TAiT

Operator's Manual

T3010*II*

Contents

The Tait T3010*II* radio is a compact, rugged and reliable unit, offering superior communications capabilities for conventional mobile radio systems. This radio has a wide range of accessories available, and can be configured with other Tait radio products to meet any mobile communications need. It is easy to use, and can be programmed to perform a wide array of specialty tasks.

Antenna

Accessory connector

BUSY TX

Function keys

Busy/TX LED

Speaker/ microphone

Press-to-Talk key

Display window

AUX 2 H.SET
LO   LOCK

Channel keys

Volume keys

On/Off key

Function key

Microphone

T3000*II*

3

Operating Modes

The T3010*II* is a conventional (PMR) two-way radio featuring built-in CTCSS/DCS capabilities. CTCSS and DCS are systems that isolate your calls so that you only talk with a single group even though other users may be on the channel. They do this by screening out radio traffic that does not carry the correct signal.

Your T3010*II* may be further enhanced by adding optional Selcall facilities. Selcall permits fleet radios to be alerted individually to incoming calls. Note that your radio is limited to calling Selcall identities which have been preprogrammed into it.

Warnings

**WARNING
(EXPLOSIVE ENVIRONMENTS):**

DANGER: SWITCH THE RADIO OFF AT PETROL FILLING STATIONS

DANGER: SWITCH THE RADIO OFF IN THE VICINITY OF EXPLOSIVE DEVICES (such as in a quarry that uses blasting techniques)

**WARNING
(USERS IN THE UNITED KINGDOM):**

DO NOT OPERATE RADIO WHILE DRIVING

Use of a handheld microphone or radio by the driver while in the act of driving contravenes Section 3 of the Radio Traffic Act. An offender could be charged under this Act with driving without due care or reasonable consideration to other road users.

Features

- Small, rugged, reliable

- Handset operation

- Easy to use

- Conventional (PMR) operation

Components

When you receive your T3010*II* radio check the contents to make sure that all the items you ordered are included. Typically, you should receive the following.
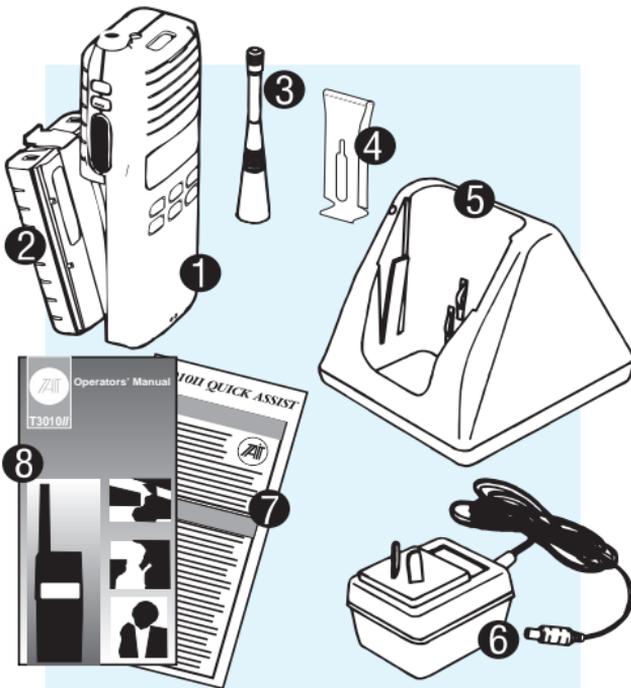
1. T3010*II* radio unit
2. Battery pack
3. Antenna
4. Belt clip
5. Charger
6. Plug pack (pins may vary to suit each country)
7. Quick Assist card
8. Operator's manual

If any parts are damaged or missing, report this to the delivery company immediately.

Setup

Before using the radio, insert the antenna as illustrated in the diagram. The antenna should screw easily into the socket at the top of the radio.

To ensure proper operation of your radio, you should fully charge the battery prior to initial use. See "Recharging the Battery" for instructions.

To fit the battery pack, offer it up to the chassis, locating the peg on its bottom edge in the slot at the bottom of the radio's chassis.   Hinge the battery up until the spring latch clicks into place.

The first time you switch the radio on, factory settings are in effect. You may wish to change some of these settings immediately. Review this manual first, and make any necessary changes after referring to the appropriate section. Enter your current settings in the form provided in Appendix III.

