4.6.6 Disconnecting the Bluetooth audio device

To disconnect the device from the radio:

- Press **Menu** and select **Bluetooth audio device** > **Disconnect**.
- Alternatively, in the **My headsets** menu select **Options** > **Disconnect**.

4.6.7 Reconnecting the Bluetooth audio device

The radio may be programmed so that each time the device is turned on, it will automatically reconnect to the radio. If the radio does not automatically reconnect to the device:

1. On the radio, press **Menu** and select **Bluetooth audio device** > **Reconnect last**.

The radio then prompts to connect to the devices in **My Headsets**, in priority order.

2. Select **Yes** to connect, or **No** to choose another device.

4.6.8 Changing the way the Bluetooth audio device reconnects

The **Power-on option** in the menu can be used to change the way the radio reconnects with a device when the radio is first turned on. The choices are:

- None: The radio does not connect to any devices, and will need to be manually connected or reconnected to the device.
- Reconnect last: The radio connects to the previously connected device.
- Connect: The radio will attempt to connect to the devices in **My Headsets**, in priority order.

To change the power-on option:

1. Press **Menu** and select **Bluetooth audio device**.
2. Select **Options** > **Power-on option**.
3. Change to the required setting.

4.6.9 Getting the best performance from the Bluetooth audio device

- Do not block the device's internal antenna (see the device's user documentation). The human body can interfere with a Bluetooth signal.
- If the radio is used with the right hand, wear the over-the-head device on the right ear.
- Avoid coming in contact with the internal antenna of a device or radio.

4.7 Turning On Active Noise Cancellation

Active noise cancellation uses a secondary microphone on the back of the radio to actively filter noise in loud
environments, making it easier for recipients to discern the speech of a radio user who is in a noisy environment.

Active noise cancellation can be left on regardless of environment. However, when safety features such as Emergency Operation or Radio Unit Monitor are activated, the listener may lose awareness of the noisy environment. Tait recommends users implement supplementary procedures to account for this.

The complementary feature of microphone sensitivity allows the internal and external microphones to be configured to suit the type of environment the user is in, further improving audio quality. When active noise cancellation is enabled, sensitivity should be decreased. In a quiet environment, increasing the sensitivity is suggested.

Speaking to the side (nearest the noise canceling microphone) could result in both ambient noise and voice being canceled. To use the radio correctly and achieve the best results, Tait recommends holding the radio 1 - 2 inches (2.5 - 5 cm) from the mouth and speaking directly into the front of the radio speaker/microphone.

4.7.1 Turning active noise cancellation on or off

1. Press **Menu** and select **Radio settings** > **Functions** > **Noise cancellation**.
2. Scroll to either **On** or **Off** and press **Select**.

Ensure that the rear microphone is not covered by your hand or clothing when making a call.

Depending on how the radio is programmed, you may be able to press a function key to toggle active noise cancellation on and off.

5 Operating on P25 Trunking Networks

This section explains how to operate your radio on a P25 network (trunked and conventional) network. This includes how to make group calls, individual calls, and phone calls.

> This feature is controlled by a software license (SFE) and may not be available with you radio default.

5.1 Checking that the System is Available

When you first switch to a talkgroup configured for P25 trunking, the radio attempts to access the network and register on a control channel.

If registration is successful, the trunking system available icon appears in the display.

5.1.1 Registration is unsuccessful

If registration is not successful, does not appear, and the display shows **No service**.

The radio may sound five beeps, followed by a repeating double beep. The double beep continues until registration is successful.

5.1.2 Service is lost

If access to the trunking system is lost, no longer appears, the bars in the RSSI icon disappear , and the display shows **No service**.

The radio sounds five beeps to indicate the loss of service, followed by a repeating double beep. The double beep continues until service is restored.

5.1.3 Site trunking operation

During normal trunking operation, the radio may roam between a number of sites. This behavior is transparent to you, unless there is a problem with a system controller. When this happens, the radio enters ‘site trunking’ mode, and you will only be able to communicate with other users within a single site.

While in site trunking mode, the display shows **Site Trunking**, and the radio sounds a repeating double beep. The double beep continues until normal service is restored.

When access to the zone controller is available again, the radio automatically returns to normal multi-site operation.

5.1.4 P25 phase 1 features not supported in P25 phase 2

If the user tries to use a P25 phase 1 feature which is not yet supported in P25 phase 2, the radio may show a system error.

5.1.5 P25 phase 2 fallback mode

If there is a fault on the phase 2 network, operation may fall back to phase 1 mode.

5.1.6 Failsoft operation

The radio may be programmed to enter ‘failsoft’ mode when service is lost due to failure of a trunking site controller. For information about failsoft mode, see Failsoft Mode Operation.

5.2 Making a Talkgroup Call

Ensure that the rear microphone is not covered by your hand or clothing when making a call.

A talkgroup is a collection of radios on a trunking system. Trunked talkgroups are found in the Channels menu, along with conventional channels that may also be available for the currently selected zone.

Depending on how the radio is programmed, the user may be able to press a function key, use the Quick Access menu or use the channel selector to select a trunked talkgroup.

In some situations, the call will not proceed. For an explanation of the radio behavior, see Unconnected Calls.

5.2.1 To make a talkgroup call on a trunking system

1. Select the required zone:
    - Press **Menu** and select **Zones**.
    - Scroll to the required zone, and press **Select**.

Depending on how the radio is programmed, the user may be able to press a function key, use the Quick Access menu or use the 3-way selector to select a zone.

The radio can be configured to indicate the zone in which it is operating, either as a letter in the top right corner of the display, or as a zone name in the second line of the display, or neither.

2. Select the required talkgroup:
    - Press **Menu** and select **Channels**.
    - Scroll to the required talkgroup, and press **Select**.

