

Contents

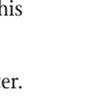
Safety warnings	4
Getting started	6
Installing the antenna	6
Installing and removing the battery pack	6
Installing and removing the belt clip	7
Radio controls and indicators	8
On/off/volume control	8
16-way selector	8
Side panel keys	10
Keypad	10
Radio indicators	10
Confidence tones	12
Programmable function key settings	13
Keypad functions	14
Summary of radio indicators	15
Basic operation	18
Turning the radio on and off and controlling volume	18
Operating modes	18
Battery indicator	19
Transmitting and receiving	19
Transmit timer	20
Trunking operation	21
Types of calls	22
Trunking call setup	22
Call time limit	23
Receiving calls	24
Caller's identity display	25
Group calls	26

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.

Status calls	26
Making calls	27
Call setup	27
Calls not connected	28
Dialling options	29
Radio-to-radio calls	29
Group calls	29
Priority calls	30
Emergency call	30
Preset calls	31
Status calls	31
Despatcher callback requests	32
Interfleet (out-of-fleet) calls	33
PSTN and PABX calls	33
Re-establishing a call	34
Last number redial	34
Callback	34
Call queuing	34
Selecting another trunking network	37
Conventional operation	38
Subaudible signalling	38
Monitor	39
Receiving calls	39
Making calls	39
Exiting conventional mode	40
DTMF over dialling	41
Example: Accessing telebanking	42
Example: Calling an automated attendant	43
Other features	44
Backlighting	44
Night use	44
Do not disturb	44
Dynamic power control	45

Handset operation	45
Volume override	45
Keypad lock	46
Low power transmit	46
Clear	46
Charging the battery	47
Charging the battery using the fast charger	47
Fast charger indicators	48
Charging the battery using the trickle charger	48
Preserving battery life	49
Conditioning the battery with the fast charger	49
Conditioning/analysing the battery with the fast charger ...	50
Disposing of used nickel-cadmium batteries	50
Basic maintenance	51
General care	51
Troubleshooting	51
Accessories	52
Fitting an accessory	52
Specifications	53
Software Licence Agreement	54

Safety warnings

- 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. 
- Use only 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.

Congratulations on your purchase of the Tait Orca handportable two-way radio.



Compact, rugged and reliable, your Tait Orca radio offers the latest state-of-the-art technology and 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.



Getting started

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

- Tait Orca handportable radio unit
- Battery pack
- Antenna
- Belt clip
- Charger
- Plug pack
- *User's Manual*

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 as illustrated. The antenna screws easily into the socket at the top of the radio.



Installing and removing the battery pack

Before the radio is first used, the battery pack must be fully charged, and putting the battery through a condition/analyse cycle to charge it will maximise the battery's initial capacity.

If using the fast charger or multi-charger to charge the battery, the battery will charge within two hours. If using the trickle charger, the battery will charge within 16 hours. The trickle charger is not recommended for NiMH battery packs.

WARNING! The battery pack must be fully charged before you first use the radio, and it is highly recommended that the battery be put through a condition/analyse cycle before first use. See pages 47 to 50 for charging instructions.

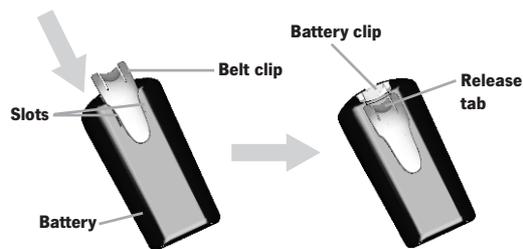
For information on charging and conditioning the battery, see pages 47 to 50.

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 and removing the belt clip

Slide the belt clip into the two slots on the top of the battery. Push down until the clip snaps into place.



The belt clip has been designed to avoid accidental removal. However, it can be replaced if required.

To remove the belt clip, insert the end of a flat-bladed object (e.g. a butter knife) under the edge of the release tab without forcing it. Gently lift the release tab up, then slide the belt clip away from the battery.

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

Radio controls and indicators

Your Tait Orca handportable controls and indicators include the on/off/volume control, the 16-way selector, side panel keys, keypad, and various radio indicators.

Many of the keys can have functions assigned to both short and long presses. A short keypress is defined as less than one second. You may need to experiment to become familiar with how long short and long keypresses are.

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.

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

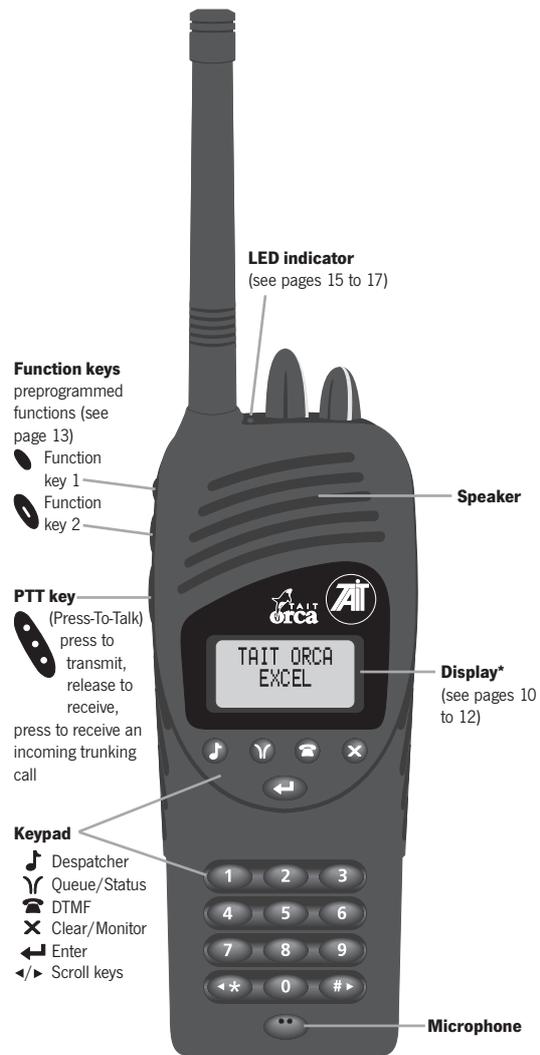
16-way selector

Each position on the 16-way selector can be preprogrammed for:

- Trunking mode preset calls: Change to the assigned position and press the PTT to initiate a trunked call.
- Conventional channels: Change to the assigned position to automatically switch the radio into conventional mode.
- Changing network: Change to the assigned position and press the PTT to change to a different trunking network.