Basic Operations

Channel keys

Volume keys

On/Off key
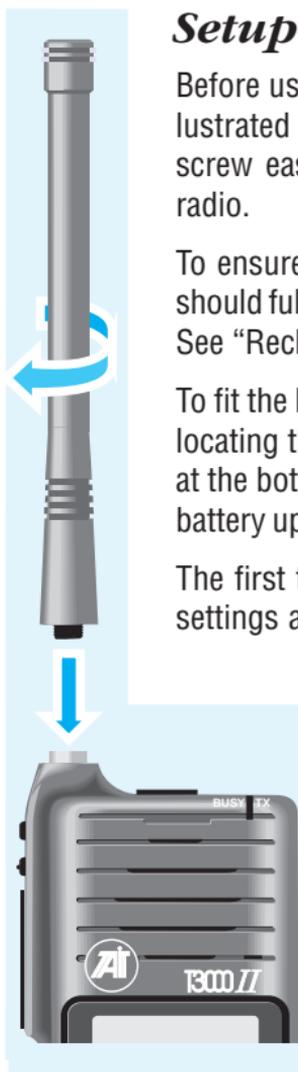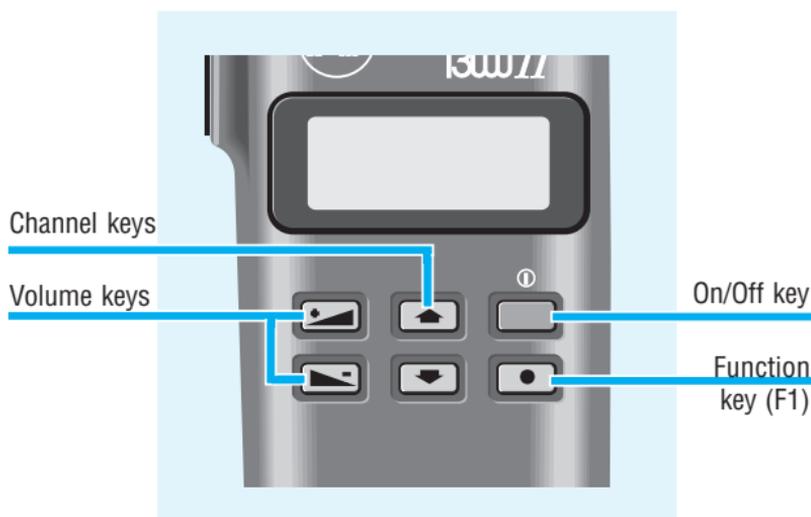
Function key (F1)

Controls

The T3010*II* controls include the keypad, side panel keys, and LCD display window.

KEYPAD

Keypad functions are as follows:

On/Off — Use to turn the radio on and off.

F1 — Function key 1. Use to initiate special preprogrammed functions (see below).

Volume — Use to increase or decrease volume.

Channel — Use to move between channels.

SIDE PANEL KEYS

F2 — Function key 2.

F3 — Function key 3.

Use to initiate special preprogrammed functions.

PTT — Press To Talk key. Use to make the radio transmit each time you talk.

Any of the following functions may be preprogrammed to the function keys on the keypad and above the PTT key:

- Enter or leave Handset mode
- Turn on backlighting momentarily
- Enter or leave Low Transmit Power mode
- Switch an auxiliary device on or off
- Enter Keypad Lock mode
- Switch the Monitor facility (muting control) on or off
- Enter Channel Scanning mode
- Initiate a preset Selcall transmission[1]

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[1]You must hold the key for one second to initiate the call.

Only three functions may be active in any radio; if you are not sure which functions have been preprogrammed for your radio, consult your fleet manager.

DISPLAY WINDOW

The LCD display window is optimised to provide rapid access to information and messages concerning the progress of your call and the status of your radio.

Switching the Radio On and Off

SWITCHING ON

Switch the radio on by pressing the ON/OFF key and holding it briefly until you hear two short tones.

The current volume setting is displayed. The number of bars indicates the setting, with a maximum of ten. (To change this value, see "Adjusting the Volume," below.)

This display also shows the current channel setting, and any operation controls in effect.

SWITCHING OFF

Switch the radio off by pressing the ON/OFF key and holding it briefly until the display goes blank. If "Key Beeps" is enabled, a tone sounds before the radio shuts off.

The T3010*II* retains its volume setting and some other settings when it is turned off. When it is next turned on it uses these settings.

ADJUSTING THE VOLUME

The volume display shows the current setting as a series of bars. If this is the first time you have used the radio, adjust the volume level to about the middle of its range (5 bars showing) using the Volume Adjustment (▬-, +▬) keys.
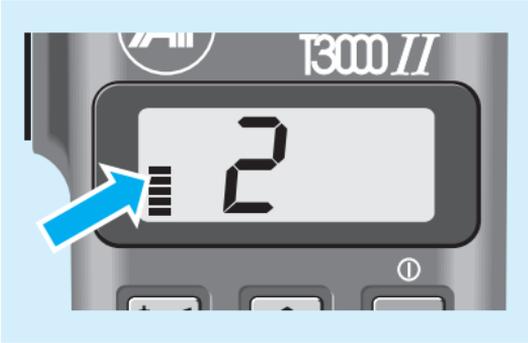
Note that the volume level of the confidence tones is also affected by the volume control.