Depending on how the radio is programmed, the user may be able to press a function key, use the Quick Access menu or use the channel selector to select a talkgroup.

3. To call this talkgroup, hold the radio so that the microphone is about one inch (2.5 cm) from your mouth.

4. Press and hold the PTT key to transmit.
5. When you hear three short beeps, speak clearly into the microphone. Release the PTT key when you have finished talking, and the radio will indicate the currently selected talkgroup.

While transmitting, the LED glows red and the transmit, , or low power transmit, , icon appears in the display.

5.3 Utilizing Active Noise Cancellation when Calling a Talkgroup

Background noise can be filtered out in loud and noisy environments by turning on Active Noise Cancellation before calling a talkgroup. For more information, see Active noise cancellation on page 23

5.4 Receiving a Talkgroup Call

To hear calls from other members of a talkgroup, the radio must have that talkgroup selected, or the talkgroup must be part of an active scanning group.

For information about selecting a talkgroup, see Making a Talkgroup Call on the previous page, and for information about talkgroup scanning, see Activating talkgroup Scanning.

When you receive a call from a talkgroup, the radio displays the name or the identity of the talkgroup, and that of the calling radio.

5.5 Making an Individual Call

in some situations, your call will not proceed. For an explanation of the radio behavior, see Unconnected Calls.

5.5.1 To make a call to one radio on a trunking system

1. Press **Menu** and select **Individual call**.

Depending on the radio model and how it is programmed, you may be able to dial the identity of the radio you want to call, press a function key or use your Quick Access menu to select an individual call.

1. Scroll to the person you want to call and press **Select** or press the PTT key.
2. The message **Calling...** briefly appears.
3. When the called party accepts the call, you will hear three short beeps.
4. Once the called party has finished talking, press and hold the PTT key to transmit, speak clearly into the microphone, and release the PTT key when you have finished talking.

5.6 Utilizing Active Noise Cancellation when Making an Individual Call

Background noise can be filtered out in loud and noisy environments by turning on Active Noise Cancellation before a call. For more information, see Active noise cancellation on page 23

5.7 Receiving an Individual Call

When you receive a call from an individual radio, the radio displays the caller's name or identity.

The radio rings until the call is answered.

1. Press the PTT key to accept the call, or **Cancel** to reject the call.

5.8 Emergency Calls

In an emergency, you can summon help by sending an emergency call. When an emergency call is initiated, the radio enters ‘emergency mode’.

5.8.1 Making an emergency call

You can make an emergency call using the emergency function key (function key 1):

1. Press the function or emergency key to activate emergency mode.

The message **Emergency mode** appears and the radio sounds three short beeps, rising in pitch.

5.8.2 Receiving an emergency call

When you receive an emergency call, the radio displays the caller’s name or identity and sounds a long beep.

5.9 Making a Phone Call

You may be able to use the radio to connect to a telephone network and make a phone call.

> ⚠ In some situations, your call will not proceed. See Unconnected Calls.

5.9.1 To make a phone call on a trunking system

1. Press **Menu** and select **Phone call**.

> ⓘ The phone call you last dialed appears in the display, unless that number was manually dialed.

2. Scroll to the number or person you want to call, or dial the required number using the alphanumeric keys.
3. Press **Select** or the PTT key.
   Call progress will be indicated by “ring” or “busy” tones as for a standard telephone call.
4. When the call is answered, proceed with your conversation.
5. At the completion of the call, or if the dialed number is busy or does not answer, press the **End** left selection key.

5.10 Dynamic Regrouping

The dynamic regrouping feature allows the user to send a dynamic regrouping request to the dispatcher. The dispatcher can then reassign the user's radio to a special communications group.

> ⓘ While are operating on this group, normal channel selection may be disabled.

5.10.1 To send a dynamic regrouping request

- Press **Menu** and select **Trunking** > **Dyn Regrouping**.

When **Select** is pressed, 'Sending dynamic regroup rqst' appears in the display.

If the request is successful, an acknowledgment message is displayed.

6 Operating in Conventional Mode

This section explains how to operate your radio on a conventional network (digital and analog).

6.1 Selecting a Zone

The radio may be programmed to use zones, which are collections of channels and groups. Zones are a way of grouping channels, for example, by public safety agency type (fire, police, ambulance, etc) or by geographical region (Dallas, Houston, etc). When a zone is selected, only the channels and groups assigned to that zone are available.

6.1.1 Using the main menu

1. Press **Menu** and select **Zones**.

> Depending on how the radio is programmed, scroll keys or left selection keys may be used to select the **Zones** menu.

2. In the **Zones** menu, scroll through the list of zones until the desired one appears.
3. Press **Select**, and the zone indication appears either below the channel information, beside the RSSI icon, or in both positions. These can also be set to not be displayed.

6.1.2 Other ways of selecting a zone

The following controls may also be used to select a zone:

- left selection key
- scroll keys
- function keys to scroll through zones
- 3-way selector

> If the 3-way selector is turned while pressing the PTT key, the zone will change after the PTT key is released.

6.2 Selecting a Channel

6.2.1 Using the main menu

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

> Depending on how the radio is programmed, the scroll keys, the left selection key, or a function key may be used to select the **Channels** menu.

2. In the **Channels** menu, scroll through the list of channels until the desired channel appears.
3. Press **Select**, and the programmed channel is now shown on the display.

6.2.2 Using the scroll keys

The radio may be programmed to use the scroll keys to scroll through the channels.

6.2.3 Using the channel selector

The channel selector can be used to select 16 channels.

> If the channel selector is turned while pressing the PTT key, the channel will change after the PTT key is released.

