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## Important Charging Information

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- 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.

### Use of Green Conditioning Button

(Fast charger only)

The green button on the fast charger is the conditioning button and is only used for short and long conditioning. See “Conditioning Using the Fast Charger” on page 36 for more information.

- Short condition your NiCd battery weekly.
- Long condition the battery following prolonged storage or if battery performance has deteriorated.
- Do not press the conditioning button if you just want to charge the battery. Only press the conditioning button when you want to initiate short or long conditioning.

### For More Information...

Complete information on batteries and battery chargers is provided in “Charging and Caring for Batteries” on page 33.

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**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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## Safety Warnings

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- Do not hold the radio with its antenna close to or touching any part of your body, especially your face and eyes, when transmitting.
- Switch the radio off at petrol filling stations.
- Switch the radio off in the vicinity of explosive devices, such as at a quarry that uses blasting techniques.
- Use of a handheld microphone or radio while driving is not permitted in some countries. Check the vehicle regulations in the area where you are driving.
- Do not use battery chargers other than Tait Orca battery chargers to charge your radio battery.
- If using the radio with an earphone or headset, avoid using unnecessarily high volume levels.
- Frequency band 406 to 406.1 MHz is reserved for use by distress beacons. Transmissions should not be made within this frequency band.
- Do not immerse your Tait Orca radio in water.

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## Getting Started

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Your Tait Orca portable radio is preprogrammed to suit your communication needs. If you are unsure which of the 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 may be listed on the “Custom Settings” page on the inside back cover of this manual.

When you receive your Tait Orca portable radio, make sure all items you ordered are included. Typically, you should receive the following:

- Tait Orca portable radio unit
- Battery pack
- Antenna
- Belt clip
- Charger
- Plug pack
- User’s Manual (this document)

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

### Installing the Antenna

Before using the radio, connect the antenna to the socket at the top of the radio.

### Charging the Battery Before First Use



The battery pack must be fully charged before you first use the radio. It is highly recommended that the battery also be put through a long conditioning cycle after the initial charge and before

use. Putting the battery through a long conditioning cycle will maximise the battery's initial capacity.

Both the fast charger and the multi-charger will fully charge the battery within four hours.

For more information on charging and conditioning the battery, see "Charging and Caring for Batteries" on page 33.

## Installing and Removing the Battery Pack

To fit the battery pack to the radio, insert the bottom edge of the battery pack into the two slots at the back of the radio. Push the battery pack towards the radio. It should snap into place.

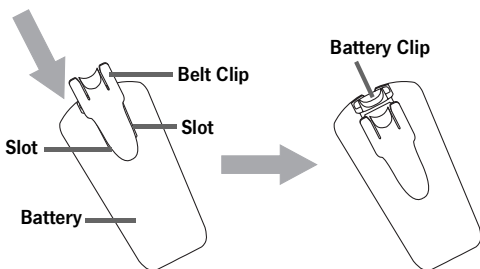
To remove the pack, push the battery catch down and from the sides pull the battery away from the radio.

## Installing a Belt Clip

Two types of belt clip are available for Tait Orca radios:

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

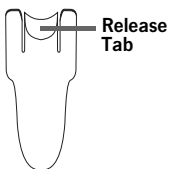
For both types of belt clip, slide the belt clip into the two slots on the top of the battery. Push down until the clip snaps into place.



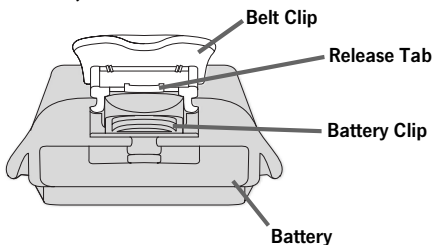
## Removing a Belt Clip

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

To remove the 38 mm belt clip, insert the end of a flat-bladed screwdriver under the edge of the release tab (right) without forcing it. Gently lift the release tab up, then slide the belt clip away from the battery.



To remove the 55 mm belt clip, lie the battery on a flat surface. Insert the end of a flat-bladed screwdriver under the release tab (shown below) and lift. Slide the belt clip away from the battery.



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.

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## Radio Controls and Indicators

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Your Tait Orca 5015 portable controls and indicators include an on/off/volume control knob, a 16-way selector knob, side panel keys, a keypad, and various radio indicators.

### **On/Off/Volume Control**

Rotating the on/off/volume control clockwise turns on the radio and increases volume. Rotating the control counter-clockwise decreases volume and turns off the radio. This also controls the volume level of indicators and confidence tones.

