

# TP9800 Multiband P25 Portable Radio User's Guide

MPH-00001-01 - Issue 01 - February 2023



## 1 Contents

Co	Contact Information 6			
Ab	oout This Guide	<b>7</b>		
	Scope of Manual	7		
	Alerts	7		
	Associated Documentation	7		
	Acronyms	8		
	Publication Record	8		
1	For your safety	9		
	Radio frequency exposure information	9		
	Radio frequency emissions limits in the USA	10		
	Radio frequency emissions limits in Canada	10		
	USA public safety bands (764–776MHz and 794–806MHz)	11		
	EMC regulatory compliance in Australia	11		
	Frequency band reserved for distress beacons	11		
	Health, safety and electromagnetic compatibility in Europe	11		
	Interference with electronic devices	12		
	Potentially explosive atmospheres and blasting areas	12		
	Radio installation and operation in vehicles	13		
	Vehicle charger installation and operation	13		
	Multicharger safety information	13		
	Electromagnetic compatibility in European vehicles	14		
	Unapproved modifications or changes to radio	14		
2	Before Using the Radio	16		
	For your safety — battery warning	16		
	Attaching labels to the radio or battery	17		
	Attaching a label to the front panel	17		
	Charging the battery before first use	19		
	Attaching the battery	19		
	Removing the battery	19		

	Attaching the antenna	20
	Removing the antenna	20
	Attaching a belt clip	21
	Removing a belt clip	21
	Installing an audio accessory	21
3	Getting Started	23
	Setting and Viewing the Radio's Time and Date	23
	About Your Radio	24
	About the Radio Controls	25
	Understanding the Radio Display	26
	Understanding the Radio Indicators	27
	Using Function Keys to Access Frequently Used Features	29
	Navigating the Radio's Menus	30
4	Basic Operation	32
	Turning the Radio On and Off	32
	Adjusting the Speaker Volume	33
	Locking and Unlocking the Keypad	33
	Holding the Radio	33
	Speaking into the Radio	34
	Using a Bluetooth Audio Device	34
	Turning On Active Noise Cancellation	37
5	Operating in Conventional Mode	38
	Selecting a Zone	38
	Selecting a Channel	39
	Understanding Talkgroups	41
	Making an Individual Call	41
	Making a Local Call	42
	Making a DTMF Patch Call	43
	Setting your Status	44
	Using the Radio in Different Repeater Areas	45
6	Location Services	46



	About Location Information	46
	About Location Statuses	46
	Viewing Location Information	47
7	Loneworker Monitoring	49
	Activating Loneworker Monitoring	49
	Responding to a Loneworker Alarm	50
8	Encryption	51
	About Encryption	51
	Encrypting Calls	51
	Making an Encrypted Call	52
	Receiving an Encrypted Call	52
	Removing Encryption Keys from the Radio	52
9	Customizing Radio Settings	53
	Changing the Color Mode	53
	Changing the Volume of all Audible Indicators	54
	Changing the Volume of Keypress Tones	54
	Changing to Quiet Operation	55
	Changing to Silent Operation	56
	Turning on Backlighting	56
	Rotating the Display	57
10	Charging and Caring for Batteries	58
	About the Chargers	58
	6-Way Charger Safety Information	59
	Before Using the Charger	60
	Charging Temperatures	60
	Leaving the Battery on Charge	61
	Receiving Calls while Charging	61
	Low Battery Warning	61
	Inserting the Radio into the Vehicle Charger	62
	Charging a Battery	63
	LED Behavior	63

	Removing the Battery from the Charger	64
	Maintaining Battery Life and Performance	64
	Storing Batteries	65
	Disposing of Batteries	65
11	Troubleshooting	66
	The Radio Won't Turn On	66
	Identifying the Radio's Audible Tones	66
	Viewing Radio Information	66
	General Care	67
	Running Diagnostic Tests	68
Sir	mplified Declaration of Conformity	69
Та	it Software License Agreement	73

## **Contact Information**

## **Tait Communications Corporate Head Office**

Tait International Limited P.O. Box 1645 Christchurch New Zealand

For the address and telephone number of regional offices, refer to our website: www.taitradio.com

#### **Copyright and Trademarks**

All information contained in this document is the property of Tait International Limited. All rights reserved. This document may not, in whole or in part, be copied, photocopied, reproduced, translated, stored, or reduced to any electronic medium or machine-readable form, without prior written permission from Tait International Limited.

The word TAIT and the TAIT logo are trademarks of Tait International Limited.

All trade names referenced are the service mark, trademark or registered trademark of the respective manufacturers.

#### **Disclaimer**

There are no warranties extended or granted by this document. Tait International Limited accepts no responsibility for damage arising from use of the information contained in the document or of the equipment and software it describes. It is the responsibility of the user to ensure that use of such information, equipment and software complies with the laws, rules and regulations of the applicable jurisdictions.

#### **Enquiries and Comments**

If you have any enquiries regarding this document, or any comments, suggestions and notifications of errors, please contact your regional Tait office.

#### **Updates of Manual and Equipment**

In the interests of improving the performance, reliability or servicing of the equipment, Tait International Limited reserves the right to update the equipment or this document or both without prior notice.

#### **Intellectual Property Rights**

This product may be protected by one or more patents or designs of Tait International Limited together with their international equivalents, pending patent or design applications, and registered trade marks: NZ409837, NZ409838, NZ415277, NZ415278, NZ508806, NZ530819, NZ534475, NZ547713, NZ577009, NZ579051, NZ579364, NZ586889, NZ610563, NZ615954, NZ700387, NZ708662, NZ710766, NZ711325, NZ726313, NZ733434, NZ593887, AU2015215962, AU339127, AU339391, AU2016259281, AU2016902579, AU2017204526, EU000915475-0001, EU000915475-0002, GB1518031.8, GB1710543.8, GB2532863, US14/834609 Div. no 1, US15/346518 Div.no 2, US15/350332, US15/387026 Div., US29/614639, US62/713910, US62/729478, US62/730107, US62/767041, US62/781642, US62/778238, US9794940 Div. no 1, US20150085799, US20160044572, US20160057051, US20170142646, US20170055267 Div. no 2, US20180006844, US640974, US640977,

US698339, US702666, US7758996, US8902804, US9107231, US9504034, US9559967.

This product may also be made under license under one or more of the following patents:

- US7203207, AU2004246135, CA2527142, GB2418107, HK1082608, MY134526, US8306071
- US7339917, AU2004246136, CA2526926, GB2418812, MY134217
- US7499441, AU2005262626, CA2570441, GB2430333, JP4690397,
   NZ551231, KR100869043, RU2351080, BRP10512052,
   MXPA06015241
- US 7200129, AU2005226531, CA2558551, CN1930809, GB2429378, JP4351720, BRP10508671, NZ549124, KR848483, RU2321952

The AMBE+2<sup>TM</sup> voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

#### **Environmental Responsibilities**

Tait International Limited is an environmentally responsible company which supports waste minimization, material recovery and restrictions in the use of hazardous materials.



The European Union's Waste Electrical and Electronic Equipment (WEEE) Directive requires that this product be disposed of separately from the general waste stream when its service life is over. For more information about how to dispose of your unwanted Tait product, visit the Tait WEEE website

at <a href="www.taitradio.com/weee">www.taitradio.com/weee</a>. Please be environmentally responsible and dispose through the original supplier, or contact Tait International Limited.

Tait International Limited also complies with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive in the European Union.

In China, we comply with the Measures for Administration of the Pollution Control of Electronic Information Products. We will comply with environmental requirements in other markets as they are introduced.

## **About This Guide**

## **Scope of Manual**

This manual provides information about all s.

