



Termatrac T3i Suite

User Guide

Version 2.15

www.termatrac.com

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This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Disclaimer

The recommendations contained in this document are not intended to establish the standard of care for the structural pest control industry, nor are they intended to promote any industry-wide practice. Rather, they are being made to assist the person undergoing training to further understand how to implement equipment into their inspection practices.

No claim or warranty is made or implied that the recommendations, methods or procedures contained in this restricted publication will ensure safe or preventable injury or prevent property damage or that the equipment will detect insects or other pests every time it is utilized.

Adherence to the recommendations in this manual is not a substitute for a careful pest inspection. This document is merely intended to assist the Operator in evaluating possible methods or procedures for inspecting a specific structure under a specific set of circumstances using the Termatrac T3i device. It is the responsibility of the Operator to determine the appropriate method of procedures to utilize under a particular set of circumstances for inspecting any given facility.

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Foreword

Thank you for choosing to use the Termatrac T3i device.

Since the launch of Termatrac in Australia in 1999, Termatrac devices are now found worldwide.

We strongly recommend that you carefully read this User Guide to familiarize yourself in the correct and safe operation of your own Termatrac device.

We recommend that all users read this Guide and complete the Termatrac training program to help use the equipment correctly and to its full potential.

Once again, thank you for investing in the Termatrac T3i Suite, and if you have any problems or questions, do not hesitate to contact any of our friendly staff.

Jim Davies
Termatrac Founder

1 Overview

1.1 Conventions

The following conventions are used throughout this document.

Table 1 Conventions

Convention	Description
Screen outputs	This font is used to display information as it appears on the screen.
Screen displays	This typeface is used to indicate the commands to be typed in.
[Key]	<p>[Key] refers to an actual key that must be pressed. For example the Enter key would be indicated as [Enter] or [Return].</p> <p>If two or more keys must be pressed simultaneously, the key names are combined with a plus sign (+). For example: Press [Ctrl]+[Alt]+[Del] to reboot the PC.</p>

1.2 Related Publications

The Termatrac T3i Software documentation includes the following:

- Termatrac T3i Suite Installation Guide
- Termatrac T3i Suite Reference Manual.

1.3 Definitions

Table 2 T3i Suite Definitions

Term	Description
Accelerometer	A device for detecting physical movement of the T3i in any direction.
Bluetooth®	A wireless communications technology developed for the transfer of information over a short distance.
Calibration Date	The date a device is due for calibration by a Termatrac Authorized Representative. For a Purchased device, the Calibration Date indicates when the next scheduled maintenance is due. The sensors in the T3i Device will continue to operate after the Calibration Date has past. However, any reports generated will display the word "UNCAL" in all scan logs. See definition of UNCAL below.
Distribution Center	The location where the Termatrac T3i is serviced and calibrated.
Expiry Date	The Expiry Date is when a Leased device will not allow more sensor scan operations. However some Public Information operations will be supported after the Expiry Date has been reached.
Idle Mode	This mode is entered after the T3i Operate program has begun and is waiting for the Operator to select a function to administer Scan Logs or begin a Termite investigation process.
Job	Investigative work carried out by the

Term	Description
	Operator. This usually results in Scan Logs and Notes about the termite activity observed.
Job Location	The physical address of where the termite investigation work will be carried out.
Log In	Gaining access to a device or program by entering a password or key.
Microsoft ActiveSync®	Software created by Microsoft to synchronize certain information between PCs and PDAs.
Operator	The Termatrac Certified Technician who carries out pest inspections in the field.
Operator Password	This password allows access to a T3i Device. It should only be known by the Operator. Without the password, the T3i Device will only reveal Public Information.
Pairing	This is the process used in a Bluetooth network to ensure devices on the same Bluetooth network can communicate with each other.
Passkey	This is a password used to gain access to a device on a Bluetooth network.
PC	Personal Computer (or Desktop computer).
PDA	Personal Digital Assistant used to control the T3i Device and display the output of any sensor readings.
Public Information	T3i Device information that is not sensitive to the Operator and is known already e.g.