Normal and Handset Operation

Your T3010*II* is designed so that you may use it as a normal two-way radio or like a telephone handset.

NORMAL OPERATION

To use the T3010*II* as a normal radio, hold it as shown in the diagram, with its microphone about 15 cm from your mouth.

Press the Press-To-Talk (PTT) key and speak clearly, in a normal voice. The Transmit (TX) indicator illuminates each time you operate the key. Release the key when you have finished talking, and the indicator turns off.
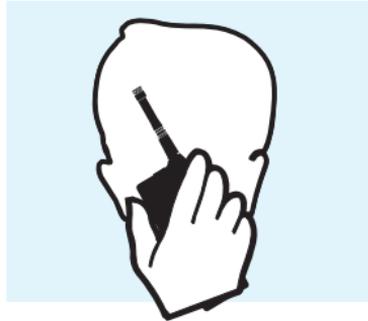
HANDSET OPERATION

To use the T3010 *II* like a tele-
phone handset, select Handset
mode by using the assigned
function key (a function key
must be preprogrammed to
enable this option). The hand-
set (H.SET) indicator appears
in the display window and the
speaker volume is reduced;
otherwise, the radio operates normally. Lift it to about 15 cm
from your face with the speaker beside your ear and the bot-
tom of the radio beside your mouth as shown. Press and hold
the PTT key each time you speak, as described above.

> **CAUTION: DO NOT** hold the radio with its antenna close
> to or touching any part of your body, especially your face
> and eyes, when transmitting. Always hold the radio up-
> right and approximately 15 cm from your head, which will
> ensure that the radio achieves maximum operating range.

Standard Operations

Making a Call

Select the desired channel by using the Channel (⬆, ⬇) keys.
If the BUSY indicator is lit, the channel is busy and you must
wait until it is clear before proceeding. Your radio may be pre-
programmed to prevent you from transmitting on a busy chan-
nel; in this case, it emits a low pitched warning tone if you
attempt to transmit.

Hold the radio in the proper manner (see "Normal or Handset
Operation") and squeeze the PTT key. Pause briefly[2,] then speak
clearly, identifying yourself and the person you wish to con-
tact by your call signs (for example "Mobile-9 to Base").   Re-
lease the PTT key when you have finished talking.

The radio is fitted with a preprogrammed timer to limit the
maximum length of transmissions. When this time period is
reached, it sounds a three tone warning before it stops trans-
mitting.

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[2]*Pausing for up to one second ensures your first word is not cut off.*

Receiving a Call

Your radio remains muted until there is activity on the channel to which it is tuned. Listen for your own call sign, and respond promptly when you hear it. The BUSY indicator lights a steady green whenever there is any activity on the channel. You may not hear this activity due to muting. To remove muting, one of the function keys may be programmed as a Monitor key. This key may be programmed to override one or more muting possibilities.

Monitor Key

The Monitor key (a preprogrammed function key option) disables muting options installed on your radio.

There are three types of muting control which may screen your calls:

RF squelch   Permits reception only if a call has a signal above a factory-set threshold. This ensures that only intelligible signals are made audible.

CTCSS/DCS mute   Permits reception only if a call carries an inaudible tone or code specific to your fleet or group.

Selcall mute   Permits reception only if a call carries a special (audible) tone sequence at the beginning which represents your identity number.

Note: RF Squelch is always programmed to operate in your radio, but CTCSS/DCS or Selcall mutes may also operate, depending on which options are fitted to your radio and the way your radio is preprogrammed.

Preprogrammed Monitor key[3]
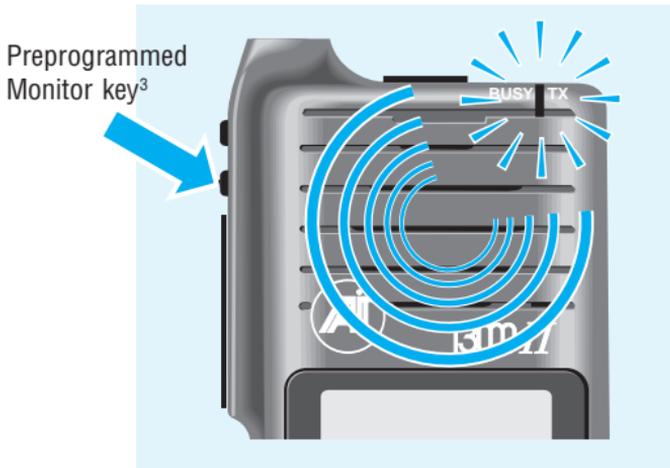
The most common Monitor configuration is as follows:

● Press the Monitor key briefly (less than one second) to override any Selcall or CTCSS/DCS signalling mute. The BUSY indicator flashes green and a short high-pitched tone sounds.

● Hold the Monitor key for more than one second to also override automatic RF squelch. The BUSY indicator continues flashing green and two more short high-pitched tones sound. You will hear the hiss of background channel noise.