The radio behavior described in this guide applies to radios with firmware. To check the radio's firmware version, see "Viewing Radio Information" on page 66. 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.

**Caution** 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 support website.

- MPD-00002-xx TP8000/TP9000 Battery Charging Guide
- MTA-00011-xx TM8000/TP8000/TM9000/TP9000/TU2000 Safety and Compliance Information
- TD-0058-xx TP9500/TP9600 Operational Description

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 technical support website.

## **Acronyms**

Acroynym	Definition
ОТАР	Over The Air Programming
OTAR	Over The Air Rekeying
PTT	Push To Talk
RSM	Remote Speaker Microphone
SFE	Software license key
UTM	Universal Transverse Mercator

## **Publication Record**

Issue	Publication Date	Description
1	February 2023	First release

## 1 For your safety

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

## 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.

#### 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.

#### 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 your 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 <a href="https://www.fcc.gov/oet/rfsafety/rf-faqs.html">www.fcc.gov/oet/rfsafety/rf-faqs.html</a>.

#### 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.

### 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 2.1091 (radios mobiles) ou 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.

## Radio frequency emissions limits in the USA

#### 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.

#### 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.

## Radio frequency emissions limits in Canada

This device complies with Industry Canada licence 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 licence. 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.

## 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.

#### Low-power channels

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

- Regional Planning channels, as defined in §90.531 (b) (3).
- Itinerant channels, as defined in §90.531 (b) (4).

#### Use of encryption

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

- Encryption is not permitted on the nationwide Interoperability calling channels. These channels are defined in §90.531 (b) (1) (ii).
- Radios using encryption must have a readily accessible switch or control to allow the radio user to disable encryption.

## **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 <a href="https://www.acma.gov.au">www.acma.gov.au</a>.

## 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.

## Health, safety and electromagnetic compatibility in Europe

In the European Community, radio and telecommunications equipment is regulated by Directive 2014/3/EU. The requirements of this directive include protection of health and safety of users, as well as electromagnetic compatibility.

#### 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).

#### Restrictions

This product can be programmed to transmit on frequencies that are not harmonized throughout the EU/EEA, and will require a licence 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.

#### **Declaration of conformity**

Brief Declarations of Conformity appear on page 69 of this booklet. To download the formal declaration of conformity, go to www.taitradio.com/eudoc.

## Interference with electronic devices



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



#### 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.

## Potentially explosive atmospheres and blasting areas



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.



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.

## Radio installation and operation in vehicles



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.



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.

## 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.

## **Multicharger safety information**



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

Norsk (no): Apparatet må tilkoples jordet stikkontakt.

Suomi (fi): Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.

Svenska (sv): Apparaten skall anslutas till jordat uttag.

## 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.

## 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.

#### Attaching of labels



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.

**Caution** 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.

#### Use of lithium-ion batteries



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.

## **Short-circuiting battery contacts**



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

Once the radio has been unpacked, there are a few tasks that must be completed before use. The most important of these is to charge the battery for the first time. Allow up to 3 hours for this.

#### This section covers:

Attaching labels to the radio or battery

Charging the battery before first use

Attaching the battery

Removing the battery

Attaching the antenna

Removing the antenna

Attaching a belt clip

Removing a belt clip

Installing an audio accessory

## For your safety — battery 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.

## Attaching labels to the radio or battery



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.

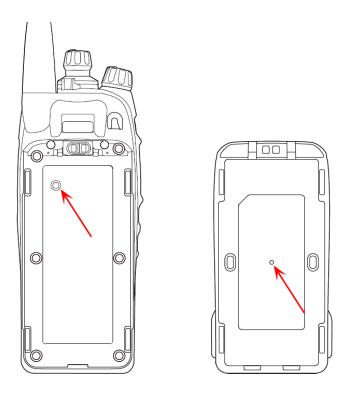


Figure 2.1 Radio chassis and battery vent holes

**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.

If a customer requires a customized label, use only a thin gummed paper label with a maximum thickness of 1/32 inch (0.1mm). Attach the customized label in the spare label recess in the chassis (if available), or over an existing label. The customized label may be applied to the bottom 25% of the radio chassis label and/or to the top 25% of the battery label.

Do not obstruct the battery vent hole (see Warning above). Do not allow the paper label to extend beyond the recessed label area or to conceal relevant product information.

## 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

The diagram below shows the specified dimensions of the label.

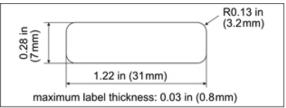


Figure 2.3 Spare label dimensions



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.

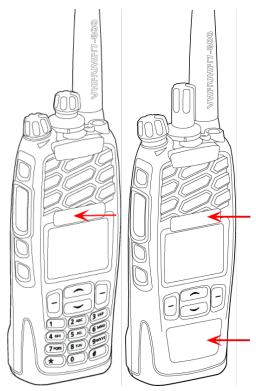


Figure 2.4 Location of model and custom labels



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

## 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. This information is repeated in the section "Charging and Caring for Batteries" on page 1.



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

See Charging and Caring for Batteries for detailed instructions on how to charge your battery.

#### 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.

## Attaching the battery



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

**Notice** Fit the bottom edge of the battery to the radio, then the top edge. Attempting to fit the top edge first may damage the contacts.

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



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

- 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.

## Removing the battery



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.



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

- 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.

## 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.

## Removing the antenna



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.

## Attaching a belt clip

#### To attach a belt clip to the radio:

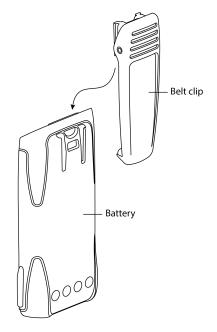
- 1. Slide the belt clip into the two grooves at the top of the battery.
- 2. Press down on the belt clip until it snaps into place.

## 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.



## Installing an audio accessory



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.

#### To remove the accessory cover and install an audio accessory:

- 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.

- 3. Plug the accessory into the accessory connector.
- 4. Tighten the screw.



The screw only needs to be finger tight when assembling the accessory and replacing the accessory cover.

## 3 Getting Started

This section provides an overview of the , describes the radio's controls and indicators, and explains how the radio menus are organized.

#### This section covers:

Setting and Viewing the Radio's Time and Date

**About Your Radio** 

About the Radio Controls

Understanding the Radio Display

Understanding the Radio Indicators

Using Function Keys to Access Frequently Used Features

Navigating the Radio's Menus

## 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.

#### To set 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.

#### To view the time and date:

• 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).

## **About Your Radio**

TP9800 Multiband P25 Portable Radios are available in multiple colors. Radio color does not affect functionality. Both analog and digital modes are supported.



Differences may be noticed between digital and analog calls in terms of:

- · static noise in low signal areas, and
- · radio coverage in marginal reception areas.

#### 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.

#### **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/microphone 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 microphone is utilized as the secondary microphone.



Active noise cancellation (secondary microphone) is not enabled when using a Bluetooth audio device (see Using a Bluetooth Audio Device).



To get the best performance from Active Noise Cancellation, Tait recommends positioning the microphone 2.5 - 5 cm (1 - 2 inches) from the mouth and speaking directly into the microphone.