What preset calls, networks and conventional channels are available for your radio may be listed on the custom settings page on the inside back cover of this manual.

The label displayed for each position on the 16-way selector can describe what option is available.



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

Side panel keys

The side panel keys include:

- function keys 1 and 2 for access to preprogrammed functions; and
- PTT (press-to-talk) key for making the radio transmit each time you talk.

The options that can be preprogrammed for the function keys are described on page 13.

Keypad

Keys 0 to 9 are used for dialling numbers and entering data. The left arrow/star (←/★) and hash/right arrow (#/→) keys can be used for scrolling.

Other key functions are as outlined on page 14.

Radio indicators

In combination, the radio's display window, LED indicator and audible indicators provide you with information on the state of your radio.

The tables on pages 15 to 17 show the meanings of different combinations of radio indicators. A summary of these indicators is also provided on the inside back cover of this manual.

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

A typical display is shown below.



The bottom line of the display shows a series of symbols that give additional information on the state of the radio. The meaning of these symbols is as follows.

	Steady: The battery is low. Flashing: Recharge the battery.
---	--

	Steady: The battery is charged.
---	---------------------------------

	Steady: The radio is in DTMF dialing mode.
---	--

	Steady: Monitor or squelch override is active.
---	--

	Steady: Scrolling is permitted.
---	---------------------------------

	Flashing: The radio is transmitting at medium or high power.
---	--

	Steady: Low power transmit mode is active. Flashing: The radio is transmitting at low power.
---	---

	Steady: Handset mode is active.
---	---------------------------------

	Steady: The radio currently has access to a trunking network. Flashing: The radio does not currently have access to a trunking network. It may be attempting to find a site it is authorised to use, or it may be out of range of a network signal.
---	--

The bars on the display (■■■■) indicate the received signal strength (RSSI), which will be displayed whenever the radio is idle in trunking mode. If signal strength is low, calls you make may not get through.

The message **QUIET ON** indicates that the radio is currently in do not disturb mode, and **BARTS** is the label of a string associated with the position on the 16-way selector.

If a function such as do not disturb were not active, the message **BARTS** would be displayed at double-height, as shown below.



Confidence tones

There are two sets of confidence tones available for your radio: the Tait tone set and the MPT tone set. When describing radio indicators, this manual describes only the Tait tone set, which is the default.

If your radio has been preprogrammed with confidence tones, a tone will be sounded each time you press a keypad key or side panel key. For the Tait tone set, a short medium-pitched tone indicates that the keypress is valid, and a long, low-pitched tone indicates that the keypress is invalid. If the keypress is not valid, you should check to ensure the entry you are attempting to make is allowed for your radio.

Programmable function key settings

Unless stated otherwise, functions operate in both trunking and conventional modes. Some functions are not permitted in some countries.

Functions marked * are described more fully in the “Other features” section (pages 44 to 46).

When programmed for	Pressing the assigned function key
Audible indicators	Turns audible indicators on and off.
Backlighting*	Turns backlighting on. Backlighting will turn off after a preprogrammed time.
Clear*	Trunking mode only. Clears the last request to the trunking system.
Do not disturb*	Trunking mode only. Turns the do not disturb function on and off.
Dynamic power control*	Turns dynamic power control on and off.
Handset mode*	Turns handset mode on and off.
Keypad lock*	Locks the keypad so the keys cannot be activated accidentally. Pressing the clear/monitor key (X) turns off keypad lock.
Low power transmit*	Changes the transmit power from mid or high to low. Pressing the key again returns the transmit power to the preprogrammed level.
Monitor*	Conventional mode only. Turns monitor on and off.
Night use*	Turns night operation mode on and off.
Preset calls	Sends a trunking preset call, changes to another trunking network or to a conventional channel. If the radio is in conventional mode when a trunking preset call is selected, the call will proceed. Once the call is complete and has been cleared down, the radio will return to conventional mode if a conventional channel is selected on the 16-way selector.
Volume control*	Controls volume in handset mode.

Keypad functions

Key	Key name	Function
	despatcher	Short press: Send a callback request to your despatcher (trunking mode only).
	queue	Short press: Access the call queue (trunked mode only). Long press: Display received status call.
	DTMF	Short press: Enter DTMF over dialling mode*.
	clear/monitor	Short press: Clear the current entry. Long press: Turn monitor on and off** (conventional mode only).
	enter	End an entry or make a selection.
	left/star	Left arrow: Arrow key when scrolling. Star: For call string and DTMF over dialling.
	hash/right	Hash: For terminating and confirming string entries (in trunking mode) and for DTMF over dialling. Right arrow: Arrow key when scrolling.

*If this feature was preprogrammed.

**The radio may be programmed so that monitor cannot be activated. However, a short press will always turn off monitor, if it is active.

Summary of radio indicators

LED:

 steady red	 steady green	 steady amber
 flashing red	 flashing green	 flashing amber

Sound:

pitch:	 high	 medium	 low
duration:	 short	 long	... sound repeats

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

	Display	Sound	Meaning
Basic operation	 flashing		The radio is transmitting.
	 flashing		The radio is transmitting at low power.
	 medium + 		Low power transmit is active.
	 slow + 		Handset mode is active.
			A function has been turned on.
			A function has been turned off.
			 x 3
		 1.5 sec	The radio has stopped transmitting because the transmit timer has expired. Release the PTT key before transmitting again.
Trunking mode	 slow + 		The radio has access to a network and is ready to make or accept calls.
	 medium +  flashing		The radio does not currently have access to a network. It is attempting to find a site it is authorised to use, or is out of range of a network signal.
		 x 5	The current operation has been cancelled at your request.
	WAIT		 every 1.5 sec

