



Radio Indicators

LED:
 ● steady
 ✱ flashing

Sound:
 pitch: ■ high ■ medium ■ low
 duration: ■ short ■ long ... repeating

Display messages are shown in ALLCAPS, e.g. CALL

	Display	Sound	Meaning
Start-up/basic operation	✱ ✱ + message	■ x 2	You have just turned on the radio. The power-up sequence is complete.
	● + ✱ flashing		The radio is transmitting.
	● + ✱ flashing		The radio is transmitting at low power.
	✱ fast + CALL flashing	ringing tone*	A call has been received.
	✱ fast + CALL flashing		A call has been received but not answered.
	● + Y		Activity has been detected on a channel.
		■	You cannot transmit because the channel is busy or selective call mute is active. Wait until it is free to transmit or use a channel that is clear.
		■ x 3	The transmit timer is about to expire. In 10 seconds, the radio will stop transmitting. Release the PTT key before transmitting again.
		■ for 1.5 seconds	The radio has stopped transmitting because the transmit timer has expired. Release the PTT key before transmitting again.
	Scanning	● + ↻	
✱ medium + ↻ flashing			The radio has detected activity on one of a group of channels being scanned.
Functions		■	A function has been turned on.
		■	A function has been turned off.
	✱ slow + RTA		Repeater talkaround is active.
	✱ medium + ✱		Low power transmit is active.
	✱ slow		Economy mode is active.
	✱ ✱ slow + ☞		Handset mode is active.
		■ x 2	Squelch override has been turned on.
		■	Squelch override has been turned off.
	✱ medium + 📢		Monitor or squelch override is active.
	Warnings	✱ slow + 🔋 flashing	■ every 5 seconds
		■	The battery is too low to operate the radio. Turn off the radio and recharge or replace the battery.
		■ x 2	The temperature is too high. You should stop transmitting and allow the radio to cool down.
✱ fast + RADIO DISABLED		■	The radio is stunned. Contact your dispatcher.
	✱ ✱ fast	■ x 2	The radio has been programmed incorrectly or is faulty. Contact your local dealer.

*The ringing tone is programmed. The radio will give different ringing tones when different types of calls are received.

Important Charging Information



- Turn your radio off before charging.
 - New batteries must be fully charged before first use.
 - Replace or recharge your battery as soon as the radio indicates the battery is low.
-



To our European customers

Tait Electronics Limited is an environmentally responsible company which supports waste minimization and material recovery.

The European Union's Waste Electrical and Electronic Equipment Directive requires that this product be disposed of separately from the general waste stream when its service life is over. Please be environmentally responsible and dispose through the original supplier, your local municipal waste "separate collection" service, or contact Tait Electronics Limited.

Tait Electronics Ltd has made every effort to ensure the accuracy of the information in this manual. However, Tait Electronics Ltd reserves the right to update the radio and/or this manual without notice.

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Menu Map



Note: Some menu options may not be available on your radio, depending on how it has been programmed.

Main Menu

- Queue
- Select Channel
- Select Bank
- Send Selcall
 - Dial Selcall
 - Select Status
- Send DTMF
- Alpha Symbols
- Send SDM [Short Data Message]
- User Settings
 - Handset
 - Low Pwr [Low Power Transmit]
 - Keylock
 - DTMF
 - Economy
 - Squelch
 - Monitor
 - Sq Ovr [Squelch Override]
- Alert Settings
 - Tones
 - Level
 - Keytone
- Display Settings
 - Night
 - RSSI [Received Signal Strength Indicator]
 - Adjust Contrast
- Advanced Settings
 - Program Group
 - Program Signal
 - Program FS-Group [Flexiscan]
 - Version Info
 - FW Ver [Firmware Version]
 - HW Ver [Hardware Version]
 - Main DB
 - Cal DB [Calibration Database]

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Before Using Your Radio

This section covers:

- About Your Radio
 - For Your Safety
 - Preparing Your Radio for First Use
-

About Your Radio

Your radio is programmed to suit your communication needs. If you are unsure which features described in this manual are available on your radio, consult your system manager or the person who programmed your radio.

The custom features programmed for your radio can be listed on the 'Custom Settings' page on the inside back cover of this manual.

When you receive your radio, make sure all items you ordered are included.

Typically, you should receive the following:

- Tait Orca portable radio unit.
- Battery pack.
- Antenna.
- User's Manual (this document).
- Compliance Information (separate document).

Your Orca may also be supplied with accessory components (see 'Options and Accessories' on page 87).

If any parts are damaged or missing, report this to your local Tait dealer immediately.

For Your Safety

Please observe the following warnings and cautions to ensure safe operation of your radio:

- When transmitting, do not hold the radio with its antenna close to or touching any part of your body, especially your face and eyes.
- Turn the radio off at petrol filling stations.
- Turn the radio off in the vicinity of explosive devices, such as at a quarry that uses blasting techniques.
- Do not use a handheld microphone or radio while driving, or operating machinery.
- Only use Tait Orca battery chargers to charge the radio's battery.
- Avoid using unnecessarily high volume levels if using the radio with an earphone or headset.
- Do not transmit within the frequency band 406 to 406.1 MHz. This band is reserved for use by distress beacons.
- Do not immerse your Tait Orca radio in water.

Preparing Your Radio for First Use

Before using your radio:

- 1 Connect the antenna to the socket at the top of the radio.
- 2 Fully charge the battery (see 'Using the Charger' on page 80).



Caution: It is highly recommended that the battery also be put through a long conditioning cycle after the initial charge and before use.

- 3 Install the battery pack (see 'Installing and Removing the Battery Pack' on page 10).
- 4 Install the belt clip if included with your radio (see 'Installing a Belt Clip' on page 10).

Installing and Removing the Battery Pack

To fit the battery pack to the radio:

- 1 Insert the bottom edge of the battery pack into the two slots at the back of the radio.
- 2 Push the battery pack towards the radio. It should snap into place.

To remove the battery pack:

- 1 Push the battery catch down
- 2 From the sides, pull the battery away from the radio.

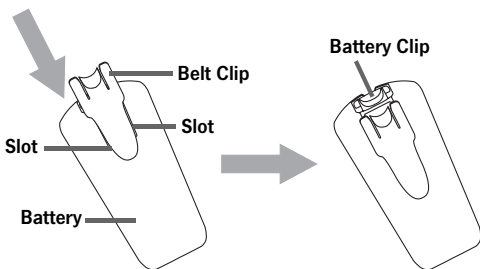
Installing a Belt Clip

Most Tait Orca batteries are designed to be fitted with belt clips.

Two types of belt clip are available:

- 38 mm belt clip.
- 55 mm spring-loaded belt clip.

For both types of belt clip, slide the belt clip into the two slots on the top of the battery. Push down until the clip snaps into place.

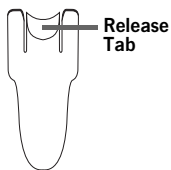


Removing a Belt Clip

Both belt clips have been designed so as to avoid accidental removal. However, they can be replaced if required.

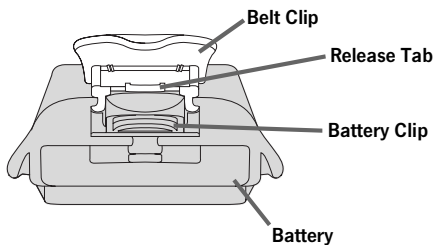
To remove the 38 mm belt clip:

- 1 Insert the end of a flat-blade screwdriver under the edge of the release tab (right) without forcing it.
- 2 Gently lift the release tab up, then slide the belt clip away from the battery.



To remove the 55 mm belt clip:

- 1 Lie the battery on a flat surface.
- 2 Insert the end of a flat-blade screwdriver under the release tab (shown below) and lift.
- 3 Slide the belt clip away from the battery.



Note: Should the small battery clip come loose while removing either belt clip, it can easily be refitted by sliding it into the slot at the top of the battery until it snaps into place.

Getting Started

This section covers:

- Using the Radio Controls
 - Understanding the Radio Indicators
 - Understanding Display Messages
 - Using the Menu
-

Using the Radio Controls

Your radio controls include the power/volume control, 16-way selector, function keys, keypad, menu, and various radio indicators.

