

T2020

Operator's Manual

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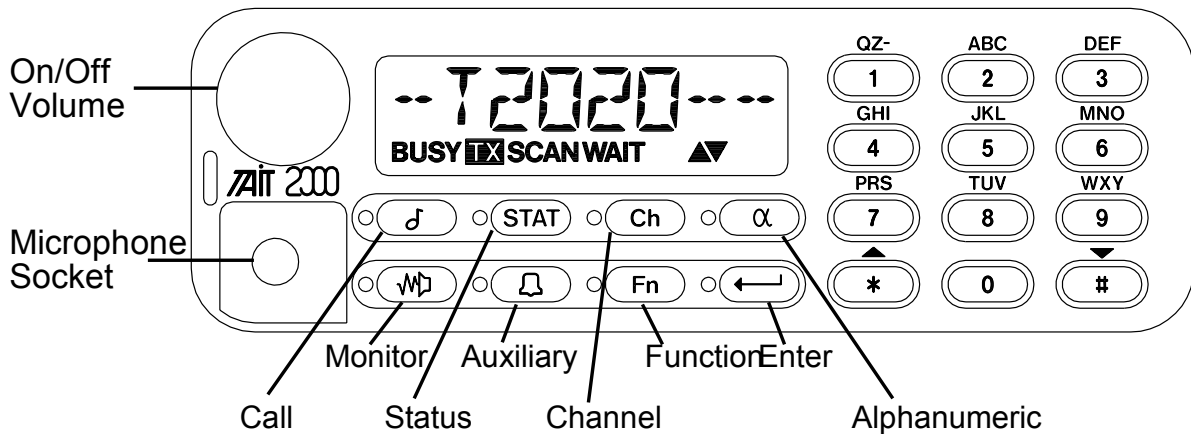
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T2020 Front Panel Controls and Indicators



To Switch On

- 1 Switch the radio on by rotating the volume knob about one-third of a turn clockwise. You will feel a click as the knob leaves the 'off' position. The display will show a power-up message and the radio then emits two short tones, *beep.beep*.
- 2 After the front panel display shows its power-up message, the radio will restore itself to the same state it was in when last turned off.
- 3 Press and hold the monitor key  until the  indicator flashes. Adjust the volume knob for a comfortable listening level. Depress the  key briefly to return the radio to the quiet state. The radio will emit a short tone, *boop*. (It may be programmed to return to this state after a short while anyway.)
- 4 You will need to finally set the volume level when you receive your first call. The volume level of the confidence tones (*beeps*) is also affected by the volume control, but will not reduce below a preset minimum level.


To Select a Channel

Each channel has two labels associated with it: its number and its name. Your Tait dealer will advise you of the channel numbers and names for your radio. (The name or 'alphanumeric label' may also have other information such as a Selcall identity associated with it - see the section "To Make a Call (Selcall Option Fitted)".)


To select the channel by its channel name:

- 1 If the indicator beside the ● **Ch** key is not already illuminated, press the key so that it lights up. The current channel name will appear in the display with the up and down arrows "▲▼" below it.
- 2 To select the next channel up, press the  key on the keypad. Similarly press the  key for the next channel down. By holding either of these keys pressed you can scroll through the available channels until you reach the channel you want.

To select the channel by its number:


- 3 Select the channel entry mode as explained in 1 above.
- 4 Use the alphanumeric keypad to type the channel number, which will appear in the display. Depending on the length of the number, you may have to finish it by pressing the  key. (You will need to do this if the display does not change when you type the last digit.) The display will change to the channel name.

To Receive



- 1 Your radio will remain muted until another user makes a call. Listen for your call-sign when you hear activity, and if you are called, reply promptly with your call-sign (for example "Mobile-9 receiving").
- 2 The (BUSY) indicator in the display will appear whenever there is any activity on the channel. Your radio may only unmute the speaker for some of this activity, depending on which signalling options are fitted. Consult your Tait dealer to see which signalling options are active on your radio.
- 3 The  key enables you to monitor a channel to listen to other users, regardless of the muting controls programmed into your radio. There are three types of muting control which may screen your calls:

- the RF squelch¹ requires that any signal made audible exceeds a preset level;
- the CTCSS² or DCS³ mute requires that any signal made audible carries a specific (inaudible) tone or code;
- the Selcall mute requires that any signal made audible carries a special (audible) tone sequence at the beginning of the transmission.