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



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

#### Coverage

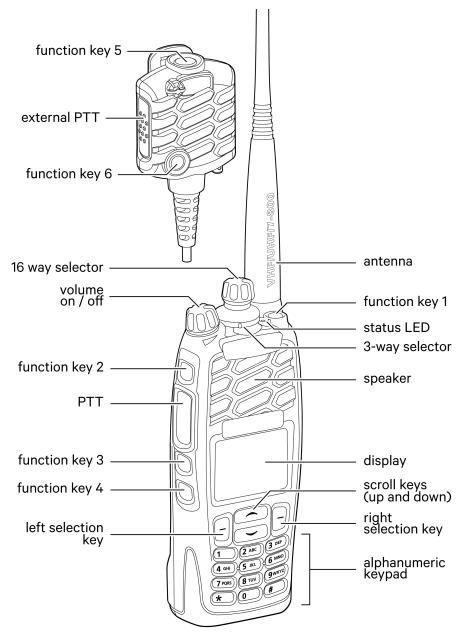
With digital networks, a call remains clear and then drops off quickly at the border of a coverage area. The reason for this is that a digital call is either received or it isn't. With analog networks, the background noise in a call gets progressively worse when the user is in fringe areas or even slightly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

## **About the Radio Controls**

The following are radio controls: PTT key, power/volume control, channel selector, 3-way selector control, scroll keys, selection keys, and function keys. Some keys have functions assigned to both short and long key presses:

- a short key press is less than 0.75 s, and
- a long key press is usually more than 0.75 s.

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



Name	Function	
PTT key	Press and hold to transmit and release to listen	
Power/volume control	Rotate to turn the radio on and change the speaker volume	
16 way selector	Select and change channels or talkgroups	
3-way selector	Select frequently used features	
Left and right selection keys	Action determined by the text above the selection key	
Scroll keys	Scroll up and down through a list of menu options, or access a pre-programmed menu	
Function keys	Programmed for frequently used options	
Alphanumeric keys	Used to enter letters and numbers	

## **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.

## Radio display icons

These are some of the icons you may see on your radio display:

Icon	Meaning	
Û	Battery indicator: shows how much charge is available in the battery	
<b>63</b>	Scanning: your radio is monitoring a group of channels or talkgroups for activity	
Z	Silent operation: your radio's audible tones have been turned off	
3	Low-power transmit: the radio is transmitting in low power	
33	Transmit: the radio is transmitting	
4	Bluetooth Audio Device Connected: there is a Bluetooth audio device connected to your radio	
7	Flashing: your radio is attempting to connect to a Bluetooth audio device, or the device connection has been lost	

Icon	Meaning	
٢	Encryption: the radio's transmissions are encrypted	
.adl	Signal strength indicator: the more bars, the stronger the signal being received by the radio	
<b>\$</b>	Scrolling: you can use or to move through a list, or access a pre-programmed menu	
Trunked mode icons		
.\	Trunking system available: the radio is operating on a P25 trunking system	
Conventional mode	icons	
٩	Monitor or squelch override: monitor or squelch override is turned on	
<b>\$</b> \$	Scanning: your radio is monitoring a group of channels for activity, and the currently selected channel is a member of the scan group.	
<b>q</b> ∙ <b>q</b>	Repeater talkaround: your radio is operating in repeater talkaround mode, or you are on a simplex channel	
Α	Zone: this letter represents the zone in which your radio is operating, where A is zone 1, Z is zone 26 (for example, K represents zone 11)	

## **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.

#### **Status Indicators**



Figure 3.1 Location of LED status indicator

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)	

#### **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.



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

Some of the more common audible tones are described below:

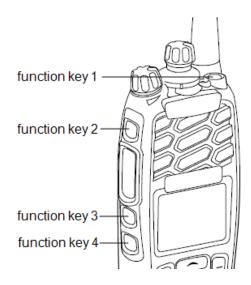
Tone	Meaning
One short	Valid keypress: The action you have attempted is permitted.
beep	Function activated: A function has been turned on (using a function key).
One short, low-pitched beep	Function deactivated: A function has been turned off (using a function key).
	Invalid keypress: The action you have attempted is not permitted.
One long, low-pitched beep	Transmission inhibited: You have attempted to transmit, but for some reason you cannot make a call at this time.
Two short	Radio turned on: The radio is powered on and ready to use.
beeps	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 your radio provider.
Two long high-low pitched tone pairs	Synthesizer is out-of-lock: The radio's synthesizer is out-of-lock on the current channel and you cannot operate on that channel ( <b>Out of lock</b> appears on the display).

#### 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.

## **Using Function Keys to Access Frequently Used Features**

The function keys provide access to some of the features you will use most often. These features are assigned to the function keys when the radio is programmed. Some keys may have a feature associated with both a short key press and a long key press.



### Viewing the function key settings

Use the Main menu to check the features assigned to your 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 the following table to record the function keys programmed for your radio:

	Short key press	Long key press
F1		
F2		
F3		
F4		
F5 <sup>1</sup>		
F6 <sup>1</sup>		

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

## **Navigating the Radio's Menus**

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

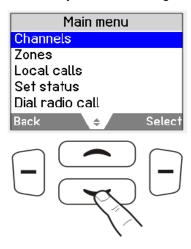
<sup>&</sup>lt;sup>1</sup>On speaker microphone (if fitted)

## **Using the Main Menu**

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



Use the scroll keys to move through the menu list.



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

Your 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 operation of your radio.

#### This section covers:

Turning the Radio On and Off

Adjusting the Speaker Volume

Locking and Unlocking the Keypad

Holding the Radio

Speaking into the Radio

Using a Bluetooth Audio Device

**Turning On Active Noise Cancellation** 

## **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 Low Battery Warning.

#### Security lock on power-up feature

Your 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). See "Turning the Radio On and Off" above below.

#### Locking the radio

- 1. Press **Menu** and select **Radio settings** > **Functions** > **Lock radio**. (Depending on how your radio is programmed, you may be able to press a function key to turn radio lock on and off.)
- 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 your radio provider for assistance.

#### Unlocking the radio

• To unlock your radio, use the unlock sequence you have been given. (This is a pre-programmed sequence of four keys).

## **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.

## Locking and Unlocking 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.

#### To lock the keypad:

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.



The left selection key can also be configured for the keypad lock function.

#### To unlock the keypad:

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

## **Holding the Radio**

To ensure that effective communication is not hindered:

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

Caution do not hold the radio speaker directly against your ear. This can damage your ear.

Caution do not pick up or hold a radio by the antenna. This can damage the antenna.

## Speaking into the Radio

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



The PTT button should be pushed and held throughout the transmission.



A common mistake is to speak before pressing PTT. To avoid cutting off the start of your sentence, wait a few seconds after pressing PTT.



Do not shout as this can hinder voice transmission clarity.



Be aware that when utilizing active noise cancellation, speaking near the noise canceling microphone can result in ambient and voice being canceled. See Turning On Active Noise Cancellation for more information.

## **Using a Bluetooth Audio Device**



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



Active noise cancellation (secondary microphone) is not enabled when using a Bluetooth audio device (see Active Noise Cancellation under About Your Radio for more information).

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



When a menu option has been selected in the **Bluetooth audio device** menu, calls can still be received and replied to without interrupting the selected operation.

## **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.
- Includes Bluetooth Headset Profile (HSP) adopted version 1.1 or 1.2, or Bluetooth Handsfree Profile (HFP) version 1.5 or 1.6.

#### Wearing the Bluetooth Audio Device

With a device worn over the head, place it on the ear. Depending on which ear the device will be 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.

#### To get the best performance from the Bluetooth Audio Device:

- 1. Do not block the device's internal antenna (see the device's user documentation). The human body can interfere with a Bluetooth signal.
  - 2. If the radio is used with the right hand, wear the over-the-head device on the right ear.
  - 3. Avoid coming in contact with the internal antenna of a device or radio.-
  - 4. Ensure that the rear microphone is not covered by your hand or clothing when making a call.

#### 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.

When connecting to a Bluetooth audio device for the first time, instruct the radio to search for compatible devices using Bluetooth wireless technology. The search should take less than one minute.

#### To pair a Bluetooth audio device with the radio:

- 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.