Some keys have more than one function assigned, which can be accessed by a short or long keypress:

- A short keypress is defined as less than 1 second.
- A long keypress is defined as more than 1 second.

You may need to experiment to become familiar with the duration of short and long keypresses.

Turning the Radio On and Off

To turn the radio on, rotate the power/volume control clockwise. To turn the radio off, rotate the control counter-clockwise.

Once the power-up sequence is complete, the LED flashes red at fast flash rate twice, and the radio gives two short, medium-pitched beeps.

Adjusting the Volume

Once the radio is on, rotate the power/volume control clockwise to increase volume. To decrease volume, rotate the control counter-clockwise. Turning the power/volume control also adjusts the level of the audible tones (see ‘Audible Tones’ on page 19).

The volume may also be able to be adjusted using the function keys when in handset mode (see ‘Adjusting Handset Volume’ on page 67).



Note: To preserve battery life, it is recommended that you turn off the radio when it is not in use.

Entering Your Personal Identification Number (PIN)

If your radio requires a personal identification number (PIN) you will get the message **ENTER CODE**, when you turn on your radio.

- 1 Enter your assigned PIN, which will be up to five digits long.
- 2 Press the menu key (D✓).

If you do not know your PIN, consult your system manager or the person who programmed your radio.

Using the 16-way Channel/Bank Selector

The 16-way selector accesses channels, scan groups or channel banks, depending on how the radio has been programmed. See ‘Selecting Channels and Channel Banks’ on page 26 for more information.



Note: The 16-way selector may have been disabled when the radio was programmed. In this case, channels can only be accessed using the menu and keypad.

Using the Press-To-Talk Key (PTT)

The PTT (press-to-talk) key is located on the side panel. Press this key to transmit each time you talk. To receive, release the PTT key.

Using the Function Keys

The function keys provide quick access to selected functions. The functions will have been assigned to a function key when your radio was programmed (see ‘Function Key Options’ on page 91 for a list of features that can be assigned to the function keys).

Each function key can have a function assigned to a short and long press.

The function keys are:

- Function keys 1 and 2, located on the side panel.
- Function key 3, located on the front panel, underneath the display (far left).
- External keys 1 and 2, located on the external microphone.

Use the panel provided in the back of this manual to record the function that has been assigned to each keypress on your radio's function keys.

The F3 key may alternatively be programmed to provide quick access to up to three user setting menu options. In this case, the F3 key will not have a short and long press option. See 'Changing Operation Settings (User Settings Menu)' on page 65.


To access menu options using the F3 key:

- Press the F3 key. Pressing once accesses the last selected option, while each subsequent press accesses the next option, moving in a continuous loop.

Using the Keypad

Keys 0 to 9 and A to Z are used for dialling numbers and entering data. Additional characters can be accessed using the 0 key. Other key functions are outlined in the following table.

Symbol	Key Name	Function
F	F3 (function key)	Short and long press: Accesses programmed functions. Single press: Provides a 'shortcut' to up to three user setting menu options (see 'Using the Function Keys' on page 15 above).
◀	Left arrow	Short: Scroll left. Long: Scroll left continuously.
▶	Right arrow	Short: Scroll right. Long: Scroll right continuously.

Symbol	Key Name	Function
X	Clear	Short: Cancel or back (menu mode); delete single character; cancel call. Long: Delete (menu mode); exit without saving (menu mode); cancel call.
	Enter	Short: Select a function, or toggle a function on/off (menu mode); dial or send a message. Long: Enter/exit mode or menu.
*	Star	Group and DTMF dialling.
#	Hash	Group and DTMF dialling.

Understanding the Radio Indicators









The radio's LED indicator and audible tones provide you with information on the radio's status.









The meaning of the radio indicators is summarised on the 'Radio Indicators' page on the inside back cover of this manual.

LED Indicators

The radio's LED is the main indicator for displaying the state the radio is in.

In this manual, one flash every 2 seconds is referred to as 'slow flash rate', one flash every second as 'medium flash rate', and four flashes every second as 'fast flash rate'.

Colour	Flash Rate	Meaning
Red	 Steady	Transmitting.
Red	 Slow	Battery low. Radio will also emit low-pitched beeps. Recharge or replace as soon as possible.
Red	 Medium	Low power transmit mode active.
Red	 Fast	Radio is stunned. Radio will also emit high-pitched beeps. Contact your despatcher.
Red	 Two fast flashes	The power-up sequence is complete. Radio will also emit two medium-pitched beeps.
Green	 Steady	Channel busy.
Green	 Slow	Economy mode active.
Green	 Medium	Monitor or squelch override active.

Colour	Flash Rate	Meaning
Amber	 Steady	Radio is scanning or voting a group of channels for activity or greatest signal strength.
Amber	 Slow	Repeater talkaround active.
Amber	 Medium	Activity detected on one of a group of channels being scanned.
Amber	 Fast	A Selcall call has been received.
Red/ Green	 Slow 	Handset mode active.
Red/ Green	 Fast 	Radio programmed incorrectly or faulty. Contact your Tait dealer.

Audible Tones

Your radio uses a variety of beeps and tones to supplement the information provided by the LED.

The most common audible tones are summarised on the 'Radio Indicators' page on the inside back cover of this manual.

Your radio may also have been programmed so that whenever you press a key, the radio beeps to indicate whether or not the action is permitted:

- Permitted: Short, medium-pitched beep.
- Not permitted: Long, low-pitched beep.



Note: Audible tones may have been disabled when your radio was programmed, and a function key assigned to turn audible tones on and off.

Understanding Display Messages



Note: Throughout this user's manual, messages that appear in the display are shown in **BOLD ALLCAPS**.

The radio display provides you with information on a number of aspects of the radio's operation.

A typical display is shown below:



Active Modes

Your radio has a number of operating modes, such as **CHAN** (channel), **MENU** (menu), and **CONT** (contrast).

The active mode appears in the upper left-hand corner of the display.

The lower left-hand corner gives additional information on the current status of the radio. In this example, **RTA** indicates the radio is in repeater talkaround mode.












Current Operation

The panel on the right-hand side shows data for the current radio operation. In this example, **CHAN9** indicates what channel the radio is currently operating on. When you enter data for a specific function, such as dialling a call, the information appears in this panel.

Display Icons

The bottom line of the display shows a series of icons that give additional information on the state of the radio, including information on current settings, the battery charge level and operational status.

The meaning of these icons is outlined in the following table.

Icon	Meaning
	Flashing: Recharge the battery.
	Steady: The battery is charged.
	Steady: The radio is in DTMF dialling mode.
	Steady: Monitor or squelch override is active.
	Steady: Scrolling is permitted.
	Steady: The radio is scanning a group of channels for activity. Flashing: Activity has been found on a group of channels being scanned.
	Flashing: The radio is transmitting at normal power.
	Steady: Low power transmit mode is active. Flashing: The radio is transmitting at low power.
	Steady: Handset mode is active.
	Steady: An auxiliary device is operating. Flashing: Lone worker mode is active.
	Steady: The selected channel is busy.

Using the Menu

The radio menu allows you to:

- Customise your radio's settings.
- Access specific features and functions of the radio.

The table below summarises the options that can be accessed through the main menu. The available options vary depending on how your radio was programmed.

Display	Operation
QUEUE	(Queued calls) View and return missed calls. Up to 10 calls can be stored (queued), depending on how the radio was programmed. See 'Using Call Queuing' on page 42.
SELECT CHANNEL	Change channels using the keypad. See 'Selecting Channels and Channel Banks' on page 26.
SELECT BANK	Change channel banks using the keypad. See 'Selecting Channels and Channel Banks' on page 26.
SEND SELCALL	Make a call to a selected individual or group. See 'Making an Individual or Group Call (Selcall)' on page 38.
SEND DTMF	Make a call using the telephone network. See 'Calling a Telephone or a Remote Device (DTMF)' on page 47.
ALPHA SYMBOLS	Perform single or multiple tasks with a single keypress. See 'Using an Alphanumeric Sequence' on page 51.
SEND SDM	Enter and send a short data message. See 'Sending and Receiving Short Data Messages (SDMs)' on page 55.
USER SETTINGS	Personalise settings for a range of features. See 'Changing Operation Settings (User Settings Menu)' on page 65.
ALERT SETTINGS	Disable or adjust the level of warning beeps and tones. See 'Changing Audible Tone Settings (Alert Settings Menu)' on page 70.