Note that the RF Squelch will always operate in your radio, but the CTCSS (DCS) or Selcall mutes are optional depending on the way your radio is programmed.

- 4 The  key may be programmed to override one or more of the mutes. The most common configuration is as follows:
- a brief press (less than one second) overrides any Selcall or CTCSS/DCS signalling mute. (If hookswitch monitoring is programmed, lifting the microphone off hook will have the same effect.)
 - a long press (more than one second) additionally overrides the RF squelch.

If you are not sure how your T2020 has been programmed, consult your Tait dealer.

- 5 The radio is equipped with an automatic RF squelch. Occasionally, you may find the message you are receiving is still intelligible, but is being cut off periodically by the RF squelch. In this case, you can force the radio to leave the RF squelch open continuously by giving the  key a long press until the radio sounds two short tones, *beep.beep*, and the ●  indicator flashes.
- 6 Your radio may be fitted with the ability to hush (mute) another device such as a car stereo, to enable you to hear a call better. Consult your Tait dealer to see if this facility is active on your radio.

To Transmit


- 1 If the BUSY indicator is on, the channel is busy and you must wait until it is free before proceeding. If you attempt to transmit anyway, the "WAIT" indicator may appear in the display, and your attempt will be deferred. The radio will sound an

¹ The RF squelch keeps your radio quiet as long as any signals it receives are below a factory-set threshold. This ensures that only signals which will be intelligible will be made audible.

² Continuous Tone-Controlled Sub-audible Signalling.

³ Digital Coded Squelch.

alerting tone, *beep . beep . beep*, as soon as the channel becomes free.

- 2 Lift the microphone off its hook and listen to check that no-one else is using the channel. Depending upon the options fitted to your radio, you may also have to press the  key briefly¹. If you attempt to transmit while the channel is in use, you will hear a warning tone, *boop*, from the speaker and the "WAIT" indicator will appear in the display. When the channel becomes free again, the radio will sound an alerting tone, *beep . beep . beep*.
- 3 Hold the microphone about 5cm from your mouth and squeeze the Press-To-Talk (PTT) switch on the side of the microphone. Speak clearly into the microphone, identifying yourself and the person you wish to contact by your call signs (for example - "Mobile-9 to Base"). Release the PTT switch when you have finished talking.
- 4 The radio is fitted with a timer to limit the maximum length of transmissions. The radio will sound a warning, *beep .. beep .. beep*, before it stops transmitting.
- 5 Your radio may be fitted with the ability to hush (mute) another device such as a car stereo so that your speech is clearly audible to other users when you transmit a call. Consult your Tait dealer to see if this facility is active on your radio.

Economiser Mode

- 1 The T2020 incorporates an economiser mode which turns off some internal circuitry and dims the back-lighting for the front panel to conserve battery power. This will occur after a pre-determined period of inactivity.
- 2 Operating any of the front panel controls or the PTT switch restores the radio to full activity immediately.
- 3 If the radio receives a call for you, it will also restore itself to full activity immediately.

¹ Some options do not allow channel monitoring in this way, but simply prevent you from transmitting if the channel is busy. Consult your Tait dealer to see if this applies to your radio.

To Scan Channels





- 1 Ensure the microphone is placed on its hook. (Your radio may be programmed to scan while the microphone is off-hook. Consult your Tait dealer for more information on this feature.)
- 2 Channels to be scanned are assembled into groups. Each group is assigned a channel number and programmed into your radio. Consult your Tait dealer to find out the number, label and channel contents of each of your scan groups. To start scan operation, select the appropriate scan group in the same way as selecting an ordinary channel. The "SCAN" indicator will appear in the display.
- 3 The radio will now repeatedly scan through all programmed channels searching for activity. When activity is detected on any channel, scanning will halt and the display will show the active channel's name. (If signalling options are active in the radio, only activity with valid signalling tones will halt the scanning.) The radio will pause and unmute on that channel as long as the traffic remains, and the "SCAN" indicator will flash. It will resume scanning, after a short delay, once the traffic disappears.
- 4 If you wish to reply to a message or make a call when the radio is in scan mode, you may lift the microphone off its hook at any time to suspend scanning. If the radio has halted scanning to monitor the traffic on a channel, it will remain on that channel when you lift the microphone off-hook. If the radio has found no traffic (i.e. has not halted), it will revert to the preprogrammed home-channel.
- 5 You may change channel if you wish, but this will cancel the scan mode. Otherwise, converse in the normal manner and, when finished, place the microphone back on its hook to restart the scan.
- 6 Scan mode is cancelled by selecting any of the non-scanning channels. The "SCAN" indicator will disappear from the display.

