

Operator's Manual



T2040 Series II

TAIT ELECTRONICS LIMITED

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 nonexclusive 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 Licencee 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. Not withstanding 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 Licences requirements or that the operation of the Software will be uninterrupted or error free. However Tait warrants that the diskets 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 Licences exclusive remedy shall be:

- The replacement of any diskette not meeting Tait "limited warranty" and which is returned to Tait or an authorized agent or subsidiary of Tait with a copy of the Licences purchase receipt; or
- If a diskette is supplied and if Tait is unable to deliver a replacement diskette which is free from defects in material or workmanship, the Licencee may terminate this Agreement by returning the Software to Tait.
- 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

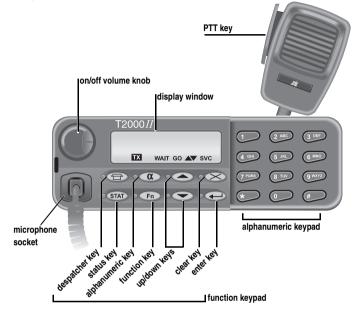
The Licencee acknowledges that it has read this agreement, understand it and agree to be bound by its terms and conditions. The Licencee further agrees that this is the complete and exclusive statement of the agreement between it and Tait in relation to the Software which supersedes any proposal or prior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

Contents

Introduction	5
Safety Warnings	5
T2040// Controls and Indicators	6
Keypad Functions	
Keypad Indicators	7
Display Window Indicators	
Display Window Indicators	7
Basic Operations	
Switching the Radio On and Off	
Volume Control	
Checking Network Access	
Making a Call	
Call Setup and Transmission 1	
Transmit Timer	
Requesting a Call from your Despatcher 1	
Unanswered Calls	
Returning an Unanswered Call 1	
Receiving a Call	
Group Calls 1	
Re-establishing a Call	
Last Incoming Caller 1	
Last Called Party 1	
Emergency Operation	
Advanced User Operations 1	
Alphanumeric Entry Mode 1	
Call Queuing	
Changing Trunked Networks 1	
Despatcher Operation 1	
Do Not Disturb	
Economy Mode	
Short Data Messages (SDMs) 1	
Receiving an SDM	
SDM Entry Mode	
Using Alphanumeric Entry Mode	
Sending an SDM 1	
Exiting SDM Entry Mode 1	
Status Calls	
Receiving a Status Call	
Making a Status Call	
3	

Trunking Call Set up and Special Functions	21
Most Common Trunking Call Setup	. 21
MPT1343	. 21
ANN Fleet Calls	. 21
Preset Numbers and Conventional Channels	. 21
Most Common Special Trunking Functions	. 22
Optional Accessories for T2040II Radios	23
Appendix	24
Maintenance	. 24
Troubleshooting	. 24

The Tait T2040II radio is a state-of-the-art mobile radio that provides outstanding communication flexibility in both conventional and trunked mobile radio systems. The T2040II is microprocessor controlled which allows it to be configured to suit your personal needs and those of your fleet, for greater communication effectiveness.



T2040II Control Head

Safety Warnings



Do not allow any part of your body to come within 20cm of the antenna for more than a few minutes while the radio is transmitting, unless there is an intervening metal screen.



Switch the radio off at petrol filling stations.



Switch the radio off in the vicinity of explosive devices (such as in a quarry that uses blasting techniques).



Use of a handheld microphone or a radio while driving could contravene the legislation that applies in your country or state. Please check the vehicle regulations in your own country.