Display	Operation
DISPLAY SETTINGS	Turn night operation on/off, adjust the contrast display or turn the received signal strength indicator on/off. See 'Changing Display Settings (Display Menu)' on page 62.
ADVANCED SETTINGS	Modify the make-up of scanning, voting and Flexiscan scan groups; change subaudible channel settings or check radio version information. See page 72, 75 and 77.

Entering Menu Mode

To enter menu mode:

- Long press the menu key (M✓). The radio displays **MENU** in the top right of screen, together with the last selected menu or submenu item.

Selecting and Exiting Menu Options

To select a menu or submenu option:

- Short press the menu key (M✓). The radio displays the menu item in the top right of screen. Sometimes, selecting a menu option will take you into a new operating mode: this will be displayed in the top left of screen.

To exit a menu or submenu option:

- Press the clear key (X).

Scrolling through the Menu

To scroll through the available menu options:

- Press the left and right arrow keys (◀ ▶) to scroll through the menu options one at a time.

OR

- Press and hold the left and right arrow keys (◀ ▶) to scroll through the menu options quickly.

Changing Settings

To toggle between available settings (such as high and low, or on and off):

- Short press the menu key.

Exiting Menu Mode

To exit menu mode:

- Long press the menu key (⏏✓).

Making and Receiving Calls

This section covers:

- Accessing Channels and Channel Banking
 - Making a Call
 - Receiving a Call
 - Scanning for Channel Activity
 - Improving Your Radio's Reception (Squelch)
 - Checking That a Channel Is Clear (Monitor)
-

Accessing Channels and Channel Banking

In order to make and receive calls you first need to select a channel. The procedure for selecting a channel varies depending on how your radio has been programmed.

About Channel Banking

Channel banking is an optional feature that allows easy access to large numbers of channels by grouping them into ‘banks’. This feature will be of benefit if you regularly access a large number of channels, or frequently change repeaters.

Selecting Channels and Channel Banks

Channels and channel banks can be accessed in different ways, depending on how your radio has been programmed.



Note: You cannot change channels while transmitting.

Using the 16-way selector



Note: The 16-way selector does not operate in menu mode.

The 16-way selector may be programmed to either:

- Select channels.

OR

- Select channel banks.

To select a **channel** or **channel bank** using the 16-way selector:

- Turn the 16-way selector dial clockwise or counter-clockwise. Each position on the 16-way selector denotes a channel/scan group, or channel bank, depending on the radio’s configuration.



Note: On some radios the 16-way selector is disabled. In this case channels can only be selected using the menu.

Using the Menu

To select a **channel** using the menu:



Note: Skip to step 4 if the radio is already in channel mode.

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **SELECT CHANNEL** is displayed.
- 3 Short press the menu key to enter **CHAN** mode.
- 4 Scroll through the channels to select the one you want.

OR

Key in the desired channel number using the keypad, then short press the menu key. A low warning beep will sound if the keyed number is not a valid channel.

- 5 Long press the menu key to exit **CHAN** if channel mode is not the default mode.



Note: If channel banking is programmed, only channels in the currently selected bank will be available.

To select a **channel bank** using the menu:

- 1 Long press the menu key to enter menu mode.
- 2 Scroll through the main menu options to find **SELECT BANK** using the arrow keys.
- 3 Short press the menu key to enter **BANK** mode.

- 4 Scroll through the available channel banks using the arrow keys, then short press the menu key to confirm a selection.

OR

Key in the desired channel bank number using the keypad, then short press the menu key to confirm a selection. A low warning beep will sound if the keyed number is not a valid channel bank.

- 5 Long press the menu key to exit menu mode. You will not be able to exit the bank mode until a valid channel bank has been selected.

Understanding Channel Numbering and Display

The number of channels in each bank differs according to the radio's configuration:

Configuration	Number of Channels Per Bank
16-way selector selects channels.	Up to 16 channels in each bank.
16-way selector selects channel banks.	Up to 32 channels in each bank.

When a new channel or channel bank is selected, the radio's channel will change to the channel number specified within the newly selected bank, and the channel name or number will appear in the display.



Note: The channel bank number does not appear in the display – only the selected channel.

Making a Call

To make a call:

- 1 Select the desired channel as described in ‘Selecting Channels and Channel Banks’ on page 26.
- 2 Hold down the PTT key, once the channel is free, and speak clearly into the radio.
- 3 Identify yourself and the party you are calling using the call signs you have been assigned.
- 4 Release the PTT key when you have finished talking.



Note: If you try to transmit when the radio is busy, a low-pitched warning beep will sound. You may not be able to hear the activity, but the LED glows green. You can activate the monitor function to listen to channel activity. See ‘Checking That a Channel Is Clear (Monitor)’ on page 35.

Transmitting after Timing Out

Your radio is programmed with a transmit timer that limits the amount of time you can transmit continuously.

If the radio gives three medium-pitched beeps, the transmit timer is about to expire. Ten seconds later, the radio automatically stops transmitting.

To transmit again, release, then press and hold the PTT key.



Note: The radio may also have been programmed to prevent transmission for a period after the transmit timer has expired.

Receiving a Call

Your radio remains quiet until there is valid activity on the channel your radio is currently on.

To receive a call:

- Select the desired channel as described in ‘Selecting Channels and Channel Banks’ on page 26.

To respond to a call:

- Press the PTT key and talk.

Scanning for Channel Activity

A series of channels can be grouped together so that the radio can scan through them looking for activity automatically. Scan groups are selected in the same way as channels (see ‘Selecting Channels and Channel Banks’ on page 26).

Scan group channels can be set up to scan in three different ways.

They can scan for:

- Busy channels.
- Priority channels.
- The strongest signal (vote).

When the radio is scanning for activity the LED glows amber and the group name and scanning icon (🔍) will be displayed in the icon bar as shown below:



Scanning for a Busy Channel

In this setup, the radio looks for any activity on the channels within the scan group. When valid activity is detected the scanning icon (🔍) flashes, and the radio will stop on that channel. Scanning resumes when the channel is no longer busy or the signalling is no longer valid.

Scanning Priority Channels

One or two priority channels may also have been programmed. These channels are scanned more often than other channels, and are scanned periodically when a non-priority or lower priority channel is busy.

Scanning for the Strongest Signal (Voting)

With this type of scanning the scan group's member channels carry the same traffic, and the radio searches for the channel with the strongest signal.

Background Scanning (Flexiscan)

The Flexiscan scanning feature allows you to communicate on a selected channel, while a group of channels is scanned for valid activity in the background.

A Flexiscan scan group can contain up to 15 member channels.

To activate Flexiscan:

- Press the assigned function key.



Your radio may be programmed so that Flexiscan is turned off when the PTT key is released after making a call when Flexiscan is active.

Deleting a Channel from a Scan Group (Nuisance Delete)

If a channel is busy for a long time and you do not wish to hear the conversation, you can temporarily delete it from the scan group if one of the function key settings is programmed for nuisance delete.

To temporarily delete a channel from a scan group:

- Press the assigned function key. When the scan group is next selected, the deleted channel is again part of the scan group.

Improving Your Radio's Reception (Squelch)

Your radio will normally be programmed to minimise unwanted noise or interference from other channels (known as 'squelch'). Without squelch, the radio would 'chatter' on and off in low signal strength areas.

However, it may sometimes be necessary to adjust the squelch settings when you are having difficulty hearing a call, or when entering a low signal strength area.

Your radio provides two means to adjust the squelch (noise and interference) levels: squelch override, and squelch 'city' and 'country' preset settings.

Selecting a Factory Setting (City or Country)

There are two preset squelch settings: city and country.

The **city** setting is designed for high signal strength areas and minimises noise and 'chatter' on a channel.

The **country** setting is designed for low signal strength areas, and allows the radio to pick up more channel activity.

To choose a squelch setting:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **USER SETTINGS** is displayed.
- 3 Scroll through the user setting menu options until **SQUELCH** is displayed (the radio will display **CITY** or **COUNTRY** as the current setting).
- 4 Short press the menu key to select **CITY** or **COUNTRY**.
- 5 Long press the menu key to exit menu mode.