Term	Description
	serial number for the device.
Purchased Device	A T3i Device that has been purchased by the Operator and will always be operational as long as the correct Operator Password has been entered.
Reference Value	This value represents a reference value set by the Operator or by the T3i Device when a sensor is first started. The PDA will display the difference between the current value and the Reference Value.
Rented/Leased Device	A T3i Device that will be rented or leased by the Operator and will be usable for a specific period being until the Expiry Date is reached.
Scan Log	This is the sensor data (radar, thermal or moisture) recorded by the PDA running the T3i Operate program for a preset time period.
Sensors	The T3i Device contains a radar, thermal sensor with laser pointer, and moisture sensor. These sensors will return information pertinent to their particular operation.
Setting Reference Value	This operation is undertaken by pressing the Pin icon or pressing on the display graph. This will reset the Reference Value to the current value of the sensor is displaying.
Signature	A common characteristic of a waveform that can be readily identified in any Scan Log.
T3i Device	The handheld device containing the sensors used to detect termite activity.

Term	Description
T3i Software Suite	The software used on PDA for operating the T3i Device and managing the Scan Logs on the PC.
T3i Suite	Carry case containing the T3i Device, PDA, batteries, chargers, cables, manuals and CDs.
Target Date	The date chosen for a job to be undertaken.

2 Introduction

The Termatrac® T3i Suite is an innovation in termite detection and tracking technology. This detection technology is of great assistance and an essential tool for professionals working in the pest inspection field.

The T3i Suite contains the following components:

- T3i Device which contains the sensors used to detect and track termites.
- Personal Digital Assistant (PDA) computer. This provides a screen to display the information from the T3i Device. The PDA also controls the operation of the T3i Device.
- Batteries to power the T3i Device.
- Battery Charger for the T3i Device batteries and for the PDA.
- Installation Manual and T3i Suite CD.

Utilizing patented radar technology, the Termatrac T3i Device can locate and detect termites moving in unseen areas such as wall voids, cracks, crevices, air pockets, construction flaws etc.

The Termatrac T3i Device will detect movement activity through materials such as brick, wood stucco, concrete blocks, ceramics tiles, marble, terracotta tiles, mica, plastic veneer, vinyl and many other common building materials.

Just as with any other tool, such as a Moisture Meters, Borescope or Infrared Camera, the Termatrac T3i Device, combined with the expertise of the Pest Inspector, greatly assists in pinpointing hidden termite activity.

The T3i Suite has benefited greatly from the success of previous models. The Termatrac T3i Suite meets the evolving needs of the Pest Control Professional.

The major features of the T3i Suite include:

- Real time control of the T3i Device and visual feedback using a wireless Bluetooth connection to a PDA.
- Enhanced termite detection radar.
- Moisture sensing.

- Remote thermal sensor with laser pointer.
- Unit stability indicator to define differences in physical movement and pest movement.
- Data logging.
- Report Generation software.

3 Safety Precautions

This instrument contains highly accurate and precision components that can be affected by sharp knocks, abuse and/or falls. It contains highly sophisticated electronic components. The user is to place the T3i Device in its Carry Case when not in use to ensure a high level of physical protection.

The T3i Device must be kept dry at all times. Failure to ensure this may cause the Device to fail, cause false readings or may void warranties.

The T3i Device contains a laser pointer to indicate the location where a thermal measurement is being taken from. Although this laser pointer is **below 1mW** in power output, care must be taken to avoid direct or reflected contact with the eye. Laser, being a finely focused beam, will reflect quite easily off shiny surfaces. Care must be taken when aiming the laser to avoid any surface that may cause the laser beam to be reflected towards the user or others standing near by.

The Termatrac T3i Device has undergone rigorous testing and qualification trials to make sure it conforms to current international safety standards. Although it uses microwave emission to pick up termite movement, the emission is much lower than the emission from a mobile phone. The T3i Device is EMC approved indicating that the emissions are well within Australian and International Standards.

In the interests of safety:

- Never look into the radar head while the Device is operating.
- Do not point the radar unit at anyone while the Device is operating.
- Do not point the laser beam at anyone while the Device is operating.
- Turn the Device completely off when not in use.
- Remove battery before you store the Device in its Carry Case.
- The operating temperature range of the Device is between 5°C and 45°C.
- It is recommended to avoid prolonged radar exposure to skin or any parts of the anatomy.
- Only use Termatrac supplied batteries in the Battery Charger.

4 Limitations of T3i

Although the Termatrac T3i Device is one of the most advanced tools for the detection of termites, it does have limitations. The Termatrac readings should not be relied upon for the surface types shown in [Surface Limitations](#)^[18].