6.2.4 Using the keypad

> This feature is only available for radios with alphanumeric keys.

Dialing a channel may be available from the radio's idle display but is always available while in the **Channels** menu.

1. Dial the number associated with the channel using the alphanumeric keys.

> To delete a digit that you have dialed incorrectly, press **Clear**.

2. Press **Select** or **#**, and the programmed channel is now shown on the display.

6.2.5 Automatic channel selection

The radio may be configured to change channels automatically based on current location. The automatic mode icon will be visible on the display.

Selecting a channel manually as described above will end automatic mode, and the manual mode icon will appear on the display.

The radio may be configured to use a timer or a function key to return to automatic mode.

6.2.6 Using the numeric keypad to store and recall channels

Channels may be stored and recalled using the numeric keypad.

- long-press a numeric key to store the current channel
- short-press a numeric key to recall the stored channel

Only one channel can be stored and recalled for each numeric key

Other ways of selecting a channel

The following controls may also be used to select a channel:

- function key
- left selection key
- scroll keys

6.3 Understanding Talkgroups

This section applies to P25 trunked only. It does not apply to P25 conventional.

A talkgroup, (or workgroup), is a collection of radio users who can have private conversations. For example, a state's public safety agencies could have the following talkgroups:

- Local talkgroups: used by a specific agency to communicate within their own local agency. It may even be made up of a county of public safety officers.
- Regional talkgroups: used by large state agencies that have regional divisions.
- Statewide talkgroups: used by an agency to communicate with public safety members in other regions (such as counterparts across entire states).
- Special event talkgroups: may be used to manage emergencies encompassing a large area, or even events such as visits by heads of state.

Talkgroups are configured during set up and cannot be created by the radio user.

6.4 Making an Individual Call

This feature is available for digital channels only. For analog individual calls, see 6.5 on the next page.

6.4.1 Making a call to one person

1. Press **Menu** and select **Individual call**.
2. Scroll to the desired person to call and press the PTT key to make the call immediately. Alternatively, press **Call** and then the PTT key.

6.5 Making a Local Call

For analog channels, each channel on the radio may have one or more local calls programmed. For digital radio-to-radio calls, see 6.4 on the previous page.

6.5.1 Using the main menu

1. Select the required channel.
2. Press **Menu** and select **Local calls**.
3. In the **Local calls** menu, scroll through the list of local calls until the desired call appears.
4. Press **Send**.

The call details appear on the display, the LED glows red, and the transmit, , or low power transmit, , icon appears on the display.

6.5.2 Using the Quick Access menu

1. Select the required channel.
2. Press one of the scroll keys or the left selection key to open the **Local calls** menu.
3. Scroll through the list of local calls until the desired call appears.
4. Press **Send**.

6.5.3 Dialing a local call

1. Select the required channel.
2. Press **Menu** and select **Dial radio call**.
3. Dial the number using the alphanumeric keys.
4. Press **Send** (if the Send option appears).

The radio may be programmed so a local call can be dialed directly from the default display. In this case, the call can be dialed without selecting the menu option.

The radio may be programmed so group tones can be dialed using the ***** and **#** keys. Dial ***** to fill one **X**. Dial **#** to fill the current **X** and all subsequent **X** characters in the current burst.

When the user receives a call, the LED glows red and the call details plus appears on the display. The message **Ack received** may also appear.

6.6 Making a Phone Call or DTMF Patch Call

A telephone network can be directly connected to by manually dialing the number or using preset dialing sequences if the network is configured to support phone calls.

1. Select the required channel.
2. Press **Menu** and select **Phone call**.
3. Press **Call**.

The call details appear on the display, the LED glows red, and  appears on the display.

6.6.1 Using a function key

Depending on how DTMF patch calls are programmed, some of the following steps may not be necessary.

1. Select the required channel.
2. Press the function key programmed for DTMF patch call (the radio may send tones to capture the line).
3. Press **Send**, or press the function key a second time, to send the preset number (there may be telephone dialing and ringing tones).
4. Proceed with the call.
5. Press **End**, or give a long press on the function key, to end the call (the radio may send tones to release the line).

6.6.2 Using the main menu

1. Select the required channel.
2. Press **Menu** and select **Dial patch call**.
3. Dial the required number using the alphanumeric keys.
4. Press **Send** (the radio may send tones to capture the line).
5. Press **Send** to send the number dialed in step 3 (there may be telephone dialing and ringing tones).
6. Once the call has finished, press **End** (the radio may send tones to release the line).

6.6.3 Dialing DTMF tones (overdialing)

The radio may be programmed to allow dialing of DTMF tones using the numeric keypad while on a channel or in a call. The dialing may be either sent out immediately (as it's typed) or sent after pressing **Send**.

6.7 Setting your Status

The radio may be able to maintain a record of its current status. This status may be sent with outgoing calls programmed to contain status information. If the radio receiving the call has been programmed with the same status messages, it will decode and display its status. The status indicates the current activity or location, such as “en route” or “at lunch”.

6.7.1 Changing the current status

1. Press **Menu** and select **Set status**.
2. In the **Set status** menu, scroll through the list of status messages until the desired message appears.
3. Press **Select**. The message **Status updated** appears on the display.

6.8 Using the Radio in Different Repeater Areas

The 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 the radio moves in and out of different repeater coverage areas, the best communication channel is automatically selected for use.

This channel is known as the ‘home’ channel, and will be the channel used to make and receive calls. While voting is active, the scanning icon appears on the display.

6.8.1 Selecting a voting group

Using the channel selector

Users can use the channel selector to select a preset voting group. If the radio is programmed in this way:

- rotate the channel selector to the group you want.

Using a function key

To use a function key to select a voting group:

- press the function key to select and activate a preset voting or scanning group.