User Programmable Scan


A user programmable scan group must be defined during programming.

- 1 To edit the user programmable scan group, press the **Fn** key. Scroll the items through the display by pressing the **▲** and **▼** keys until **PROG GRP** is displayed and press the **←** key. The name of the group that is to be edited will be


displayed and the top row of LED's will be lit.

- 2 Press the  key for a second time to start the editing. All the available channels can now be displayed by pressing the  and  keys. The "SCAN" indicator will indicate those channels that are included in the user programmable scan group and a flashing "SCAN" indicator will indicate the home channel.
- 3 Any channel can be added or deleted from the scan group by selecting the required channel and then pressing the  key.

Note: A scan group must contain 2 to 16 channels.



- 4 The home channel is defined by selecting a channel and then holding the  key for longer than 1 second. The "SCAN" indicator will now be flashing.



Note: You can only delete a normal channel from the scan group. If the home channel is to be deleted from the scan group, you first have to define another channel as home channel and then delete the original home channel.

- 5 Once the group editing is complete, press the  key to return to the function menu. An inactivity timer will also return the radio to the normal operating mode if no operator activity has been detected for the last 10 seconds.

To Make a Call (Selcall Option Fitted)









Selcall is enabled on a per channel basis. Hence if you try to make a call on a channel that does not have Selcall enabled, an invalid key press tone will sound. Ensure you are aware of the channels which have Selcall enabled.

- 1 If the radio is scanning, you may have to lift the microphone off its hook or select a single channel in place of the scan group. Check that the radio is on the correct channel and that the channel is clear before attempting to make the call.
- 2 Your radio may have been preprogrammed with the ability to make a 'one touch' call to one other user; usually your base or despatcher - check with your Tait dealer. To call this user, press the  key for about one second. You will notice that the "TX" indicator appears in the display briefly and your radio will sound a short *beep* as the call is transmitted.
- 3 Your radio may be programmed with the ability to call other users with Selcall on your channel. Press the  key briefly to activate the Selcall mode. Enter the call code for the other user on your keypad. Each digit will appear in the display as you

enter it. When you have entered all of the digits, press the  or  key to send the call.

For example:

You wish to call another user on the current channel (*REGION 2*) with the number 37515. The sequence of keystrokes, and the corresponding display characters, " ", would look like this:

		REGION2	(the current channel)
	...	12345	(the last number called)
	...	3	(first digit of the new number)
	...	37	(2nd digit of the new number)
	...	375	(3rd digit of the new number)
	...	3751	(4th digit of the new number)
	...	37515	(5th digit of the new number)
 or 	...	TX	(call placed)

- 4 After the call is sent you may hear an acknowledging tone, *beep*, or series of tones from the other user's radio indicating that your call has been received. If you hear no tone, their radio may not be capable of generating the acknowledging tone, it may be off or they may be out of range of your call. Your T2020 may be programmed to display the status of the called unit as follows:

- if no acknowledge sequence was detected after a period of time, the display will show "**-NO ACK-**";
- if an acknowledge sequence was detected but no status information was decoded, the display will show "**NO STAT**";
- if an acknowledge sequence was detected and the decoded status number can be identified, the status description will be displayed, e.g. "**AT LUNCH**";
- if an acknowledge sequence was detected and the decoded status number cannot be identified, the status number will be displayed, e.g. "**STAT 09**".







If any front panel activity is detected before any of the above messages is displayed, the acknowledge sequence is no longer expected and messages will therefore no longer be displayed.

- 5 When the other user replies, you should take your microphone off its hook and press the PTT switch on the side of the microphone when you wish to speak.

- 6 If you wish to call a group of other users, you may do so by dialling the digits common to all members of the group and then using the # character, which will substitute for all the remaining digits. (Note that this facility may not be programmed into your radio.)



For example:

You wish to call a group of users on the current channel (*REGION2*) with numbers which all begin with 37 and have three more digits. After you have selected channel **REGION 2** (see the previous section, To Select a Channel), the sequence of keystrokes and the corresponding display characters would look like this:

		REGION2	(the current channel)
	...	12345	(the last number called)
	...	3	(1st digit of the new number)
	...	37	(2nd digit of the new number)
	...	37GGG	(group wild card character)
 or 	...	TX	(call placed to all 37??? users)

When the group call has been sent, there will be no acknowledging tone from any of the other users. You should wait a few seconds after the TX indicator in the display disappears and then broadcast your message. You should phrase your message in such a way that it requires no acknowledgement, since the other users cannot all reply at once.