#### 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**).

#### **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.

#### **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.

#### **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 > Options > Power-on option**, and change to the required option.

## **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 the talking party who is in a noisy environment.

Active noise cancellation can be left on regardless of environment. However, when safety features such as Loneworker Monitoring 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 2 - 5 cm (1 - 2 inches) from the mouth and speaking directly into the front of the radio speaker/microphone.

### To turn active noise cancellation on or off:

1. Press Menu and select Radio settings > Functions > Noise cancellation.



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

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.

## 5 Operating in Conventional Mode

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

### This section covers:

Making a DTMF Patch Call

Making a Local Call

Making an Individual Call

Receiving a Call

Selecting a Channel

Selecting a Zone

**Setting your Status** 

**Understanding Talkgroups** 

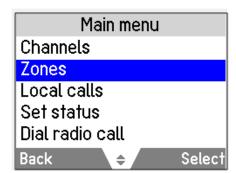
Using the Radio in Different Repeater Areas

## Selecting a Zone

The radio may be programmed to use zones, which are collections of channels and groups. When a zone is selected, only the channels and groups assigned to that zone are available.

### Using the Main menu:

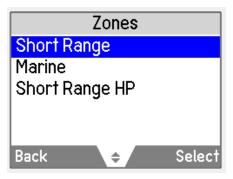
1. Press Menu and select Zones.





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.

### Other ways of selecting a zone

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

3-way selector (see About the Radio Controls)



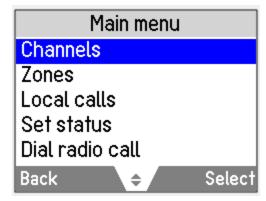
If the 3-way selector is turned while pressing the PTT key, the zone will change after the PTT key is released.

- left selection key (see Using the left selection key Quick Access menu)
- scroll keys (see Using the scroll key Quick Access menu)
- · function keys to scroll through zones

## **Selecting a Channel**

### **Using the Main menu:**

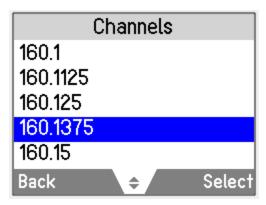
1. Press Menu and select Channels.





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.

### Using the scroll keys:

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

### 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.

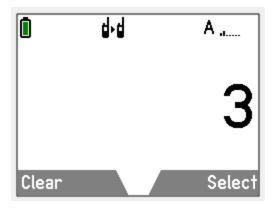
### Using the keypad



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.

### **Automatic channel selection**

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

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

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

### Other ways of selecting a channel

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

- function key (see Accessing Frequently Used Menus)
- left selection key (see Using the left selection key Quick Access menu)
- scroll keys (see Using the scroll key Quick Access menu)

## **Understanding Talkgroups**

This feature is available for digital channels only.

A talkgroup is a collection of radio users with whom to 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.
   Statewide talkgroups, as their name suggests, enable public safety agencies to communicate with each other from one end of the state to the other.
- 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.

## Making an Individual Call

This feature is available for digital channels only. For analog individual calls, see Making a Local Call

### To make a call to one person:

1. Press Menu and select Individual call.



If no address book is configured, a preconfigured list appears. The person to whom the last individual call was made is highlighted.

2. Scroll to the desired person to call and press the PTT key to make the call immediately. Alternatively, press **Call** and then PTT.



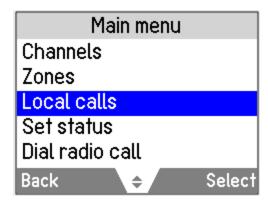
If an address book is configured, it's possible to either dial a number or show the address book.

## **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 Making an Individual Call.

### 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.

## Making a DTMF Patch Call

DTMF patch dialing may be used to connect to a telephone network or signal another device by dialing the number manually, or using preset dialing sequences.

Users may either:

- · use a programmed function key
- · use the Main menu to dial the call
- make a local call (see Making a Local Call)

### Using a function key



Depending on how DTMF patch calls are programmed, some or 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.

### **Using the Main menu**



This feature is only available for radios with alphanumeric keys.



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

- 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 "Making a DTMF Patch Call" on the previous page.



There may be telephone dialing and ringing tones.

- 6. Proceed with the call.
- 7. Once the call has finished, press End.



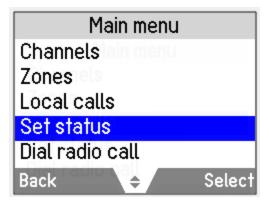
The radio may send tones to release the line.

## **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".

### To change 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.

## **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.

### 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.

## 6 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.

### This section covers:

**About Location Information** 

**About Location Statuses** 

**Viewing Location Information** 

## **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.

### **About Location Statuses**

In the **Own location** screen, 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.

## **Viewing Location Information**

1. Press Menu and select Location Svs > Own location.

Location information is now shown in the display, if it is available and has been configured as visible. The images below show a selection of available options.



The radio may be programmed to show any of these displays.



Immediately after the radio is turned on, location reporting is set to all zeros, until the first satellite fix is achieved.

2. Use the scroll keys to scroll though the **Own location** displays.

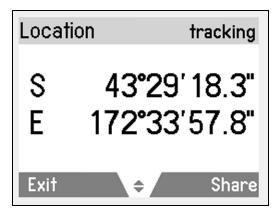


Figure 6.1 Latitude and longitude in degrees, minutes and decimal seconds



Latitude and longitude can be displayed in various formats depending on configuration.

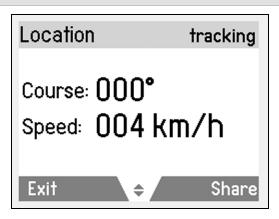


Figure 6.2 The radio's current course and speed

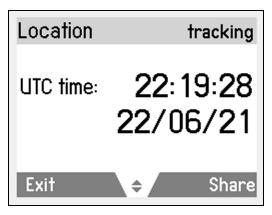


Figure 6.3 UTC: Coordinated Universal Time, 24-hour clock

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



In certain situations, the radio may automatically exit the location display.

## 7 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 predetermined period of time:

- the radio has been tilted by more than the configured number of degrees (man down)
- · the radio has not moved
- · there has been 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 loneworker situation.

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.

#### This section covers:

Activating Loneworker Monitoring
Responding to a Loneworker Alarm

## **Activating Loneworker Monitoring**

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

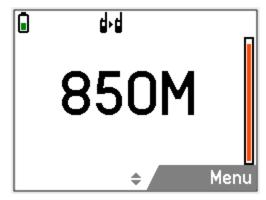
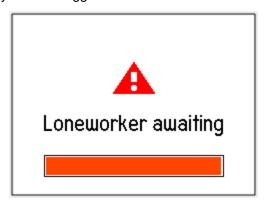


Figure 7.1 Radio display when loneworker is activated

## Responding to a Loneworker Alarm

If the radio beeps to indicate that the radio is expecting a response from the user to acknowledge they are safe, the message **Loneworker awaiting** and a horizontal scroll bar appear indicating the remaining time until an emergency action is triggered.



- · Press any key,
- · Move the radio,
- If using the man down feature, restore the radio to an upright position.

Otherwise the radio will activate emergency mode or (in digital mode) send a status update.

## 8 Encryption

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



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

### This section covers:

About Encryption
Encrypting Calls
Making an Encrypted Call
Receiving an Encrypted Call

## **About Encryption**

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

To make communications with other users on a users' system completely private, the users' radio may be able to encrypt outgoing calls, using a confidential encryption key. The radio receiving a users' call must have the same encryption key installed before it can hear an encrypted call.

## **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.

### To turn encryption on or off:

- 1. Press **Menu** and select **Security > Encryption**. (Depending on how the radio is programmed, users may be able to press a function key to turn encryption on and off.)
  - 2. Scroll to On (or Off) and press Select.