Table 3 Surface Limitations

Surface Types	Limitations	Recommendations
Metal	The radar does not penetrate these materials. It may also give false readings that indicate termite activity. This is caused by the signal reflecting off the material and back to the T3i Device, which is interpreted as false movement	Visually inspect the area. Always make sure there is no metal sheeting between the device and the area you want to check.
i.e. Foil building insulation		
i.e. Aluminum-cladding		
Materials with very high moisture content	The radar signal may be absorbed in high moisture areas	Circumnavigate around these areas in the dryer sections to detect activity and to determine size of the colony

You can confirm the accuracy of your readings by checking other areas of the wall, as well as checking the wall from the other side. Use of other tools at your disposal is also recommended.

Termatrac T3i Radar will have severely reduced effectiveness through very dense materials such as seasoned hardwoods that are of a certain thickness and density, or thick concrete that is of a high PSI or MPa. In these situations however, the activity most certainly will be on the outer areas.

5 T3i Suite Overview

5.1 Carry Case

This is a specially designed case that houses the components of the T3i Suite. The inner lining of the carry case has been designed to hold and protect all of the T3i Suite components from shocks through rough handling. The location of the T3i Suite components are shown in [T3i Suite](#)¹⁹.

Figure 1 T3i Suite



The cut-out patterns inside the case for each component provide a quick visual aid in detecting any missing components.

5.2 T3i Device

This is the handheld, battery powered Device which contains the sensors for use in termite detection. As the T3i Device is not waterproof, do not take the Device into water environments or use in heavy rain. Ingress of moisture into the Device may cause faults or failures and possibly void any warranties.

The T3i Sensor locations and the flip stand are shown in [T3i Sensors and Flip Stand](#) ²⁰.

Figure 2 T3i Sensors and Flip Stand



5.3 PDA (Personal Digital Assistant)

This device is an intelligent, portable PC running the Microsoft® Windows Mobile® 6.0 Operating System (or later). The PDA contains software for the control of the T3i Device. The PDA will provide a real-time visual indication of the current T3i Device state and display the information obtained from the T3i Device sensors in an "easy to view" line or bar graph. The PDA uses a Bluetooth wireless connection to communicate with the T3i Device.

The diagram in [PDA Features](#) ²¹ shows the HP iPAQ PDA housed in its protective case. The locations of the SD Card Slot, the USB connector, the Cursor Control button and the OK button have been indicated.

Figure 3 PDA Features



Highlighted in [PDA On/Off Button and Stylus](#)^[21] is the location of the PDA On/Off button and the Stylus.

Figure 4 PDA On/Off Button and Stylus



Read the PDA Manufacturers handbook prior to operating the PDA for care, maintenance and warranty information.

Note: If a PDA other than the HP iPAQ has been provided, please refer to its PDA Supplement document supplied for details on the PDA and attachments needed to connect to a PC.

5.4 Batteries

The T3i Device is powered by five (5) AA 1.2V (nominal) batteries. Any similar commercially available battery may be used. The Termatrac T3i Suite includes ten (10) re-chargeable NiMH batteries which will provide approximately 8 hours of continuous operational time before they need recharging.

The location of the battery compartment and the battery orientation is shown in [Battery Location](#)^[22].

Figure 5 Battery Location



5.5 Battery Charger

This unit is used to re-charge up to ten (10) rechargeable AA batteries that power the T3i Device. The charger can be powered from a main AC supply or a vehicle's 12VDC cigarette lighter socket. The batteries will require overnight charging in this charger.

5.6 USB Cable

This cable is used to connect the PDA to a PC (or laptop). This will allow the exchange of information and scanning logs between the PDA and the PC. The USB Cable is inserted into the USB Connector of the PDA as shown in [PDA Features](#)^[21], and to a spare USB connector in the PC.

5.7 User Guide

This manual is produced in a Combined Help File format (.chm) and a printable version in PDF format (.pdf). The User Guide is included on the T3i Suite CD and installed onto the PC for convenience. This Guide will also provide information on the operating the T3i Device in common modes and operations.

5.8 CD

A CD is provided for the installation of the T3i Suite software for the PDA and PC. The CD also has a web based and PDF versions of this Guide.

6 T3i Suite Ready for Use

6.1 Charging Batteries

The Battery Charger is used to charge the AA batteries before their use in the T3i Device. This intelligent charger will accept a combination up to 10 x AA/AAA cells and 2 x 9 volt batteries. When the batteries are inserted into the Battery Charger, the LED above the battery will turn red, indicating charging. Once the battery has been fully charged, this LED will turn green.