In either case, pressing the Monitor key once more restores the muting system to normal operation. Note that your radio may have been preprogrammed without either or both of these facilities. If you are not sure how your T3010 *II* has been programmed, consult your fleet manager or Tait dealer.

If you find your message is being cut off periodically by the muting system, you can disable it by pressing the Monitor function key and holding it until you hear three short tones and the BUSY indicator flashes.

Scanning Channels

Scanning is a preprogrammed option which enables your radio to sequentially monitor a number of channels, pausing its search only when it detects activity on a channel.

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[3]*Any of the three function keys may be programmed as the Monitor key.*

ACTIVATING SCANNING

To select scanning, use the assigned function key or select a channel which is preprogrammed for the purpose. The scanning (SCAN) indicator appears in the display window, appearing solid when the radio is moving through the list of scan channels and flashing when it pauses because a channel is active. Whether you hear this activity will depend on the muting options which your radio uses. The Monitor key (if assigned) can override the CTCSS and Selcall mutes (but not the RF squelch) when the radio is scanning. If the Monitor is turned on, scanning will pause for any activity on any scanned channel, whereas in normal operation it will only pause for activity which carries the tones or codes specific to you.

STOPPING SCANNING

Scanning may be stopped by using the function key (if assigned) or by pressing the Channel (⬆, ⬇) keys. If the radio has paused for activity on a channel it will remain on that channel when scanning is interrupted. Otherwise it will return to the channel which was selected when you activated scanning. (If using channel selection, the radio returns to the channel which initiates scanning.)

MAKING CALLS

If you wish to make a call whilst the radio is scanning you may operate the PTT key or make a Selcall call as described in the next section, which will interrupt scanning and usually returns the radio to the channel from which scanning was initiated. However if the radio has paused on an active channel, then the radio will remain there and the call will be made on that channel (once it becomes clear of other traffic).

Selcall Operations

TRANSMITTING

If your radio has the Selcall (Selective Calling) option fitted and a Selcall call has been assigned to one of your function keys, simply press that key for about one second to initiate the call.

When the other party replies, begin conversing in the usual way.

RECEIVING

When you are called by another party using your Selcall code, your T3010*II* sounds a ringing tone and the call received (CALL) indicator appears, flashing, in the display.
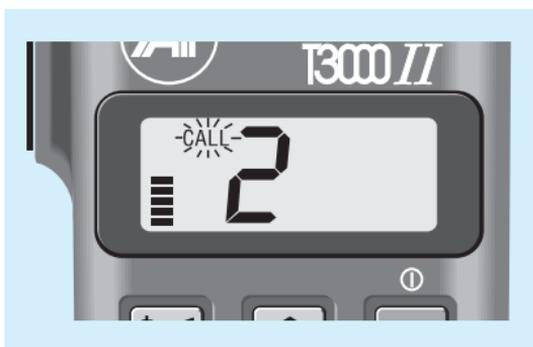
When you answer the call the ringing tone stops as soon as you press the PTT key.

If you are one of the recipients of a group call, your radio sounds the ringing tone only once. The caller then broadcasts his message to all members of your group. It is not usually necessary to reply.

If you do not answer the call , the ringing tone will stop after a short while but the call received indicator continues to flash in the display until you press a key.

CTCSS and DCS Operations

CTCSS and DCS isolate your calls so that you only talk with a single group, even though other users may be on the channel. They do this by screening out radio traffic that does not carry the correct signal. Either CTCSS or DCS is automatically available on any channel for which it has been programmed. Only one CTCSS tone or DCS code can be used, but it may be applied to more than one channel.

Transmitting and receiving using CTCSS or DCS is the same as transmitting and receiving in normal radio operation.

Your radio must be specially programmed to enable the features described in this section. Unlike the switched options described in the next section, these features cannot be activated or deactivated by assigned function keys.

Economiser Mode

The T3010*II* incorporates an Economiser mode which turns off some internal circuitry after a few seconds of inactivity, to conserve battery power. This is preprogrammed and may be customised to various interval and sensitivity options, or it may be disabled. Full radio activity is restored when any key is pressed or when the radio receives a signal (with your signalling tone, if CTCSS/DCS or Selcall is installed). When Economiser mode is active, ECON appears in the display window.

Night Use

The Night Use option automatically turns on the backlighting for the display window and keys when any key is pressed or when a call is received. Backlighting remains on for only a few seconds unless further activity is detected. To determine whether this feature is active in your radio, observe the display in subdued lighting and press any key.

Switchable Options

The function keys above your radio's PTT switch and on the keypad can be configured to perform a variety of functions. These options will have been made available to you at the time your radio was preprogrammed. If you are unsure about what is available, contact your Tait dealer or distributor.