### **16-Way Selector**

Each position on the 16-way selector can be preprogrammed for a channel or group of channels. See “Selecting a Channel” on page 16 for more information.

### **Short, Long and Double Key Presses**

Some keys can have functions assigned to both short and long presses. A short key press is defined as less than one second. You may need to experiment to become familiar with the duration of short and long key presses.

One of the two Side Panel Function Keys can be preprogrammed to perform the Emergency DTMF or emergency Selcall function. An emergency function may be combined with a Double Key Press Activation option. This feature helps to avoid accidental use of the emergency function. If the emergency call is assigned to a short key press, the two key presses must be made within 3 seconds. If the emergency call is assigned to a long key press, the two key presses must come within 5 seconds.

### **Side Panel Keys**

The side panel keys include:

- Function keys 1 and 2 for access to preprogrammed functions. See “Programmable Function Key Settings”










on page 13 for more information on the options that can be preprogrammed for the function keys.

- The PTT (press-to-talk) key, for making the radio transmit each time you talk.

## Keypad Functions

Keys 0 to 9 are used for dialling numbers and entering data. Other key functions are outlined in the following table.

Functions marked \* must be preprogrammed in order to operate.

Symbol	Key Name	Function
	Call	Short: Enter Selcall dialling mode*. Long: Send a preset Selcall call*.
	Channel	Short: Enter channel selection mode. Long: Turn repeater talk around* on and off.
	DTMF	Short: Enter DTMF dialling mode*. Long: Send a preset DTMF call*.
	Monitor/ Clear	Short: When channel monitoring is active, a short press of this key will turn monitor off. Note that the radio may be preprogrammed so that a short press of this key toggles monitor on or off. Long: Clear, or turn squelch override* on and off.
	Enter	End an entry or make a selection.
	Left/Star	Left arrow: Arrow key when scrolling. Star: For group and DTMF dialling*.
	Hash/Right	Hash: For group and DTMF dialling*. Right arrow: Arrow key when scrolling.

## Radio Indicators

















In combination, the radio's LED indicator and audible signals provide you with information on the state of your radio. Display messages provide additional information.

Radio indicators are summarised on the "Radio Indicators" page on the inside back cover of this manual.

## LED Indicators

The radio's LED (Light Emitting Diode) is the main indicator for displaying the state the radio is in. Other indicators provide additional information intended to supplement that provided by the LED.

In this User's Manual, one flash every 2 seconds is referred to as "low flash rate", one flash every second as "medium flash rate", and four flashes every second as "high flash rate".

Colour	Flash Rate	Meaning
Red	 Steady	Transmitting.
Red	 Low	Battery low. Radio will also emit low-pitched beeps. Recharge or replace as soon as possible.
Red	 Medium	Low power transmit mode active.
Red	 High	Radio is stunned. Radio will also emit very high-pitched beeps. Contact your despatcher.
Red	2 x  Two flashes	The power-up sequence is complete. Radio will also emit two medium-pitched beeps.
Green	 Steady	Channel busy.
Green	 Low	Economy mode active.
Green	 Medium	Monitor or squelch override active.
Amber	 Steady	Radio is scanning or voting a group of channels for activity or greatest signal strength.
Amber	 Low	Repeater talkaround active.
Amber	 Medium	Activity detected on one of a group of channels being scanned.
Amber	 High	A Selcall call has been received.
Red/ Green	 Low 	Handset mode active.
Red/ Green	 High 	Radio programmed incorrectly or faulty. Contact your Tait dealer.

## Audible Signals

Your radio may be preprogrammed so that whenever you press a key, the radio will beep to indicate whether or not the action you wish to carry out is permitted.

A short, medium-pitched beep indicates that an action or selection is valid, whereas a long, low-pitched beep indicates that the action or selection is not valid.

Common audible signals are summarised on the “Radio Indicators” page on the inside back cover of this manual.

Audible signals may be disabled at radio programming time, and a function key may be programmed to turn audible signals on and off.

## Display Messages

A typical display is shown below.














The upper left hand corner of the display shows the mode the radio is currently in. In this example, **CHAN** indicates the radio is in channel selection mode. The lower left hand corner gives additional information on the status of the radio. In this example, **RTA** indicates the radio is in repeater talk around mode.

The panel on the right hand side shows data for the current radio operation, and characters may be single- or double-height. 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 will appear in this panel.