T2040*II* Controls and Indicators

The T2040*II* control head includes the following keys and indicators:

Keypad Functions

The keypad functions are as follows:

	Despatcher	<i>Short press</i> : accesses a preset number (usually your base despatcher). This is a one touch dialling key.
		<i>Long press:</i> if call queuing is enabled, this changes the mode of operation between call queuing and normal mode.
		<i>Long press:</i> if the radio is in despatcher mode, this changes the display from call queuing to normal mode.
STAT	Status	Short press: used to send status calls using alphanumeric label mode, and to select preprogrammed status messages to indicate your own present status (such as "EN ROUTE" or "AT LUNCH").
		Long press: used to access short data message (SDM) entry mode.
α	Alphanumeric	Used to scroll and select or enter alphanumeric labels associated with preset numbers preprogrammed into your radio. It can also be used to view an alphanumeric status label of an incoming status call and to enter and view SDMs.
Fn	Function	<i>Long press:</i> toggles the level of the confidence tones from normal to quiet. At each press, the radio sounds a sample tone at the new level.
		<i>Short press:</i> may function as a one touch dialling key or it may activate or disable an auxiliary device, such as a scrambler or an external alert unit (e.g. car horn).
	Up / Down	Used to scroll through entries in the call queue, or a list of preset number labels or status labels. Also used to scroll through an SDM or to edit an SDM.
\otimes	Clear	Used to end calls, and to clear 'call back' numbers in the queue and the 'do not disturb' facility. It also operates automatically after a period of inactivity determined by the network, or when you put the microphone back on hook.
	Enter	Used to initiate a call and to select items.
*	Star/Hash	Used at the end of dialling sequences and for special operations.
0 to 9 [ABC] to [V	VXYZ]	Used for dialling and for entering alphanumeric data for labels, when the indicator beside the Alphanumeric key is illuminated.

Keypad Indicators

- Indicates that your radio is queuing incoming calls.
- Indicates that your radio is in alphanumeric entry or label selection mode. The indicator flashes when there is an incoming status call with an associated alphanumeric label or when there is an incoming SDM.
- **STAT** Indicates that the displayed call is a status call or an SDM, or that your radio is at present in status label selection mode or SDM entry mode.
- Fn Indicates that either the auxiliary device or mode that is controlled by the **Function** key is currently active.

Indicates that these keys may be used to display another entry in the queue, to

scroll through a list of preset number labels or status labels, to scroll through an SDM or to edit an SDM.

Display Window Indicators

The LCD window provides you with direct visual access to information and messages about the status of your calls and your radio.



Note: Your T2040*II* has the ability to display messages in languages other than English. This option is selected during programming.

Display Window Indicators

- **TX** *Transmit* Your radio is transmitting. This indicator should appear each time you press the PTT key.
- **WAIT** Wait The network is in the process of setting up a call and is not yet ready for you to begin speaking.
- **GO** *Go* Your radio has established a call between you and another party and you are now able to speak to them.



Scrolling Your radio in alphanumeric preset number mode or in status label selection available mode and you are now able to scroll through a list of choices using the **Up** and **Down** keys (

svc Service This indicator has three functions:

On: your radio has access to a network and is ready to make or accept calls.

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

Off. your radio is in conventional mode.

Switching the Radio On and Off

Switch the radio on by rotating the volume knob clockwise to about one third of its maximum setting. You will feel a click as the knob leaves the 'off' position. The control head display then shows a power-up message.

Switch the radio off by rotating the volume knob fully anticlockwise.

Your T2040*II* retains some settings when it is turned off. When you next turn it on, the radio uses these settings.

Volume Control

A long press of the **Function** key ($(_____)$) toggles the confidence tone level between 'normal' and 'quiet'. Press and hold the **Function** key for at least one second to hear a sample tone from the speaker (similar tones are emitted by the radio during normal use¹).

Repeat this action to hear the same tone at the alternative level (normal or quiet), and select your preferred tone level. Adjust the volume knob for comfortable listening.

Note: If the Function key () is programmed to operate an auxiliary device, it may not be able to change the tone level as well.

You may need to finally adjust the volume when you receive your first call.

Checking Network Access

Check that the **svc** indicator appears in the bottom of the display window within a few seconds of power-up.

This shows that your radio has logged on to the network. If the **svc** indicator is flashing, you may be out of the coverage area of your network. If this is not the case consult your Tait dealer.



¹ The T2040II has either the MPT or 'Tait-standard' set of tones available. One set is selected during programming. This manual refers only to the 'Tait-standard' tones.