Each option has an ON and OFF setting. To change the current setting, press the assigned function key. When an option is turned ON, an indicator generally appears in the display window. (See Appendix I for a list of display window indicators.)
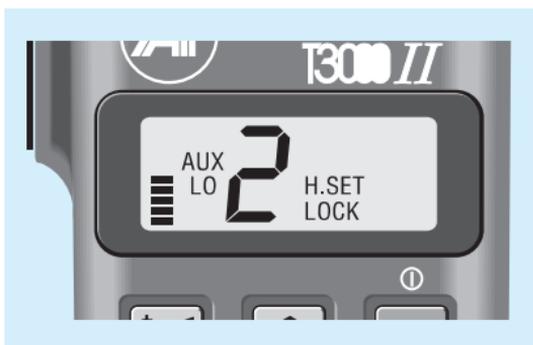
The possible options are displayed in the following table:

Option	Indicator	Description
AUXILIARY	**AUX**	Turns an installed auxiliary device ON or OFF.
HANDSET MODE	**H.SET**	Lets you switch between Handset and Normal mode. Handset Operation enables you to use the T3010*II* like a telephone Handset. For more details, see "Normal and Handset Operation".
KEYPAD LOCK	**LOCK**	Enables you to lock the keypad so that only the ON/OFF, Volume Adjustment and PTT keys are active. This prevents accidental operation. The function keys are also disabled. Turn Keypad Lock on in the normal manner using the assigned function key. The radio reverts to normal operation with the keypad locked. Keypad Lock can be removed at any time by pressing the ON/OFF key and holding it for at least one half-second.
BACKLIGHTING[4]		Lets you turn backlighting on momentarily by pressing the assigned function key. If Night Use is also active, Backlighting is activated anywaywhen activity on the current channel is detected.

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[4] *Selecting "BACKLIGHTING" increases power consumption.*

Option	Indicator	Description
TX LOW POWER (Transmit Low Power)	**LO**	Lets you conserve battery power by reducing the output of your transmitter if you are near your targeted receiver. When this option is on, the LO indicator appears continuously in the display. The LO indicator also appears on channels which have been preprogrammed for low power operation.
CHANNEL SCAN	**SCAN**	Enables you to automatically monitor a number of channels for activity. For further details see "Scanning Channels".

Recharging the Battery

Under normal usage, your radio battery can be expected to last approximately eight hours before it requires recharging. If you spend a lot of time transmitting, this time will be reduced; if you rarely transmit, it may be considerably longer.

When battery voltage is low, the (TX / BUSY) indicator flashes red, the BATT indicator appears in the LCD window, and the radio sounds a low-pitched beep every 20 seconds. You can continue using the radio, but you should recharge the battery as soon as possible to avoid reducing its life.

*Note:* Once the battery becomes too discharged to properly run the radio, the radio switches itself off.

The battery can be recharged while still attached to the radio, or it can be recharged separately.

Mounting the Radio in the Charger

1. Turn the radio off using the front panel ON/OFF key. (The radio may be left on, but, if using a trickle charger, full charge may not be achieved).

2. Place the radio, with its battery still fitted, into the charger.
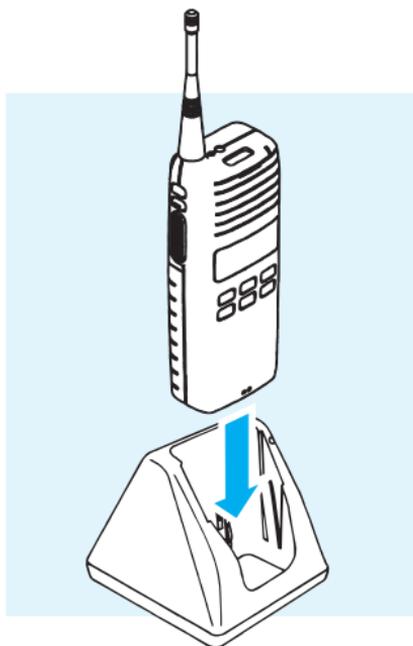
Note: Some Radio Regulatory Authorities forbid any transmissions while the radio is mounted in its charger.

3. Recharge according to the "Recharging" instructions below.

Mounting the Battery in the Charger

1. Turn the radio *off* using the front panel ON/OFF key.

2. Remove the battery pack from the back of the radio by pressing down the spring latch in the middle of the radio back panel. Hinge the battery pack away from the chassis until it comes free.
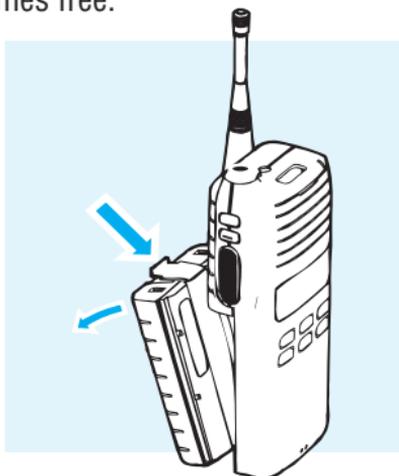
3. Place the battery in the charger pocket with the four silver contacts to the back. Lean the top forward as far as you can to seat the battery properly.