(continued on next page)

	Display	Sound	Meaning
Trunking mode (cont'd)	 + GO	 or 	A traffic channel has been allocated for a call you have made or received. You can proceed with the conversation.
	 + GO		The radio is operating on a traffic channel.
	 fast + caller's ID	 warble ...	A call has been received but not answered. You can return the call by giving a brief press of the PTT.
		 x 3	Your call time is almost up. In 10 seconds, you will be disconnected and the network will clear down the call.
	ENGAGED	 ...	The system cannot contact the party you are attempting to call because they are busy. Try again later. If you are repeatedly unable to make the call, contact your fleet manager.
	QUEUED		The network has queued the call you are attempting to make. Your call will be connected as soon as possible.
	SYS BUSY		The network is busy and is unable to handle your call request. Try again later.
	NOT HOME		The party you are calling has their radio switched off, in do not disturb mode or is out of range. Try your call later.
	UNAVAIL		Your radio is not permitted to make the type of call you requested.
	UNOBTAIN		The call you are attempting to make is not valid for your radio. Consult your fleet manager.
ACCEPTED		Your status call, dispatcher callback request or network service request has been accepted.	

	Display	Sound	Meaning
Conventional mode	  + CHAN		Your radio is now operating in conventional mode.
			The channel is busy.
			You cannot transmit because the channel is busy. Wait until it is free to transmit or use a channel that is clear.
	 medium + 		Monitor is active.
Warnings	 slow +  flashing	 every 5 seconds	The battery is low. Recharge or replace the battery as soon as possible.
			The battery is too low to operate the radio. Turn off the radio and recharge or replace the battery.
			The temperature is too high. You should stop transmitting and allow the radio to cool down.

Basic operation

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

Turning the radio on and off and controlling 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 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 characters long, then press the enter key (↵). If you do not know your PIN, consult your system manager or the person who programmed your radio.

The radio will then display the radio's identity, then a message such as **TAIT ORCA RADIO**. The radio will then give two short, medium-pitched beeps, which indicate that the power-up sequence is now complete. How you now use the radio depends on what operating mode it is in.

Operating modes

There are two main modes of operation available on your radio: trunked and conventional.

- In trunking mode, you make calls through the trunking network. You can call other radios in your fleet and, depending on how your network is configured, private automatic branch exchange (PABX) extensions and public switched telephone network (PSTN) numbers.

See pages 21 to 37 for more information on operating in trunking mode.

- In conventional mode, your radio communicates directly with other radios over standard channels or via a repeater. If your radio is in conventional mode, the message **CHAN** will appear in the upper lefthand corner.

See pages 38 to 40 for more information on operating in conventional mode.

Battery indicator

The battery indicator in the lower lefthand corner of the display shows how charged the battery is. When the battery is low, the low battery symbol () will flash, the radio will emit a low-pitched beep every five seconds and the LED indicator will slowly flash red. When the battery gets too low, the radio will emit a long, low-pitched beep and stop operating. You should turn off the radio immediately.

See pages 47 to 50 for recharging instructions.

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

Transmitting and receiving

Making and receiving calls in trunking mode is described on pages 24 to 36. Making and receiving calls in conventional mode is described on page 39.

Once a call is established, proceed with the conversation by pressing the PTT (press-to-talk) key to transmit, and speaking clearly into the radio. While you are transmitting, the LED will glow red and the transmitting symbol () will flash. If you are transmitting at low power, the low power symbol () will flash.

Release the PTT key to hear the other party.

Transmit timer

Your radio is programmed with a transmit timer, which limits the amount of time you can transmit continuously using the PTT key.

If the radio gives three short 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 key before you can transmit again.

Trunking operation

When your radio is operating in trunking mode, all calls are made to a trunking system via a control channel. The trunking system manages a pool of traffic channels.

A typical display upon entry into trunked mode is shown below.



The trunking service icon (Y) indicates whether the radio currently has access to the network. If it is on continuously, your radio is ready to make and accept calls; if it is flashing, your radio does not currently have access to a network. It may be attempting to find a site it is authorised to use, or it may be out of range of a network signal.

BARTS is the label of the string associated with the position on the 16-way selector. The string will be actioned if you press the PTT key, the enter key (↵) or the hash key (#). The labels that are displayed and the strings associated with them are dependent upon how your radio is programmed.

Calls can be made from one radio to another, from a radio to a PABX or PSTN number, or from a PABX or PSTN number to a radio. The setup of a radio-to-radio call is described on page 22.

The features and calls available on your radio in trunked mode depend on how the network is configured. If your radio does not operate as described in this manual, consult your network operator.

Types of calls

The types of calls available for your radio depends on how your radio was programmed. Your network operator can tell you what calls are available for your radio, or they may be listed on the custom settings page on the inside back cover of this manual.

Trunking call setup

For a trunking call between two radios, the calling radio sends a message to the control channel giving the identity of the called radio and the type of call.

The control channel then sets up the call by:

- contacting the other radio; and
- directing both radios to switch to a traffic channel.

The conversation is carried out on the traffic channel.

When the conversation is finished or when the time permitted for the call is up (see “Call time limit” on page 23), the traffic channel will clear down the call and will be available for other calls. The network (or your radio) may also clear down the call if neither caller transmits for some time or moves out of range.

Call time limit

The length of your call may be limited by the network or by your radio.

Your radio may be programmed to display the call duration while it is in progress. If so, call duration will be displayed as either:

- time remaining for the call; or
- time already used for the call.

In the display below:



Time remaining for the call is 9 minutes and 54 seconds.
The call time limit will always be displayed at double-height.

When the radio gives three short medium-pitched beeps, your call time is almost up. Ten seconds later, you will be disconnected and the network will clear down the call. You will hear five short, low-pitched beeps.

The network will also clear down the call if there is no activity on the traffic channel for a network-specific period of time or if one of the callers move out of range.

Receiving calls

When you receive a call, the radio will display the caller's identity (see page 25) and respond in one of two ways, depending upon the system configuration and how the radio is programmed.