Making a Call

There are four different ways of making a call using your T2040II:

- 1 Enter the full number of the required party using the alphanumeric keypad and then press either the **Hash** key () or **PTT** key to send the call.
- 2 Enter short dial preset numbers using the alphanumeric keypad and then press the Hash key (()) or PTT key to send the call.
- 3 Use the **Despatcher** key () or **Function** key (). These keys can be assigned preprogrammed numbers and used for one touch calling. The **Despatcher** key () is usually programmed to be your base despatcher.
- 4 Press the Alphanumeric key () to enter alphanumeric mode. Use the Up and Down keys () to scroll through a list of labels, until the label of the required party is shown in the display. Press the Hash key () or PTT key to send the call. (See "Advanced User Operations", on page 14 for more information on alphanumeric dialling.)

Note: The TX indicator illuminates each time you operate the PTT key.

Call Setup and Transmission

You may hear call set-up tones, *pip.. pip.. pip.. pip..*, and the **wait** indicator illuminates. When the called unit rings, the tone changes to *buzz, buzz... buzz, buzz...* If the network accepts your call but cannot connect it immediately, you hear a similar tone to the call setup tone, but lower-pitched, *pip.. pip.. pip.. pip.*, and the **wait** indicator flashes.

When the called party answers, the **WAIT** indicator turns off, the tones stop and the **GO** indicator illuminates. Proceed with the call as follows:

- 1 Lift the microphone off its hook and hold it about 5 cm from your mouth.
- 2 Squeeze the **PTT** key and speak clearly into the microphone. Release the **PTT** key when you have finished talking.
- 3 End the call by placing your microphone back onto its hook or by pressing the Clear key (>>>>).

The network may also end the call if neither you nor the other party transmits for a predetermined time.

Transmit Timer

Your T2040*II* is fitted with a preprogrammed timer to limit the maximum length of transmissions. Your radio sounds five tones, beginning eight seconds before the call is automatically 'cleared down'. You must release the **PTT** key before proceeding.

Requesting a Call from your Despatcher

Note: Your radio needs to be programmed to call your despatcher for this function to operate.

Press the **Despatcher** key (). If the call is accepted, you hear a single high-pitched tone, *peeeeee*, lasting three seconds. This places your call in the despatcher's queue and the despatcher will call you back as soon as possible.

If the call is not accepted, you hear a single low-pitched tone, *brrrrrrr*, and one of the 'call fail' messages is displayed.

Unanswered Calls

If you make a call and receive no reply from the called party within a short time, your radio sounds tones and displays the following messages:

Message displayed	Tone	Called party	Action
ENGAGED	broken low pitched tone	The called party is engaged on another call or does not accept your call.	call again later
NOT HOME	single low pitched tone	The called party's radio is turned off or out of range of the system.	call again later
SYS BUSY (system busy)	single low pitched tone	The network is too busy to handle the call request at this time.	call again later
N/U (number unobtainable)	single low pitched tone	The dialled number you have entered is not supported by the network.	check the number you have dialled

Returning an Unanswered Call

A call which you are unable to answer within a period determined by the network becomes an 'unanswered call'. The ringing tone changes to a high pitched *chirp*. The **DESPATCHER** indicator may illuminate and the number of unanswered calls is shown on the left of the display. The calling party number shows on the right of the display, in the same way as a received call is displayed. Any further calls are now queued.

- 1 Press the PTT key to call the party shown on the display, or
- 2 Use the **Up** and **Down** keys () to scroll through the call list and choose an unanswered call. Press the **PTT** key to make the call.
- 3 To clear an unanswered call from the queue of calls, without calling the party back, scroll through the list of unanswered calls using the Up and Down keys () until that call is displayed, then press the Clear key ().