Hearing All Activity on a Channel (Squelch Override)

Squelch override allows you to hear all activity on a channel no matter how faint or noisy. This setting is useful when a caller is very hard to hear.

To turn squelch override on and off:

- Press the assigned function key.

OR

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **USER SETTINGS** is displayed.
- 3 Scroll through the user setting menu options until **SQ OVRD** is displayed (the radio will display **OFF** or **ON** as the current setting).
- 4 Short press the menu key to turn squelch override on and off.
- 5 Long press the menu key menu to exit menu mode.



Note: Squelch override cannot be activated when a scan group is selected, and is automatically turned off when you change to a scan group channel.

Checking That a Channel Is Clear (Monitor)

Your radio is capable of segregating individuals or groups of users by means of audible or subaudible tones (known as signalling). This means that in normal operation you may not be able to hear all calls being transmitted on a channel.

However, your radio may be programmed with the monitor function which, when activated, allows you to hear all activity on a channel. This is useful if you want to check whether a channel is clear before making a call.



Note: The monitor function may not have been programmed to override all signalling.

Using the Menu

To activate or deactivate the monitor function:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options to find **USER SETTINGS**, and short press the menu key.
- 3 Scroll to find **MONITOR** (the radio will display **OFF** or **ON** as the current setting).
- 4 Short press the menu key to turn monitor on and off.
- 5 Long press the menu key to exit menu mode.

When the Monitor is on, the Monitor icon () appears in the display icon bar.

Using Other Ways to Activate/Deactivate Monitor

Your radio may be programmed to activate monitor mode when you:

- Turn on the radio.
- Send specific types of calls.
- Press a function key (if assigned).

The monitor may be deactivated by:

- Your despatcher.
- Receiving specific types of calls.
- Pressing a function key (if assigned).
- Automatically, after a preset deactivation period.

Making and Receiving Different Types of Calls

This section covers:

- Making an Individual or Group Call (Selcall)
 - Resending Calls Automatically
 - Receiving an Individual or Group Call
 - Responding to Missed Calls
 - Sending a Status Message
 - Calling a Telephone or a Remote Device (DTMF)
 - Making an Emergency Call
 - Making Calls from a Predefined List (Alphanumeric Labels)
-

Making an Individual or Group Call (Selcall)

You can use your radio to make calls to an individual or a specific group using Selcall (selective calling).

There are two ways to make an individual or group call:

- Using a preset call (if programmed).
- Dialling.

Making a Preset Call

Two preset individual or group calls can be assigned to each channel that has Selcall. If programmed, a preset call will be assigned to a function key.

To make a preset call:

- 1 Change to the desired channel.
- 2 Press the assigned function key.

One-Touch Preset Calls

A single one-touch call may also be assigned to one of the function keys.

To make a one-touch preset call:

- Press the assigned function key.

Dialling

To call a group or individual using dialling:

- 1 Select a channel that has Selcall programmed.
- 2 Long press the menu key to enter menu mode (if the radio displays a submenu option, short press the clear key to enter the main menu).
- 3 Scroll through the main menu options using the arrow keys until **SEND SELCALL** is displayed.
- 4 Short press the menu key to enter **DIAL SELCALL**, and again to enter **CALL** mode. The last number dialled is displayed.

- 5 Short press the menu key to call the last number dialled.

OR

Dial the desired number using the keypad (press the clear key to delete a character; press and hold to delete a series of characters), then short press the menu key to send.

- 6 Long press the menu key to exit menu mode.

Receiving an Auto Acknowledge Message

When you call another radio, it may automatically generate a ringing tone sequence or beep to let you know that the radio you have called is on and able to receive. The tone sequence will vary depending on how your radio has been programmed.

The auto acknowledge message may also contain a status message that will appear in your radio's display (see 'About Status Messages' on page 45).

Resending Calls Automatically

Your radio may have been programmed to resend individual and group calls when they are not answered.

Your radio has two automatic callback features:

- Deferred calling.
- No acknowledgement retries.

Deferred Calling

When you attempt to make a call on a channel that is busy, the radio can store and send the call once the channel is free. The radio will give a low-pitched beep if the channel is busy, and will then give two long, medium-pitched beeps at regular intervals until the channel is free, and the call can be resent.

To cancel a deferred call:

- Press any key.

No Acknowledgement Retries

When you send a call and there is no reply, **NO ACKNOWLEDGE** will be displayed, and the call will be resent up to 15 times.

To cancel a call that is being resent:

- Press any key.

Receiving an Individual or Group Call

When a call is received that contains your radio's identity, **CALL** will flash in the display. The radio also gives a ringing tone and the LED indicator flashes amber at fast flash rate. Different ringing tones will sound when different types of calls are received.

To accept a call:

- Press the PTT key and begin speaking. If the call is a group call, there is usually no need to respond.

The caller's identity and status may also be displayed (top right-hand corner):



The caller's identity can be a name or a number, depending on how your radio was programmed.

The caller's status is displayed underneath the caller's identity. It can also be a name or number.

Responding to Missed Calls

Your radio may be programmed with two features to help you manage missed individual and group calls:

- Immediate callback.
- Call queuing.

Using Immediate Callback

When you miss a call the LED will flash amber at fast flash rate, the display will flash **CALL**, and the caller's identity and status may be displayed.

The immediate callback feature can only be used when the caller's identity is displayed, and is useful when queue call is disabled (see "Using Call Queuing" below).

To call back the missed caller:

- Short press the menu key.

Using Call Queuing

Call queuing allows you to store up to 10 missed incoming calls so that you can return the calls later.

Accessing a Missed Call

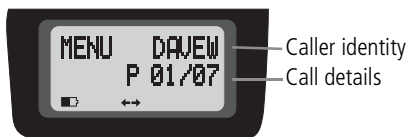
To access a missed call:

- 1 Long press the menu key to enter menu mode.
- 2 Scroll through the list of options using the arrow keys until the **QUEUE** option is displayed, then press the menu key.



Note: the **QUEUE** option will not be available if there are no missed calls. If a call has been missed, the radio will automatically display the call queue option after a period of inactivity.

The first call in the queue will be displayed:



The meaning of each element in the display message (above) is as follows:

- **DAVEW:** The caller's identity.
- **P:** A priority call is queued.
- **01:** The current queued call.
- **07:** The number of calls in the queue.

Returning a Missed Call

To return a call:

- Short press the menu key. The radio will automatically switch to the channel the call was received on and send the call.

Deleting a Missed Call

To delete a call:

- Press the clear key. If the deleted call was the only call in the queue, the radio will automatically leave the call queue menu.

Exiting Queued Calls

To exit:

- Long press the menu key.

Understanding How Calls Are Queued

Calls are queued in the following ways:

- The call queue list starts with the most recent call and moves backwards, but priority calls will be placed in the queue ahead of individual calls.

- Calls will be queued until the queue is full. However, if a priority call is received when the queue is full, the most recent individual call will be discarded to allow the priority call to be saved.

Sending a Status Message

Your radio may be programmed with the capability to attach a status message when you send an individual or group call.

About Status Messages

A status message contains information about your current activity or location, which is sent to the called radio. Status messages are defined when your radio is programmed. Each message is assigned a number from 0 to 99, and an 8-character name (for example, **AT LUNCH** or **AT HOME**).

Your radio may be programmed to automatically send a status message when you send a selcall, or you may be able to assign a status message.

Assigning a Status Message

To assign a status message to a call:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **SEND SELCALL** is displayed.
- 3 Short press the menu key to enter the Selcall submenu and scroll using the arrow keys until **SELECT STATUS** is displayed.
- 4 Select the desired status message from the available list using the arrow keys.

OR

Enter a number from 0 to 99 using the keypad.

- 5 Long press the menu key to confirm your choice and exit.



Note: The currently selected status message will also be assigned if the menu mode times out (that is, the radio returns to default mode of operation, often channel mode).

When you next send a selcall, a status message will be attached. To send a selcall, see ‘Making an Individual or Group Call (Selcall)’ on page 38.

Calling a Telephone or a Remote Device (DTMF)

You can call a telephone or send control codes to a remote device using a feature called DTMF (the tone-based system used by the world telephone network).

There are two ways to make a DTMF call:

- Using a preset call.
- Dialling.