- The radio will give a medium-pitched warble and automatically accept the call. The LED will glow green to indicate that the radio has switched to a traffic channel. The display will read **GO**. Press the PTT to proceed with the call.

This is known as on-air call setup.

- The radio will give a long high-pitched tone every 1.5 seconds. Accept the call by giving a brief press of the PTT. The display will read **WAIT** until a traffic channel has been allocated. The radio will then give two short medium-pitched beeps, the LED will glow green and the display will read **GO** to indicate that the radio has switched to a traffic channel. Proceed with the call.

This is known as full off-air call setup, or FOACSU.

In either case, if you do not wish to accept the call, give a short press of the clear key (✕) or change to another position on the 16-way selector.

When you have finished your conversation, either:

- give a short press of the clear key (✕); or
- change to another position on the 16-way selector.

This will indicate to the network that you have finished the call, and it can then clear down the traffic channel for other calls. The radio will give five short, low-pitched beeps and the radio will return to the idle state.

Caller's identity display

When you receive a call, the caller's identity will be displayed in one of the following ways.

- If the caller's identity is a label such as **CAR9**, the caller is one of your preset numbers with a label preprogrammed into your radio.
- If the caller's identity is a number such as **208**, the caller is either one of the preset numbers preprogrammed into your radio that does not have a label, or is in the same fleet as your radio but is not preprogrammed as a preset call for your radio.
- If the caller's identity is **O FLEET**, the caller is not in the same fleet as your radio and is not preprogrammed.
- If the caller's identity is **PHONE**, the caller is calling from the PSTN (public switched telephone network).
- If the caller's identity is **PABX**, the caller is calling from the PABX (private automatic branch exchange).

The message displayed may include:

- a **G** for a group call; and
- an **E** for an emergency call.

For more information on group and emergency calls, see below.



For example, the display above indicates that the call received is a group call from car 9.

Group calls

Your fleet may be set up up with users allocated to several groups, which may sometimes be changed by the network.

The call you receive may be a group call. If so, the caller will broadcast a message to all members of your group and there is usually no need to reply.

The call will automatically be cleared down when the caller is finished. However, you can leave the call at any time by giving a short press of the clear key (✕) or changing to another position on the 16-way selector.

Status calls

A status call is a message from another caller telling you their current activity.

If you receive a status call, the call will automatically be queued, since a response is not expected.

See “Call queuing” on pages 34 to 36 for information on call queuing and viewing your status message.

Making calls

There are three ways to establish a call.

- Enter the number of the required party using the keypad and press the enter key (↵) or the hash key (#).

For more information on what you can dial, see “Dialling options” starting on page 29.

- Each position on the 16-way selector can have a preset call assigned to it. Change to the position the call you wish to make is assigned to and briefly press the PTT.
- The radio can also have two function key preset calls, which are assigned to one of the function key positions. Press the assigned function key to send the call.

The control channel will then set up the call.

Call setup

While the control channel is setting up the call, the radio will display the message **WAIT**. Once the called party has answered, you will hear either:

- a medium-pitched warble; or
- two short medium-pitched beeps.

Depending upon how the trunking system and radio are configured, you may also hear a telephone-like ringing tone.

The display will read **GO** and the LED will glow green to indicate that the radio has switched to a traffic channel. You can proceed with the call.

When you have finished your conversation, either:

- give a short press of the clear key (✕); or
- change to another position on the 16-way selector.

This will indicate to the network that you have finished the call, and it can then clear down the traffic channel for other calls. The radio will give five short, low-pitched beeps and will revert to the idle state.

Calls not connected

If your call is not connected, your radio will respond with one of the following messages.

- If the display reads **ENGAGED** and the radio gives a series of long, low-pitched beeps, the party you are calling is already busy. Try your call again later.
- If the display reads **QUEUED** and the radio gives a long, low-pitched beep, the party you are calling has queued your call. Wait for the other party to call you back, or try your call again later.
- If the display reads **SYS BUSY** and the radio gives a long, low-pitched beep, the system is too busy to handle your call. Try your call again later.
- If the display reads **NOT HOME** and the radio gives a long, low-pitched beep, the party you are calling has their radio switched off, in do not disturb mode or is out of range. Try your call again later.
- If the display reads **WAIT** and the radio gives a series of long, medium-pitched beeps, the system is not able to connect your call straight away but will queue it and connect it as soon as possible.
- If the display reads **UNAVAIL** and the radio gives a long, low-pitched beep, your radio is not permitted to make the type of call you requested.
- If the display reads **UNOBTAIN** and the radio gives a long, low-pitched beep, the number you called is not supported.

Dialling options

How you dial calls depends on how your radio was preprogrammed and how the trunking network is configured. Check with your network operator if you are not sure what calls you can dial.

The dialling sequences described are the most common setups.

While dialling, you can cancel call setup by giving a short press of the clear key (✕), changing to another position on the 16-way selector or dialling the sequence *#. Note that the *# option is not available when your radio has been preprogrammed for DTMF overdialling.

To send the string you have dialled, press the enter key (↵) or the hash key (#).

Radio-to-radio calls

To call a radio in your own fleet:

- dial a number from 20 to 89 or 200 to 899, then
- press the enter key (↵) or the hash key (#).

Group calls

Your fleet may be setup up with users allocated to several groups. Your radio can subscribe to up to eight groups for each network you are operating on.

To call a group in your own fleet:

- dial a number from 90 to 98 or 900 to 998, then
- press the enter key (↵) or the hash key (#).

You can also modify the properties of the group call you are making using the following codes:

- code 1 sends a conference call to the group;
- code 11 sends a broadcast call to the group;
- code 8*1 sends a priority conference call to the group;
and

- code 9*1 sends an emergency conference call to the group.

To dial group calls using these codes:

- dial *code *number, then
- press the enter key (↵) or the hash key (#),

where *code* is one of the codes described above and *number* is the number of the group you wish to call.

For example, to send a conference call to group 92, dial *1*92↵, and to send a priority conference call to group 92, dial *8*1*92↵.

Priority calls

If you wish your call to take priority over other calls being made on the trunking network, dial:

- *8*number, then
- press the enter key (↵) or the hash key (#),

where *number* is the number of the radio unit or group you are calling.