4. Tilt the battery back against the contacts until it snaps into place.
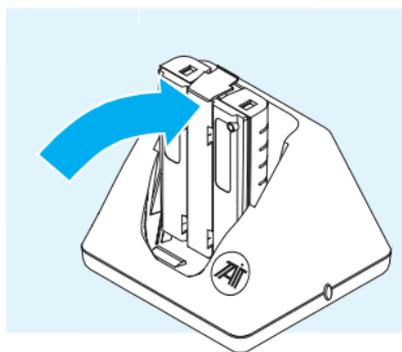
5. Recharge according to the instructions below.

Recharging

To recharge using a Tait battery charger, perform the following steps:

1. Make sure the indicator at the top corner of the charger confirms that the battery pack is charging. If it does not illuminate red within a few seconds, check whether the battery is seated properly, the plug pack is properly connected to the charger and the mains outlet is switched on and live.
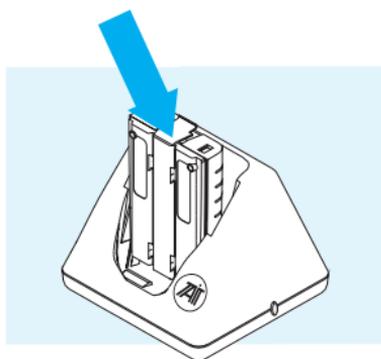
2. The battery pack (or radio) may be considered fully recharged when the indicator changes from red to green but it is recommended that the battery remain in the charger until it is required. (The T3001 trickle charger has no end of charge indication - it charges continuously.)

Note: Trickle chargers are not considered suitable for re-charging high capacity (Nickel-Metal Hydride) battery packs.

To refit the battery pack, offer it up to the chassis, locating the peg on its bottom edge in the slot at the bottom of the radio's chassis. Hinge the pack up until the spring latch clicks into place.
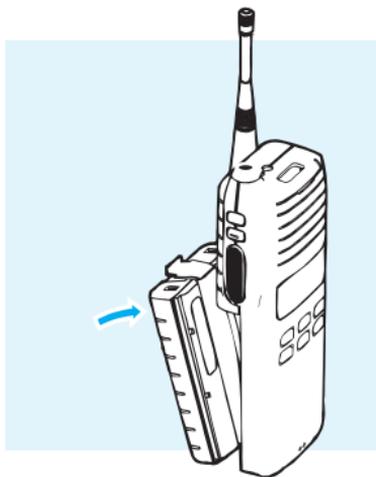
Note: When using a trickle charger, recharging the battery pack with the radio attached *and* switched on will reduce the amount of charge the pack receives. To ensure that an exhausted battery pack is completely recharged, it should be charged for a full twelve hour period either separately, or with the radio switched off.

Maintenance and Troubleshooting

Maintenance

Your T3010*II* requires no regular maintenance, other than ensuring the battery has sufficient charge.

CARE OF YOUR T3010*II*

- From time to time wipe the battery contacts and accessory connector contacts with a dry lint-free cloth to remove any dirt, oil or grease.
- To clean the radio's case use a cloth dampened with clean water.
- To remove difficult marks the cloth may be dampened with a mild liquid soap solution.
- *DO NOT* allow the radio to come in contact with detergents, alcohol, aerosol sprays or petroleum-based products as they may permanently damage the case.

TO PRESERVE BATTERY LIFE

- Avoid storing the battery for extended periods without first fully recharging it.
- Avoid repeatedly recharging the battery when it has only had a small amount of use.
- Use only a Tait recommended charger.
- Maintain an ambient temperature of 5^0 to 40^0 C during recharging (optimum battery performance will be obtained between 15^0 and 25^0 C).

CAUTION: DO NOT allow the battery pack contacts to become short-circuited or dispose of the battery pack in a fire.

AVOIDING HIGH TEMPERATURES

If your radio is left in strong sunlight, or exposed to high temperature, the display may temporarily darken, and the High Temperature Warning may sound. If the temperature exceeds 80^0C, the radio will cease to function until the temperature returns to a safe level.

Additionally, the high capacity battery pack is fitted with a safety cutout which prevents operation above 70^0 C. Temperatures above 90^0 C cause permanent damage.

Troubleshooting

If the display remains blank and no indicators light up when you turn the radio on, it is likely that no power is available.

If the radio turns on briefly then off again, or fails to operate properly, it is likely that the battery is discharged.

In either case, check the following:

- Is the battery firmly plugged into the rear of the T3010*II* ?
- Was the battery sufficiently charged after its last use?
- Is the battery charger working correctly?
- If using a high capacity battery pack, has it been subjected to very high temperatures[5]?