Making a Preset Call

A preset DTMF call will be assigned to one of the function keys (if programmed).

To make a call:

- 1 Select the channel the DTMF call is assigned to.
- 2 Press the assigned function key.

Different preset calls may be available on different channels.

One-Touch Preset Calls

A single one-touch call may also be assigned to one of the function keys.

To make a one-touch preset call:

- Press the assigned function key.

Dialling

DTMF call strings can use numbers 0 to 9, letters A to D, and the * and # keys.

Entering Tones A to D

If you wish to dial tones A to D, your radio must be programmed so that you can use the PTT key as a 'shift' key in conjunction with the numeric keys as follows:

- PTT + **2** = A

- PTT + **5** = B
- PTT + **8** = C
- PTT + **0** = D

To enter the tone A, for example:

- Press and hold the PTT key, then press the **2** on the keypad.

Entering a Pause

To enter a pause:

- Press and hold the PTT key, then press the **1** key. A hyphen (pause) will be entered in the display.

Dialling a Number

To dial a number:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **SEND DTMF** is displayed.
- 3 Short press the menu key to enter DTMF dialling mode. **DTMF** will appear in the top right-hand corner of the display.
- 4 Short press the menu key to send the last call dialled (if available, it will appear in the display).

OR

Dial the desired number using the keypad (press the clear key to delete a character; press and hold to delete a series of characters). The radio may dial as you press each number, or you may need to press the menu key to confirm, depending on the radio's configuration.

- 5 Long press the menu key to exit menu mode.

Making an Emergency Call

Your radio may be programmed with an emergency call function.

About Emergency calls

There are two different types of emergency call that may be programmed for your radio, both of which are activated using an assigned function key:

- Selective emergency call (Selcall): Sends an emergency call sequence to a group or individual.
- DTMF emergency call: Sends an emergency call sequence to a telephone or remote device.

When an emergency call has been made, the radio enters emergency mode and cycles between receiving and transmitting so that your operator can hear activity near the radio. For your safety, the radio displays no signs that an emergency call has been made.

Making an Emergency Call



Note: It is not necessary to change channels to send an emergency call.

Your radio may be configured to use either a single press or double keypress to send an emergency call.

Using a Single Keypress

To make an emergency call with a single keypress:

- Short or long press the assigned function key (depending on the configuration of your radio).

Using a Double Keypress

To avoid accidental use of the emergency function, the emergency call may have been programmed with a Double Keypress Activation option.

The double keypress activation option will have been programmed to be used with a short or long press.

To make an emergency call using a double **short press**:

- Short press the assigned function key twice within 3 seconds.

To make an emergency call using a double **long press**:

- Long press the assigned function key twice within 5 seconds.

Exiting Emergency Mode

To reset the radio to normal operation:

- Turn the radio off, then on again.



Note: Your dispatcher or operator can also reset your radio to normal operation remotely.

Activating the Automated Emergency Call Feature (Lone Worker)

Your radio has an automated emergency feature called 'lone worker'. Lone worker enables an emergency call to be sent if you become incapacitated while working alone.

The lone worker feature works by monitoring your activity. If no keypress is detected within a specified period, a warning tone will sound (also for a specified period), after which an emergency call will be made.

To turn the lone worker feature on and off:

- Press the assigned function key.

To stop an emergency call from being sent (once the warning tone has been activated):

- Press any key.



Note: The time between when a key is pressed and the warning tone is activated, and the duration of the warning tone before an emergency call is made, vary depending on how your radio was programmed.

Making Calls from a Predefined List (Alphanumeric Labels)

You can use your radio to make up to 20 preset calls known as alphanumeric labels (if programmed). These calls can be accessed in much the same way as an electronic phone book. Each preset call has a label using numbers and/or letters. The label might be a person's name, a radio ID, or a telephone number.

Alphanumeric labels allow you to simplify more complex or repetitive tasks by incorporating them into a single operation.

An alphanumeric label can be used to perform any of the following actions (or a combination of these actions):

- Select a specific channel.
- Make a specific individual or group call.
- Call a telephone.
- Change the radio's status.

Using an Alphanumeric Sequence

To use an alphanumeric sequence:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **ALPHA SYMBOLS** is displayed, then short press the menu key (**ALPH** is displayed in the top left-hand corner, with the alphanumeric label on the right).
- 3 Scroll through the alphanumeric labels using the arrow keys, until the one you want is displayed.
- 4 Short press the menu key to send the call sequence.
- 5 Long press the menu key to exit menu mode.

Searching for a label

The alphanumeric mode also has a search function that you can use to find an alphanumeric label. This provides a shortcut to using the scrolling arrows.

To find an alphanumeric label using the search function:

- 1 Enter the **ALPHA SYMBOLS** menu as described in steps 1 to 2 on page 51.
- 2 Key in the numbers that match the alphanumeric label in sequential order until the radio finds the label. The first keypress searches for the first letter, the second keypress for the second letter, and so on.

Use the following example:

If you were searching for the label **BASE**, you would key-in the letters in this order: **B - A - S - E**. One press of a key searches for all numbers and letters accessed by that key. Labels will be displayed in alphabetic order when there is a common letter sequence.

Use the table below to see how searching for the word 'base' would work:

Label List	Press Key	Radio Displays	Explanation
BANK BASE HOME	2 (searches for 2, A,B, C)	BANK displays	'B' is the first letter in both words. Bank is the first label alphabetically.
	2 (searches for 2, A,B, C)	BANK displays	'A' is the second letter in both words.
	7 (searches for 7, P, Q, R, S)	BASE displays	'S' only occurs in the word 'base'.

Pressing the Wrong Key

If you press the wrong key or need to move back a letter position, use the clear key. Each press of the clear key moves back one position.

Between each press of the clear key the radio displays question marks to indicate the current position in the sequence: ? indicates the first letter is in place, ?? indicates the second letter is in place and so on.

To get back to the 'start' or 'zero' position:

- Long press the clear key.

OR

- Press the clear key once more after the ? is displayed.

Sending and Receiving Short Data Messages (SDMs)

This section covers:

- Reading Short Data Messages
 - Sending Short Data Messages
 - Sending a Short Data Message Using a Selcall Channel
-

Your radio may be programmed with the capability to send and receive short data messages called SDMs.

When your radio receives a message, **SDM** flashes in the lower left-hand corner of the display and the radio gives three short, medium-pitched beeps.

Reading Short Data Messages

To read a message:

- Long press the menu key. The message appears across both rows of the display.

To scroll through a message:

- Use the arrow keys.

To display a message from the start:

- Hold down PTT and press the left arrow key.

To display a message from the end:

- Hold down PTT and press the right arrow key.

Exiting SDM Mode

When you have finished reading a message:

- Long press the menu key to exit.

OR

- Press the clear key to delete the message (the radio reverts to the mode it was in before you viewed the message).

Sending Short Data Messages



Note: If you want to send a message on a Selcall channel, see 'Sending a Short Data Message Using a Selcall Channel' on page 60.

To send a message:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **SEND SDM** is displayed, then short press the menu key to display **ENTER SDM**.
- 3 Enter a new message using the keypad (see 'Entering a Message' on page 58)

OR

Press an arrow key to begin editing an existing message, then proceed in the same way as for entering a new message.

- 4 Short press the menu key. The message, **ENTER ID** will be displayed, along with the receiver's identity for the last SDM transmission.
- 5 Short press the menu key again to send the message using the existing ID.

OR

Enter a new ID using the keypad if you are calling a different radio (the receiver's identity must be 8 characters long), then short press the menu key to send.




Note: Once the message has been sent, the radio will return to the SDM entry mode in preparation for sending another message.

- 6 Long press the menu key to exit menu mode.

Entering a Message

Short data messages can contain up to 32 characters.

To enter a character:

- Press a key once to enter the first character on that key. Repeat the process to enter the other characters on the same key: for example, with the key , one press enters **7**, two presses enters **P** and so on.



Note: The **0** key toggles between **0** and a space.

To select a character or entry position:

- Use the left and right arrow keys.



Note: After a short time the flashing cursor moves on to the next letter automatically.

To move to the next entry position:

- Press another key.

OR

- Use the arrow keys.

OR

- Wait for the flashing cursor to move automatically after a short duration.