Receiving a Call

When you receive an incoming call, your radio alerts you with a ringing tone like a telephone and the identity of the calling party is displayed, as follows:

Message displayed	Example	Explanation
Label	VEHICLE7	The calling party is one of the preset numbers with a label programmed in your radio.
Preset number	8	The calling party is one of the preset numbers without a label programmed in your radio.
Identity number	20-89	The calling party is in the same fleet as your radio but is not preprogrammed.
System message	OFLT	Out Of Fleet: the calling party is not in the same fleet as your radio and is not preprogrammed.
System message	PHONE	Call from the PSTN (Public Switched Telephone Network)
System message	PABX	Call from the PABX (Private Automatic Branch Exchange)
G + message		Group call
E +message		Emergency call

Depending on your network and how your T2040*II* is programmed, you can respond to the call as follows:

1 You can accept the call by lifting the microphone off its hook or momentarily pressing the **PTT** key.

You then hear the call set-up tone, *pip.. pip.. pip..*, and the **WAIT** indicator illuminates briefly before the 'call ready' **go** indicator illuminates.

Alternatively, if you do not want to accept the call, press the Clear key (>>) and the call is then cancelled.

2 When your radio receives an incoming call, two short tones, *beep*, *beep*, sound from the speaker and the **GO** indicator illuminates. Answer the call by lifting the microphone off its hook. No further tones will be heard.

Group Calls

If the incoming call is a group call, you hear a single ring and then the caller broadcasts a message to all members of your group. It is not normally necessary to reply.

Re-establishing a Call

When a call has been ended and no other function is active, your T2040*II* displays the identity of the last party called. This enables you to easily re-establish a call.

Last Incoming Caller

Re-establish a call to your last incoming caller as follows:

Note: This option must be enabled during radio programming.

- 1 When an incoming call that you have accepted is terminated, the call-back facility stores the caller's number in a special memory, so that you can return the call. As you hang up, this is shown by the message "CBK", together with the identity of the calling party.
- 2 Briefly squeeze the PTT key. You may hear call set-up tones, *pip.. pip.. pip.. pip..*, and the wait indicator illuminates. When the called unit rings, the tone changes to *buzz, buzz... buzz, buzz ...* When the called party answers, the wait indicator turns off, the tones stop and the Go indicator illuminates.
- 3 Proceed with the conversation, or discard the incoming caller's number by pressing the **Clear** key (

Last Called Party

Re-establish a call to your last called party as follows:

- 1 Your T2040*II* remembers the last number you called (as opposed to the number of a party who called you), and it is displayed when no other function is active.
- 2 To redial this party, press the PTT key.
- 3 You may hear the call set-up tones and you can proceed with the conversation after the **GO** indicator illuminates.

Emergency Operation

Your T2040*II* can be set up to make an emergency call to a preprogrammed party (usually your base or despatcher). This facility may be accessible via a switch fitted externally to the radio.

- 1 To make an emergency call, operate the hidden switch. This will cause no change to the front panel indicators of the T2040*II*, but the radio calls the pre-programmed party. The radio then adopts a transmit/receive cycle which allows the base or despatcher to monitor activity in the vicinity of the radio.
- 2 To remove the radio from emergency mode, turn the radio off and back on, without operating the emergency switch.

Advanced User Operations

Many of the advanced operations detailed in this section must be enabled during programming of the T2040*II*. Consult your Tait dealer to find out which of these features have been enabled in your radio.

Alphanumeric Entry Mode

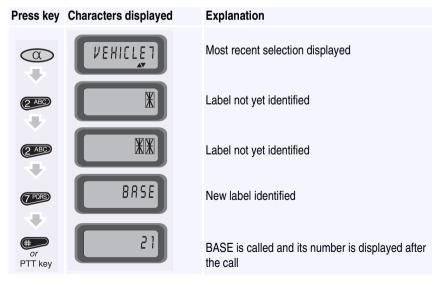
Your T2040*II* can be programmed with up to 100 preset numbers, each of which can be accessed from the keypad using an alphanumeric label of up to eight characters. The label may be a person's name, a radio's name, a group name or an acronym which helps you find the appropriate preset number. Each preset number may contain a complete trunking call setup message, including status calls.