To Receive a Call (Selcall Option Fitted)

- 1 When your radio receives an incoming call, the ● indicator beside the  key will flash and a ringing tone, *burr,burr ...burr,burr*, will sound from the speaker. (Your T2020 may be programmed to display the caller's identity when you receive a call. Consult your Tait dealer for more information on this feature.)
- 2 To answer the call, you should lift the microphone off its hook and converse with the caller. As soon as you operate the PTT switch, the ringing tone will cease.
- 3 If you do not answer the call within a short time, the ringing tone will stop. The radio may then switch on another alerting device (the horn in your car, for example) to attract your attention. (Consult your Tait dealer to see if this option is fitted.) The external device will also sound for a predetermined time before stopping.

- 4 Your T2020 may be programmed to queue incoming calls. If this feature is enabled, the caller's identity will be put on the queue after the ringing stops. All other call indicators will be cleared when the received call has been queued. (Refer to the section on Call Queuing for more information.)
- 5 If the call was not queued and you are still unable to answer the call, the radio will indicate that a call was received in your absence by leaving the red ● (📞) indicator flashing.
- 6 If you do not wish to answer a call, the ringing may be cancelled at any time by pressing any of the front panel keys. (The function associated with the key you press will not be invoked.) Note that if the caller's identity was displayed and the call was still not answered, pressing the (←) key will clear the call and initiate an 'immediate call back' to the caller.
- 7 If you are one of the recipients of a group call, your radio will only sound a single sequence of the ringing tone, *burr,burr*. The caller will then broadcast his message to all members of your group.

Advanced User Operations

Repeater Talkaround

Repeater talkaround is a programable option that allows the T2020 to transmit and receive in simplex on the repeater receive frequency of the current channel. This feature can be used to talk to other participants on a repeater channel without the use of the actual repeater, for example when you are out of reach of the repeater.

- 1 Press the (Ch) key for longer than 1 second.
- 2 The ● (Ch) should now be flashing which indicates that the T2020 is now in the repeater talk around mode.

Call Queuing (Selcall Option Fitted)

This feature will enable the storing of up to 10 caller identities. Consult your Tait dealer to find out if this feature has been enabled for your radio.

1 Accessing The Call Queue

The call queue can be accessed through the Function Menu Entry mode. This is the same mode as that used to alter the user options.

- To enter this mode, press the **Fn** key. The last item viewed previously will appear in the display. Scroll the items through the display by pressing the **▲** and **▼** keys.
- Once in this mode, scroll through the item list and select "**CALL QUE**".
- Pressing the **←** key when "**CALL QUE**" is being displayed will let you access the Call Queue, but only if the queue is not empty.
- In Call Queue Entry mode, the display will show the current entry number and the total number of entries in the list. An example of the display would be "**CL 01/02**" which indicates that the current entry is entry number one, with a total of two entries in the queue. The **▲** and **▼** arrow keys can be used to scroll through the list of entries and the **0** key can be used to delete the entry from the queue.
- Pressing the **←** key will then show the caller identity of this entry. Again, the **▲** and **▼** arrow keys can be used to scroll through the list of entries and the **0** key can be used to delete the entry from the queue.
- Pressing the **←** key again when the caller identity of the entry is being displayed will initiate the call back and automatically remove that entry from the queue. Note that the call back sequence is based on the caller identity.

2 Exiting The Call Queue

Pressing any mode key while in the Call Queue will initialise the respective mode and therefore will take the radio out of the Call Queue Entry mode. This includes the **Fn** key.

When deleting entries and making call backs, if the call queue becomes empty, the radio will automatically exit from the Call Queue Entry mode and go back into the Function Menu Entry mode.

3 **Queuing Calls**

The caller identity and the channel of the received call will be put on the Call Queue when:

- the internal alert (ringing) of the received call stops;
- another call is received before the previous one is queued.

Note that after the incoming call has been queued, it is automatically cleared/answered and the radio will resume what it was doing prior to receiving the call. This includes the resumption of scanning, if the radio was scanning prior to receiving the call.