To delete a character:

- 1 Select the character using the arrow keys (the flashing cursor highlights the selected character).
- 2 Press the clear key to delete.

To replace a character:

- 1 Select the character using the arrow keys.
- 2 Press and hold the PTT key, then press any numeric key to create a space (press more than once to insert multiple characters).
- 3 Press the character you wish to insert.

To move between lines:

- Hold down the PTT key and press the arrow keys.

Sending a Short Data Message Using a Selcall Channel

In normal circumstances a short data message cannot be received on a Selcall channel. However, a Selcall channel can receive a short data message if a selcall status message is sent first, thereby ensuring that the data message can be decoded.

Sending a data message on a Selcall channel involves four stages:

- 1 Entering a message.
- 2 Assigning a status message.
- 3 Sending a Selcall (with a status message assigned)
- 4 Sending an SDM message (within 10 seconds of having sent the status Selcall message)

If you need to send a short data message using a Selcall channel, please contact Tait Customer Support for assistance (<http://support.taitworld.com>).

Changing Your Radio's Settings

This section covers:

- Display Settings (Display Menu)
 - Operation Settings (User Settings Menu)
 - Audible Tone Settings (Alert Settings Menu)
 - Scanning and Voting Group Settings (Advanced Menu)
 - Flexiscan Scan Group Settings (Advanced Menu)
 - Subaudible Signalling Settings (Advanced Menu)
-

Changing Display Settings (Display Menu)



Note: Some display features may not be available or modifiable on your radio.

Display settings can be modified using a function key (if assigned) or the display settings menu.

To access the display settings menu:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **DISPLAY SETTINGS** is displayed.

Activating Backlighting (Night Operation)

When backlighting is turned on, the display and keypad will light up for a few seconds when a key is pressed, a call is received or the 16-way selector is turned.

To turn backlighting on and off:

- Press the assigned function key.

OR

- 1 Enter the display settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **NIGHT** is displayed.
- 3 Short press the menu key to turn **NIGHT ON** and **OFF**.
- 4 Long press the menu key to exit menu mode.

Adjusting Contrast

If the radio's display is too light or too dark, you can adjust the LCD contrast using the contrast adjustment function.

The contrast can be adjusted using a function key or the menu. After making the adjustment, the radio will

automatically return to its previous mode of operation after a few seconds of inactivity.

Using a Function Key

To use a function key:

- 1 Press the assigned function key. The message **CONTRAST ADJUSTMENT** is displayed.
- 2 Use the arrow keys to adjust the contrast to the desired level.

Using the Menu

To use the menu:

- 1 Enter the display settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **ADJUST CONTRAST** is displayed.
- 3 Use the arrow keys to adjust the contrast to the desired level.
- 4 Long press the menu key to exit menu mode.

Resetting Contrast to Default

Your radio may be programmed so that you can reset the contrast to the factory's default setting using function key 2.

To reset the contrast to the radio's default setting:

- Press and hold function key 2 while turning the radio off then on again.

Displaying the Received Signal Strength Indicator (RSSI)

When this option is turned on, the strength of the received signal is displayed in the lower left-hand corner of the menu display.

To turn RSSI on and off:

- 1 Enter the display settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **RSSI** is displayed.
- 3 Short press the menu key to turn **RSSI ON** and **OFF**.
- 4 Long press the menu key to exit menu mode.

Changing Operation Settings (User Settings Menu)



Note: Some operation features may not be available or modifiable on your radio.

Operation settings can be modified by using a function key (if assigned) or the user settings menu.

To access the user settings menu:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **USER SETTINGS** is displayed.

For information on modifying squelch or monitor settings, see 'Improving Your Radio's Reception (Squelch)' on page 33 and 'Checking That a Channel Is Clear (Monitor)' on page 35

Extending Battery Life (Economy and Low Power Transmit Modes)

Your radio has two features which allow you to extend the life of the battery between charging:

- Economy mode: Use this feature when there is little or no activity on the radio. When in economy mode, the radio cycles between the receive state and a stand-by state, once there has been no activity for a preset period. Receiving or sending a call returns the radio to the fully active state.
- Low Power Transmit mode: Use this feature in conditions where signal strength is high. While low power transmit is active, transmissions are made at low power rather than at the preset power level.

Turning Economy Mode On and Off

To turn economy mode on and off:

- Press the assigned function key.

OR

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **ECONOMY** is displayed.
- 3 Short press the menu key to turn economy mode on and off.
- 4 Long press the menu key to exit menu mode.

Turning Low Power Transmit On and Off

To turn low power transmit on and off:

- Press the assigned function key.

OR

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **LOW PWR** is displayed.
- 3 Short press the menu key to turn low power on and off.
- 4 Long press the menu key to exit menu mode.



Note: Some channels may have been programmed to always transmit at low power.

Choosing a Radio Microphone Setting

The radio microphone has two modes of operation:

- **Normal mode:** The radio microphone is held about 15 cm away from the mouth.
- **Handset mode:** The radio is operated like a telephone handset. This is particularly useful in noisy environments or when privacy is required.

When handset mode is turned on, the radio's handset microphone operates.



Note: The radio may have been programmed so that handset microphone is the default setting.



Caution: While using the handset microphone, do not hold the speaker pressed against your ear, or allow the antenna to touch your body.

Turning Handset Mode On and Off

To turn handset mode on and off:

- Press the assigned function key. The radio may have been programmed so that handset mode automatically turns off after a period of inactivity.

Adjusting Handset Volume

The radio may have been programmed so that the function keys can be used as volume up and down keys while in handset mode. Which keys act as volume control keys can be listed on the 'custom settings' page on the inside back cover of this manual.

Locking the Keypad

The keypad lock prevents you from pressing a key accidentally. Which keys are locked depends on how your radio was programmed, but the clear key can never be locked.

To activate or deactivate the keypad lock:

- Press the assigned function key.

OR

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **KEYLOCK** is displayed.

The current status (**LOCKED** or **UNLOCKED**) is displayed underneath.

- 3 Short press the menu key to lock and unlock the keypad. The keypad lock can also be deactivated by a long press the clear key.
- 4 Long press the menu key to exit menu mode .

When a locked key is pressed, the radio will give a long, low-pitched beep and display the message **KEYPAD LOCKED**.

Answering a Call

If a call is received while the keypad is locked, press any key to answer.

Choosing a DTMF Dialling Mode

DTMF dialling has two modes: normal and buffered:

- **Normal:** Each character in DTMF string is transmitted as the key is pressed.
- **Buffered:** The DTMF string is transmitted after all the characters in the string have been entered.

To select normal or buffered dialling:

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **DTMF** is displayed. The current status (**NORMAL** or **UBUFFERED**) is displayed underneath.
- 3 Short press the menu key to select normal or buffered dialling.
- 4 Long press the menu key to exit menu mode.

Bypassing Repeater Stations (Communicating Directly with Other Radios)

If you are out of range of a repeater you can communicate directly with another radio by using a feature called ‘repeater talkaround’.

To activate repeater talkaround:

- Press the assigned function key.

To deactivate repeater talkaround:

- Press the function key again or change to another channel.



Note: Repeater talkaround is not accessible through the menu.

Changing Audible Tone Settings (Alert Settings Menu)



Note: Some or all audible tone features may not be available or modifiable on your radio.

Key tone settings (see below) can be modified using the alert settings menu. Audible tones can be modified using the alert settings menu or a function key (if assigned).

To access the alert settings menu:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **ALERT SETTINGS** is displayed.

About Audible Tones

Your radio has two features for controlling which audible tones you hear:

- **Key tones:** This feature controls the tones you hear when you press a function key, or a key on the keypad. Key tones can be turned on and off.
- **Audible tones:** This feature provides overall control for all audible tones, including key tones, receive call tones, warning tones and so on. Audible tones can be turned on and off. If audible tones is turned off, key tones will also be off.

Turning Key Tones On and Off

To turn keypress tones on and off:

- 1 Enter the alert settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **KEYTONES** is displayed.
- 3 Short press the menu key to select on or off.
- 4 Long press the menu key to exit menu mode.

Turning Audible Tones On and Off

To turn audible tones on and off:

- Press the assigned function key.

OR

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **TONES** is displayed.
- 3 Short press the menu key to turn audible tones on and off.
- 4 Long press the menu key to exit menu mode.