The bottom line of the display shows a series of icons that give additional information on the state of the radio. The meaning of these icons is outlined in “Display Icons” on page 12.

Throughout this user's manual, messages that appear in the display of the Orca 5015 radio are shown in **BOLD ALLCAPS**.

## Display Icons


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.
	Steady: The selected channel is busy.

## Battery Life Indicator

The battery life indicator in the lower left hand corner of the display indicates the battery's charge level.



Note: While the battery is charging, and for up to half an hour after removing the radio from the charger, the battery indicator will not accurately reflect the charge level.

When the battery is low, the low battery icon () will flash, the radio will emit a low-pitched beep every five seconds and the LED indicator will flash red at low flash rate. See “Charging and Caring for Batteries” on page 33 for recharging instructions.

To preserve battery life, it is recommended that you turn off the radio when it is unattended, or use economy mode (see “Other Features” on page 29), if it has been programmed.

## Programmable Function Key Settings

Functions marked \* are described more fully in “Other Features” on page 29. Some of these functions may not be permitted in your country.

Function	Description
Audible Indicators	Turns audible indicators on and off.
Backlighting*	Turns backlighting on. Backlighting will turn off after a preprogrammed time.
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 monitor/clear key (✕), depending on the radio's programming. (See “Keypad Functions” on page 9.)
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 (✕) turns off keypad lock. What keys are locked depends on how the radio was preprogrammed; however, the clear key (✕) cannot be locked.

<b>Function</b>	<b>Description</b>
Low Power Transmit*	Changes the transmit power from medium or high to low. Pressing the key again returns the transmit power to the preprogrammed level. Channels can also be preprogrammed 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	Sends a preset Selcall call or DTMF call, or selects a channel.
Preset Call	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 Talk Around	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 talk around. The radio may be preprogrammed so that a long press of the channel key (Y) turns repeater talk around on and off.
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 preprogrammed so that a long press of the monitor/clear key (X) 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 or off, so that the user can hear all traffic on a channel. This may also be achieved by a short press of the monitor/clear key (X), depending on the radio's programming. (See "Keypad Functions" on page 9.)
Volume Control	Controls volume in handset mode.

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## Basic Operation

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This section describes the basic operation of your radio, including turning the radio on and off, adjusting volume, selecting channels, and making and receiving calls.

### Turning the Radio On and Off and Adjusting Volume

Rotating the on/off/volume control clockwise turns on the radio and increases volume. Rotating the control counter-clockwise decreases volume and turns off the radio.

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

When you turn on the Orca 5015 radio, you may need to enter a personal identification number (PIN) before you can use the radio. If you get the message **ENTER CODE**, enter your assigned PIN, which will be up to five digits long, then press the enter key (↵). If you do not know your PIN, consult your system manager or the person who programmed your radio.

Once the power-up sequence is complete, the LED will flash red twice and the radio will give two short, medium-pitched beeps.

### Operating Modes

Once the power-up sequence is complete, the message in the upper left hand corner of the display will indicate which operating mode the radio is in.

The modes that are available depends on how your radio was programmed. The radio can be preprogrammed to enter the same mode each time it powers up, or to enter the mode that was last used when the radio was previously turned off.

## Selecting a Channel

Each position on the 16-way selector denotes a channel or group of channels. If you select a channel and the radio gives two short, high-pitched beeps, then that channel was the last one activity was found on during scanning. See “Scanning and Voting Groups” on page 19 for more information on groups of channels.

If the selected channel is busy, the LED will glow green and the channel busy icon (Ψ) will appear in the display. Wait until the channel is free before transmitting.

You can also select channels using the keypad. To select a new channel using the keypad, the radio must be in channel selection mode (**CHAN** in the upper left hand corner of the display). If not, give a short press of the channel key (Υ). The message **CHAN** and the scrolling permitted icon (←→) will appear. The name of the current channel or group will be displayed, e.g. **BASE**.

To select another channel or group, you can either:

- scroll through the available channels using the scroll key (◀/▶) and select the desired channel; or
- key in the desired channel number.



Note: You cannot change channels while transmitting.

## Receiving a Call


Your radio will remain quiet until there is valid activity on the selected channel (see “What You Hear On a Channel” on page 17). When you hear your own call sign, respond promptly by pressing the PTT key and replying.

## Making a Call




Select the desired channel as described above.