Using the main menu

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**.

6.8.2 Suspending a channel from a voting group

Users may be able to use the function key programmed for nuisance delete to temporarily delete one of the channels from the voting group.

When that voting group is next selected, or after the radio has been turned off and then on, the deleted channel is again part of the voting group.

Alternatively, the function key programmed for voting may be programmed so that a short key press turns on voting, and a long key press activates nuisance delete.

- Press and hold the function key programmed for voting to remove the current channel from the voting group.

If the operation has been successful, the message **Channel nuisance deleted** appears on the display.

7 P25 Services

This section describes the P25 services that may be available on the radio.

> This feature is controlled by a software license (SFE) and may not be available with the radio.

7.1 P25 Emergency Operations

> The features described in this chapter are for P25 channels/networks only.

This section describes how to make different types of emergency calls.

7.1.1 About emergency calls

> **Warning** The radio can be configured to automatically delete ("zeroize") encryption keys when emergency mode is activated.

In an emergency you can summon help by sending an emergency call. 7.1.1 above lists the types of emergency calls:

Call type	Explanation
Priority call	Priority call applies to digital channels only. An emergency alert is automatically sent to the current talkgroup when the priority call feature is turned on. Calls made with this feature activated are flagged as 'emergency' calls. For further information, see Making a priority call below
Standard emergency call	When an emergency call is initiated, the radio enters ‘emergency mode’. For further information see Standard emergency mode on the next page
Manual emergency call	Manual emergency call applies to digital channels only. When activated, the emergency mode is triggered and the radio sends an alert to the dispatcher and other group members, including the radio's digital alias and location. For further information, see About manual emergency operation on page 52

7.1.2 Making a priority call

Notice This feature is available for digital channels only.

When you turn the priority call feature on, the radio automatically sends an emergency alert (message) to the current talkgroup.

Any calls you make while the priority call feature is turned on are flagged as emergency calls.

To turn the priority call feature on and off

1. Press **Menu** and select **Priority call**.
2. Scroll to **On** (or **Off**) and press **Select**.

7.1.3 Standard emergency mode

When you press the emergency key the radio enters ‘emergency mode’, if the radio is programmed in this way.

When the radio enters emergency mode, it will automatically send alerts together with the radio unit ID to the dispatcher. These alerts are usually sent on a designated emergency channel.

Warning The way the radio behaves in emergency mode depends on how it is programmed.

What happens during an emergency call?

The exact way the radio behaves when it enters emergency mode depends on how it is programmed.

The main phases for emergency modes are summarized below. The length of each phase is determined when the radio is programmed.

When the emergency key is pressed

1. **Digital Channels:** The radio continually sends emergency alerts to the dispatcher until a response is received. Details of your location may also be sent (if this feature is available for the radio).
2. The radio alternately transmits and receives so the dispatcher can hear what is happening in the vicinity of the radio. Emergencies end once this phase is complete or when emergency mode is ended.

Activating emergency mode

You can activate emergency mode using the emergency function key.

1. Press the function or emergency key to activate emergency mode.

Warning How emergency mode is activated depends on how it has been configured. Confirm this step with your administrator.

One or more emergency calls are sent to your dispatcher or another predetermined radio user. During emergency mode, the radio will behave as described in Standard emergency mode above.

2. To end emergency mode and return the radio to normal operation, either:
    - turn the radio off and on again to end emergency mode,
    - push the function or emergency key again, or
    - if configured, press the PTT key

7.1.4 About manual emergency operation

This feature is available for digital channels only.

When you press the emergency key, the radio sends an alert to your dispatcher and other members of your group, along with the radio digital alias and location.

While the emergency call is active, the emergency information is sent out periodically, until either you or another member of your group end the emergency call.

You are still able to make and receive voice calls while emergency information is being sent, but the radio does not display caller details.

Making a manual emergency call

Warning You will not be able to make a voice call on the channel until the 3-second emergency alarm has finished.

1. Press and hold the emergency key for longer than three seconds.

Warning How emergency mode is activated depends on how it has been configured. Confirm this step with your administrator.

The radio gives three short beeps, rising in pitch.

Emergency appears in the display, and remains until the manual emergency call is canceled.

If you receive an acknowledgment from another radio in your group, the manual emergency call is canceled, and the message **Emergency Acked** briefly appears in the display.

This feature is controlled by a software license (SFE) and may not be available with the radio.

Canceling a manual emergency call

If the emergency situation has been resolved, the manual emergency call can be canceled either by you or another member of your group.

- Press and hold the emergency key until the message **Emergency canceled** appears in the display.

the radio now returns to the channel that it was operating on prior to the emergency call.

Canceling a manual emergency call you have received

When you have received a duress emergency call, the Emergency menu always moves to the top of the menu list. In the Emergency Menu, you can manually acknowledge the duress emergency call. This acknowledgment cancels the call.

1. Press **Menu** and select **Emergency** > **Acknowledge**.

The name of the radio that initiated the emergency call appears in the display.

2. Press **Send** to cancel the manual emergency call from that number.

The message **Emergency ack. sent** briefly appears in the display.

7.1.5 Accessing emergency location information

If **Location** appears in the display, above the left selection key, you can display the current location of the radio that has sent a manual emergency call. The last location of the radio will still be available even if the radio is turned off and then on again.

To access the location information, either press **Location** or use the **Last Stored** menu.

Using the location menu

1. Press **Location** to display the current location of the radio.
2. Use the scroll keys to view more location information.
3. Press **Exit** to return to the previous display.

Using the last stored menu

1. Press **Menu** and select **Emergency** > **Last stored** to display the current location of the radio.
2. Use the scroll keys to view more location information.
3. Press **Exit** to return to the previous display.

