

TP3300/TP3350 DMR Conventional Portable Radios

User's Guide

MPE-00001 - Issue 05 - March 2023

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2 About this guide

Product Code Cross Reference

Product Code	Description	Product (used in this manual)
T03-00312-XXXX	Analog and DMR Tier 2 portable radio	TP3300
T03-00313-XXXX	Analog and DMR Tier 2 portable radio, with GPS and BT functionality	TP3350

This user's guide provides information about the TP3300 and TP3350 DMR conventional and analog portable radios.

Both models are available with the following front panels:

- display and 16 keys
- display and 4 keys
- no display and no keys

These front panels are interchangeable. Contact your radio provider for more information.



Bluetooth® ("Connecting to a Bluetooth® device (TP3350 only)" on page 23), GPS ("Turning location information on and off (TP3350 only)" on page 30), and man-down features are only available in TP3350 portables. Mandown can operate in all signalling modes.

The radio behavior described in this guide applies to radios with the firmware current at date of publication. If your radio does not operate as you expect, contact your radio provider for assistance.

Safety warnings used in this guide

Please follow exactly any instruction that appears in the text as an 'alert'. An alert provides necessary safety information as well as instruction in the proper use of the product. This user's guide uses the following types of alert:



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



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

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



This icon is used to draw your attention to information that may improve your understanding of the equipment or procedure.

Related documentation

The following documentation is also available for your Tait radio, which you can access from the Tait Partner Portal website (partnerinfo.taitradio.com/):

- **MPC-00006-xx**— *Li-ion Battery Safety Information* (also supplied with each battery.)
- **MPE-00006-xx** — *Quick Start Guide* (also supplied with each radio.)
- **MPE-00002-xx** — *Safety and Compliance Information* (also supplied with each radio.)

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.

3 Before using your radio



Read the safety and compliance documentation supplied with the radio:

- **MPE-00006-xx:** Quick Start Guide
- **MPE-00002-xx:** Safety and Compliance Information

Once you have unpacked your radio, there are a few tasks you must do before you can use it. The most important of these is to charge your battery for the first time—allow 2.5 hours for this.



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

Package Contents

Your TP3 package contains the following items:

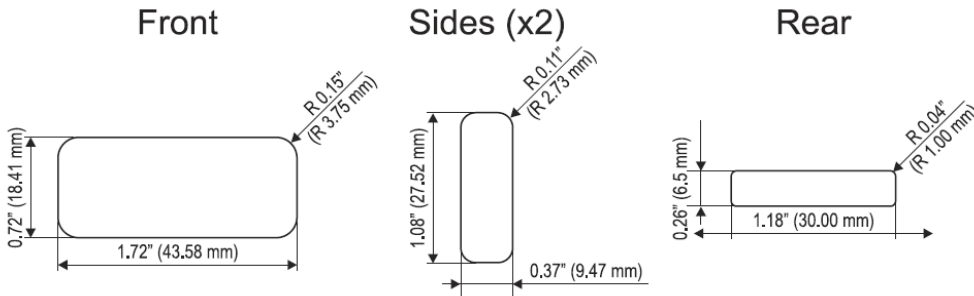
- Radio
- Antenna(s)
- Battery(s)
- Belt Clip
- Quick Start Guide
- Safety and Compliance Information

For your safety—battery warning



Warning This radio uses a Lithium-ion battery. If the battery is damaged or handled in an unsafe manner, it can cause personal injury and/or damage to property.

Attaching labels to the radio or battery



The radio has recesses to attach labels to the front (not for 16-key radio), both sides and the rear. Please contact your Tait dealer for pre-printed, customized labels.



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

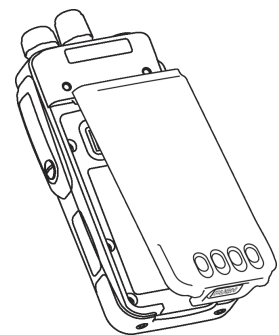
Notice Tait recommends that you do not affix additional labels to the surfaces between the radio chassis and the battery. The fit between these surfaces is intentionally firm and any added thickness will damage the points of attachment between radio and battery.