To select a preset number by its alphanumeric label, proceed as follows:

- 1 Press the **Alphanumeric** key () to enter alphanumeric entry mode.
- 2 Use the Up and Down keys () to scroll through the list of labels and choose one for the required preset number, or enter the label of the required preset number, using the keypad.

A star appears in the display as you type each character, until the radio recognises the label. The label is then displayed in full.

- 3 Press the Hash key () to make the call to the selected label.
- **Example:** You wish to call your BASE. The sequence of keystrokes and the corresponding display characters that appear, is as follows:



Call Queuing

If you need to leave your T2040*II* unattended, incoming calls can be saved as 'call-back' messages for you to return later. All calls except group calls, PABX and PSTN calls can be queued, as follows:

1 Enter * 48# using the keypad, or keep the Despatcher key () pressed until the DESPATCHER indicator illuminates.

Incoming calls from other radios are now queued by your radio. The display shows the number of queued calls on the left and the identity of the calling party on the right, in the same way as a received call is displayed. The most recent call is displayed until you scroll through the queue.

- 2 Press the PTT key to call the party shown on the display, or
- 3 Use the **Up** and **Down** keys () to scroll through the calls and choose an unanswered call from the queue. Press the **PTT** key to make the call.
- 5 To disable call queuing, enter #48# using the keypad, or keep the Despatcher key () pressed until the DESPATCHER indicator turns off.

Incoming calls are now received normally. The call queue remains intact and you can reinstate call queuing at any time.

Note: With call queuing enabled, it is still possible to make calls by dialling any number, using the keypad.

Changing Trunked Networks

The T2040*II* can operate in two completely separate trunking networks. To do this, the radio must be programmed with the parameters of each network. You may wish to change networks because you are out of reach of the current network (the **svc** indicator is flashing) or you need to have access to the second trunking network.

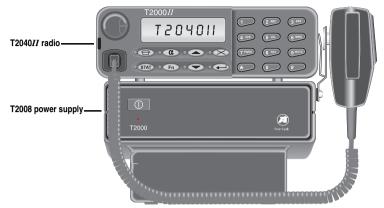
- 1 Press ***700**[#] to display the name of the current trunked network.
- 2 Press *701# to change to network 1 or *702# to change to network 2, or
- 3 If your radio has preset labels programmed to change networks, press the Alphanumeric key (a) and use the Up and Down keys (a) to find the name of the new network. Briefly press the PTT key or the Hash key to (a) initiate the change.

The radio displays the name of the new network, followed by a power-up message.

4 Check to see that the **SVC** indicator appears within a few seconds. If it keeps flashing, you may be out of the coverage area of this network.

Despatcher Operation

The T2040*II* may be used for despatcher operation, mounted on top of its companion T2008 power supply, as shown below.



Note: If your T2040II is to be used as a despatcher, this must be enabled during programming.

- 1 The radio powers up in despatcher mode. To see the normal display give a long press the **Despatcher** key ().
- 2 To return to the despatcher display, give a long press the **Despatcher** key again. The procedure for viewing and returning calls is identical to that outlined in "Call Queuing", on page 15.

Incoming despatcher calls are appended to the bottom of the call queue, whether the radio is in normal or despatcher mode. Normal calls to your radio, group calls, PSTN calls and some other calls are not queued, and request immediate despatcher attention.

If the despatcher's call queue is empty when a call is received, the radio emits a continuous tone, *chirp..... chirp*, which may be stopped by returning the call or by pressing any of the radio's keys.

It is still possible to make calls by dialling any number using the keypad.

Do Not Disturb

If you do not want to accept any calls for a while, the radio can be placed into a 'do not disturb' mode. Note that it is not possible to have call queuing and 'do not disturb' active at the same time. Enabling call queuing automatically clears the 'do not disturb' facility.

 To set 'do not disturb' on, enter *49# using the keypad. The radio displays the message "QUIET".