7.2 Call Alert

You can let another radio user know that you want to talk to them by sending them a call alert page. When the other radio user receives the call alert page, they can call you back when it is convenient.

- If you are on a P25 trunked channel, you can send a call alert to any other radio on a trunk channel on the same network.
- If you are on a P25 conventional channel, you can send a call alert to any other radio on the same conventional channel.

7.2.1 To send a call alert page

1. Press **Menu** and select **Services** > **Call alert**.
2. Select the radio you want to page.
3. Press **Send to**. A message appears in the display.

A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

7.2.2 Answering a call alert page

If you receive a call alert page from another radio user, the message **Page rx'd from...** briefly appears in the display.

Select **Call** to return the page or **No** to delete it. If you miss the call alert page, the identity of the caller may be saved in your recent calls list.

7.3 Messages

You may be able to send short messages to another radio user. These messages are defined at programming time.

- If you are on a P25 trunked channel, you can send a message to any other radio on a trunk channel on the same network.
- If you are on a P25 conventional channel, you can send a message to any other radio on the same conventional channel.

To read and display a sent message, receiving radios must have the same message programmed.

7.3.1 Sending a message

You may be able to send your message to a predetermined person or to the dispatcher administering the current talkgroup, or to a person of your choice.

Sending a message to a predetermined person or talkgroup administrator

1. Press **Menu** and select **Services** > **Messages**.
2. Select the required message from the list.
3. Press **Select**.

A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

Sending a message to a person of your choice

1. Press **Menu** and select **Services** > **Messages**.
2. Select the required message from the message list.
3. Press **Select**.
4. Select the message recipient from the list and press **Send to**.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

7.4 Radio Check

> This feature is only available on P25 conventional channels.

If you want to find out whether a particular radio is available on the system, you can use the radio check feature. This sends a radio check message to the radio unit you have specified.

1. Press **Menu** and select **Services** > **Radio check**.
2. Scroll to the radio you want to check.
3. Press **Send to**.

> A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If the radio is available on the system, an acknowledgment message is displayed.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

7.5 Radio Unit Monitor

> This feature is controlled by a software license (SFE) and may not be available with the radio. This software license is only required for the radio that sends the radio unit monitor request. The receiving radio does not need the software license.

This feature is only available for digital channels operating in conventional mode, and for radios configured for dispatcher operation.

The radio unit monitor feature ensures user safety by silently calling back the sender, allowing them to listen to nearby activity for up to 20 seconds.

> If Active Noise Cancellation is turned on, you may not be able to hear any background noise.

7.5.1 Sending a radio unit monitor request

1. Press **Menu** and select **Services** > **Radio monitor**.
2. Scroll to the radio you want to monitor.
3. Press **Send to**.

> A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If the other radio has received your request, it will now call you so that you can monitor activity near the radio.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

7.6 Status Request

This feature is only available on P25 conventional channels.

You can find out what another radio user is currently doing by asking their radio to send you a status update.

7.6.1 To send a status request

1. Press **Menu** and select **Services** > **Status request**.
2. Select the status request recipient from the list.
3. Press **Send to**.

A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If an acknowledgment is not received from the recipient's radio, you will have the option of either canceling or resending the request.

7.7 Status Update

You can inform another radio user of your current status by sending them a status update, for example, 'At scene'. You may be able to send the status update to a predetermined person or talkgroup, or to a person of your choice.

- If you are on a P25 trunked channel, you can send your status to any other radio on a trunk channel on the same network.
- If you are on a P25 conventional channel, you can send your status to any other radio on the same conventional channel.

When you send a status message, you are also *setting* your status, which the dispatcher may be able to check by 'interrogating' the radio. You can change your status at any time by selecting another status message and sending it. See Status Request above.

7.7.1 To send a status update

1. Press **Menu** and select **Services** > **Status update**.
2. Select the required status message from the list.
3. Press **Send to** or **Select**.

A message showing the radio destination appears on the display. The LED glows red, and a notification indicates whether the message was sent successfully.

If an acknowledgment is not received from the recipient’s radio, you will have the option of either canceling or resending the request.

To set a status without sending it to anyone, see Setting your Status on page 48

8 Location Services

This section explains how to use the location services that may be available on the radio.

> This feature is controlled by a software license (SFE) and may not be available with the radio.

8.1 About Location Information

The radio can display location information such as latitude and longitude, true course, speed, and coordinated universal time. The radio can also display universal transverse mercator (UTM) information such as the UTM zone, and northing and easting coordinates.

The radio may also be set up to send and log location information.

8.2 About Location Statuses

On the **Own location** screen, the following location status information appears on the display:

- **Trk**: the receiver is displaying up-to-date satellite information.
- **stored**: the receiver is having trouble connecting to satellites and the radio is displaying stored information that may not be current.
- **no cnx:** the radio has lost serial communications with the receiver.

The information displayed can be sent to other radios on the network by pressing the **Share** selection key.

8.3 Viewing Location Information

The radio can be programmed to show various displays. Initially, location reporting is set to all zeros until the first satellite fix. Latitude and longitude formats depend on the configuration. In certain situations, the radio may automatically exit the location display.

Location information is displayed if it is available and configured to be visible. The images below show some of the available options.

1. Press **Menu** and select **Location Svs** > **Own location**.
2. Use the scroll keys to scroll though the **Own location** displays.