Charging the battery before first use

Before using your battery for the first time, you must charge it. See the instructions in "Charging and caring for batteries" on page 31

Attaching the battery

1. Rotate the power/volume control switch counterclockwise to turn off the radio.
2. Insert the top of the battery into the recess at the back of the chassis.
3. Lightly press the bottom of the battery towards the radio until the battery catch clicks.
4. Make sure that the battery is firmly in position.



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

Removing the battery

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. Push the **PRESS** button at the bottom of the radio to release the battery catch, and pull the battery away from the radio.

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

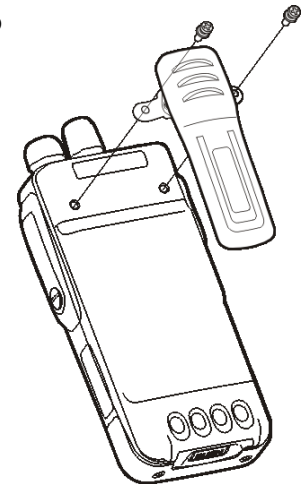


Warning Do not change the antenna in a hazardous location. An explosion could cause serious injury or death.

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

Replacing the belt clip

1. To remove the belt clip, use a Pozidrive screwdriver to undo the two belt clip screws.
2. To attach the belt clip, use a Pozidrive screwdriver to fasten the two belt clip screws.




Attaching an audio accessory

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.
5. Once the radio has recognized the accessory, the accessory icon  will appear.

4 Getting started

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

About your DMR digital radio

Your DMR digital radio can be programmed for DMR conventional. Analog conventional operation is also available.

You may notice differences 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 your digital radio removes the 'noise' from the call, so that you hear only clear voice.

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 you are in fringe areas or even slightly outside normal coverage areas.

What you hear on an analog channel

On analog channels, your radio may be programmed so that you hear all conversations on a channel, or your user group may be segregated from other user groups by using special signaling. The special signaling is used to control the muting and unmuting of your radio, so that your radio is muted when other user groups are talking and unmuted for members of your user group.

There are two muting controls that operate in your radio:

- signaling mute
- squelch

Signaling mute

The radio's signaling mute only allows the radio to unmute if the incoming call carries the tones specific to your user group. Your user group may use tones that are either audible, subaudible or both.

Squelch

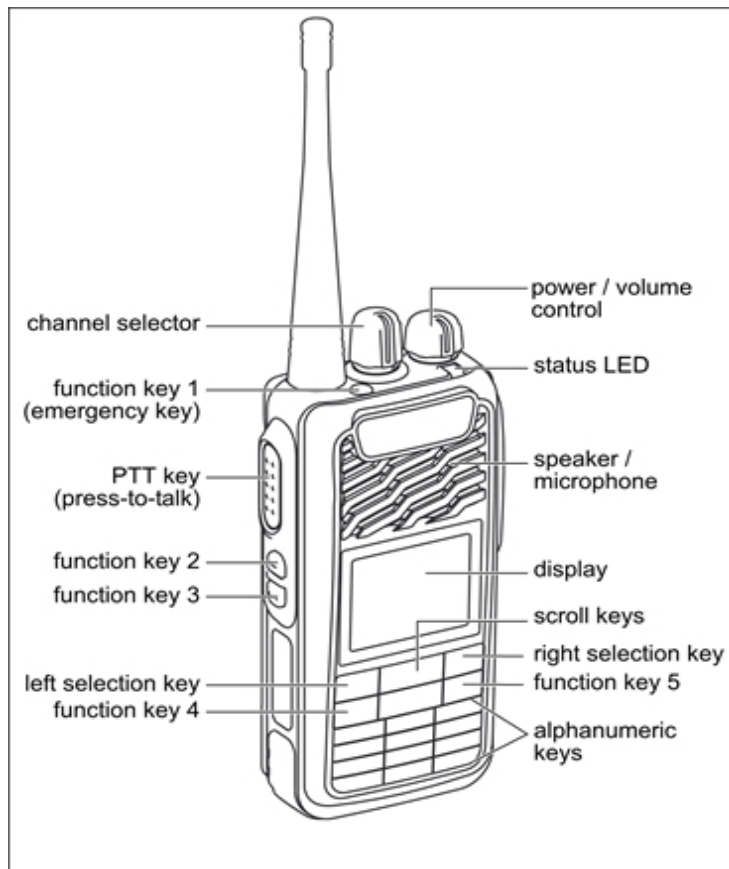
The radio's squelch allows the radio to unmute only when the strength of the incoming signal is above a pre-determined threshold. This means that only signals of reasonable intelligibility are made audible.