All calls are now rejected and the calling party is notified that you are currently not to be disturbed. The calls will not be put in the call queue.



- 2 To clear 'do not disturb', enter #49# using the keypad, or press the Clear key (). The "QUIET" message is removed, and the radio returns to the mode it was in previously.
- *Note:* With 'do not disturb' enabled, it is still possible to make calls by dialling numbers using the keypad.

Economy Mode

The T2040*II* incorporates an economy mode, which is activated after a pre-determined period of inactivity. Some internal circuitry and the back-lighting for the display, function and channel keys is turned off, to conserve battery power.

To restore power:

- 1 Operate any of the front panel controls or the **PTT** key.
- 2 If the radio receives a call, the radio is restored to full activity.

Short Data Messages (SDMs)

Your T2040*II* radio can be used to receive and send Short Data Messages (SDMs). For example, numeric reference codes and alphanumeric status text can be sent between T2040*II* radios.

Receiving an SDM

An incoming SDM is put in the call queue and the message "M" appears on the left of the display, with the callers identity on the right. The **STATUS** indicator illuminates and the **ALPHA-NUMERIC** indicator flashes.

- Press the Alphanumeric key () to view the message. If an SDM contains more than eight characters (the amount that can be displayed at one time), the UP and DOWN indicators illuminate, indicating that you can use the Up and Down keys () to scroll through the whole message.
- 2 To clear the message, press the Clear key ().
- 3 Press the Alphanumeric key again to return the radio to its previous state.

Note: An SDM will be displayed only if your radio firmware supports short data messaging.

SDM Entry Mode

Give a long press of the **Status** key ((I)) to enter SDM entry mode. The **STATUS** indicator flashes intermittently and the last message sent is displayed, flashing. If you have not sent an SDM before, a cursor flashes on the right-hand side of the display.

The SDM can comprise a maximum of 25 characters, including a combination of the following:

- numbers (0 to 9)
- Entered using the alphanumeric keypad in the usual way.
- alphabetic characters (A to Z) Entered only while alphanumeric entry mode is active. dash (—) character space ()

Enter the message as follows:

1 Specify the characters to be sent using the radio's alphanumeric keypad.

As you press each key, the corresponding character is added to the right-hand side of the display and the previously-entered characters (if any) are moved one place to the left. The flashing cursor remains at the point of entry on the right-hand side of the display, as shown.

T2000//

- 2 If you make a mistake while specifying the SDM, the following keys can be used to correct the entry:
 - When the UP indicator is illuminated, you can use the Up key () to move the cursor to the previous character (to the left) in the message. Press the key repeatedly to move the cursor to the beginning of the message.

When the first character in the message is selected, the **UP** indicator turns off, to indicate that there is no previous character to select. An audible tone is emitted to confirm this, if the key is pressed.

When the **DOWN** indicator is illuminated, you can use the **Down** key () to move the cursor to the next character (to the right) in the message. Press the key repeatedly to move the cursor to the end of the message.

When the last character in the message is selected, the **DOWN** indicator turns off, to indicate that there is no next character to select. An audible tone is emitted to confirm this if the key is pressed.

- The currently selected character can be exchanged for a different character either by:
 - entering the required numeric character, if the character is a number, or

- specifying the required character and then pressing the **Enter** key (*(*), for an alphabetic character.

In both cases, the cursor is advanced to the next character in the message, or a blank space is inserted if the character is the last in the message, and further characters can be added.

 The currently selected character can be deleted from the message by pressing the Clear key ().

Using Alphanumeric Entry Mode

Alphabetic characters can be included in the SDM as follows:

1 Press the Alphanumeric key () to enter alphanumeric entry mode.

While alphanumeric entry mode is active, the **ALPHANUMERIC** indicator is illuminated and the alphabetic characters marked on the keypad are now available for inclusion in the SDM.