A partially charged battery may be used in the T3i Device however, the operational time may be severely reduced, or the unit may not function.

6.2 Installation of Batteries

Remove the battery compartment cover and insert the AA batteries into each slot. Care must be taken to orientate the batteries correctly into the T3i Device. The battery compartment has indicators to show the correct battery orientation. Insert the batteries as shown in [Battery Location](#)^[22].

If the battery level is low, the Power LED, (shown in [Power LED](#)^[33]), will **flash yellow three times** before turning green. This indicates the battery capacity is almost depleted and they should be replaced. The T3i Device will continue to operate for approximately one hour longer (with Termatrac supplied batteries).

If the battery level is too low for the T3i Device to operate reliably, the Power LED will **flash red three times** and then the T3i Device will turn itself off. The only action now permissible is to replace the batteries. All of the buttons will be disabled.

If the batteries have been excessively drained, the T3i Device may enter a loop where all of the LEDs are **constantly flashed**. If this occurs, replace all of the batteries with fully charged ones.

6.3 PDA

The PDA is powered by a battery which will need to be charged before use. The PDA will provide an indication of its battery level on

the main screen when it is first turned on. The PDA runs a program called T3i Operate which is used to control the T3i Device. This program will establish the Bluetooth connection with the T3i Device and control the scanning operations.

The T3i Operate program should be exited before the PDA is turned off.

T3i Operate will provide a facility to view the output of the current sensor scanning operation. This scan data may be stored in the PDA for later review, or downloading to a PC for inclusion in a customer report.

See section [Use T3i Operate on the PDA](#)^[47] for details on the T3i Operate program.

Note: To exit most screens and return to the previous screen, press the OK icon in the top right hand corner of the screen.

6.3.1 Pairing to Bluetooth Devices

Before the T3i Device can be used it must be "paired" with a PDA. This operation is carried out automatically by the T3i Operate program. PDA devices have Bluetooth capability built-in and may establish a link with any device capable of supporting a Bluetooth wireless connection. The Termatrac T3i is such a device.

The pairing process will establish a link between a specific T3i Device and a PDA. This will ensure the PDA will connect to the supplied Termatrac T3i Device. If the PDA, or the T3i Device, is to be changed in the future, this Bluetooth pairing process must be carried out again (see *Termatrac T3i Suite Installation Guide*).

For the first time the PDA and T3i Device are to be paired, a Bluetooth pass key will be requested. The passkey for the T3i Device is set to a value of "0000" (four zeros).

6.4 Checking the Battery Level

The PDA will run a Termatrac software program called T3i Operate. This program will constantly show the current state of the T3i Device battery level.


At a preset level, the low battery warning will be displayed on the PDA. This is an indication that the batteries will need recharging soon. The T3i Device can still be operated when this warning is given.

If the batteries reach an unacceptably low level, the PDA will display a message to charge the batteries now and no further action can be performed.

7 T3i Quick Start

7.1 Turning On the T3i Device

To turn on the T3i Device, perform the following steps:

1. Insert charged batteries into the T3i Device. The LEDs will light up momentarily and then go out. This indicates the device is operating correctly and has performed its self-test successfully. If the LEDs remain on and do not go out, this may indicate an error. If this occurs, check that the batteries are fully charged. Remove and re-insert the batteries again. If the LEDs continue to indicate an error, contact the Distribution Center.
2. Press the Power button (shown in [Button Locations](#) ) to start the T3i Device. The Power LED turns green indicating it is in a ready state. The device is now ready for a PDA connection using Bluetooth wireless connection technology.

7.2 Establishing a Connection

To establish a connection between the PDA and the T3i Device, perform the following steps:

1. Ensure the PDA is powered up and the T3i Operate program is running by selecting it from the Programs menu on the initial PDA Start screen.
2. From the T3i Operate screen, select the **Connect** icon to establish the connection between the PDA and the T3i Device.
3. The Power LED on the T3i Device will change from green to blue once a Bluetooth wireless connection (Leased Usage mode only) with the PDA has been established. If the T3i Device is in Purchased Usage mode, the power LED will remain green and only turn blue once the Operator has correctly entered their password.
4. The T3i Operate program will also indicate a connection to the T3i Device has been made by changing the icon in the lower left corner of the PDA screen.
5. The LED on the top left hand side of the PDA will also change to blue when the Bluetooth wireless connection is active.