Adjusting the Level of Audible Tones

Audible tones have two settings: high and low.

To change between the high and low setting:

- 1 Enter the user settings menu as described at the beginning of this section.
- 2 Short press the menu key, then scroll through the available menu options until **LEVEL** is displayed. The current status (**HIGH** or **LOW**) is displayed underneath.
- 3 Short press the menu key to select high or low.
- 4 Long press the menu key to exit menu mode.

Changing Scanning and Voting Group Settings (Advanced Menu)



Note: Scan group features may not be available or modifiable on your radio.

Configuring Scan Groups

You can modify the mix of channels in your radio's scan groups in the following ways by:

- Removing channels.
- Adding new channels.
- Altering the characteristic of a channel (for example, setting a channel as a priority channel).

Scan groups can be modified using the advanced menu. Before modifying a scan group you need to understand the various types of channel membership status:

- **Y**: The channel is currently a member of the group.
- **N**: The channel does not belong to the current group.
- **P1**: The channel is the first priority channel.
- **P2**: The channel is the second priority channel.
- **T**: The channel is the default transmit channel for the group.

To modify the status of a channel in a scan group:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **ADV SETTINGS** is displayed.
- 3 Scroll through the main menu options using the arrow keys until **PROGRAM GROUP** is displayed.

- 4 Press the menu key to enter group programming mode. **GPGM** is displayed in the top left-hand corner.
- 5 Scroll through the available scan groups using the arrow keys until the desired group is displayed.
- 6 Press the menu key to select the chosen group. The name of the first channel in the group will be displayed:



P1 in the lower left-hand corner indicates the current membership status of the channel.

- 7 Use the arrow keys to select the channel whose membership you want to alter.
- 8 Short press the menu key to move between the available options, then scroll to the next channel (moving to the next channel confirms the previous selection).
- 9 Long press the menu key to exit the menu with saved changes.

OR

Short press the clear key to exit the program group menu without saving changes.



Note: After 10 seconds of inactivity the radio will save the new group information and exit group programming.

Membership Rules

There are several rules which govern the make-up of scan groups.

When modifying the settings a prompt message will be displayed if an action is not permitted.

Message	Rule	Meaning/Action
CANNOT DELETE	A scan group must have a minimum of two channels.	No more channels can be deleted, without first adding another channel.
GROUP FULL	A scan group can have up to 16 channels.	No more channels can be added, without first deleting an existing channel.
CANNOT CHANGE	Priority groups must have a P1 channel assigned. Dual priority groups must have a P1 and P2 channel assigned.	Changing the value of a P1 or P2 channel is not permitted. To assign a new priority channel, scroll to the desired channel and set its value as P1 or P2. The previous P1 or P2 channel will revert to the value Y.
CANNOT CHANGE	A group that has a default transmit channel assigned must have one channel set to T.	Changing the value of the default transmit channel is not permitted. To assign a new default transmit channel, scroll to the desired channel and set its value to T. The previous default transmit channel will revert to the value Y.

Changing Flexiscan Scan Group Settings (Advanced Menu)



Note: Flexiscan scan group features may not be available or modifiable on your radio.

Configuring Flexiscan Scan Groups

Flexiscan scan groups can be modified in the same ways as Scanning and Voting groups (see ‘Configuring Scan Groups’ on page 72), using the advanced menu.

Before modifying a Flexiscan scan group you need to understand the various types of channel membership status:

- **S:** The channel is currently a member of the Flexiscan scan group.
- **NS:** The channel does not belong to the current Flexiscan scan group.
- **P1:** The channel is the first priority channel.
- **P2:** The channel is the second priority channel.

To modify the status of a channel in a scan group:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **ADV SETTINGS** is displayed.
- 3 Scroll through the main menu options using the arrow keys until **PROGRAM FS-GROUP** is displayed.
- 4 Press the menu key to enter group programming mode. **FSPR** is displayed in the top left-hand corner.
- 5 Scroll through the available scan groups using the arrow keys until the desired group is displayed.

- 6 Press the menu key to select the chosen group. The name of the first channel in the group will be displayed:



NS in the lower left-hand corner indicates the current membership status of the channel.

- 7 Use the arrow keys to select the channel whose membership you want to alter.
- 8 Short press the menu key to move between the available options, then scroll to the next channel (moving to the next channel confirms the previous selection).
- 9 Long press the menu key to exit the menu with saved changes.

OR

Short press the clear key to exit the program group menu without saving changes.



Note: After 10 seconds of inactivity the radio will save the new group information and exit group programming.

Membership Rules

For membership rules, see 'Membership Rules' on page 74.

Changing Subaudible Signalling Settings (Advanced Menu)



Note: Subaudible signalling may not be available or modifiable on your radio.

To change the signalling used on a channel:

- 1 Long press the menu key to enter menu mode (if the radio displays a submenu option, press the clear key to enter the main menu).
- 2 Scroll through the main menu options using the arrow keys until **ADV SETTINGS** is displayed.
- 3 Scroll through the advanced menu options using the arrow keys until **PROGRAM SIGNAL** is displayed
- 4 Press the menu key to enter signal programming mode. **SPGM** is displayed in the top left-hand corner.
- 5 Scroll through the available channels using the arrow keys until the channel you wish to change is displayed, then short press the menu key.

The display will show the first in a series of signal labels, for example **SIG 1**:



Your system manager or the person who programmed your radio will know what values correspond to these labels.

- 6 Scroll through the available signal labels until you find the one you want, then short press the menu key to confirm your selection. The next channel will then be displayed.
- 7 Long press the menu key to exit the menu.



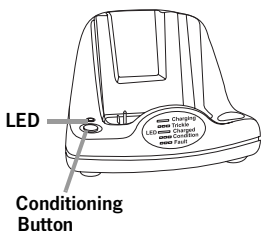
Note: After 10 seconds of inactivity the radio will automatically leave signal programming mode.

Maintaining Your Radio

This section covers:

- Battery Charging and Conditioning
 - Preserving Battery Life
 - Caring for Your Radio
 - Options and Accessories
 - Specifications
-

Battery Charging and Conditioning



There are two types of chargers available for your radio: A desktop fast charger (shown left) and a multi-charger (see page 87). Instructions for using the fast charger also apply to the multi-charger.

A vehicle charging kit is also available, allowing the radio to be charged from a vehicle's power supply. Installation and user information are supplied with the vehicle kit.

Using the Charger

The battery charger can be used to:


- Charge batteries.
- Short condition batteries.
- Long condition batteries.

Before First Use

Before using the radio for the first time:

- Fully charge the battery (see 'Charging the Battery' on page 81).
- Long condition the battery (see 'Long Conditioning the Battery' on page 83).

After First Use

Charge the battery as soon as the radio indicates the battery is low (the low battery icon () flashes, the radio gives a low-pitched beep every 5 seconds and the LED flashes red at slow flash rate).



Note: If the message **BATTERY IS FLAT** displays, the battery is too low, and the radio will stop operating. Turn off the radio immediately and recharge.

Short condition the radio's battery:

- Weekly.

Long condition the radio's battery:

- When battery performance has deteriorated.
- Following prolonged storage.

Charging the Battery



Do not press the blue conditioning button when charging the battery – this button is only used for conditioning the battery.

To charge the battery:

- 1 Turn off the radio.
- 2 Insert the battery/radio into the charger (the charger LED glows red).

When the charger LED glows steady green, the battery is charged.



Note: For up to 30 minutes after removing the battery from the charger, the battery indicator will not accurately reflect the battery's charge.

Battery charging involves three stages:

Stage	Function	LED Indicator
Fast charge	Brings the battery up to near full capacity.	Glows red.
Trickle charge	Slowly tops up the battery until it is at its full capacity.	Flashes green.
Stand-by charge	Keeps the battery at its full capacity, as long as the radio is turned off.	Glows steady green.







Charge Times

Charge times vary according to the battery type.

Battery Type	Fast Charge Time	Trickle Charge Time
1100 mAh NiCd (TOPB100)	Up to 1½ hours	1½ hours
1500 mAh NiCd (TOPB200)	Up to 2 hours	1½ hours
1500 mAh NiMH (TOPB700)	Up to 2 hours	1½ hours
2000 mAh NiMH (TOPB500)	Up to 2½ hours	1½ hours

Charging LED States

The table below shows the battery charging LED states.