If the channel is busy, you will not normally be able to transmit; if you try to transmit, the radio will sound a low-pitched warning beep. You may not be able to hear the activity, but the LED will glow green and the channel busy



icon (  ) will appear in the display. You can activate the monitor function to listen to channel activity.

When the channel is clear, hold down the PTT (press-to-talk) key and speak clearly into the radio. Identify yourself and the party you are calling using the call signs you have been assigned. Release the PTT key when you have finished talking.

While you are transmitting, the LED will glow red and the transmitting icon (  ) will flash. If you are transmitting at low power, the low power icon (  ) will flash. While the other party is transmitting, the LED will glow green and the channel busy icon (  ) will appear in the display.

If Selcall mute is programmed for a particular channel, you will only be able to make Selcall calls on that channel until the monitor function is activated and the channel is clear.


## **Transmit Timer**

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 will automatically stop transmitting. You will have to release the PTT before you can transmit again. The radio may be programmed to prevent transmission for a period after the transmit timer has expired.

If Selcall mute is programmed for a particular channel, you will only be able to make Selcall calls. See “Monitor” on page 18 for more information on the monitor function and the Selcall mute.

## **What You Hear On a Channel**

The traffic you hear on a channel depends on how your radio was programmed. A channel can be programmed so that you hear all conversations on a channel (no signalling), or your user group may be segregated from others using various types of signalling (CTCSS, DCS or Selcall).

When your group is segregated, you will not hear other groups talking on the current channel unless the monitor function is active (see below). If the channel is busy, the LED will glow green and the channel busy icon (  ) will appear in the display.

## CTCSS and DCS

CTCSS (Continuous Tone Controlled Sub-audible Signalling) and DCS (Digitally Coded Squelch) signalling use sub-audible tones to isolate your calls so you only hear activity for your group.



## Selcall

Selcall (Selective calling) uses audible tones to isolate your calls and direct calls to specific individuals within a group. You may hear the Selcall tones at the beginning of a transmission.

## Monitor

Monitor lets you hear all conversations on a channel, including those outside your group. Your radio may be programmed so that monitor is activated when your radio is turned on or when you send some types of calls. Once activated, monitor will automatically turn off after a pre-programmed time period, and can also be reset by your despatcher or when some types of calls are received.

While monitor is active, the LED will flash green at medium flash rate and the monitor icon (  ) will appear in the display.

Monitor may be assigned to a function key, or can be toggled on or off by a short press of the monitor/clear key (  ). Your radio may also be programmed so that a press of the assigned function key or monitor/clear key (  ) will only deactivate monitor when it is active, rather than toggling it on or off.

Monitor can be programmed to override both CTCSS/DCS signalling and Selcall signalling or only Selcall signalling (Selcall mute).

If a particular channel is programmed with Selcall mute, you will only be able to hear traffic that matches your Selcall identity and you will only be able to make Selcall calls. Turn on monitor to hear all traffic and make calls other than Selcall calls.

## Squelch Override

The radio's squelch allows reception of a signal only when it is above a factory-set threshold so that only intelligible signals will be made audible. Activating squelch override can sometimes improve reception of a signal in marginal signal strength areas.

If programmed, squelch override can be turned on and off by a long press of the monitor/clear key (✕), or it may be assigned to a function key. While squelch override is active, the LED will flash green at medium flash rate and the monitor icon (🔊) will appear in the display.

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

## Scanning and Voting Groups

A series of channels may be grouped together so that the radio can scan through them looking for activity. Groups are selected the same way as channels. When a scanning or voting group is selected, the LED will glow amber, and the group name and scanning icon (🔄) will be displayed, as shown below.



When a busy channel is detected and the signalling is valid (see “What You Hear On a Channel” on page 17), the LED will flash amber at medium flash rate, the scanning icon (🔄) will flash and the radio will stop on that channel. The name of the captured channel will be displayed rather than the group

name and you will be able to hear the transmission. Scanning will resume when the channel is no longer busy or the signalling is no longer valid.

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

## Voting

Voting works the same way as scanning, except the group's member channels carry the same traffic and the radio searches for and stops on the channel with the strongest signal.

## Flexiscan

Your radio may be programmed with one Flexiscan scan group, with up to 15 member channels. When Flexiscan scanning is turned on, a group of channels in a programmed Flexiscan scan group is scanned for valid activity, while the radio user is able to communicate on an unrelated channel. Flexiscan is activated by the press of a programmed function key (see "Toggle Flexiscan" on page 14).