Emergency call

When you send an emergency call, the radio sends a message to alert the party you are calling, usually a dispatcher, that you are in distress. You may still need to inform them of your location and any other relevant information.

On most networks, emergency calls pre-empt other types of calls, and so if all traffic channels are busy, an existing call will be cleared down so the emergency call can proceed.

To dial an emergency call:

- dial 999, then press the enter key (↵) or the hash key (#); or
- dial *9, then press the enter key (↵) or the hash key (#).

Dialling one of these sequences will send an emergency call to the prime emergency address that was preprogrammed for your radio.

If you wish to send an emergency call to another address, dial $\star 9 \star$ *number*, then press the enter key (↵) or the hash key (#), where *number* is the radio unit number you wish to send the emergency message to.

One of the preset calls on your radio may be an emergency call. If so, it will be assigned to a function key setting. Press the assigned function key to make the emergency call.

Preset calls

Your radio can be preprogrammed with up to 20 preset calls.

To make a preset call:

- dial 0 *nn*, then
- press the enter key (↵) or the hash key (#),

where *nn* is the preset call number in two-digit format.

For example, to send preset call 17, dial 017, then press the enter key (↵) or the hash key (#). To send preset call 0, dial 000, then press the enter key (↵) or the hash key (#).

Preset calls numbered 1 to 16 can also be made by switching to the corresponding position on the 16-way selector and pressing the PTT.

Status calls

Status calls send the called party a brief message such as “enroute”, “at lunch” or “at home” without setting up a voice conversation.

To make a status call:

- dial $\star 0$ *ss* \star *number*, then
- press the enter key (↵) or the hash key (#),

where *ss* is the two-digit status number and *number* is the number of the party you wish to call. If you wish to send the

status call to your despatcher, simply dial:

- *0 ss, then
- press the enter key (↵) or the hash key (#).

One or more of the preset calls on your radio may be status calls. To make preset status calls, dial the call as you would a normal preset call.

The network will return a message confirming that your status call has been received. When this message is received, the display will read **ACCEPTED** and the radio will give a two-second-long high-pitched beep.

Despatcher callback requests

If your fleet has a despatcher, you can send a message to the despatcher requesting they call you back.

There are two ways to send a despatcher callback request.

- Dial *0, then press the enter key (↵) or the hash key (#).
- Give a short press of the despatcher key (D).

The network will return a message confirming that your despatcher call has been received. When this message is received, the display will read **ACCEPTED** and the radio will give a two-second-long high-pitched beep.

To send a callback request to another despatcher:

- dial *0* *number*, then
- press the enter key (↵) or the hash key (#),

where *number* is the other despatcher's radio unit number.

If you wish to cancel a callback request you have made:

- dial #0, then press the enter key (↵) or the hash key (#) if you made the request to your own despatcher; or
- dial #0* *number*, then press the enter key (↵) or the hash key (#), where *number* is the other despatcher's radio unit number.

Interfleet (out-of-fleet) calls

Consult your network operator on how to dial interfleet calls.

PSTN and PABX calls

For calls to the public switched telephone network (PSTN) or to a private automatic branch exchange (PABX), you may need to first dial a code. If you are unsure whether your system requires a code or what the code is, consult your fleet manager.

To make a call to a PSTN number, dial *code number*, where *code* is the code specified by your fleet manager, and *number* is the PSTN number you wish to call. For example, to make a call to PSTN number (03) 584 1212 when *code* is 0, dial 0035841212, then press the enter key (↵) or the hash key (#).

To make a call to a PABX extension, dial *code number*, where *code* is the code specified by your fleet manager and *number* is the PABX extension you wish to call. For example, to make a call to PABX extension 8909 when *code* is 3, dial 38909, then press the enter key (↵) or the hash key (#).

Be sure to press the PTT key when you are speaking.

Re-establishing a call

When a call has been ended and no other function is active, your radio may be preprogrammed to display the identity of the last party you were talking to. If so, you can easily re-establish the call using last number redial, callback or call queuing. The last number redial function is used for outgoing calls, and callback and call queuing are for incoming calls.

Last number redial

If you initiated the call, the called party's identity is stored and displayed. Redial the number by pressing the enter key (↵).

Callback

If you received the call, the caller's identity may be displayed, together with the message **CALLBACK**. If so, you can call them back by pressing the enter key (↵).

If you do not wish to return the call, give a short press of the clear key (✕). The caller's identity will be deleted, and the identity of the last party you called will be displayed. If you wish to redial this call, press the enter key (↵).

If you have missed a call from another radio, the caller's identity will be displayed, the LED will rapidly flash amber and the radio will periodically give a medium-pitched warble. You can call back the person who called you by pressing the enter key (↵).

Callback does not operate for PABX and PSTN calls.

Call queuing

If you are unable to answer your incoming calls immediately, your radio may be preprogrammed to store up to 20 calls so you can call back later.

All unanswered calls will normally be queued whether call queuing is on or off.

If you wish to queue all your incoming calls, give a short press of the queue key (ℵ). The message **QUE** will appear in

the display, and while call queuing is on, all radio messages will be displayed in the second row of the display.

You can also activate call queuing by dialling the string *48, then pressing the enter key (↵) or the hash key (#).

When call queuing is on, incoming calls will automatically be added to the call queue and displayed, together with how many calls are in the call queue. The call displayed will be the most recent call.



For example, the display above shows that **BARTS** is the first of two calls.

To return the call, press the enter key (↵). If you do not wish to return the call, you can either:

- delete the call by giving a short press of the clear key (✕); or
- use the scroll keys (◀/▶) to scroll through the list of queued calls until you find the call you wish to return.

If the message reads **SCL** rather than **CL**, the call displayed is a status call. Give a long press of the queue key (∩) to read the status message, and give a short press of the clear key (✕) to clear the message. If there are other calls in the call queue, the radio will return to the call queue. If the status call was the only call in the call queue, the radio will revert to the state it was in before receiving the status call.