4 **Queue Not Empty**

Whenever the queue is not empty, the Function Menu Entry mode will automatically be the default mode, with the "**CALL QUE**" function as the current selected item, regardless of what has been programmed for the default mode. This will mean that the radio will always revert to the Function Menu Entry mode after a period of no user activity if there was something in the call queue. In addition to that, the red (FCN) indicator will flash whenever the radio is in the Function Menu Entry mode.

5 **Queue Full**








Whenever the queue is full, the radio will continue receiving calls but will not resume what it was doing prior to receiving the call. This means that the radio will not resume scanning if it was scanning prior to receiving the call. This will allow calls to be received only on the held channel. For every other call that is received, the information on the previous call will be overwritten.

To Divert a Received Call (Selcall Option Fitted)

This feature will enable the radio to be put into "Call Diversion Mode", where any valid incoming Selcall sequences will cause the radio to transmit another user defined Selcall or DTMF sequence on the programmed "Call Diversion Channel". The sequence (number) to be transmitted and the call type (Selcall or DTMF) can be set from the front panel when putting the radio into "Call Diversion Mode".

1 Activating Call Diversion Mode

The Call Diversion "switch" can be accessed through the Function Menu Entry mode. This is the same mode used to alter the user options.

- To enter this mode, press the **Fn** key. The last item viewed previously will appear in the display. Scroll the items through the display by pressing the  and  keys.
- Once in Function Menu Entry mode, scroll through the function list and select **"DIVERT"**.
- Pressing the  key while **"DIVERT"** is being displayed will initiate the call diversion set-up process.
- On entry into the set-up procedure, the display will flash the last selected diversion call type: this may be Selcall or DTMF. Use the  and  arrow keys to toggle between the two options. Note that if the DTMF option has not been fitted on the radio, the DTMF call type will not be an option.
- Pressing the  key will confirm the call type selected and display the last selected sequence if it was still valid. If the last selected sequence was no longer valid, the displayed sequence will be the default sequence.
- If another sequence is required, the numeric keypad can be used to enter the new diversion sequence. Note that the correct sequence length must be entered (consult your Tait dealer for more information on this). Pressing the  key will confirm the diversion sequence and put the radio into Call Diversion mode.

2 Exiting Call Diversion Set-up/Mode

At any stage of the call diversion set-up process, any mode key-presses will initialise the respective mode and therefore take the radio out of the Call Diversion Set-up/Mode. This includes the **Fn** key.

3 Receiving A Call During Call Diversion

When a standard incoming call is received by the radio in Call Diversion mode, the programmed auto-acknowledge sequence will be transmitted as for a normal call, but the programmed Diversion Status will be transmitted instead of the normal acknowledge status to inform the caller that the call has been diverted.

The radio will then proceed to switch to the programmed call diversion channel and transmit the sequence that has been set up for the call diversion without indicating that an incoming call has been received (no ringing).



After executing the diversion transmission, the radio will revert to the channel it was on prior to the call diversion.

4 Making A Call To A Radio In Diversion Mode

Your T2020 radio can be programmed to respond to a diversion status report when making a call. When it detects the diversion status in the acknowledge from the radio it has called, it will display "**-DIVERT-**" to indicate that the call has been diverted. It then proceeds to switch to the programmed diversion channel.

To Send DTMF Tones (DTMF Option Fitted)

The keypad on the T2020 may also send Dual Tone Multi-Frequency tones (consult your Tait dealer to see if this option is fitted to your radio). This gives you the ability to dial telephone numbers if your radio network has an interconnection to the Public Switched Telephone Network (PSTN) or to send tones as control codes to remote devices.

- 1 To enter the DTMF mode, observe which of the function indicators below the display is currently illuminated (i.e. ● **J**, ● **STAT**, ● **Ch**, ● **α** or ● **Fn**) and push that key to de-activate the function. This leaves the radio in the DTMF dial mode, with the last number dialled in the display.
- 2 Pressing  will redial the number in the display.
- 3 Dialling a new number may be done digit by digit or as a complete number, as follows:
 - To transmit the tone with each key-press (i.e. 'live'), press the PTT switch on the microphone as you dial. (Your radio may be programmed so that you need only press the number key.) The TX indicator appears in the display as you dial.
 - To set up a complete sequence of digits, push each number key in turn without pressing the PTT switch (although your radio may be programmed to transmit the tones 'live' anyway). Each number appears in the display, and when the sequence is complete it may be transmitted by pushing the  key. (Even if the digits have been transmitted 'live' they will be retransmitted as a group.)