One of the function keys may also be programmed to enter Flexiscan programming mode, where you can change group membership (see "Program Flexiscan" on page 30).

## 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 scanning regime if one of the function key settings is programmed for nuisance delete. Pressing the assigned function key deletes the currently held channel from the regime. When the scan group is next selected, the deleted channel will again be part of the group.

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## Selcall (Selective Calling)

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Selcall (selective calling) segregates a group of users from others on a channel using a set of audible tones. Because each radio has a unique identity, you can direct calls to individuals within your own group and make different types of calls. An emergency call may also be preprogrammed.

### Receiving a Selcall Call

When a call is received that contains your radio's identity, the radio will give a ringing tone and the LED indicator will flash amber at high flash rate. The ringing tone is preprogrammed, and the radio will give different ringing tones when different types of calls are received. The display will flash **CALL** and the caller's identity and status may be displayed.



If the caller's identity is displayed, it will be as a name or a number, depending on how your radio was preprogrammed. If status is displayed, it will be a number from 00 to 99. See the person who programmed your radio for the meaning of different status numbers.

To accept the call, press the PTT key and begin speaking. If the call is a group call, there is usually no need to respond.

### Making a Selcall Call

Orca 5015 radios can make preset Selcall calls and can also dial Selcall numbers.

#### Preset Selcall Calls

Your radio may be programmed with preset Selcall calls.

There are two different types of preset Selcall calls that may be programmed for your radio:

- Two preset Selcall calls can be assigned to each channel that has Selcall. If programmed, these calls will be assigned to a function key, and each channel that has Selcall may have different preset calls. To make one of these calls, change to the desired channel and press the assigned function key.
- A single one-touch Selcall call may also be assigned to one of the function keys. It is not necessary to change channels to send this call; simply press the assigned function key.

Orca 5015 radios can have an additional preset Selcall call preprogrammed for each channel that has Selcall. To make this call:

- Change to the desired channel.
- Give a long press of the call key (🎵).

When the called party responds, proceed with your conversation.

## Dialling Selcall Calls

If you are unsure what numbers you can dial, consult your system manager or the person who programmed your radio. If you know your system's group tone, you can also make a call to a group of users.

To dial a Selcall call:

- Switch to a channel that has Selcall programmed.
- Give a short press of the call key (🎵) to enter Selcall dialling mode.
- The message **CALL** will appear in the display, and the last number dialled may also appear. If the displayed number displayed is the one that you wish to call, press the enter key (↵).
- If you wish to call another number, enter up to three

digits, then press the enter key (↵).

While you are transmitting, the LED will glow red and the transmitting icon (⚡) will flash. If you are transmitting at low power, the low power icon (⚡) will flash.

When the called party responds, proceed with your conversation.

## Selcall Emergency Call

One of the preset Selcall calls programmed for your radio may be an emergency call. If programmed, the emergency call will be assigned to a function key.

Pressing or double pressing the function key (see “Short, Long and Double Key Presses” on page 8) sends an emergency sequence to a preprogrammed party, usually your dispatcher. It is not necessary to change channels to send the emergency call.

When in emergency mode, the radio cycles between receiving and transmitting, so that your dispatcher can hear activity near your radio and so decide how to respond. All radio indicators will remain unchanged.

The radio can be reset to normal operation remotely by your dispatcher or by turning the radio off, and then on again.

## Other Selcall Features

Other Selcall features that may be preprogrammed are:

- deferred calling;
- immediate callback; and
- no acknowledgement retries.

### Deferred Calling

If the channel you are making a call on is busy, the radio may be preprogrammed to store the call and send it again 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 sent.

If the call is being resent and you wish to cancel it, press any key.

### Immediate Callback

If you did not answer a call, the LED will flash amber at high flash rate and the display will flash **CALL**. The caller's identity and status may also be displayed. If the caller's identity is displayed, you can call back the caller by a press of the enter key (↵).

### No Acknowledgment Retries

When you send a call and there is no reply, your radio may be programmed so that the call will be resent up to 15 times. If the called radio does not acknowledge, the display will show **NO ACKNOWLEDGE**.

If the call is being resent and you wish to cancel it, press any key.



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## DTMF Calls

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DTMF (dual tone multiple frequency) is the tone-based system used in the world's telephone networks. If your system has access to the public switched telephone network or other networks that make use of DTMF tones, your radio can make a call to a telephone or send control codes to a remote device. It can also be preprogrammed to make emergency calls.