When you return a call and the call is established successfully, the call will be deleted from the queue. If the call is not established successfully, the call will remain in the call

queue. When all calls in the call queue are called back successfully or deleted from the queue, the radio will revert to normal operation until another call is received and queued.

Incoming calls will be queued as long as call queuing is active. To cancel call queuing, give a short press of the queue key (↵). You can also cancel call queuing by dialling the string #48, then pressing the enter key (↵) or the hash key (#).

Selecting another trunking network

Your radio may be programmed to operate on up to four trunking networks. See your network operator if you are not sure if your radio has this capability.

To change to a new network:

- change to the assigned position on the 16-way selector and press the PTT; or
- dial a preset number that has another network assigned to it; or
- dial ***70 n**, then press the PTT, the enter key (**↵**) or the hash key (**#**), where *n* is the number of the network, which will be from 1 to 4.

When the new network has been selected, the radio will give two short medium-pitched beeps and will display the new network's name.

Conventional operation

Your radio may be preprogrammed with up to 10 conventional channels.

If programmed, select a conventional channel by:

- changing to the assigned position on the 16-way selector; or
- key in the desired number (101 to 110) and press the enter key (↵) or the hash key (#).

In conventional mode, you communicate directly with other radios or via a repeater rather than through the trunking system. A typical display upon entry into conventional mode is shown below.



CHAN indicates that the radio is in conventional mode, and **CONV109** is the name of the current channel.

Subaudible signalling

Your radio may be also be programmed with subaudible signalling that segregates your group from others using the same channels. If so, you will only hear traffic from radios within your own group and so will have some degree of privacy.

Monitor

The monitor facility allows you to override the subaudible signalling so you hear all conversations on a channel, including those outside your group.

Monitor can be turned on and off by a short press of the monitor/clear key (✕), or it may be assigned to a function key.

While monitor is active, the monitor symbol (🔊) will appear in the display.

Receiving calls

Your radio will remain quiet until there is activity on the currently selected channel. When you hear your own call sign, respond promptly by pressing the PTT key and replying. You can then proceed with your call (see “Transmitting and receiving” on page 19).

Making calls

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

When the channel is free, press the PTT and speak clearly into the radio. Identify yourself and the party you are calling using the call signs you have been assigned. While you are transmitting, the LED will glow red and the transmitting symbol (📡) will flash. If you are transmitting at low power, the low power symbol (📡) will flash. Release the PTT key when you have finished talking.

Exiting conventional mode

To exit conventional mode, either:

- select a position on the 16-way selector that does not denote a conventional channel;
- enter two or three numbers that do not correspond to a conventional channel, then press the PTT, the enter key (↵) or the hash key (#); or
- if the 16-way selector is on a position that is not a conventional channel, give a short press of the clear key (✕).

The radio will then return to operating on the trunking network it was operating on before entry into conventional mode.

DTMF overdialling

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.

If you simply wish to call a PABX or PSTN number, follow the instructions for making such calls on page 33. If, however, once you have set up such a call you wish to send control codes (e.g. telebanking), use DTMF overdialling.

You can only use DTMF overdialling in trunked mode.

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.

To use DTMF overdialling while the radio is operating on a trunking network, first set up a call to the device you want to send control codes to, which is usually a PABX extension or PSTN number.

Once the call is connected:

- Give a short press of the DTMF key (). The message **DTMF** and the DTMF overdialling symbol () will appear in the display.

- Begin dialling the control codes required.

When you are finished entering control codes, give a short press of the DTMF key (☎) to exit DTMF over dialling mode.

When you are finished with your call, clear down the call by either:

- press the clear key (✕); or
- change to another position on the 16-way selector.

The call will then be cleared down.

Example: Accessing telebanking

In this example, the code the trunking system requires for making a PSTN call is 0 and the telephone banking systems phone number is 5487777.

To access telebanking:

- Dial 05487777 (the code plus the PSTN number).
- Press the enter key (↵).
- When the trunking system has set up the call (the display reads **GO**), and the telebanking system has answered, give a short press of the DTMF key (☎) to enter DTMF over dialling mode.
- Start entering the control codes required by the telebanking system.

So if your telebanking system requires you to enter your user code (e.g. 12345678), followed by the hash key, you would dial 12345678# and wait for the telebanking system's response.

When you are finished entering control codes, give a short press of the DTMF key (☎) to exit DTMF over dialling mode.

If you are then finished with the call, clear down the call as described above.

Example: Calling an automated attendant

An automated attendant is an automated answering service that requests the caller to dial the extension number they wish to call. If an organisation's PABX extensions cannot be dialled directly by outside callers, an automated attendant can transfer external phone calls to those extensions.

In this example, the code the trunking system requires for making a PSTN call is 0, the automated attendant's phone number is 5487777, and the extension the caller wishes to call is 8866.

To call extension 8866:

- Dial 05487777 (the code plus the PSTN number).
- Press the enter key (↵).
- When the trunking system has set up the call (the display reads **GO**), and the automated attendant has answered, give a short press of the DTMF key (☎) to enter DTMF overdialling mode.
- Enter 8866.

When your call is connected, proceed with the conversation as you would for a normal PSTN or PABX call. You can then give a short press of the DTMF key (☎) to exit DTMF overdialling mode as control codes are no longer required.

When you are finished with the call, clear down the call as described on page 42.

Other features

Note that some features are not permitted in some countries.

Backlighting

Control of backlighting can be assigned to a function key. If programmed, 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.

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.

If assigned to a function key, pressing the key toggles night use on and off.

Do not disturb

Do not disturb only works in trunking mode.

Do not disturb allows you to ignore incoming calls while still making outgoing calls as usual.

To activate do not disturb, dial the string *49, then press the enter key (↵) or the hash key (#). To cancel do not disturb, dial the string #49, then press the enter key (↵) or the hash key (#).

The radio will give a short medium-pitched beep when do not disturb is turned on, and a short low-pitched beep when it is turned off. While do not disturb is active, the message **QUIET ON** will appear in the upper righthand corner of the display, and any strings you dial will appear in the lower righthand corner.

Do not disturb can also be assigned to a function key. If so, pressing the key toggles do not disturb on and off.