LED colour and state	Meaning
Red  Steady	Battery charging.
Red  Flashing	Battery not seated properly in charger, battery or charger contacts dirty, or battery faulty. If this occurs at the end of a long condition, consult your Tait dealer.
Green  Steady	Battery charged.
Green  Flashing	Battery trickle charging.
Amber  Steady	Charge suspended until battery temperature is within correct range.
Amber  Flashing	Battery being short or long conditioned.

Short Conditioning the Battery

The short conditioning cycle discharges the battery, then charges it. Regularly recharging a battery that has not been completely discharged will eventually affect the battery's ability to hold a full charge.



Caution: Do not use the short conditioning cycle on a new battery if it has not been fully charged previously.

To short condition the battery:

- 1 Turn off the radio.
- 2 Insert the battery/radio into the charger.
- 3 When the charger LED glows red, press and hold the blue conditioning button until the indicator flashes amber.
- 4 Release the conditioning button.

The battery is ready to be used again when the charger LED glows steady green.

Long Conditioning the Battery

The long conditioning cycle discharges and charges the battery a number of times.

Long conditioning will take about 24 hours. To long condition the battery:

- 1 Turn off the radio.
- 2 Press and hold the blue conditioning button while inserting the battery/radio into the charger.
- 3 Continue holding the conditioning button until the charger LED flashes amber.
- 4 Release the conditioning button.

The battery is ready for use when the indicator glows steady green. If the charger LED flashes red at the end of a long conditioning cycle, consult your Tait dealer.

Troubleshooting

Problem: When inserting the battery/radio in the charger, the state indicated by the charger LED is not as expected.

- Make sure the battery/radio is seated properly in the charger.
- Check that the charger is properly plugged in.
- Check that the battery and charger contacts are clean. To clean, wipe the battery contacts with a dry lint-free cloth to remove any dirt, oil or grease.

Problem: The charger LED glows amber.

- The radio battery is too hot or too cold for charging.

The safe range for charging is 5°C to 40°C, and optimum battery performance will be obtained between 15°C and 25°C. The battery will start charging when the battery temperature is within the range 5°C to 40°C.

Warning: Disposing of Used NiCd Batteries



Warning: NiCd batteries contain a small amount of cadmium, a potentially toxic substance that must be disposed of properly. When no longer in use, contact your Tait dealer for recycling details.

Preserving Battery Life

To preserve battery life, take the following precautions:

- Replace or recharge the battery as soon as the radio indicates that the battery is low.
- Avoid recharging a full battery that has had little or no use. Overcharging the battery will reduce the life of the battery.
- Avoid leaving the battery in a charger for more than a few days.
- Turn the radio off when it is unattended for long periods.
- Use Tait-recommended chargers only.
- Maintain an ambient temperature of between 5°C and 40°C during recharging. Optimum battery performance will be obtained between 15°C and 25°C.
- Do not allow the battery contacts to become short-circuited. This may happen if a metallic object such as a coin or paper clip comes into contact with both battery contacts.
- The battery pack is a sealed unit and is not serviceable. Do not attempt to open it.

Caring for Your Radio

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 pack.

General Care

To ensure your radio is maintained in good working order:

- Wipe the battery contacts, accessory connector contacts and radio display with a dry lint-free cloth to remove any dirt, oil or grease.
- Use a cloth dampened with clean water to clean the radio's case and display lens, but do not immerse the radio in fluids.
- Do not allow the radio to come into contact with detergents, alcohol, aerosol sprays or petroleum-based products, as these substances may permanently damage the case.
- Avoid high temperatures. If the radio overheats you will hear two short high-pitched beeps and the radio will cease to function.

Troubleshooting

If you are experiencing difficulty operating your radio, review 'Getting Started' on page 13 and check the following:

- Is the battery firmly attached to the radio?
- Is the battery sufficiently charged?
- Does the battery need conditioning?
- Is the battery charger working properly?
- Is the radio or antenna damaged?

If all appears to be in order but your radio still fails to operate properly, consult your local Tait dealer for assistance.

Options and Accessories

Tait offers a large range of radio accessories. Contact your local dealer for more information.



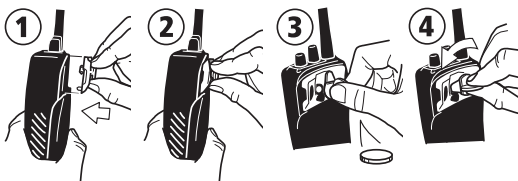
Removing the Accessory Cover

To fit some accessories to the radio, you will need to remove the radio cover by first removing the battery, then using the end of a key to prise off the accessory cover.

D-Clip and Accessory Connectors

The D-clip connector enables the radio to be installed on the belt loop. The accessory connector enables accessories to be installed on the radio.

Installing the Connector



- 1 Place the two connector pegs into the bottom holes on the radio.
- 2 Push the connector into position and hold.
- 3 Use a coin (D-clip only) or thumb or finger to turn the lever counter-clockwise.
- 4 Turn the lever until it clicks into position.

Removing the Connector



- 1 Press the small metal clip firmly and hold.
- 2 Use a coin (D-clip only) or thumb to turn the lever clockwise 90°.
- 3 Remove the connector.



Specifications

Size H x W x D 154 mm x 66 mm x 41 mm
(including 1500 mAh
NiMH battery)

Typical weight 535 g
(including 1500 mAh
NiMH battery)

Battery voltage 7.5 V nominal

Receive sensitivity better than -117 dBm

Audio power >0.5 W into 16 Ohms

Antenna connector SMA



Note: For full details of the technical specifications of the radio, refer to the Service Manual or to your local dealer.

Function Key Options



Note: Some functions are not permitted in some countries.

The features below can be assigned to the function keys when the radio is programmed. If you do not know which features have been programmed for your radio, see your system administrator.

For information on function keys, see 'Using the Function Keys' on page 15.

Function	Description
Audible Tones	Turns audible tones on and off.
Backlighting	Turns backlighting on. Backlighting will turn off after a programmed period.
Channel's DTMF Preset	Sends the DTMF preset call assigned to the current channel.
Contrast Adjustment	Allows you to adjust the display contrast.
Disable Monitor	Disables the monitor facility if it is active. This may also be achieved by a short press of the clear key depending on the radio's programming. See 'Using the Keypad' on page 16.
Economy Mode	Turns economy mode on and off.
Emergency DTMF	Activates DTMF emergency mode.
Emergency Selcall	Activates Selcall emergency mode.
Handset Mode	Turns handset mode on and off.
Keypad Lock	Locks the keypad so the keys cannot be activated accidentally; a long press of the clear key deactivates the keypad lock. What keys are locked depends on how the radio was programmed; however, the clear key cannot be locked.
Lone Worker	Monitors radio activity so that an emergency call can be sent if a worker becomes incapacitated.

Function	Description
Low Power Transmit	Changes the transmit power from medium or high to low. Pressing the key again returns the transmit power to the programmed level. Channels can also be programmed for low power.
Night Use	Turns night operation mode on and off.
Nuisance Delete	Temporarily deletes the current channel from the scanning regime.
One Touch Call	Sends a preset Selcall call or DTMF call, or selects a channel.
Preset Selcall	Sends the preset Selcall call assigned to the current channel.
Program Flexiscan	Allows you to enter Flexiscan programming mode. You can now change group membership and change priority channels.
Repeater Access Tone	Sends the repeater access tone to key up the transmitter.
Repeater Talkaround	Allows you to bypass normal repeater operation and communicate directly with another radio. Pressing the key again or changing to another channel turns off repeater talkaround.
Squelch Override	Turns the squelch override on and off so the user can hear all activity on a channel, including noise. The radio may be programmed so that a long press of the clear key turns squelch override on and off.
Toggle Flexiscan	Turns Flexiscan on and off. Your radio may be programmed so that Flexiscan is turned off when the PTT key is released after making a call when Flexiscan is active.
Toggle Monitor	Toggles monitor on and off, so that the user can hear all traffic on a channel. This may also be achieved by a short press of the clear key, depending on the radio's programming. (See 'Using the Keypad' on page 16.)
Volume Control	Controls volume in handset mode.