If single character messages appear in the display when they should not, turn your T3010*II* off, wait a few seconds and then turn it back on.

If the message reappears you should return your T3010*II* to your local Tait dealer for servicing.

Appendix I Indicators

The indicators described here include the single letter messages displayed by the radio, abbreviated status messages, and the BUSY/TX indicator at the top of the radio.

Display Window Messages

The display window provides single letter messages concerning the current mode and status of your radio. These messages are as follows:

E	Error (Switch radio off and back on)
H	Out of hire time
P	Programming mode*
A	Recalibrate*

Consult your Tait dealer.

These messages stop or limit usage. Additional messages are available for programming and testing.

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[5] *The high capacity battery pack is fitted with a thermal fuse which operates at temperatures exceeding 90⁰ C and renders the pack unserviceable.*

Display Window Indicators

The display window indicators refer to the abbreviated messages which appear in the T3010*II* display window and the volume indicator to the left of the display. These indicators are described in the following table:

Indicator	Condition	Meaning
☰	Volume	Shows the relative setting of the volume control. Full volume has 10 bars showing, lowest volume has one.
CALL	Selcall Call Received	Your Radio has received a Selcall call for you.
AUX	Auxiliary	Your radio has an auxiliary device fitted and it is active.
LO	Low Transmit Power	Your radio is running with its transmitter power reduced.
SCAN	Scanning	Your radio has entered the channel scanning mode.
ECON	Economiser	Your radio has entered the economiser mode. It returns to active mode when a key is pressed or if there is activity on the current channel.
H.SET	Handset	Your radio is in the handset mode.
LOCK	Keypad Locked	The keypad is locked to prevent accidental operation. It may be unlocked by pressing the ON/OFF key and holding it for at least one half-second.
BATT	Battery	The battery needs charging and should be replaced or recharged as soon as possible.

LED Indicator

The LED Indicator at the top of the radio provides a variety of indications as displayed in the following table in order of priority:

Indicator	Condition	Meaning
Steady Red	Tx	The radio is transmitting. This should occur each time you press the PTT key and may occur automatically when another party calls you using Selcall (if installed).
Steady Green	Receiver Busy	Your radio has detected some activity on the channel.
Flashing Green	Monitor Active	Muting is off and you are able to hear any traffic on the channel.
Flashing Red	Low Battery	This is accompanied by a low-pitched beep every 20 seconds. The battery is nearly completely discharged.

Appendix II Audible Indicators

High Temperature Warning

A series of high-pitched tones when the radio is transmitting. The radio automatically switches to low power, but you should stop transmitting and allow it to cool down.

Battery Low

A series of low tones, with the LED indicator flashing red and the BATT indicator displayed in the LCD window.

Transmit Timer

Three short medium-pitched tones. (Your message has exceeded a preprogrammed time-limit.) The radio stops transmitting. Release the PTT key before transmitting again.

Appendix III Preset Options

The following items may be preprogrammed in your radio:

- Channels
- Channel Scanning
- Confidence tones
- Economiser mode

- Function keys
- Night Use
- Hire Timer
- Selcall

Many of these settings will be obvious in use. You may wish to record other items, such as your function key and channel usage in the spaces provided.

CHANNEL USAGE

Channel	Use	Preset call	Scan
1.	_____	_____	☐
2.	_____	_____	☐
3.	_____	_____	☐
4.	_____	_____	☐
5.	_____	_____	☐
6.	_____	_____	☐
7.	_____	_____	☐
8.	_____	_____	☐
9.	_____	_____	☐

FUNCTION KEY SETTINGS

F1: [●] _____

F2: [   ] _____

F3: [▬] _____

SELCALL SETTINGS

Your Selcall

ID: _____

The following guidance is intended to help you get maximum life and trouble-free service out of your Tait rechargeable batteries.

Types of Batteries

There are two types of rechargeable battery available for your Tait handportable radio, Nickel Cadmium (NiCd) and Nickel Metal Hydride (NiMH). The NiMH is the higher capacity battery. Each type has slightly different charging requirements and should be handled accordingly (see "Battery Charging").

Rechargeable batteries have a finite lifetime. Battery capacity reduces as the total number of charge and discharge cycles increases. A battery is considered to be approaching the end of its useful life when it can achieve no more than 80% of its rated full charge capacity. The number of charge and discharge cycles a battery can achieve depends upon its type and the way it is used. The lifetime of well cared for NiCd and NiMH batteries will be typically from twelve to eighteen months (400 to 600 cycles).

New Batteries

Before first use (or after prolonged storage) you should ensure that your new battery is properly charged. Otherwise the battery may not start with its full charge and will not perform correctly until it has undergone several charge and discharge cycles. It is recommended that you charge your batteries before first use as follows:

Tait Charger	NiCd	NiMH
Trickle (T3001, T3003)	For at least 12 hours[6].	Not recommended.
Fast (T3002) or **Rapid** (T3004)	Until 2 hours after the green "full charge" light illuminates.	Until 2 hours after the green "full charge" light illuminates.