- 2 Specify the required alphabetic character by using the alphanumeric keys, as follows:
 - Pressing a key with three or more alphabetic characters toggles it between the values shown on the keypad and a blank space. For example, a single press of the example, a single press of the presses selects 3, two presses selects D, three presses selects E and four presses selects F. A further press of the key selects a blank space.
 - The provide the set was a constrained by the set was a constr
 - The me key toggles between a 1, a dash and a blank space.
- 3 Once the required character is displayed, select by pressing the Enter key (

The selected character is then moved one place to the left, and the flashing cursor remains at the point of entry, ready to accept the next character.

Alternatively, the displayed character can be selected by pressing a different **Alphanumeric** key. While this method is quicker that using the **Enter** key, it can be used only when the next character does not require the use of the same key.

An alphabetic message can be edited in the same way as a numeric message.

Sending an SDM

- 1 Once the SDM has been entered, press the Star key ().
- 2 Enter the number of the party to whom you wish to send the message, either in the same fleet, or inter-fleet.
- 3 Press the Hash key () to make the call.

The SDM is transmitted and SDM entry mode is exited. The **STATUS** indicator turns off and the display shows the most-recently transmitted valid call. The SDM is stored and is displayed next time SDM entry mode is activated.

Note: An SDM will only be displayed on the receiving radio if that radio has firmware supporting short data messaging.

Exiting SDM Entry Mode

SDM entry mode can be exited manually and automatically under the following conditions:

1 Manually, by pressing the **Hash** key () to send a message (see "Sending an SDM".

- 2 Manually, by giving a long press of the Status key (STAT). SDM entry mode is exited, the STATUS indicator turns off and the display shows the most-recently transmitted valid call. Any unsent message is discarded.
- 3 Automatically, if the 'do not disturb' function is not active and a call is received during SDM entry. In this event, the radio exits from SDM entry mode to process the incoming call. The 'do not disturb' function can be enabled if incoming calls are to be ignored.
- 4 Automatically, upon a receipt of an incoming SDM.
- 5 Manually, by pressing the **Despatcher** () or the **Function** key (). If the pressed key is programmed with a preset call message, the radio exits from SDM entry mode to place the call. If the key is not programmed, the message "UNAVAIL" is displayed, an audible tone is emitted and SDM entry mode is exited.

Status Calls

Status calls permit rapid exchange of simple messages without voice conversation. Your radio can have messages such as "EN ROUTE" or "AT LUNCH" preprogrammed.

Receiving a Status Call

Incoming status calls are always put in the call queue. A status call in the queue is shown with the status value (1-30) on the left of the display and the caller's identity on the right. The **STATUS** indicator also illuminates.

If the **ALPHANUMERIC** indicator is flashing, there is an alphanumeric label associated with the displayed status call. Press the **Alphanumeric** key (\bigcirc) to view the status label. When the **Alphanumeric** key (\bigcirc) is pressed again, the radio reverts to its previous state.

Making a Status Call

Status calls can be made by dialling (refer to "Short Data Messages (SDMs)", on page 17) or by using the alphanumeric labels that are associated with a status message.

Your radio can be programmed with up to 30 possible status numbers, which can be accessed from the keypad using an alphanumeric label of up to eight characters. The label may be a message, a job name or an acronym which helps you find the appropriate status message.

- 1 Press the **Status** key (STATD) and use the **Up** and **Down** keys () to scroll through the list of labels.
- 2 Press the **Hash** key () to send the status message associated with that label to your despatcher, or
- 3 To send the selected status message to another party, press the Star key () and select the party to whom you wish to send the status call. This can be done either by using alphanumeric entry mode (see page 14) or by entering the party's call number, using the keypad.
- 4 Press the Hash key () to make the call.

Trunking Call Set up and Special Functions

Some of the functions listed below may be unavailable on your network, and some may need to be enabled during radio programming. For more information about the facilities available on your radio, consult your Tait dealer.

Note: The # terminator is not necessary if you press the **PTT** key instead.