There are two ways to make DTMF calls:

- preset DTMF calls; and
- dialled DTMF calls.

### Preset DTMF Calls

There are two different types of preset DTMF calls that may be programmed for your radio.

- A preset DTMF call can be assigned to one of the function keys. To send the call, select the channel that the DTMF call is assigned to and press the assigned function key. Different preset calls may be available on different channels.
- A single one-touch DTMF call may also be assigned to one of the function keys. It is not necessary to change channels to send this call; simply press the assigned function key.

A preset DTMF call may also be assigned to a long press of the DTMF key (☎). To send the call, select the channel the DTMF call is assigned to and give a long press of the DTMF key (☎). Different calls may be available on different channels.

## Dialled DTMF Calls

Consult your system manager or the person who programmed your radio for detail about the DTMF strings you can dial. They will consist of DTMF tones 0 to 9, \* and #, and perhaps tones A to D.

If you wish to dial tones A to D, your radio may 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

So pressing the PTT key, holding it, then pressing the **2** key enters tone A in the DTMF string.

You can also send a pause by pressing the PTT, holding it, and then pressing the **1** key. A hyphen will be entered in the display to indicate a pause.

Depending on how your radio was programmed, the digits may be transmitted as you dial them (normal dialling) or once the string has been entered in full and you have pressed the enter key (**↵**) (buffered dialling).

To send a DTMF string:

- Make sure the radio is in DTMF dialling mode (**DTMF** in the upper left hand corner of the display). If not, give a short press of the DTMF key (**☎**).
- The message **DTMF** will appear in the display. The last call dialled may also appear, and if this is the call you wish to make, press the enter key (**↵**).
- If you wish to call another number, enter the required DTMF string then press the enter key (**↵**).

When the called party responds, proceed with your conversation.

## **DTMF Emergency Call**

One of the preset DTMF calls programmed for your radio may be an emergency call. If programmed, the emergency call will be assigned to a function key.

Pressing or double pressing the function key (see “Short, Long and Double Key Presses” on page 8) will send the DTMF emergency sequence on a selected channel, or the current channel if none is selected. If the channel has no DTMF ID associated with it, or does not have a transmit frequency, then the radio will switch to the first channel that does and start transmitting the emergency sequence.

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## Short Data Messages

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Orca 5015 radios may be preprogrammed to receive short data messages (SDMs).

When your radio receives an SDM, the message **SDM** will flash in the lower left hand corner of the display and the radio will give three short, medium-pitched beeps. To read the message, give a long press of the enter key (↵).

The message will appear across both rows of the display. Use the scroll keys (◀/▶) to read the whole message. To display the message from the start, hold the PTT and press the left arrow key (◀). To display the message from the end, hold the PTT and press the right arrow key (▶).

When you have finished reading the message:

- Press the monitor/clear key (✕) to delete the message. The radio will revert to the mode it was in before you viewed the message.

OR

- Press any of the mode keys. The message will remain in memory. To read the message again, give a long press of the enter key (↵).

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## Other Features

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Note: Some of these features may not be permitted in your country.

### Backlighting

Control of backlighting for the display can be assigned to a function key. Pressing the assigned function key turns backlighting on. Backlighting will remain on for only a few seconds.

Backlighting can also be activated by turning on the night use feature (see below).

### Night Use

When the radio is programmed for night use, backlighting will be turned on whenever a key is pressed or when a call is received. Backlighting will remain on for only a few seconds unless further activity is detected.

Night use can be toggled on and off by the press of an assigned function key.

### Contrast Adjustment

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

The contrast adjustment function is accessed by a press of a function key. The message **CONTRAST ADJUSTMENT** will appear in the display. Use the scroll keys (◀/▶) to adjust the contrast to the desired level.

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

### Economy Mode

Economy mode can extend battery life when there is little or no activity on the radio. When in economy mode, the radio will cycle between the receive state and a stand-by state once

there has been no activity for a preprogrammed period. Receiving or sending a call returns the radio to the fully active state.

Economy mode may be permanently enabled or can be toggled on and off by the press of an assigned function key.

While economy mode is active, the LED will flash green at low flash rate.

## Program Flexiscan

Flexiscan programming mode can be activated by the press of an assigned function key. The message **FSPR** appears in the upper left-hand corner of the display, and the channel name is shown on the right-hand side of the display.



The message in the middle left of the display shows the Flexiscan membership status of the channel.