About the radio controls

The radio controls are the PTT key, power/volume control, channel selector, 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 one second, and
- a long key press is more than one second.

The radio controls and their functions are described in the following 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













Name	Function
Channel selector	Select and change channels
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, scroll left and right in messages, 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 you see on your radio display depend on the mode in which your 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
	No signal.
	Signal strength indicator: the more bars, the stronger the signal being received by the radio
	Battery indicator: shows how much charge is available in the battery.
	Bluetooth: The Bluetooth feature is enabled but there is no remote Bluetooth device connected.
	Bluetooth connected: The Bluetooth feature is enabled. The icon stays lit when one or more remote Bluetooth devices are connected.
	Scanning: your radio is monitoring a group of channels or workgroups for activity.
	Scan land on: Scan feature is enabled.
	Encryption: Encryption is turned on.
	GPS available: GPS is turned on. The icon stays lit when a position fix is available.
	GPS not available/out of range: GPS is turned on. The icon stays lit when a position fix is available.
	Accessories connected.
	High-power transmit: Your radio is set to transmit on high power.

Icon	Meaning
	Low-power transmit: Your radio is set to transmit on low power.
	Direct mode (talkaround mode). In repeater mode no icon is shown.
	Unread message.
	VOX enabled.
	Speaker open.
	Private Call Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).
	Bluetooth Audio Device Bluetooth-enabled audio device, such as a headset.
	Item sent successfully.

Switch Input Method

Long-press the # key to switch input method between:

-  lowercase
-  uppercase
-  numeric

Understanding the radio indicators

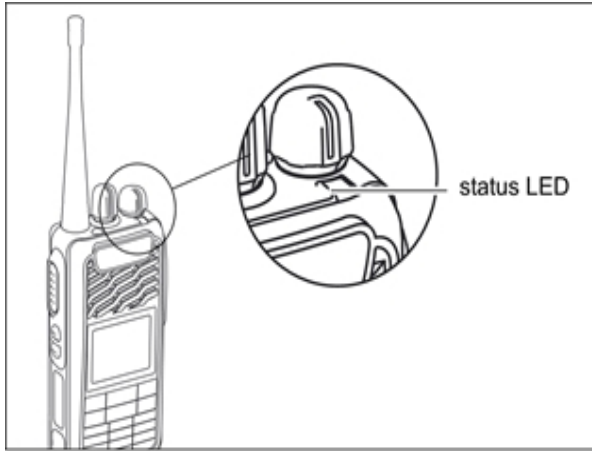
The status LED indicator and the radio's audible tones—together with the radio display—all combine to give you information about the state of your radio.






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



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

Status indicators



Color		Meaning
Red		On: The radio is transmitting.
		Flashing: The battery is low.
Green		On: The radio is receiving, or detecting activity over the air.
Orange		On: The radio is powering up.
		Flashing: The Radio is scanning, or in selective call, or emergency state.

Audible tones



Warning Your radio may be programmed to be silent, which means you may not hear any alerts.

The radio uses audible tones to alert you to its status:

- Radio controls and keypress tones—the tones and beeps you hear when you press your radio's keys or use the controls.
- Incoming call tone—when the radio is receiving a call.
- Warning tones—when there is an error, or the battery is low, for example.

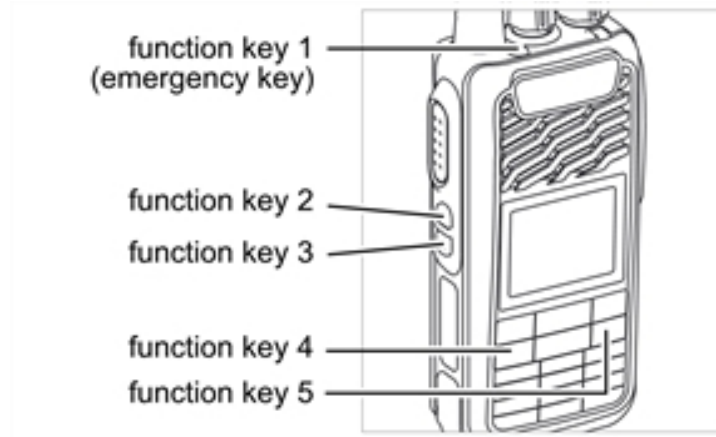
Voice annunciation

Your radio may be programmed to play a pre-recorded message

- for start-up channel
- when changing the channel
- for the battery condition

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.