The message **Encryption activated** (or **deactivated**) appears in the display.

## **Making an Encrypted Call**

- 1. Select the desired.
- 2. Check that encryption is on (encryption key  ${\bf \hat{q}}$  is showing in the display).
- 3. Press and hold the PTT key to transmit.

While transmitting, the LED glows red and 🤧 appears in the display.

## **Receiving an Encrypted Call**

When receiving 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.

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

## Removing Encryption Keys from the Radio

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



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.

## Deleting an encryption key

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

### Deleting all encryption keys

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

## 9 Customizing Radio Settings

This section describes ways of customizing the radio.



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

### This section covers:

Adjusting the Display Contrast

Changing the Color Mode

Changing the Volume of all Audible Indicators

Changing the Volume of Keypress Tones

**Changing to Quiet Operation** 

**Changing to Silent Operation** 

**Rotating the Display** 

**Turning On Active Noise Cancellation** 

**Turning on Backlighting** 

## **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.

### 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**.

### The color modes are:

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.

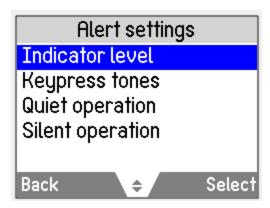
Mode	Description
Red/Black	Black background, red text. Best suited for night display.

## 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.

### To change the volume of the radio's audible tones:

1. Press Menu and select Radio settings > Alert settings > Indicator level.





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

2. Scroll to High (or Low) and press Select.

## **Changing the Volume of Keypress Tones**

Whenever you press the radio keys, the keypress tones give you 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.

### To change the volume of your 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 your 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.

## **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.

### To turn quiet operation on or off:

1. Press Menu and select Radio settings > Alert settings > Quiet operation.





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

2. Scroll to On (or Off) and press Select.

## **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.

### To turn 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**.



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

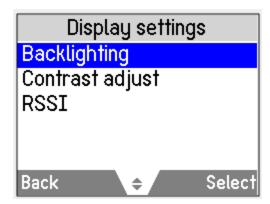
While silent operation is on, the  $\nearrow$  icon appears in the display.

## **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.

### To turn backlighting on or off:

1. Press Menu and select Radio settings > Display settings > Backlighting.





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

2. Scroll to either On or Off and press Select.

### **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.

## **Rotating the Display**

When the display is rotated, everything appears upside down.

### To rotate 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 your radio is programmed, you may be able to press a function key to toggle rotate display on and off.

# 10 Charging and Caring for Batteries

This section describes how to charge your Tait radio battery as well as care for it, to ensure safe operation, maximum performance and prolonged battery life.

#### This section covers:

**About the Chargers** 

6-Way Charger Safety Information

Before Using the Charger

**Charging Temperatures** 

Leaving the Battery on Charge

Receiving Calls while Charging

**Low Battery Warning** 

Inserting the Radio into the Vehicle Charger

**Charging a Battery** 

**LED Behavior** 

Removing the Battery from the Charger

Maintaining Battery Life and Performance

**Storing Batteries** 

Disposing of Batteries

## **About the Chargers**

Unless otherwise indicated, the charging advice and instructions in this document apply to all chargers.

The following chargers are available for Tait radios and batteries:

Part Number Range	Designation	
T03-00012-xxxx	Desktop charger for non-IS/NI batteries	
T03-00013-xxxx	6-way charger for non-IS/NI batteries	
T03-00014-AAAA	Battery-only vehicle charger for non-IS/NI batteries	
T03-00014-Bxxx	Vehicle charger for non-IS/NI batteries	

## **6-Way Charger Safety Information**



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

Norsk (no): Apparatet må tilkoples jordet stikkontakt.

Suomi (fi): Laite on liitettävä suojamaadoitus-koskettimilla varustettuun pis-

torasiaan.

Svenska (sv): Apparaten skall anslutas till jordat uttag.

## **Before Using the Charger**

Check the battery label and charger label to see if the charger is compatible with the battery. See also About the Chargers" About the Chargers on page 58



Handle the battery safely. Failure to observe the following handling recommendations could result in personal injury and/or equipment damage.

- Before using a Li-ion battery, read the Li-ion Battery Safety Information (MPD-00002-xx) included with your battery, and follow the instructions it provides. Incorrect use of a Li-ion battery can cause explosion or fire.
- Do not short-circuit the battery contacts to the radio, 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.
- Do not obstruct the vent hole(s) on the battery. If the vent on the battery is obstructed the battery may explode, causing personal injury and/or equipment damage. If the vent on the radio is obstructed, audio quality and/or key function may deteriorate and radio seals may be damaged.

**Notice** Turn the radio off before removing the battery, and turn it on again after attaching the battery. This ensures that the radio powers down and up correctly. Failing to follow this procedure may require the radio to be turned off then on again to operate correctly.

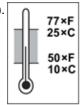
## **Charging Temperatures**

**Notice** Do not expose a battery to very high or very low temperatures for extended periods of time. Doing so will shorten the usable life ('service life') of the battery.

To achieve the best results when charging the battery:

- Before beginning to charge the battery, ensure that the battery temperature is close to the room temperature in which the battery is to be charged.
- If possible, charge the battery in temperatures between 50°F and 77°F (between 10°C and 25°C). This temperature range is the optimal charging range.

Charging only starts when the battery is between 32°F to 104°F (0°C to 40°C).





When the battery temperature is outside the normal charging range, the orange LED on the charger is lit. Charging will start or resume once the temperature is within normal limits, and no action is required.

## **Leaving the Battery on Charge**

A battery/radio can be left in the charger once charging is complete. Leaving a battery in the charger will not overcharge or damage it.

A battery/radio can be removed from the charger at any time without harming the battery, the radio, or the charger. When the battery/radio is returned to the charger, charging is automatically resumed.

### Vehicle chargers only

It is safe to switch off the ignition while there is still a battery in the charger. But if the vehicle will not be used again for some time, check whether charging will continue while the ignition is off, and consider what effect this might have on the vehicle battery.

To check, place the battery in the charger and switch off the vehicle ignition:

- If no charger LED stays lit, the charger will resume charging only when the ignition is switched on again. Minimal charger standby power will be drawn from the vehicle battery until then.
- If a charger LED stays lit, the charger will continue to charge the radio battery even while the ignition is off, and will continue to draw power from the vehicle battery. Once the battery is charged, the charger draws minimal current and has little effect on a healthy vehicle battery.

## **Receiving Calls while Charging**



Does not apply to battery-only vehicle chargers

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

Calls can be received while the radio is in the charger, but radio performance may be degraded. If the radio is removed from the charger to answer a call, the call will not be disrupted.

Removing the radio from the charger to make or receive a call ends the charging process. Charging safely recommences when the radio is reinserted into the charger.

If a radio was turned on while being charged, the battery indicator may not be accurate when the radio is initially removed from the charger. After a few seconds, the battery indicator is updated to display the amount of charge available in the battery

## **Low Battery Warning**

**Notice** Do not allow a radio battery to fully discharge every time it is used, or the service life of the battery will be shortened.

When the battery is low, the radio provides warnings in the following ways:

- · The battery symbol on the radio display looks empty.
- The status LED on the radio slowly flashes red.
- · A high-pitched beep sounds.

The battery should be recharged or replaced as soon as possible.

When the battery is completely empty, the message **Battery is flat** appears on the display. The radio emits a long, low-pitched beep and then turns off. Turn off the radio.