In this mode the time of transmission of each digit is set by the radio and is usually shorter and more efficient than sending them 'live'.

- 4 Pressing any of the keys on the keypad causes the corresponding DTMF tone to sound, but this does not indicate whether or not the tone has actually been transmitted. Watch your radio's display to see if the TX indicator appears (without the PTT switch pressed).
- 5 To access special DTMF tones A to D, your radio may be programmed to use the PTT switch as a shift key to alter the function of some of the keypad keys as follows:
 - PTT + **2** gives DTMF tone A
 - PTT + **5** gives DTMF tone B
 - PTT + **8** gives DTMF tone C
 - PTT + **0** gives DTMF tone D

Alphanumeric Entry Mode




The T2020 contains a number of memory locations which are able to be accessed with an alphanumeric entry or label from the keypad. The alphanumeric label may be the same as a channel name or it may be a quite separate word, person's name or acronym which helps you find the appropriate memory location. Each location may contain information which selects a channel, makes a Selcall or DTMF call or selects a new Selcall status code.

To select a memory location by its alphanumeric label:

- 1 Press **α** to enter the alphanumeric entry mode. Now type the label associated with the location (and function) you want, using the keypad keys as either numbers or letters (e.g. the **2** key may be used as a '2', an 'A', a 'B' or a 'C'). A star "*" will appear in the display as you type each character until you have entered enough for the radio to recognise the label. When it does, it will display the label in full.
- 2 Pressing **←** will cause any instructions (channel selection, send call and so on) contained in the memory location to be carried out.
- 3 If you then press the **Ch** key, the display will change from the label to the channel name. (The radio may be programmed to return to the channel name display after a short while anyway.)








For example:

You wish to call your *BASE* which monitors a channel called *REGION2* and has the Selcall code, 24624. The sequence of keystrokes, and the corresponding display characters, " ", might look like this:


	...	" MARLEY6 "	(the last label entered)
[ABC]	...	"*"	(unable to determine new label)
[A BC]	...	"**"	(unable to determine new label)
[PRS]	...	" BASE "	(new label identified)
	...	" 24624 "	(channel <i>REGION2</i> selected and Selcall code transmitted)
	...	" REGION2 "	(channel for BASE displayed)

To Change the Selcall Status Code (Selcall Option Fitted)

If your radio is fitted with Selcall, you may also be able to choose from a number of activity codes which will be sent with each call you make to indicate your present status. Each code's description and number (0 to 99) is set when the radio is programmed. Typical descriptions might be "**AT LUNCH**", "**ENROUTE**" and so on.

- 1 To enter the status mode press the  key. How they are displayed by your radio depends on which status display function is active (see the later section, To Alter User Options).
- 2 If 'normal display' (**STAT NRM**) is active, the complete eight character word for the currently selected status will be displayed. You may now scroll through the choices by pressing the   keys until you find one appropriate for your present activity. Alternatively, if you know it, you may type the number for your new status on the keypad. The new status description will appear in the display (you may have to press  first).
- 3 If 'fixed display' (**STAT FIX**) is active, your own status is displayed as a code at the right of the display (along with the channel name which is truncated to six characters). You may now scroll through the codes by pressing the  and  keys. Again, if you know it, you may enter the number for your new status on the keypad. The new status code will appear in the display (you may have to press  first).
- 4 The status code is sent when your radio acknowledges another user's call to you.

Emergency Operation (Selcall Option Fitted)

To utilise the emergency capability of the T2020, the radio must be fitted with Selcall selective tone calling and be connected to a hidden emergency switch. (The  key on the front panel may also be programmed to initiate the emergency state.)








- 1 To send an emergency call, operate the hidden switch. This will cause no change in the front panel indications of the T2020, but the radio will send a Selcall emergency code to a preprogrammed party (usually your base or despatcher) every few seconds until it receives an acknowledging Selcall code.











Note: The emergency cycling option is controlled at the time of programming. If emergency cycling is disabled then the emergency sequence is sent only once and no Tx/Rx cycling occurs.

- 2 The radio will then adopt a transmit/receive cycle which allows the base or despatcher to monitor activity in the vicinity of the radio.
- 3 The radio may be removed from this mode either by receiving a reset code from the base or despatcher during one of its receive periods, or by turning the radio off and back on without the emergency switch operated.

To Alter User Options

Whilst most of the features available on the T2020 radio are able to be customised with the Tait programming software, some may be directly accessible to you, to alter according to your own requirements. Consult your Tait dealer to see whether this facility is available on your radio.