Use the following table to record the function keys programmed for your radio:

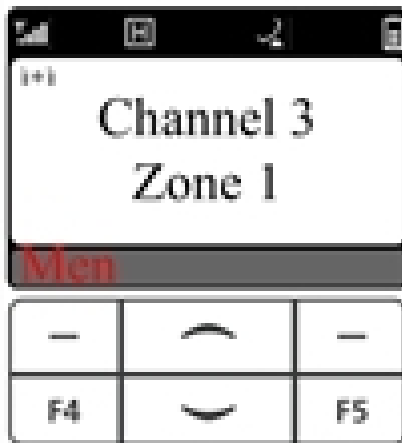
	Short key press	Long key press
F1		
F2		
F3		
F4		
F5		

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

Navigating the radio's menus

Radios with display have a number of menus, each containing lists or submenus. The menus available depend on the way your radio is programmed.

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



Use the scroll keys to move through the menu list.

When the menu you want is highlighted, press **Select** (left selection key).

To go back one level, press **Back** (right selection key).

Menu map

This section shows the menus and submenus that may be programmed for your radio (for radios with display only).

Contact List

- Favorite Call List
- Call List
- New Contact
 - Enter ID
 - Enter label
 - Save
- Dialing

Messages

- New message
- Preset message
- Status message
- Inbox
- Outbox
- Drafts

Call history

- Outgoing
- Incoming
- Missed

Zones

Scanning

- Scan on/off
- Scan list

Settings

- Radio settings
 - Power level
 - Languages
 - Alert/ring
 - Squelch
 - Backlight
 - Day/night
 - Brightness
 - LED
 - Keypad Lock
 - Locked keys
 - Startup PIN
 - VOX
 - Channel display
 - Keypad mode
 - Man down¹
 - Loneworker
 - Vibration
 - Encryption

Radio info

Accessories

- GPS¹
 - GPS on/off
 - Position
 - GMT
- Bluetooth¹
 - BT on/off
 - My devices
 - Search devices
 - Clear list
 - Data mode

¹TP3350 only

5 Operation

This section describes the basic operation of your radio.

Turning the radio on and off

Rotate the On/Off/Volume control switch clockwise until you hear a click. You see a welcome message or welcome image.

The LED lights up solid orange and the Home screen lights up if the backlight setting is set to turn on automatically.

To turn off the radio, rotate the switch counterclockwise until you hear a click. You see a brief **Powering Down** on the radio's display.



Your radio may not turn on if your battery is very low. (See "Low battery warning" on page 33.)

Security lock on power-up feature

Your radio may be automatically locked each time it is powered-up.

1. Power up the radio.
2. Enter your current six-digit password with the radio keypad. The display shows *****.

You hear a positive indicator tone for every digit pressed.

3. Press the right selection key to remove the each * on the display.
4. Press the left selection key to proceed.

If the password is correct, your radio proceeds to power up.

If the password is incorrect, the display shows **Password Input Error**. Repeat step 2.

Adjusting the speaker volume

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



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

Connecting to a Bluetooth® device (TP3350 only)

You may be able to connect a Bluetooth device to your radio.

Compatibility with Tait radios

Bluetooth devices may operate with Tait radios, provided they:

- are compatible with the Bluetooth Specification Version 2.0 or higher. Tait recommends Bluetooth Specification Version 2.1 or higher.
- include Bluetooth Headset Profile (HSP) adopted version 1.1 or 1.2, or Bluetooth Handsfree Profile (HFP) version 1.5 or 1.6.

Wearing a Bluetooth headset

Place the headset on your ear. Depending on which ear you are going to wear the headset, simply adjust the ear hook accordingly.

To get the best performance from your headset:

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 you usually use your radio with your right hand, wear the headset on your right ear.
3. Avoid coming in contact with the internal antenna of a headset or radio.