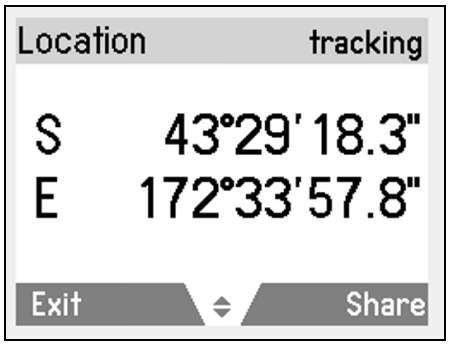


Figure 8.1 Latitude and longitude in degrees, minutes and decimal seconds

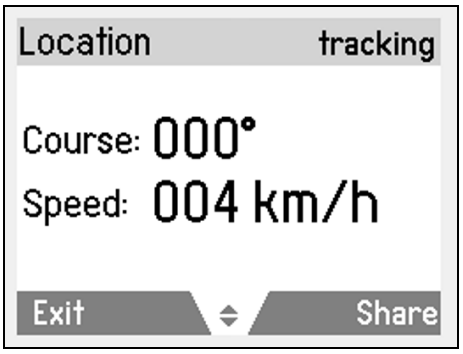


Figure 8.2 The radio's current course and speed

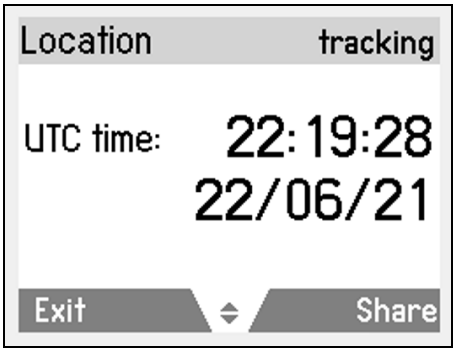


Figure 8.3 UTC: Coordinated Universal Time, 24-hour clock

3. Press **Exit** to exit the location display.

9 Loneworker Monitoring

Loneworker monitoring is a safety feature for people who work alone. Loneworker monitoring may be programmed to be on or off at all times, or can be switched on and off by the user using a programmed function key or the menu.

A loneworker alarm is activated if, for a set period of time, the radio is tilted beyond a certain angle (man down), remains stationary, or shows no user activity.

> The radio may be programmed to respond to a combination of these events.

When the predetermined time has expired, an audible warning is given and the user will have a predetermined time to respond to the warning.

If the user is unable to respond, the radio either enters emergency mode or (in digital mode) sends a status update to a predetermined person or talkgroup.

9.1 Activating Loneworker Monitoring

1. Press **Menu** and select **Radio Settings** > **Extra features** > **Loneworker**.
2. In the **Loneworker** menu, select **On**.

A vertical scroll bar on the right-hand side of the display indicates the remaining activity timeout. To reset the count-down bar, press any key.

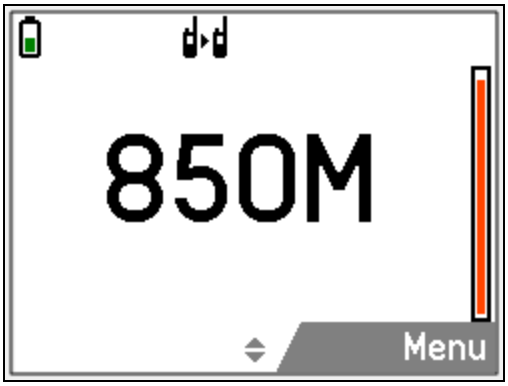


Figure 9.1 Radio display when loneworker is activated

9.2 Responding to a Loneworker Alarm

When the radio beeps, a response from the user is required to confirm their safety. The message **Loneworker awaiting** and a horizontal scroll bar appear, showing the remaining time until an emergency action is triggered (see Figure 9.2 below).

Figure 9.2 Loneworker awaiting message

To respond to the Loneworker awaiting message:

- press any key
- move the radio
- if using the man down feature, restore the radio to an upright position.

If no action is taken, the radio will activate emergency mode or send a status update in digital mode.

10 Encryption

This section describes how to use encryption to make user's communications completely private.

> This feature is controlled by a software license (SFE) and may not be available with the radio.

10.1 About Encryption

The encryption feature is available only for digital and dual mode networks.

To ensure private communication, the radio can encrypt outgoing calls using a confidential encryption key. The receiving radio must have the same encryption key installed to hear the encrypted call.

10.1.1 About the proper key detect feature

> Encryption does not need to be enabled for the radio to unmute.

The radio may be programmed with ‘proper key detect’. This means that you can only hear an encrypted call if the key used to encrypt the incoming call matches the key used to encrypt your outgoing calls on that channel.

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

10.2 Encrypting Calls

The radio may be able to turn encryption on and off. While encryption is on, outgoing calls are encrypted on networks programmed for encryption, and the encryption icon remains in the display.

This setting only affects outgoing calls. Incoming calls will still be decoded by the radio so long as the key required to decode the call is stored in the radio.

10.2.1 Turning encryption on or 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 **deactivated**) appears in the display.

Depending on how the radio is programmed, users may be able to press a function key to turn encryption on and off.

Using the 3-way selector

- Turn encryption on by rotating the 3-way selector to either position A or B. The message **Encryption activated** briefly appears in the display.
- Turn encryption off by rotating the 3-way selector to position C. The message **Encryption deactivated** briefly appears in the display.

10.3 Making an Encrypted Call

1. Select the desired channel or group.
2. Check that encryption is on (encryption key is showing in the display).
3. Press and hold the PTT key to transmit.

The name of the encryption key that the radio is using for the transmission may briefly appear in the display.

The call details appear on the display, the LED glows red, and appears on the display.

10.4 Receiving an Encrypted Call

When receiving an encrypted call, the radio unmutes and clear speech can be heard, so long as the key required to decode the call is stored in the radio.

The name of the encryption key used to encrypt the incoming call may briefly appear in the display, below the name of the caller.