- 1 To enter the options mode, press the  key. The last item viewed previously will appear in the display. Scrolling the items through the display may be done by pressing the   keys.
- 2 To select whether your radio sounds key-press confidence tones (*beeps*), scroll the display to find either the "**BEEP ON**" or "**BEEP OFF**" message. To change from one to the other, press . To change back, press  again.
- 3 To alter the loudness of the confidence tones (*beeps*), scroll the display to find either the "**BEEP HI**" or "**BEEP LOW**" message. To change from one to the other, press . To change back, press  again.
- 4 To select whether your Selcall status is displayed as a full word or a single digit,

- scroll the display to find either the "**STAT NRM**" or "**STAT FIX**" message. To change from one to the other, press . To change back, press  again.
- 5 To adjust the display's normal backlighting level between full and dimmed, scroll the display to find either the "**LITE FUL**" or "**LITE DIM**" message. To change from one to the other, press . To change back, press  again.
 - 6 To adjust the display's economy mode backlighting level between dimmed and off, scroll the display to find either the "**ELIT DIM**" or "**ELIT OFF**" message. To change from one to the other, press . To change back press  again.
 - 7 To select whether the radio is able to mute an external device such as a car stereo when you transmit or receive a call, scroll the display to find either the "**HUSH ON**" or "**HUSH OFF**" message. To change from one to the other, press . To change back, press  again. (This function also requires the radio to be equipped with the necessary hardware interface.)
 - 8 To select whether the radio sounds a vehicle horn (or similar device) when a received call is unanswered, scroll the display to find either the "**HORN ON**" or "**HORN OFF**" message. To change from one to the other, press . To change back, press  again. (This function also requires the radio to be equipped with the necessary hardware interface.)
 - 9 The cloning function, call queue and call diversion set-up modes are also accessed from this mode. For more information on this contact your Tait dealer.
 - 10 To exit the options mode, press any of the other function keys. The radio may also be programmed to return to one of the other modes after a short while anyway.

Other Selcall Features

Your T2020 radio may be programmed with other Selcall functions. Consult your Tait dealer for more information on these functions:

- quiet status interrogation (QSI)
- automatic numbering identification (ANI)
- deferred calling
- stun.

Warning (Vehicle Installations)

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.

Do not touch the antenna while the radio is transmitting.

Appendix A1 Key Functions Explained

If 'confidence tones' have been enabled during programming, pressing any of the keys causes a short tone, *beep*, to be sounded. If they have been suppressed, the key-press will be silent.





'Call' takes your radio into the Selcall mode in order to make calls to other users. A short press invokes the dialling mode. A long press accesses a memory location which may contain the identity (call number) of another user (or group of users) and will initiate a call to them. The "TX" indicator appears in the display briefly and your radio will sound a short *beep* as the call is transmitted.










'Status' is also associated with Selcall and gives you access to a number of activity choices from which you can select one to indicate your own present status. The description corresponding to each code (0-99) is set when the radio is programmed. Typical descriptions might be "**AT LUNCH**", "**ENROUTE**" and so on. For more information see the section 'To Change the Selcall Status Code'.




'Channel' takes your radio into the channel selection mode. Here you may select a channel or scan group using the   keys, a number or a label associated with the channel name.


A long press invokes or cancels the 'Repeater Talkaround' mode.

-  'Alphanumeric' sets your radio in a mode where it accepts key-presses on the number keys as being a letter or a number character. (Each number key represents three letters.) The radio cannot tell which of the four characters you intend, so it waits until you give it sufficient characters so that the label or acronym becomes completely distinguishable from all other similar labels before it displays the complete word.
-  'Monitor' gives you access to the signalling mute and RF squelch control of your receiver. With it you may monitor only transmissions intended for you, all transmissions or very weak signals.
-  'Auxiliary' is provided to control an auxiliary hardware option such as an external alerting device. Alternatively, it may be programmed to act as a memory from which a particular channel configuration or a calling sequence may be recalled at the touch of a single key.
-  'Function' takes your radio into the user options mode (if it is available on your radio). This allows you to customise the operation of your radio to suit your particular requirements, and to access some other optional radio operational modes.
-  'Enter' is used to tell your radio that you have completed a series of key-presses and that the radio should now go and act on the information you have given it. It is used for channel entry, Selcall calls, DTMF dialling, alphanumeric entry and user option selection.

 to 

The number keys are used for entering numbers into the radio when the indicator beside the  key is *not* illuminated. They are used for entry of channel and scan group numbers, Selcall numbers and DTMF tones.