Most Common Trunking Call Setup

MPT1343

Dialling Code	Call to	Example
0	PSTN Number	0 03 3583399#
2089	Radio in own fleet	23#
200899	Radio in own fleet	234#
20016050	Radio in another fleet	3078 23# or 3078 234#
200327	Radio in another fleet	300 3078 23#
9099	Group in own fleet	92#
900999	Group in own fleet	923#

ANN Fleet Calls

Fleet Size	Call to	Example
Large	Radio 234 in Fleet 1 (same prefix)	7 1 234#
	Radio 235 in Fleet 2 (other prefix 32)	7 32 2 235#
Medium	Radio 23 in Fleet 51 (same prefix)	7 51 23#
	Radio 23 in Fleet 52 (other prefix 126)	7 126 52 23#
Small	Radio 23 in Fleet 80 (same prefix)	7 (8 or 9) 80 23#
	Radio 23 in Fleet 81 (other prefix 3)	9 3 81 23#

Note: See your network operator for ANN call details.

Preset Numbers and Conventional Channels

101110	Conventional Channels	101#
099	Preset Strings	9# or 009#

Note: Where preset numbers are the same as call setup numbers, leading zero's have to be dialled for the preset numbers, i.e. dial 23# for radio 23 and dial 023# for preset 23.

Most Common Special Trunking Functions

Dialling Code	Function	Example
*0#	Request Base Despatcher Callback	*0#
*0*nnn#	Request another Despatcher Callback	*0 *234#
*0ss*nn#	Status Call (ss = Status 01 to 30)	* 015 * 23#
*1*nn#	Conference Call to Group nn	*1*92#
*11 * nn#	Broadcast Call to Group nn	*11*923#
*31 * nn#	Non-prescribed Data Calls	* 31 * 23#
* 41 * nn#	Divert Own Calls to Radio nn	* 41 * 23 #
*41 * 0nn#	Divert Own Calls to PSTN nn	* 41 * 00335#
*44 * nn * mm#	Divert 3rd Party Calls nn to mm	* 44 * 23 * 21 #
*48#	Queue Incoming Calls	* 48#
*49#	Do Not Disturb	* 49#
* 700#	Display name of the current network	* 700#
* 70n#	Change to network n (1 or 2)	* 701#
*8*nn#	Priority Call to Radio nn	*8*23#
*8 *1 * 9n#	Priority Conference Call to Group nn	*9*1*923#
*9*nn#	Emergency Call to Radio nn	*9*23#
*9*1*9n#	Emergency Conference Call to Group nn	*9*1*92#
* * nn#	Abbreviated Dialled Codes (1 - 49)	* * 3#

1 "*...#" Functions:

2 "#...#" Functions:

Dialling Code	Function	Example
#0#	Cancel Base Despatcher Callback	#0#
#0*nnn#	Cancel another Despatcher Callback	#0 * 234#
#41#	Cancel Own Call Diversion	#41#
#44 * nn#	Cancel 3rd Party Call Diversion	#44 * 23#
#45#	Cancel Incoming Call Diversions	#45#
#48#	Cancel Queuing of Incoming Calls	#48#
#49#	Cancel Do Not Disturb	#49#

Optional Accessories for T2040*II* Radios

The following accessories are available for use with your T2040II radio:

- T2008 desk-top mains power supply
- Remote speaker
- DTMF microphone
- Desk-top microphone
- Six metre remote mounting kit
- CTCSS kit
- Scrambler kit
- Handsfree microphone with remote or voice-activated PTT key
- Single or dual port Uart kits, allowing computer control of your T2040II
- 600 Ω line interface kit

Consult your Tait dealer for more details.

Appendix

Maintenance

The T2040*II* requires no regular maintenance, other than ensuring that all cables and connections are secure, and that no damage has occurred to the antenna or wiring.

Troubleshooting

If the front panel indicators do not light up when the radio is turned on, it is likely that no power is reaching the T2040*II*. Check the following:

- Is the power connector firmly plugged into the rear of the T2040II?
- Are the in-line fuses in good condition?
- Is the power cable securely connected to the vehicle battery or power supply?

If all appears to be in order, then contact your Tait dealer for further assistance.