Dynamic power control

Dynamic power control optimises the radio's power use by reducing the transmit power in high signal strength areas.

If assigned to a function key, pressing the key toggles dynamic power control on and off.

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. However, ensure that while using the radio in handset mode, you do not hold the speaker pressed against your ear and the antenna does not touch your body.

Press the assigned function key to activate handset mode. The handset symbol (📞) will appear in the display.

Handset mode will automatically turn off after a preprogrammed period of inactivity. You can also turn off handset mode by pressing the function key.

Volume override

Your radio may be preprogrammed so that the function keys are used as volume up and down keys while in handset mode.

Keypad lock

The keypad lock prevents accidental operation by locking the keypad so that only a certain set of keys can be used. What keys are locked depends on how your radio was programmed, but the clear key (✕) can never be locked.

If assigned to a function key, pressing the key activates the keypad lock. Deactivate keypad lock by pressing the clear key (✕).

The normal function of the clear key (✕) will be locked out while keypad lock is active.

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.

If assigned to a function key, pressing the key changes the transmit level from mid or high to low. Pressing the key again returns the transmit power to the preprogrammed level.

When low power transmit mode is active, the low power transmit mode symbol (ℒ) will appear in the display. When you transmit, the symbol will flash.

The low power transmit mode symbol (ℒ) will also flash when you transmit on a channel preprogrammed for low power.

Clear

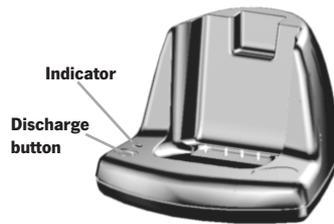
One of the function key settings can be programmed to clear the last request to the trunking system. For example, if you have just pressed the PTT to set up a call, pressing the assigned function key will cancel the call.

The function key will only act as a clear key in trunking mode.

Charging the battery

The battery will last about eight hours under normal usage, although this depends on the time spent transmitting and the type of battery used.

Battery state is indicated in the radio's display. When the battery is low, the low battery symbol () will flash, the radio will emit a low-pitched beep every five seconds and the LED will slowly flash red. 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 stop operating. Turn off the radio immediately.



Your radio comes with a choice of three chargers: a desktop fast charger (left), a desktop trickle charger or a multi-charger. The trickle

charger does not have a discharge button, but is otherwise identical in appearance to the fast charger. The multi-charger is made up of six fast chargers and can be used on a desktop or mounted on a wall. Instructions for using the fast charger also apply to the multi-charger.

The battery can be recharged attached to the radio or as a separate unit.

Charging the battery using the fast charger

The fast charger will charge the battery when the radio is on, but the battery will charge faster if the radio is turned off.

WARNING! The battery pack must be fully charged before first use, and it is highly recommended that the battery be put through a condition/analyse cycle before first use.

Insert the battery/radio into the charger. The indicator will glow amber for three seconds, then red. If the indicator does not glow red, make sure the battery/radio is seated properly and the charger is properly plugged in. If the battery is too hot or too cold, the indicator will remain amber until the battery temperature is within the safe range for recharging (5°C to 40°C).

Charge times are:

- up to 1 1/2 hours for the 1100 mAh NiCd battery;
- up to 2 hours for the 1500 mAh NiCd battery; and
- up to 2 1/2 hours for the NiMH battery.

Once the battery is charged, the indicator will change from red to green. Leaving the battery in the charger once it is charged does not damage the battery.

Fast charger indicators

Indicator	Meaning
steady red	battery charging
steady green	battery charged
steady amber	charge suspended until battery temperature is within correct range
flashing red	battery not seated properly in the charger, contacts dirty or battery faulty
flashing green	battery being discharged
flashing amber	battery below optimum capacity

Charging the battery using the trickle charger

The trickle charger is not recommended for NiMH battery packs as they can take up to 24 hours to charge and the overall lifetime of your battery may be reduced. Use a fast charger instead.

To charge the battery pack using the trickle charger, make sure the radio is turned off. Insert the battery/radio into the

charger. Make sure the indicator on the charger glows red. If the indicator does not glow red, make sure the battery/radio is seated properly and the charger is properly plugged in. The indicator will remain red until the radio is removed from the charger.

The battery will be charged in about 16 hours. Leave the battery in the charger until you next need to use the radio; however, leaving the battery in the charger for longer than 24 hours is not recommended.

Preserving battery life

- Condition your battery weekly using the Tait Orca fast charger.
- Avoid storing the battery for extended periods without first fully recharging it. For best results, store the battery detached from the radio.
- Avoid repeatedly recharging the battery when it has only had a small amount of use.
- Turn the radio off when it is unattended for long periods.
- Use only a Tait-recommended charger.
- 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 pack contacts to become short-circuited.

Conditioning the battery with the fast charger

For best performance, the battery should be conditioned weekly using the fast charger. Conditioning the battery takes about eight hours, depending on how much use it has had.

To condition the battery, turn off the radio. Insert the battery/radio into the fast charger then press the discharge button until the indicator flashes green. The indicator will

flash green while the battery is being discharged. Once the battery is discharged, it will charge normally.

Conditioning/analysing the battery with the fast charger

Conditioning/analysing the battery with the fast charger will put the battery through a number of conditioning cycles and will check the battery's capacity on the last cycle.

To condition/analyse the battery, turn off the radio. Press and hold the discharge button while inserting the battery/radio. Continue holding the discharge button; the indicator will glow amber for three seconds, and then will flash green. When the indicator flashes green, release the discharge button.

The condition/analyse cycle will take approximately 16 hours.

Once charged, the charger's indicator will glow green if the battery is in good condition. The indicator will flash amber if the battery is below its optimum capacity; consult your Tait dealer.

Disposing of used nickel-cadmium batteries

NiCd batteries contain a small amount of the metal cadmium, which can produce potentially toxic waste if not disposed of properly. When no longer in use, contact your Tait dealer for recycling details.

Basic maintenance

Your Tait Orca handportable 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 handportable, review basic operation and check the following items:

- Is the battery firmly attached to the back of your radio?
- Is the battery sufficiently charged?
- Is the battery charger working properly?
- Is the antenna damaged?