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

The radio may also remain muted if the currently selected channel has 'proper key detect' programmed.

10.5 Removing Encryption Keys from the Radio

It may be possible for users to delete encryption keys from their radio.

Warning When emergency mode is activated, or when the radio is immobilized (‘inhibited’), encryption keys may be automatically deleted from the radio.

If the encryption keys are deleted, the message **Key fail** appears and a warning tone will periodically sound. The message **Cannot transmit** will be displayed if the user tries to transmit.

10.5.1 Deleting an encryption key

1. Press **Menu** and select **Security** > **Advanced** > **Zeroize key**.
2. Scroll to the desired key and press **Select**. The message **Single key zeroized** briefly appears in the display.

10.5.2 Deleting 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** briefly appears in the display.

11 Customizing Radio Settings

This section describes ways of customizing the radio.

These features are common to radios operating in either trunked or conventional mode.

11.1 Changing the Color Mode

The display colors can be changed to suit the environment. For example, Red/Black is suited for night display while Color - Dark is ideal for bright environments. The default setting is Color - Light.

11.1.1 To change the color mode

1. Press **Menu** and select **Radio settings** > **Display settings** > **Color mode**.
2. Scroll to the desired mode and press **Select**.

Table 11.1 below features the available color modes.

Table 11.1 Color modes

Mode	Description
Color - Dark	Dark background, light text
Color - Light	Default setting. Light background, dark text. Best suited for day time display
Black/White	White background, black text
White/Black	Black background, white text
Red/Black	Black background, red text. Best suited for night display

11.2 Changing the Volume of all Audible Indicators

Users can set the volume of all the audible indicators to either high or low. Audible tones include incoming call tones, warning tones and confirmation tones.

11.2.1 Changing the volume of the radio's audible tones

Depending on how the radio is programmed, users may be able to press a function key to change the level of indicators.

1. Press **Menu** and select **Radio settings** > **Alert settings** > **Indicator level**.
2. Scroll to **High** (or **Low**) and press **Select**.

11.3 Changing the Volume of Keypress Tones

Whenever you press the radio keys, the keypress tones make an audible indication as to whether or not your action is allowed. A short, medium-pitched beep indicates that an action is allowed. A long, low-pitched beep indicates that the action is not allowed.

11.3.1 Changing the volume of the radio's keypress tones

1. Press **Menu** and select **Radio settings**> **Alert settings** > **Keypress tones**.
2. Scroll to either **Off**, **Low** or **High** and press **Select**.

> Depending on how the radio is programmed, you may be able to press a function key to toggle keypress tones on and off, and to change between high and low volume.

11.4 Changing to Quiet Operation

When quiet operation is on, keypress tones and confirmation tones are turned off. Incoming call tones, signaling tones and warning tones all remain audible.

11.4.1 Turning quiet operation on or off

1. Press **Menu** and select **Radio settings** > **Alert settings** > **Quiet operation**.
2. Scroll to **On** (or **Off**) and press **Select**.

> Depending on how the radio is programmed, you may be able to press a function key to toggle quiet operation on and off.

11.5 Changing to Silent Operation

When silent operation is on, all the radio's audible tones are turned off, and only channel traffic can be heard.

11.5.1 Turning silent operation on or off

1. Press **Menu** and select **Radio settings** > **Alert settings** > **Silent operation**.
2. In the **Silent operation** menu, scroll to either **On** or **Off** and press **Select**.

While silent operation is on, the  icon appears in the display.

> Depending on how the radio is programmed, you may be able to press a function key to toggle silent operation on and off.

11.6 Turning on Backlighting

If configured, whenever a key is pressed or a call is received, the keypad and display will light up automatically. Backlighting only remains on for a few seconds, unless there is further radio activity. When backlighting is turned on, it remains on until the setting is changed to **Off**, regardless of radio activity.

11.6.1 Turning backlighting on or off

1. Press **Menu** and select **Radio settings** > **Display settings** > **Backlighting**.
2. Scroll to either **On** or **Off** and press **Select**.

> Depending on how the radio is programmed, you may be able to press a function key to toggle backlighting on and off, or between 'with activity' and 'on'.

11.6.2 Turning backlighting on momentarily

You may be able to use a programmed function key to turn backlighting on momentarily, as long as backlighting has been configured to 'with activity'.

- Press the assigned function key to turn backlighting on. Backlighting remains on for a few seconds, and then turns off.

Alternatively, the function key may be programmed so that:

- a short key press turns backlighting on momentarily, and
- a long key press turns backlighting on, and it remains on until there is a further long key press.

11.7 Adjusting the Display Orientation

When the display is rotated, everything appears upside down.

11.7.1 Rotating the display

1. Press **Menu** and select **Radio settings** > **Display settings** > **Rotate display**.
2. Scroll to **On** (or **Off**) and press **Select**.

> Depending on how the radio is programmed, you may be able to press a function key to toggle rotate display on and off.

12 Troubleshooting

This section describes troubleshooting procedures and basic maintenance.

If you are experiencing difficulty operating the radio, you may find the following sections helpful. Consult the radio provider for assistance, if necessary.

12.1 The Radio won't Turn On

If the radio LED doesn't light up red briefly when the radio is turned on, power is likely not reaching the radio. Try one more of the following:

- Is the battery firmly attached to the radio?
- Is the battery sufficiently charged?
- Is the battery charger working properly?

If all appears to be in order, but the radio still fails to operate properly, contact the radio provider for further assistance.

12.2 Identifying the Radio's Audible Tones

The radio's audible tones can help you identify a potential problem. See 3.5.2 on page 28.

12.3 Viewing Radio Information

Use the **Radio info** menu to view information such as the hardware and firmware version of the radio, function key settings, the radio serial number, and various radio identities.