- **S**: the channel is a Flexiscan group member, or
- **NS**: the channel is not a Flexiscan group member, or
- **P1**: the channel is the first Flexiscan priority channel, or
- **P2**: the channel is the second Flexiscan priority channel.

Each press of the enter key (↵) changes the status of the channel, through the choices of **S**, **NS**, **P1** or **P2**.



Note: The 16-way channel selector is disabled while the radio is in Flexiscan programming mode. Scroll through the available channels using the scroll keys (◀/▶).

Flexiscan programming mode can be deactivated by a long press of the enter key, or the radio automatically returns to its previous mode of operation after a few seconds of inactivity.

## Handset Operation

The radio can be operated as a normal radio where you hold the radio with the microphone about 15 cm away from your mouth. It can also be operated like a telephone handset in noisy environments or when privacy is required. While in handset mode, the radio's handset microphone will operate.



Note: The radio can be preprogrammed so that the handset microphone is also the default microphone.



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

Handset mode can be toggled on and off by the press of an assigned function key. Your radio may be preprogrammed so that handset mode will automatically turn off after a period of inactivity.

While handset mode is active, the LED will flash red and green at low flash rate and the handset icon (📞) will appear in the display.

## Volume Override

Your radio may be preprogrammed so that the function keys are used as volume up and down keys while in handset mode. What keys act as volume control keys may be listed on the "Custom Settings" page on the inside back cover of this manual.

## Keypad Lock

The keypad lock prevents accidental operation by locking the keypad so that only a certain set of keys can be used. Which keys are locked depends on how your radio was programmed, but the monitor/clear key (✕) can never be locked. If a call is received while the keypad is locked, press any key to answer the call.

Keypad lock can be activated by the press of an assigned function key, and can be deactivated by giving a long press of the monitor/clear key (✕). While the keypad is locked, the

radio will give a long, low-pitched beep and display the message **KEYPAD LOCKED** whenever you press a locked key.

## Low Power Transmit



If you are using your radio in conditions where signal strength is high, you can extend battery life by transmitting at low power.

While low power transmit is active, transmissions will be made at low power rather than at the preprogrammed power level.




Note: Some channels may be preprogrammed to always transmit at low power.


Low power transmit can be toggled on and off by the press of an assigned function key.


The low power icon (  ) will appear in the display while low power transmit mode is active. When you transmit, the LED will flash red at low flash rate and the low power icon (  ) will flash.

## Repeater Talk Around

If the repeater is busy or you are out of range of the repeater, you can communicate directly with another radio by using repeater talk around.

Repeater talk around can be toggled on and off by the press of an assigned function key. Orca 5015 radios may be programmed so that a long press of the channel key (  ) toggles repeater talk around on and off.

Give a press of the assigned function key or a long press of the channel key (  ) to activate repeater talk around. While repeater talkaround is active, the LED will flash amber at low flash rate. The message **RTA** will appear in the lower left hand corner of the display.

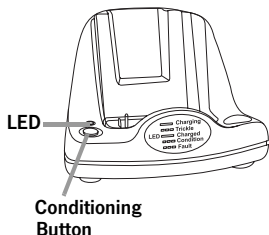
To turn off repeater talk around, press the function key again, give a long press of the channel key (  ), or change to another channel.



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## Charging and Caring for Batteries

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There are two types of chargers available for Tait Orca radios: a desktop fast charger (shown left) and a multi-charger (see page 40). The multi-charger consist of six fast chargers and can be used on a desktop or mounted against a wall.

Instructions for using the fast charger also apply to the multi-charger.

A vehicle kit is also available for charging the radio from a vehicle's power supply. Instructions for charging the battery using the vehicle kit are supplied with the vehicle kit.

Batteries can be recharged while attached to the radio, or as a separate unit. If attached to the radio, the radio must be turned off to ensure a full charge.

### Charging the Battery Before First Use

The battery pack must be fully charged before you first use the radio. It is highly recommended that the battery also be put through a long conditioning cycle after the initial charge and before use. Putting the battery through a long conditioning cycle will maximise the battery's initial capacity.

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### 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.

## Use of Green Conditioning Button


(Fast charger only)

The green button on the fast charger is the conditioning button and is only used for short and long conditioning.

- Short condition your NiCd battery weekly.
- Long condition the battery following prolonged storage or if battery performance has deteriorated.
- Do not press the conditioning button if you just want to charge the battery. Only press the conditioning button when you want to initiate short or long conditioning.