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

Accessories

Tait offers a large range of accessories to increase communication efficiency with your Tait Orca handportable. Most of the accessories available are listed below, and you can contact your nearest Tait dealer for a more detailed list.

- Antennas
- Audio accessories
 - Lapel speaker microphones
- Carrying accessories
 - Belt clip
 - Heavy duty carry case
 - Heavy duty holster
- Batteries
 - 1100 mAh NiCd battery pack
 - 1500 mAh NiCd battery pack
 - 1850 mAh NiMH battery pack
- Battery chargers
 - Desktop fast charger
 - Desktop trickle charger
 - Multi-charger

Fitting an accessory

To fit some accessories to the radio, you will need to remove the rear accessory cover. Remove the battery, then insert the end of a key underneath the bottom edge of the accessory cover. Lift to remove the cover.

When attaching or removing an accessory, ensure that the lever is in the upright position. Once the accessory is in position, rotate the lever 90 degrees counterclockwise to lock it in place.

Specifications

Size L x W x H (including 1100 mAh NiCd battery)	44 mm x 62 mm x 153 mm
Typical weight (including 1100 mAh NiCd battery)	520g
Battery voltage	7.5 V nominal
Transmitter power	136-174 MHz: 5 W 174-530 MHz: 4 W
Receive sensitivity	better than -117 dBm
Audio power	>0.5 W into 16 ohms
Antenna connector	SMA

For full details of the technical specifications of the radio, refer to the *Service Manual* or to your nearest Tait dealer.

Tait Electronics Ltd Software Licence Agreement

This legal document is an Agreement between you (the "Licencee") and Tait Electronics Limited ("Tait"). By opening this product package and/or using the product you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement, do not open the product package and immediately return the unopened product package to Tait. If you open the product package, that will be deemed to be acceptance of the terms of this licence agreement.

Licence

In consideration of the payment of the Licence Fee, which forms part of the price you paid for products you acquired from Tait or its subsidiary or agent (the "products") and our willingness to be bound by the terms of this agreement, Tait grants to you as Licencee the non-exclusive right to use the copy of a Tait software program included in the products (the "Software").

In particular, the Licencee may use the program on a single machine and if the software is supplied on a diskette, the licensee may:

- (a) Copy the program into any machine readable or printed form for backup purposes in support of your use of the program on the single machine (certain programs, however, may include mechanisms to limit or inhibit copying; they are marked "copy protected"), provided the copyright notice must be reproduced and included on any such copy of the Software.
- (b) Merge it into another program for your use on the single machine. (Any portion of this program merged into another program will continue to be subject to the terms and conditions of this Agreement.)

The Licencee may not duplicate, modify, reverse compile or reverse assemble the Software in whole or part.

Title to software

This agreement does not constitute a contract of sale in relation to the Software supplied to the Licencee. Notwithstanding the Licencee may own the magnetic or other physical media on which the Software was originally supplied, or has subsequently been recorded or fixed, it is a fundamental term of this Agreement that at all times title and ownership of the Software, whether on the original media or otherwise, shall remain vested in Tait or third parties who have granted licences to Tait.

Term and termination

This Licence shall be effective until terminated in accordance with the provisions of this Agreement. The Licencee may terminate this Licence at any time by destroying all copies of the Software and associated written materials. This Licence will be terminated automatically and without notice from Tait in the event that the Licencee fails to comply with any term or condition of this Agreement. The Licencee agrees to destroy all copies of the Software and associated written materials in the event of such termination.

Limited warranty

The Software is supplied by Tait and accepted by the Licencee "as is" without warranty of any kind either expressed or implied, including but not being limited to any implied warranties as to merchantability or fitness for any particular purpose. The entire risk as to the quality and performance of the Software vests in the Licencee. Should the Software prove to be defective, the Licencee (and not Licensor or any subsidiary or agent of the Licensor) shall assume the entire cost of all necessary servicing, repair or correction. Tait does not warrant that the functions contained in the Software will meet the Licencee's requirements or that the operation of the Software will be uninterrupted or error free. However Tait warrants that the diskettes if any on which the Software is supplied to the Licencee shall be free from defects in material and workmanship under normal use and service for a period of ninety (90) days from the date of delivery to the Licencee.

Exclusion of liability

Tait's entire liability and the Licencee's exclusive remedy shall be:

1. The replacement of any diskette not meeting Tait "limited warranty" and which is returned to Tait or an authorised agent or subsidiary of Tait with a copy of the Licencee's purchase receipt; or
2. If a diskette is supplied and if Tait is unable to deliver a replacement diskette that is free from defects in material or workmanship, the Licencee may terminate this Agreement by returning the Software to Tait.
3. In no circumstances shall Tait be under any liability to the Licencee, or any other person whatsoever, for any direct or consequential damage arising out of or in connection with any use or inability of using the Software.
4. Tait warrants the operation of the Software only with the operating system for which it was designed. Use of the Software with an operating system other than that for which it was designed may not be supported by Tait, unless otherwise expressly agreed by Tait.

General

The Licencee confirms that it shall comply with the provisions of law in relation to the Software.

Law and jurisdiction

This Agreement shall be subject to and construed in accordance with New Zealand law and disputes between the parties concerning the provisions hereof shall be determined by the New Zealand Courts of Law. Provided however Tait may at its election bring proceedings for breach of the terms hereof or for the enforcement of any judgement in relation to a breach of the terms hereof in any jurisdiction Tait considers fit for the purpose of ensuring compliance with the terms hereof or obtaining relief for breach of the terms hereof.

No dealings

The Licencee may not sublicense, assign or transfer the licence or the program except as expressly provided in this Agreement. Any attempt otherwise to sublicense, assign or transfer any of the rights, duties or obligations hereunder is void.

No other terms

The Licencee acknowledges that it has read this agreement, understand it and agree to be bound by its terms and conditions. The Licencee further agrees that this is the complete and exclusive statement of the agreement between it and Tait in relation to the Software which supersedes any proposal or prior agreement, oral or written and any other communications between the Licencee and Tait relating to the Software (LS-589).