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[6] *If a trickle charger is being used with the battery fitted to the radio during this first charge, ensure that the radio is turned off.*

Battery Use

Both NiCd and NiMH batteries perform best when they are not repeatedly recharged after only short periods of use - ie the battery should be allowed to substantially run down before recharging. To ensure a long and trouble-free battery life it is recommended that you get into the routine of using the radio until the "low battery" indication appears, before recharging it fully.

If your application makes it inconvenient to follow such a routine, you should still ensure that the battery is fully discharged and recharged at least once every week. This can be done either by using a suitable charger with inbuilt discharge function (see "Battery Problems"), or by using the radio until it switches itself off and then recharging the battery fully.

Both types of batteries will also self-discharge - ie if the battery is charged and then left to sit without being used, it will gradually discharge by itself. NiMH batteries can self-discharge in less than one week if left in warm moist air. NiCd batteries self-discharge more slowly. To prevent self-discharge, batteries may be left in the charger, after the green "full charge" light has illuminated.

Battery Charging

Tait rechargeable batteries must only be charged using Tait specified charging equipment. There are several models of battery charger available which fall into two basic types, "trickle" and "fast".

Tait trickle chargers charge the battery slowly but do not sense when the battery has been fully charged. To avoid repetitive overcharging, it is important to avoid making a habit of recharging batteries after they have had only a small amount of use (see "Battery Use" above). Because of their susceptibility to damage from overcharging, it is recommended that NiMH batteries not be routinely subjected to trickle charging.

Tait fast chargers are fitted with a device that senses when the battery has reached full capacity and commences trickle charging, thus eliminating the possibility of overcharging. They are therefore suitable for "topping up" partially discharged batteries of both types. Some models of fast charger (eg T3002) also have an inbuilt discharge function, which enables the battery to be periodically given a full discharge and charge cycle, quickly and without the need to use the radio to discharge the

battery.

Battery Problems

NiCd batteries sometimes exhibit a symptom commonly called "memory effect". This is a term used to describe the performance of a battery that has regularly only been partially discharged before recharging and seems to "remember" where it previously stopped discharging. When the battery reaches this discharge point, the voltage drops prematurely and the radio gives a "low battery" indication. Consequently the battery only operates with a reduced capacity. While NiMH batteries suffer less from memory effect, it is recommended that both types of battery be subjected to regular full discharge and charge cycles, as outlined in "Battery Use" above.

A battery suffering from memory effect can often be restored to full capacity by deep-discharging using a suitable charger with an inbuilt discharge function (eg T3002). After discharge the battery will be immediately fast charged to capacity. In cases of severe memory effect it may take a number of discharge and charge cycles to restore the battery to full capacity. See your charger manual for full instructions. Alternatively the battery can be returned to your dealer or service agent for reconditioning using an approved battery analyser/reconditioner.

The performance and lifetime of both types of batteries may also be reduced by prolonged overcharging. NiMH batteries are most prone to damage from overcharging, but NiCd batteries can also have their life reduced.

Under certain environmental conditions, the terminals on the battery may exhibit tarnishing. This in turn may lead to unreliable operation, either while in use or during charging. Typical symptoms might be that the radio turns itself off for no apparent reason, or that it fails to charge properly. The tarnish can be seen as a dull discolouration on the terminal, which prevents it from connecting effectively to the radio or charger. In such cases it is recommended that the tarnish be removed by gently rubbing the affected terminals with a standard pencil eraser.

Battery Storage

Avoid storing the battery for extended periods without first fully recharging it. After prolonged storage (the battery should be fully recharged in accordance with the instructions for new batteries (see "New Batteries") before being put back into service. If initially you experience lower than normal battery capacity, this will usually correct itself in normal use after two to five full charge and discharge cycles.

If the battery capacity remains low, you may be able to restore it using the procedure outlined in "Battery Problems". If not, it is probably nearing the end of its useful life and needs to be replaced.

Disposal of Used Nickel Cadmium Batteries

NiCd batteries contain a small amount of the metal Cadmium, which can produce potentially toxic waste if it is not disposed of correctly. When no longer in use, you should ensure that your NiCd battery is properly disposed of. Contact your local Tait sales/service outlet or dealer for details of where to send your "spent" battery for recycling. Do not burn or break the battery.

Optional Accessories for the T3000II Range of Radios

- Trickle Charger
- Single Fast Charger
- Dual Rapid Charger
- Multi-way Rapid Charger
- Vehicle adaptor
- Remote speaker / microphone
- High Capacity Battery Pack

- Selcall (factory-fitted)

See your Tait dealer for more details.

TAIT ELECTRONICS LIMITED

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