## **Inserting the Radio into the Vehicle Charger**

1. Place the radio in the charger with the battery attached.



When the portable radio is used inside a vehicle, radio performance is degraded. Use a mobile radio for all critical communications. If the portable radio must be left switched on while it is in the charger, removing the radio from the charger will improve radio performance. Check your local regulations about using a portable radio in a vehicle.

2. Firmly press the retention bar towards the radio.



If the larger battery is attached to the radio, there will be an audible click as the catches engage. If the smaller battery is attached to the radio, there will be two audible clicks as the catches engage. If the catches do not engage, remove the radio. Press once firmly on the release bar, then try again.

## **Charging a Battery**

### **Charging a Battery for the First Time**

Fully charge a battery before using it for the first time.



The red LED stays lit while the battery charges

### **Charging a Battery**

**Notice** For best charging performance, switch off the radio before placing it in the charger (not for battery-only vehicle charger).

- **Desktop charger:** Connect the charger to the correct Tait power adaptor.
- 6-way charger and vehicle charger: Power on the charger.



Initially, all three LEDs are lit for 2 seconds.

Place just a battery in the charger, or a radio with a battery attached (desktop charger or 6-way charger only).
 There is no need to remove a belt clip, antenna, or any accessory that is attached to the accessory connector.



The red LED lights up and stays lit while the battery charges.



When charging is complete, the green LED stays lit.

## **LED Behavior**

If there is a battery in the charger when power is supplied to the charger, the LEDs behave as follows:

181	Meaning
(briefly)	The charger has been connected to a power supply.
(steady)	The battery is charging.
•00	Charging complete. Remove the battery, or leave it in the charger.

121	Meaning
(steady)	
(steady)	The battery temperature is outside the normal charging range. Charging will start or resume once the temperature is within normal limits. No action is required by you.
(cloudy)	There is a fault. Contact your dealer.
00*	
or	If the LEDs for all charger slots continuously flash orange, or red then orange, the charger itself may be faulty (e.g. the 6-way charger fan may be jammed). Contact
<b>○</b> ★★	your dealer.
(flashing)	
(all off)	There is a fault. Contact your dealer.

If the charger does not behave as expected:

- Make sure the radio or battery is seated properly in the charger. For the vehicle charger, see also Inserting the Radio into the Vehicle Charger.
- Check that the charger is properly plugged into the originally supplied power supply.
- Check that the battery and charger contacts are clean. To clean, wipe the contacts with a dry lint-free cloth to remove any dirt, oil or grease.

## Removing the Battery from the Charger

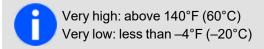
- Desktop charger and 6-way charger: Lift the battery/radio out of the charger.
- Battery-only vehicle charger: Pull up the top clip of the vehicle charger, and then lift out the battery.
- **Vehicle charger:** Press down once firmly on the release bar at the top of the vehicle charger, and then lift out the radio.

A battery/radio can be removed from the charger at any time without harming the battery, the radio, or the charger. When the battery/radio is returned to the charger, charging is automatically resumed. A battery/radio can also be left in the charger once charging is complete.

## **Maintaining Battery Life and Performance**

With proper care and maintenance you will maintain the performance and life of the battery. It is recommended that you:

- · Use only Tait chargers and batteries.
- Do not expose a battery to very high or very low temperatures for extended periods of time. Doing so will shorten the service life of the battery.



- Charge the battery at a room temperature of between 50°F and 77°F (between 10°C and 25°C). This temperature range is the optimal charging range.
- Wipe excess moisture and dirt from the radio, radio contacts and battery contacts before charging the battery.
- Store batteries properly when not in use. See Storing Batteries.

## **Storing Batteries**

When not in use for a month or more, batteries should be stored correctly to prolong their life.

- Batteries which are not in active use should be fully charged when they reach a period of 24 weeks in storage. This should be repeated for each subsequent 24-week period.
- Any battery found to have fallen below 4.0V should be disposed of appropriately. An exception to this is the T03-00011-EXXX 5.2V.
- Remove the battery from the radio before storage.
- Store in a cool dry place.

Batteries that have been stored for any length of time must be charged before being used. See Charging a Battery.

## **Disposing of Batteries**



Run the battery flat before disposing of it. When disposing of the battery, be sure to do so in an environmentally sensitive manner. Please contact your radio provider for information on recycling programs in your area. Also see "Environmental Responsibilities" under "Contact Information" at the beginning of this document.

## 11 Troubleshooting

This section describes troubleshooting procedures and basic maintenance.

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

#### This section covers:

The Radio Won't Turn On

Identifying the Radio's Audible Tones

Viewing Radio Information

**General Care** 

## 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. Check 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 your radio provider for further assistance.

## **Identifying the Radio's Audible Tones**

The radio's audible tones can help you identify a potential problem. See Audible Tones.

## **Viewing Radio Information**

Use the **Radio info** menu to view information such as the hardware and firmware version of your 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**.

### Checking the version of your 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 your radio's frequency band is briefly displayed.

## **General Care**

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

**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.

For general battery care, see Maintaining Battery Life and Performance.

### Cleaning the Radio



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).

### To clean the radio:

- 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.

**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).

- 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.



# Health risk! Always use protective equipment (gloves, face mask) when handling bleach.

5. If the dishwashing 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.

### **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.

## **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 your radio.

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

The following table lists diagnostics tests may be available on your radio.

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

Test	Description	
Display freq	Displays the transmit and receive frequencies of the current channel. Also displays the channel status (CNV, TCH, CCH <sup>1</sup> ) and the mode (ANA, PH1 or PH2 <sup>2</sup> ). 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%.	

<sup>&</sup>lt;sup>1</sup>CNV = conventional, TCH = traffic channel, CCH = control channel

<sup>&</sup>lt;sup>2</sup>ANA = analog, PH1 = P25 Phase 1, PH2 = P25 Phase 2

## **Simplified Declaration of Conformity**

EN Hereby, Tait International Limited declares that the radio equipment type TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, 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: www.-taitradio.com/eudoc

BG С настоящото Tait International Limited декларира, че този тип радиосъоръжение ТМАА4А, ТМАА4С, ТМАВ1А, ТМАВ1С, ТМАВ1Е, ТМАС0А, ТМАС0С, ТМАН5А, ТМАН5С, ТМАН5Е, ТМАН6А, ТМАН6С, ТМАН6Е, ТМВВ1А, ТМВС0А, ТМВН5А, ТМВН7А, ТМВМ1А, ТРАВ1А, ТРАН5А, ТРАН6А, ТРСВ1А, ТРСС0А, ТРСН5А, ТРСН6А, ТРОВ1В, ТРОВ1С, ТРОВ1D, ТРОС0А, ТРОС0D, ТРОН5А, ТРОН5D, ТРОН7А, ТРОН7D, ТРОНВВ, ТРОНКС, ТРОН7С, ТИГМ2D, ТИГМ3А, ТРСВ1А, ТРСНКА, ТРСН6А & ТРНN0А е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: www.-taitradio.com/eudoc

ES Por la presente, Tait International Limited declara que el tipo de equipo radioeléctrico TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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:

www.taitradio.com/eudoc

CS Tímto Tait International Limited prohlašuje, že typ rádiového zařízení TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E,

TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

DA Hermed erklærer Tait International Limited, at radioudstyrstypen TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

DE Hiermit erklärt Tait International Limited, dass der Funkanlagentyp TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, 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: www.-taitradio.com/eudoc

ET Käesolevaga deklareerib Tait TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.-taitradio.com/eudoc

EL Με την παρούσα ο/η Tait International Limited, δηλώνει ότι ο ραδιοεξοπλισμός TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

FR Le soussigné Tait International Limited, déclare que l'équipement radioélectrique du type TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, 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: www.taitradio.com/eudoc

HR Tait International Limited ovime izjavljuje da je radijska oprema tipa TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