[ABC] to [QZ-]





The number keys also act as letter entry keys when the indicator beside the  key is illuminated. The radio cannot tell at first which of the four characters you intend it to read when you press the key. You must continue





keying the label or acronym into it, until it has enough characters to be able to distinguish the word from all similar words it has in its memories.




For example:

Suppose your radio has two channel labels programmed into it: BASE and BASIL. To call up the BASE channel, you key in [ABC]; [ABC]; [PRS]. The radio cannot yet distinguish whether you want BASE or BASIL so it places "***" in the display. But when you key in the fourth letter, [DEF], the radio knows you do not want BASIL (or you would have keyed in [GHI]) and so it is able to acknowledge the entry properly and displays "**BASE**".


Note that in choosing labels or acronyms, you should avoid words which are indistinguishable to the radio, e.g. BASE and CAPE. Both use the same key sequence, [ABC]; [ABC]; [PRS]; [DEF]. You will only be able to find them separately with the  or  keys.



 or 
 or 




When the "▲▼" indicator appears in the display, these keys act as up / down scrolling keys to enable you to search through a list of choices. They are used in conjunction with the , ,  and  keys.

When the "▲▼" indicator is not visible in the display, these keys act as dialling keys for Selcall and DTMF dialling. In Selcall dialling mode the  key may be used in place of the  key, and the  key may be used as a 'wild card' digit to make group calls.

Appendix A2 Indicator And Display Functions Explained




-  'Call' indicates that your radio has received a Selcall call. If it is intended specifically for you alone, your radio will also sound a ringing tone, *burr,burr ...burr,burr*. If the call is a group call intended for several users at once, your radio will sound only one sequence of this ringing tone, *burr,burr*. If the 'Call' indicator is flashing, your radio received a call which you were unable to answer. It will only indicate who the call was from if that option is fitted.




- **STAT** 'Status' indicates that your radio is ready for you to select a status code relating to your current activity. You may use the   keys to choose a status code or description.




- **Ch** 'Channel' indicates that your radio is ready for you to enter information to enable it to select a new channel. You may use the   keys to choose from a list, the  key to enter a label, or the number keys.



A flashing ● **Ch** indicates that the current channel is in the 'Repeater Talkaround' mode.

- **α** 'Alphanumeric' indicates that your radio is ready for you to enter some information from the keypad as letter or number characters, such as a channel label.











-  When the radio is operating normally, this indicator will be off. If it is on continuously, the signalling mute (if active) is open. This may be because the microphone is off hook or the  key has been pressed. If the indicator is continually flashing, the  has been pressed for long enough to open the RF squelch.

-  'Aux' indicates the state of the auxiliary options switch. Depending upon the configuration of the auxiliary options switch, the ●  indicator may be either on continuously or off continuously, or may only come on whilst the  key is held pressed.

- **Fn** 'Function' indicates that your radio is ready for you to change its user programmable options. The display will show the last option viewed previously. You may use the   keys to choose a new option and the  key to change it.

-  'Enter' comes on when the  key is pressed.

- All indicators off. If your radio is able to transmit DTMF tones, it is possible only in this mode.

- "BUSY" 'BUSY' indicates that the channel you are currently listening to has traffic on it. If the signalling mute on your radio is closed (see  function), you may not hear the traffic until you lift your microphone off-hook.
- "TX" 'TX' indicates that your radio is sending a transmission. It should come on each time you press the PTT switch on the side of the microphone. It should also come on briefly when your radio makes a Selcall or DTMF call (see the relevant sections on making these types of calls). If it does not, and the (WAIT) indication is not present, your radio may be malfunctioning and you should consult your Tait dealer.
- "SCAN" 'SCAN' indicates that your radio is sampling each of a group of channels for any activity. When it finds some, it will pause on that channel for as long as the channel carries traffic and then resume scanning.
- "WAIT" 'WAIT' indicates that, although you have just attempted to transmit, the channel you are using is busy and the attempt has been deferred. You should wait for the radio to give you an alerting signal, *beep . beep . beep*, as soon as the channel becomes free.
- "▲▼" '▲▼' indicates that you are now able to use the   keys (which would otherwise carry the * and # characters) to scroll through a list of choices related to the function (   or ) which is currently active. Having found an appropriate choice with the   keys, you may select it by pushing .