Pairing a Bluetooth device with the radio



Before attempting to connect a device, Tait recommends that the device is fully charged. Refer to the documentation of your Bluetooth device for charging instructions.

Pairing creates a unique and encrypted wireless link between the radio, and the Bluetooth device. To use a device with your radio, they must first be paired.

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



Do not turn off your Bluetooth device or press the right selection key during the finding and connecting operation as this cancels the operation.

A pin code may be required to be programmed in your radio before it can pair with some devices. Contact your dealer for more information.

16-key and 4-key radios

1. Turn on your Bluetooth device and place it in pairing mode. Refer to the documentation of your Bluetooth device.
2. On your radio, press **Menu** and select **Accessories**.
3. Select **Bluetooth** > My Devices.



If you cannot see **My Devices**, turn on the **BT On/Off** setting.

4. Scroll to the required device and press **Select**.



You can also use **Search Devices** to locate available devices.

5. Select **Connect**.

The display shows **Connecting to <device>**. Your Bluetooth device may require additional steps to complete the pairing. Refer to the documentation of your Bluetooth-enabled device.

If successful, the radio display shows **<Device> Connected**. A tone sounds and √ appears beside the connected device. The Bluetooth Connected icon appears on the status bar, or if unsuccessful, the radio display shows **Connected Failed**.

No-key no-display radio

1. Turn on your Bluetooth device and place it in pairing mode. Refer to the documentation of your Bluetooth device.
2. On your radio, press the function key programmed for **Bluetooth Connect**.

A tone sounds and the LED blinks orange.

Your Bluetooth device may require additional steps to complete the pairing. Refer to the documentation of your Bluetooth device.

If successful, a positive tone sounds, or if unsuccessful, a negative indicator tone sounds.

Answering a Call Alert

16-key and 4-key radios:

- To answer a call alert on your radio, select View then press and hold the PTT button.

Selecting a zone

A zone is a group of channels.

The 16-key and 4-key radios support up to 2000 channels and 250 zones, with a maximum of 160 channels per zone.


The non-keypad radio supports up to 32 channels and two zones, with a maximum of 16 channels per zone.

16-key and 4-key radios

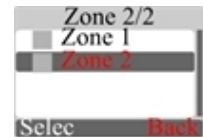
- Press the function key programmed for Zone.

or

1. Press **Menu** and select **Zone**.

The selected zone is indicated by a .

2. Scroll to the required zone and press Select.



No-key no display radio

- Press the function key programmed for Zone.

You hear a positive indicator tone, indicating the radio has switched from Zone 1 to Zone 2.

or

You hear a negative indicator tone, indicating the radio has switched from Zone 2 to Zone 1.

Selecting a channel


Once the required zone is displayed (if you have multiple zones in your radio), turn the channel selector to select the channel.

Changing a Channel


To use the quick channel change method simply dial the channel you would like to use. e.g. - dial 502 to move to channel 502.

Making a group call

1. Turn the channel selector to select the channel with the active group alias or ID.
2. Hold the radio vertically one to two inches (2.5 to 5cm) from your mouth.
3. Press the PTT key to make the call.

The LED lights up solid red and the Group Call icon  appears. The first text line shows the group call alias.


4. Wait for the Talk Permit tone to finish (if enabled) and speak clearly into the microphone, or wait for the PTT side tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT key to listen.

When the called radio responds, the LED lights up green. You see the Group Call icon , the group alias or ID, and transmitting radio alias or ID on your display.

6. Your radio may be programmed to create a short alert tone the moment the target radio releases the PTT key, indicating the channel is free for you to respond. Press the PTT key to respond.
or
If there is no voice activity for a predetermined period of time, the call ends.
7. The radio returns to the screen you were on prior to initiating the call.

Making a private call

1. Turn the channel selector to select the channel with the active subscriber alias or ID.
2. Hold the radio vertically one to two inches (2.5 to 5cm) from your mouth.
3. Press the PTT key to make the call.

The LED lights up red. The Private Call icon  appears. The first text line shows the subscriber alias. The second text line displays the call status.

4. Wait for the Talk Permit tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT key to listen.

When the target radio responds, the LED lights up green.