IT II fabbricante, Tait International Limited, dichiara che il tipo di apparecchiatura radio TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, 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: www.taitradio.com/eudoc

LV Ar šo Tait International Limited deklarē, ka radioiekārta TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

LT Aš, Tait International Limited, patvirtinu, kad radijo įrenginių tipas TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

HU Tait International Limited igazolja, hogy a TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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 EUmegfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: www.taitradio.com/eudoc

MT B'dan, Tait International Limited, niddikjara li dan ittip ta' tagħmir tar-radju TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E,

TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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. Ittest kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: www.-taitradio.com/eudoc

NL Hierbij verklaar ik, Tait International Limited, dat het type radioapparatuur TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

PL Tait International Limited niniejszym oświadcza, że typ urządzenia radiowego TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

PT O(a) abaixo assinado(a) Tait International Limited declara que o presente tipo de equipamento de rádio TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.-taitradio.com/eudoc

R0 Prin prezenta, Tait International Limited declară că tipul de echipamente radio TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

SK Tait International Limited týmto vyhlasuje, že rádiové zariadenie typu TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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:

SL Tait International Limited potrjuje, da je tip radijske opreme TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

FI Tait International Limited vakuuttaa, että radiolaitetyyppi TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, TPAB1A, TPAH5A, TPAH6A, TPCB1A, TPCC0A, TPCH5A, TPCH6A, 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: www.taitradio.com/eudoc

SV Härmed försäkrar Tait International Limited att denna typ av radioutrustning TMAA4A, TMAA4C, TMAB1A, TMAB1C, TMAB1E, TMAC0A, TMAC0C, TMAH5A, TMAH5C, TMAH5E, TMAH6A, TMAH6C, TMAH6E, TMBB1A, TMBC0A, TMBH5A, TMBH7A, TMBM1A, 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: www.taitradio.com/eudoc

## **Tait Software License Agreement**

This Software License Agreement ("Agreement") is between you ("Licensee") and Tait International Limited ("Tait").

By using any of the Software items embedded and preloaded in the related Tait Designated Product, included on CD, downloaded from the Tait website, or provided in any other form, you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement, do not install or use any of the Software. If you install or use any of the Software, that will be deemed to be acceptance of the terms of this Agreement.

For good and valuable consideration, the parties agree as follows:

#### **Section 1 DEFINITIONS**

"Confidential Information" means all or any information supplied to or received by Licensee from Tait, whether before or after installation or use and whether directly or indirectly pertaining to the Software and Documentation supplied by Tait, including without limitation all information relating to the Designated Products, hardware, software; copyright, design registrations, trademarks; operations, processes, and related business affairs of Tait; and including any other goods or property supplied by Tait to Licensee pursuant to the terms of this Agreement.

- "Designated Products" means products provided by Tait to Licensee with which or for which the Software and Documentation is licensed for use.
- "Documentation" means product and software documentation that specifies technical and performance features and capabilities; user, operation, and training manuals for the Software; and all physical or electronic media upon which such information is provided.
- "Executable Code" means Software in a form that can be run in a computer and typically refers to machine language, which is comprised of native instructions the computer carries out in hardware. Executable code may also refer to programs written in interpreted languages that require additional software to actually execute.
- "Intellectual Property Rights" and "Intellectual Property" mean the following or their substantial equivalents or counterparts, recognized by or through action before any governmental authority in any jurisdiction throughout the world and including, but not

limited to all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation; including any adaptations, corrections, de-compilations, disassemblies, emulations, enhancements fixes, modifications, translations and updates to or derivative works from, the Software or Documentation, whether made by Tait or another party, or any improvements that result from Tait processes or, provision of information services.

- "Licensee" means any individual or entity that has accepted the terms of this License.
- "Open Source Software" means software with freely obtainable source code and license for modification, or permission for free distribution.
- "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.
- "Person" means any individual, partnership, corporation, association, joint stock company, trust, joint venture, limited liability company, governmental authority, sole proprietorship, or other form of legal entity recognized by a governmental authority.
- "Security Vulnerability" means any flaw or weakness in system security procedures, design, implementation, or internal controls that if exercised (accidentally triggered or intentionally exploited) could result in a security breach such that data is compromised, manipulated, or stolen, or a system is damaged.
- "Software" (i) means proprietary software in executable code format, and adaptations, translations, decompilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, new versions and new releases of the software provided by Tait; (iii) means any upgrades, enhancements or other functions or features to the Software provided by Tait; and (iv) may contain one or more items of software owned by a third-party supplier. The term "Software" includes the applicable "Software Key" and does not include any third-party software provided under separate license or not licensable under the terms of this Agreement.
- "Source Code" means software expressed in human readable language necessary for understanding,

maintaining, modifying, correcting, and enhancing any software referred to in this Agreement and includes all states of that software prior to its compilation into an executable programme.

"Software Key" means a code or key that is supplied by Tait to access, enable and use the Software or certain functions or features of the Software.

"Tait" means Tait International Limited and includes its Affiliates.

#### **Section 2 SCOPE**

This Agreement contains the terms and conditions of the license Tait is providing to Licensee, and of Licensee's use of the Software and Documentation. Tait and Licensee enter into this Agreement in connection with Tait delivery of certain proprietary Software and/or products containing embedded or preloaded proprietary Software.

#### **Section 3 GRANT OF LICENSE**

- 3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Tait grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7), and non-exclusive license to use the Software in executable code form, and the Documentation, solely in connection with Licensee's use of the Designated Products for the useful life of the Designated Products. This Agreement does not grant any rights to source code.
- 3.2. The Licensee acknowledges that one or more Software Keys may be required from Tait for the Software or certain functions or features of the Software. The Licensee may only access, enable and use such Software or functions or features of the Software with Software Keys issued by Tait. Tait may provide the Licensee with a Software Key for the Software or certain functions or features of the Software agreed to by the parties as part of this Agreement. The Software Key may control the functions or features of the Software licensed in accordance with this Agreement. The Licensee's license to the Software Key is limited to a license to use the Software Key only to access, enable and use the Software or certain functions or features of the Software that Tait has agreed to provide to the Licensee and only in accordance with the Documentation.
- 3.3. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not in this

Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the any applicable Open Source Software Licenses, the terms and conditions of the Open Source Software Licenses will take precedence. For information about Open Source Components contained in Tait products and the related Open Source licenses, see:

https://www.taitradio.com/opensource

#### Section 4 LIMITATIONS ON USE

- 4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," "service bureau" basis, or for any other similar commercial rental or sharing arrangement.
- 4.2. Licensee will not, and will not directly or indirectly allow or enable any third party to: (i) reverse engineer, disassemble, extract components, decompile, reprogram, or otherwise reduce the Software or any portion thereof to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party; (iv) grant any sublicense or other rights in the Software or Documentation to any third party; (v) take any action that would cause the Software or Documentation to be placed in the public domain; (vi) remove, or in any way alter or obscure any copyright notice or other notice of Tait or third-party licensor's proprietary rights; (vii) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by, any third party or on any machine except as expressly authorized by this Agreement; or (viii) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software by any means whatsoever other than what is permitted in this Agreement. Licensee may make one copy of the Software to be used solely for archival, back-up, or disaster recovery purposes; provided that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

- 4.3. Unless otherwise authorized by Tait in writing, Licensee will not, and will not enable or allow any third party to: (i) install a copy of the Software on more than one unit of a Designated Product; or (ii) copy or transfer Software installed on one unit of a Designated Product to any other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device.
- 4.4. Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Tait, or a third party nominated by Tait, may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Tait is responsible for the payment of all expenses and costs of the inspection, provided that Licensee shall indemnify Tait for all costs (including audit costs and legal costs on a solicitor client basis) if Licensee has breached the terms of this Agreement. Any information obtained by Tait during the course of the inspection will be kept in strict confidence by Tait and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

#### **Section 5 OWNERSHIP AND TITLE**

Tait, its licensors, and its suppliers retain all of their Intellectual Property Rights in and to the Software and Documentation, in any form. No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All Intellectual Property developed, originated, or prepared by Tait in connection with providing the Software, Designated Products, Documentation, or related services, remains vested exclusively in Tait, and Licensee will not have any shared development or other Intellectual Property Rights.

## Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. The commencement date and the term of the Software warranty will be a period of one (1) year from Tait shipment of the Software. If Licensee is not in breach of any obligations under this Agreement, Tait warrants that the unmodified Software, when used properly and in accordance with the Documentation and this

- Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect has occurred will be determined solely by Tait. Tait does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Tait makes no representations or warranties with respect to any third-party software included in the Software.
- 6.2 Tait sole obligation to Licensee, and Licensee's exclusive remedy under this warranty, is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Tait cannot correct the defect within a reasonable time, then at Tait option, Tait will replace the defective Software with functionally equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund Licensee's paid license fee. If Tait investigation of the perceived defect reveals that no such defect in fact exists, Tait may recover its costs in respect of such investigation from Licensee.
- 6.3. Tait disclaims any and all other warranties relating to the Software or Documentation other than the express warranties set forth in this Section 6. Warranties in Section 6 are in lieu of all other warranties whether express or implied, oral or written, and including without limitation any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether Tait knows, has reason to know, has been advised of, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Tait disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

#### **Section 7 TRANSFERS**

7.1. Licensee will not transfer the Software or Documentation to any third party without specific prior written consent from Tait. Tait may withhold such consent or at its own discretion make the consent conditional upon the transferee paying applicable license fees and agreeing to be bound by this Agreement.

- 7.2. In the case of a value-added reseller or distributor of Tait Designated Products, the consent referred to in Section 7.1 may be contained in a Tait Reseller or Tait Distributor Agreement.
- 7.3. If the Designated Products are Tait vehicle-mounted mobile products or hand-carried portable radio products and Licensee transfers ownership of the Tait mobile or portable radio products to a third party, Licensee may assign its right to use the Software which is embedded in or furnished for use with the radio products and the related Documentation; provided that Licensee transfers all copies of the Software and Documentation to the transferee.
- 7.4. 7.4. For the avoidance of any doubt, Section 7.3 excludes TaitNet Infrastructure, or the products listed at any time under network products at: <a href="http://www.-taitradio.com">http://www.-taitradio.com</a>.
- 7.5. If Licensee, as a contractor or subcontractor (integrator), is purchasing Tait Designated Products and licensing Software not for its own internal use but for end use only by a Customer, the Licensee may transfer such Software, but only if a) Licensee transfers all copies of such Software and the related Documentation to the transferee and b) Licensee has first obtained from its Customer (and, if Licensee is acting as a subcontractor, from the interim transferee(s) and from the ultimate end user sub license) an enforceable sublicense agreement that prohibits any other transfer and that contains restrictions substantially identical to the terms set forth in this Software License Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorised by this Section may not otherwise transfer or make available any Tait Software to any third party nor permit any party to do so. Licensee will, on request, make available evidence reasonably satisfactory to Tait demonstrating compliance with all the foregoing.

### **Section 8 TERM AND TERMINATION**

- 8.1. Licensee's right to use the Software and Documentation will commence when the Designated Products are supplied by Tait to Licensee and will continue for the life of the Designated Products with which or for which the Software and Documentation are supplied, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Tait.
- 8.2. Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Tait that all copies of the Software have been removed or

- deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Tait or destroyed by Licensee and are no longer in use by Licensee.
- 8.3. Licensee acknowledges that Tait made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Tait for which monetary damages would be inadequate. If Licensee breaches this Agreement, Tait may terminate this Agreement and be entitled to all available remedies at law or in equity including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation. Licensee shall pay all Tait costs (on an indemnity basis) for the enforcement of the terms of this Agreement.

#### **Section 9 CONFIDENTIALITY**

Licensee acknowledges that the Software and Documentation contain proprietary and Confidential Information valuable to Tait and are Tait trade secrets, and Licensee agrees to respect the confidentiality of the information contained in the Software and Documentation.

### **Section 10 LIMITATION OF LIABILITY**

- 10.1. In no circumstances shall Tait be under any liability to Licensee, or any other person whatsoever, whether in Tort (including negligence), Contract (except as expressly provided in this Agreement), Equity, under any Statute, or otherwise at law for any losses or damages whether general, special, exemplary, punitive, direct, indirect, or consequential arising out of or in connection with any use or inability of using the Software.
- 10.2. Licensee's sole remedy against Tait will be limited to breach of contract and Tait sole and total liability for any such claim shall be limited at the option of Tait to the repair or replacement of the Software or the refund of the purchase price of the Software.

#### **Section 11 GENERAL**

- 11.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.
- 11.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software may be subject to the laws and regulations of the jurisdiction covering the supply

of the Designated Products and will comply with all applicable laws and regulations, including export laws and regulations, of that country.

- 11.3. ASSIGNMENTS AND SUBCONTRACTING. Tait may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to, or consent of, Licensee.
- 11.4. GOVERNING LAW. This Agreement shall be subject to and construed in accordance with New Zealand law and disputes between the parties concerning the provisions hereof shall be determined by the New Zealand Courts of Law. Provided however Tait may at its election bring proceedings for breach of the terms hereof or for the enforcement of any judgment in relation to a breach of the terms hereof in any jurisdiction Tait considers fit for the purpose of ensuring compliance with the terms hereof or obtaining relief for breach of the terms hereof.
- 11.5. THIRD-PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Tait and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third-party software included in the Software will be a direct and intended third-party beneficiary of this Agreement.
- 11.6. SURVIVAL. Sections 4, 5, 6.3, 7, 8, 9, 10, and 11 survive the termination of this Agreement.
- 11.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Agreement and any other Agreement between the parties, the parties agree that, with respect to the specific subject matter of this Agreement, this Agreement prevails.
- 11.8 SECURITY. Tait uses reasonable means in the design and writing of its own Software and the acquisition of third-party Software in order to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Tait will take the steps specified in Section 6 of this Agreement.
- 11.9 EXPORT. Licensee will not transfer, directly or indirectly, any Designated Product, Documentation or Software furnished hereunder or the direct product of such Documentation or Software to any country for which New Zealand or any other applicable country requires an export license or other governmental

- approval without first obtaining such license or approval.
- 11.10 SEVERABILITY. In the event that any part or parts of this Agreement shall be held illegal or null and void by any court or administrative body of competent jurisdiction, such determination shall not affect the remaining terms which shall remain in full force and effect as if such part or parts held to be illegal or void had not been included in this Agreement. Tait may replace the invalid or unenforceable provision with a valid and enforceable provision that achieves the original intent and economic effect of this Agreement.
- 11.11 CONSUMER GUARANTEES. Licensee acknowledges that the licenses supplied in terms of this agreement are supplied to Licensee in business, and that the guarantees and other provisions of prevailing consumer protection legislation shall not apply.
- 11.12 WHOLE AGREEMENT. Licensee acknowledges that it has read this Agreement, understands it and agrees to be bound by its terms and conditions. Licensee also agrees that, subject only to the express terms of any other agreement between Tait and Licensee to the contrary, this is the complete and exclusive statement of the Agreement between it and Tait in relation to the Software. This Agreement supersedes any proposal or prior agreement, oral or written, and any other communications between Licensee and Tait relating to the Software and the Designated Products.