See “Conditioning Using the Fast Charger” on page 36 for more information.

## Low Battery Warning

When the battery is low, the radio will give a low-pitched beep every five seconds and the LED will flash red at low flash rate. The low battery icon () on the radio will also flash. Recharge or replace the battery as soon as possible. When the battery gets too low, the radio will emit a long, low-pitched beep, and the display will read **BATTERY IS FLAT**. The radio will then stop operating. Turn off the radio immediately.









Note: While the battery is charging, and for up to half an hour after removing the battery from the charger, the radio’s battery indicator will not accurately reflect the battery’s charge level.

## Using the Fast Charger

The fast charger can be used to:

- charge batteries; or
- condition batteries.

## Fast Charger 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.

## Charging Using the Fast Charger

Charging using the fast charger involves three stages.

- The fast charge stage quickly brings the battery up to near its full capacity. The charger LED will glow red.
- The trickle charge stage slowly tops up the battery until it is at its full capacity, which is typically 1½ hours. The charger LED will flash green.
- The stand-by charge stage keeps the battery at its full capacity, as long as the radio is turned off. The charger LED will glow steady green.

The battery can be charged separately or attached to the radio. The radio must be turned off to ensure a full charge.

### *To Charge the Battery Using the Fast Charger*

- Turn off the radio.
- Insert the battery/radio into the charger.
- The charger LED will glow red.
- When the charger LED glows steady green, the battery is charged.

## Charge Times

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

### Conditioning Using the Fast Charger

Two conditioning functions are available on the fast charger, a short conditioning cycle and a long conditioning cycle.

The short conditioning cycle discharges the battery, then charges it. Regularly recharging a battery that has not been completely discharged will eventually affect its ability to hold a full charge. For best battery performance, short conditioning should be carried out once a week. This will take about 4 to 8 hours, depending on how much use the battery has had.



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

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

A long conditioning cycle may be necessary when:

- the battery performance has deteriorated; or
- if a battery has been stored for a long time.

Long conditioning will take about 24 hours. If the charger LED flashes red, consult your Tait dealer.

### *To Short Condition the Battery*

- Turn off the radio.
- Insert the battery/radio into the charger.
- When the charger LED glows red, press the conditioning button until the indicator flashes amber.
- Release the conditioning button.

Once the battery has been discharged, it will charge normally. The battery is ready to be used again when the charger LED glows steady green.

### *To Long Condition the Battery*

- Turn off the radio.
- Press and hold the conditioning button while inserting the battery/radio in the charger.
- Continue holding the conditioning button until the charger LED flashes amber.
- Release the conditioning button.

The battery is ready for use when the indicator glows steady green.

## **Preserving Battery Life**

- 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.

### **Warning: Disposing of Used NiCd Batteries**



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.

### **Troubleshooting**

*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.

*The charger LED glows amber.*

The radio is too hot or too cold for charging.

- 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.

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## Basic Maintenance

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Your Tait Orca portable 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

- 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 they may permanently damage the case.
- Avoid high temperatures. If the radio overheats, it will cease to function. You will hear two short high-pitched beeps.

### Troubleshooting

If you are experiencing difficulty operating your Tait Orca portable, review “Basic Operation” on page 15 and check the following items:

- 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.

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## Options and Accessories

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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, the cover has to be removed by first removing the battery, then using the end of a key to prise off the accessory cover.





## D-Clip Belt/Accessory Connector

The D-Clip Connector enables the radio to be installed on the belt loop.



### Installing the D-Clip Connector

1-2. Place the D-Clip connector on the radio and locate the two pegs into the holes.

3-4. Use a coin to turn the 'D' clockwise 90 degrees.



### Removing the D-Clip Connector

1. Press the small metal clip, and keep it pressed.

2. Use a coin to turn the 'D' counter-clockwise 90 degrees.

3. Remove the D-Clip connector.

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## Specifications

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Size H x W x D (including 1500 mAh NiMH battery)	154 mm x 66 mm x 41 mm	
Weight	1100mAh NiCd	515g
	1500mAh NiCd	550g
	1500mAh NiMH	535g
	2000mAh HiMH	575g
Battery voltage	7.5 V nominal	
Transmitter power	66 to 88 MHz:	5 Watt
	136 to 174 MHz:	5 Watt
	400 to 470 MHz:	4 Watt
	450 to 530 MHz:	4 Watt
Receive sensitivity (20dB SINAD)	better than -114 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.