6. Your radio may be programmed to create a short alert tone the moment the target radio releases the PTT key, indicating the channel is free for you to respond. Press the PTT key to respond.
or
If there is no voice activity for a predetermined period of time, the call ends.
7. You hear a short tone. The display shows **Call Ended**.

Turning scanning on and off

16-key and 4-key radios


- Press the function key programmed to turn scan on and off.

or

1. Press **Menu** and select **Scan > Scan Switch**.
2. Select **On** or **Off**.



If you cannot turn on scanning, select a scan list first (**Scan > Scan List**).

During scan, the LED flashes orange and the Scan icon  is displayed.

No-key no-display radio

- Press the function key programmed to turn scan on or off.

During scan, the LED flashes orange.

Making a call alert

16-key and 4-key radios

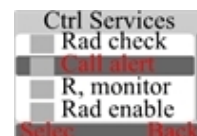
- Press the function key programmed to make a call alert to the predefined ID.

or

1. Press **Menu** and select **Contacts > Contact List**.
2. Scroll to required contact and press **Select**.
3. Select **Ctrl Services** and **Call Alert**.

or (for 16-key radio only)

1. Press **Menu** and select **Contacts > Manual Dial**.
2. Enter the subscriber ID you want to page and press **Confirm**.
3. In the **Ctrl Services** menu select **Call Alert**.



The display shows **Call Alert** and the subscriber alias or ID, indicating that the call alert has been sent.

The LED flashes red when your radio is sending the call alert.

If the call alert acknowledgement is received, the display briefly shows **Success!**

If the call alert acknowledgement is not received, the display briefly shows **Failed!**

No-key no-display radio

- Press the function key programmed to make a call alert to the predefined contact.

The LED flashes when your radio is sending the call alert.

If the Call Alert acknowledgement is received, two chirps sound.

or

If the Call Alert acknowledgement is not received, a low-pitched tone sounds.

Sending a quick text message



16-key radio

- Press the function key programmed to send a predefined quick text message to a predefined contact.

or

- Press the function key programmed to open the Quick Text function. Go to step "Scroll to the required quick text and press Select." below below.

or

1. Press **Menu** and select **Message > Quick Text**.
2. Scroll to the required quick text and press **Select**.
3. Use the keypad to edit the message, if required.
 - a. Press  to move to the left.
 - b. Press  to move to the right.
 - c. Press the * key to delete any unwanted characters.
 - d. Press the # key to input one space to the right.
 - e. Long-press the # key to switch between lowercase, upperacase and numeric input.
4. Press **Confirm**.



You can also press the right selectyion key to quit the operation.

5. Press **Send**.



You can also press **Save** to save the message in the drafts.

1. Select **Contact List**, scroll to the required contact and then press **Select**.

or

Select **Manual Dial** end enter the subscriber ID and press **Confirm**.

The display shows **Sending Msg...** and the LED flashes red.

If the message is sent, a tone sounds and the display **Send Success!**

or

If the message is not sent, a low tone sounds and the display shows **Send Failed!**

4-key radio

- Press the function key programmed to open the Quick Text function. Go to step "Scroll to the required quick text and press Select." below below.

or

1. Press **Menu** and select **Message > Quick Text**.
2. Scroll to the required quick text and press **Select**.
3. Scroll to the required contact and press **Select**.

The display shows **Sending Msg...** and the LED flashes red.

If the message is sent, a tone sounds and the display **Send Success!**

or

If the message is not sent, a low tone sounds and the display shows **Send Failed!**

No-key no-display radio

- Press the function key programmed to send a predefined quick text message to a predefined ID.

The LED flashes red.

Two chirps indicate that the message has been sent, or a low-pitched tone indicates that the message cannot be sent.

Sending an emergency alarm



If your radio is set to silent, it will not display any audio or visual indicators during Emergency mode.

- Press the function key programmed for emergency.

The display shows **Tx Alarm** and the destination alias. The LED blinks red and the Emergency icon appears.

or

The radio will send an emergency telegram. You can now press PTT to make an emergency call, and receive by releasing PTT. After a call hang time, the radio return to its normal working state.

or



The radio will send an emergency telegram and then transmit voice from the microphone for a preset time. And then goes back to normal working state. Then the radio return to its normal working state.