1. Press **Menu** and select **Radio settings** > **Radio info**.
2. Scroll to the radio information you want to view and press **Select**.

12.3.1 Checking the version of the radio using the PTT key

1. Turn off the radio.
2. Hold down the PTT key and turn on the radio.

The firmware and hardware versions, and the radio's frequency band is briefly displayed.

12.4 General Care

The only radio maintenance required is ensuring the battery has sufficient charge and that the antenna and battery are not damaged or dirty.

Notice To prevent permanent damage to the radio case, do not allow the radio to come into contact with detergents, alcohol, aerosol sprays, or petroleum-based products.

12.4.1 Cleaning the radio

Warning Risk of permanent damage to the radio housing! Do not clean the radio with solvents or alcohol based products. This includes (but is not limited to) ethylene glycol (antifreeze), propanone (acetone), ethanol (methylated spirits), isopropyl alcohol, and pool chlorine (calcium hypochlorite).

1. Use a lint-free, dry cloth to remove surface dirt, oil, or grease.
2. Use an alcohol-free, antibacterial wipe to disinfect the radio.
3. Use a water-dampened, lint-free, microfibre cloth to remove any remaining dirt.
4. If the damp cloth is ineffective, dilute a (5 to 10%) solution of alcohol-free dishwashing liquid in clean water, on a cloth, to remove remaining dirt.
5. If the dish-washing liquid solution is ineffective, use a solution of one part household bleach to two parts clean water, on a cloth, to wipe away remaining dirt.

Warning Always use protective equipment (gloves, face mask) when handling bleach.

Notice Risk of internal damage! To avoid damaging the inside of the radio, do not allow excess liquid to enter the radio body (speaker grille, keypad, buttons, and connectors).

12.4.2 Cleaning the contacts of the battery

Notice Do not scratch or scrape the contacts of the battery. If necessary, wipe the contacts of the battery with a dry, lint-free cloth to remove any dirt, oil or grease.

12.5 Running Diagnostic Tests

Diagnostics tests are available via the main menu.

This feature is controlled by a software license (SFE) and may not be available with the radio.

1. Press **Menu** and select **Diagnostics**.
2. Scroll to the name of the required test and press **Select**.

Notice The radio may transmit when you select some tests. Make sure you have a suitable load or antenna connected before running diagnostics tests.

Table 12.1 Diagnostic tests

Test	Description
Display freq	Displays the transmit and receive frequencies of the current channel. Also displays the channel status (CNV, TCH, CCH) and the mode (ANA, PH1 or PH2). If the radio is scanning, this information may not be available
Display test	Displays a test screen of all colors that appear on the screen. Useful for identifying dead pixels
RSSI	Displays the received signal strength (RSSI) of the current channel
Site display	Shows the channel number, signal strength and system-identity code (SYSCODE) for the currently registered trunked site
Site measure	Lists the current trunked site (indicated with an asterisk) and up to six detected adjacent sites, with received signal strength (RSSI) information
Tx Tone Cal	Transmits a 1011Hz or 1031Hz tone on the current channel with a bit error rate (BER) of 5%

13 Simplified Declaration of Conformity

EN Hereby, Tait International Limited declares that the radio equipment type TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

BG С настоящото Tait International Limited декларира, че този тип радиосъоръжение TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

ES Por la presente, Tait International Limited declara que el tipo de equipo radioeléctrico TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

CS Tímto Tait International Limited prohlašuje, že typ rádiového zařízení TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

DA Hermed erklærer Tait International Limited, at radioudstyrstypen TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelses-erklæringens fulde tekst kan findes på følgende internetadresse: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

DE Hiermit erklärt Tait International Limited, dass der Funkanlagentyp TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

ET Käesolevaga deklareerib Tait TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

EL Με την παρούσα ο/η Tait International Limited, δηλώνει ότι ο ραδιοεξοπλισμός TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

FR Le soussigné Tait International Limited, déclare que l'équipement radioélectrique du type TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

HR Tait International Limited ovime izjavljuje da je radijska oprema tipa TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

IT Il fabbricante, Tait International Limited, dichiara che il tipo di apparecchiatura radio TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

LV Ar šo Tait International Limited deklarē, ka radioiekārta TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

LT Aš, Tait International Limited, patvirtinu, kad radijo įrenginių tipas TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A,

TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

HU Tait International Limited igazolja, hogy a TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

MT B'dan, Tait International Limited, niddikjara li dan it-tip ta' tagħmir tar-radju TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

NL Hierbij verklaar ik, Tait International Limited, dat het type radioapparatuur TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

PL Tait International Limited niniejszym oświadcza, że typ urządzenia radiowego TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

PT O(a) abaixo assinado(a) Tait International Limited declara que o presente tipo de equipamento de rádio TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

RO Prin prezenta, Tait International Limited declară că tipul de echipamente radio TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

SK Tait International Limited týmto vyhlasuje, že rádiové zariadenie typu TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

SL Tait International Limited potrjuje, da je tip radijske opreme TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

FI Tait International Limited vakuuttaa, että radiolaitetyyppi TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A on direktiivin 2014/53/EU mukainen. EU-vaatimusten-mukaisuus-vakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity

SV Härmed försäkrar Tait International Limited att denna typ av radioutrustning TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, TPDB1A, TPDB1B, TPDB1C, TPDB1D, TPDC0A, TPDC0D, TPDH5A, TPDH5D, TPDH7A, TPDH7D, TPDHBB, TPDHKC, TPDH7C, TUFM2D, TUFM3A, TPGB1A, TPGHKA, TPGH7A & TPHN0A överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: https://www.taitcommunications.com/our-resources/compliance/declarations-of-conformity