Turning location information on and off (TP3350 only)

Your radio may be enabled to send location information.

16-key and 4-key radios

1. Press **Menu** and select **Accessories > GPS**.
2. Select **GPS On/Off** and select on or off.

When GPS is turned on, the GPS icon  will appear. Once a GPS signal is available, the GPS icon will change to .

No-key no-display radio

- Press the function key programmed for GPS to turn GPS on or off.
If turned on, a positive tone sounds. If turned off, a negative tone sounds.

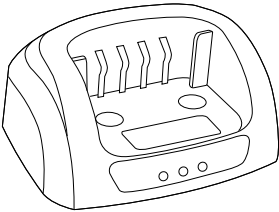
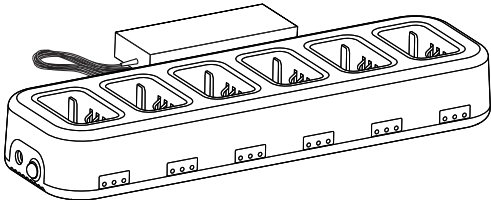
6 Charging and caring for batteries

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.

About the chargers

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

The following chargers are available for your Tait radios and batteries:

Part number range	Designation	
T03-00322-xxxx	Desktop charger	
T03-00320-xxxx	6-way charger	

6-way charger safety information



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

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" on the previous page.



Warning 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 (MPC-00006-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, 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.

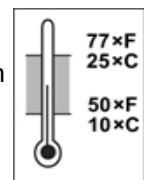
To achieve the best results when charging your battery:

- Before you begin to charge your battery, make sure 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 by you.



Leaving the battery on charge

Notice The radio must be turned off before being placed in the charger.

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

You can remove a battery/radio from the charger at any time without harming the battery, the radio, or the charger. When you return the battery/radio to the charger, charging is automatically resumed.

Charging the Battery While Attached to the Radio

The radio battery can be charged while still attached to the radio.

Notice The radio must be turned off before being placed in the charger.

Low battery warning

Notice Do not allow a radio battery to fully discharge every time you use it, or you will shorten the service life of the battery.

When the battery is low, your radio warns you 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.

You should recharge or replace the battery as soon as possible.

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





The radio should be switched off before placing in the charger.

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

Initially, all three LEDs are lit for 2 seconds. 









2. Place just a battery in the charger, or a radio with a battery attached. There is no need to remove a belt clip, antenna, or any accessory that is attached to the accessory connector.

3. 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:

 Meaning	
 briefly	The charger has been connected to a power supply.
 steady	The battery is charging.
 steady	Charging complete. Remove the battery, or leave it in the charger.
 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. There is a fault. Contact your dealer.
 or  flashing	If the LEDs for all charger slots continuously flash orange, or red then orange, the charger itself may be faulty. Contact your dealer.
 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.
- 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

- Lift the battery/radio out of the charger.

You can remove a battery/radio from the charger at any time without harming the battery, the radio, or the charger. When you return the battery/radio to the charger, charging is automatically resumed. You can also leave a battery/radio 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.
Very high: above 140°F (60°C)
Very low: less than -4°F (-20°C)
- 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" below.

Storing batteries

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

- Remove the battery from the radio before storage.
- Fully charge the battery if storing for less than one month.
- Charge batteries to about 30% if storing for longer than one month.
- 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 for the first time" on page 33.

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.

8 Troubleshooting

This section describes troubleshooting procedures, and basic maintenance.

About troubleshooting

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

When your radio won't turn on

If the LED on your radio does not glow red when the radio is turned on, it is probable that power is 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 your 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" on page 18.

Viewing radio information

Your radio provider may ask you for the hardware and firmware version of your radio, for troubleshooting purposes.

Use the **Radio Info** menu to view information such as the hardware and firmware version of your radio, the radio serial number, and various radio identities.

1. Press **Menu** and select **Settings > Radio Info**.
2. Scroll to the radio information you want to view.

General care

Your radio requires no regular maintenance other than ensuring that the battery has sufficient charge and that no damage has occurred to the antenna or the battery.

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" on page 35.

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.

Cleaning the radio

If you need to clean the radio case, use a cloth dampened with clean water. Do not immerse the radio in fluids.