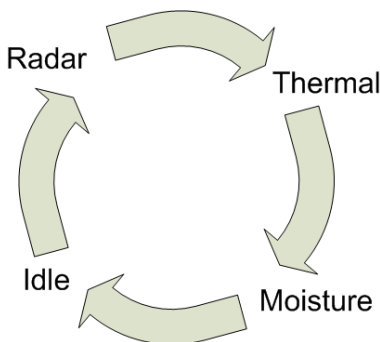
7.3 Operating the T3i Device

The main screen of the T3i Operate program will indicate the two main modes of use being Job mode or Quick View.

The quickest way to start the T3i Device sensors is to select the Quick View button. This will allow termite activity to be seen but will not allow the logging of any activity information. Activity information can be logged only when the Job mode is selected.

Select the desired sensor to be used by selecting the Radar, Thermal or Moisture buttons. Pressing the Mode button on the T3i Device will automatically start the sensors in the following sequence, starting with Radar as shown in [Mode Sequence](#)^[28].

Figure 6 Mode Sequence



Operation of a scanning sensor will be indicated by the appropriate screen being displayed on the PDA and the LED sequence shown in [LED Colors for Scanning Operations](#)^[28].

Table 4 LED Colors for Scanning Operations

Scan Operation	LED Display
Radar	Radar LED green
Thermal	Thermal LED red
Moisture	Moisture LED blue

The sensor data will now be displayed as a bar graph on the PDA

screen.

7.4 Shutting Down T3i Operate

To stop the current scanning operation and shut down the T3i Device from the Quick Scan function, perform the following steps:

1. Click the `OK` icon in the top right hand corner of any scanning screen.
2. Select the `OK` icon to return to the Main menu.
3. Select the `Connect` button or select the `Disconnect` menu item. When confirmed, the PDA icon will change to indicate there is no longer a connection with the T3i Device. The T3i Power LED will change color from blue to green.
4. Press the T3i Device power button to turn it off.
5. Select the `OK` icon in the top right hand corner of the PDA screen, or select the `Close` button to shutdown the T3i Operate program. A confirmation dialogue box will be presented.
6. Select the `OK` icon to close the T3i Operate application completely.

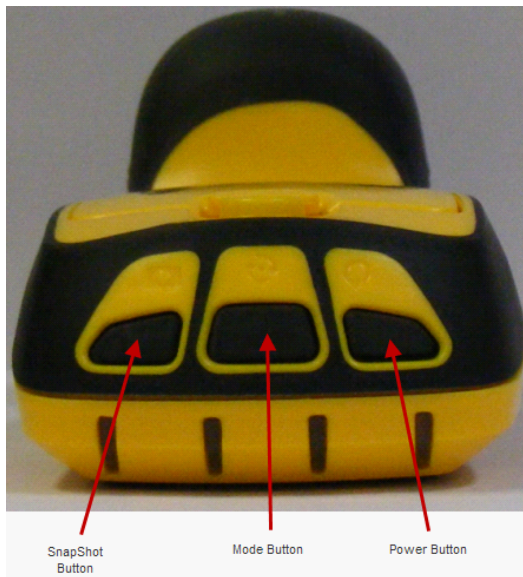
8 Buttons and LED Indicators

8.1 Buttons

8.1.1 Button Locations

Shown in [T3i Button Locations](#)^[30] are the locations of the T3i buttons.

Figure 7 T3i Button Locations



8.1.2 Power Button

To **power up** the T3i Device, press the Power button once. This will initiate the start up sequence indicated by the Power LED turning yellow. A brief internal check will be performed by the T3i Device which will be indicated by some of the LEDs being illuminated. At the end of this sequence the Power LED will be a steady green color.

To **power down**, press the Power button. All the LEDs will go off

and the device will enter a standby mode.

8.1.3 Mode Button

This button changes the mode of operation of the T3i Device. Provided there is a connection to the PDA and T3i Operate is running, pressing and releasing the Mode button once will change the sensor currently being used.

The sequence starts off in the Idle mode and moves to the next mode when the Mode button is pressed. This will be verified by the LED associated with the next mode coming on. Each mode can be selected in turn by pressing and releasing the Mode button. When the last mode is reached the T3i Device will revert back to the Idle mode again. This is shown in [Mode Sequence](#)^[28].

If a Job is not currently active, pressing the Mode button will start the Quick View operation.

8.1.4 Snapshot Button

This button is only active if all of the following conditions are met:

- PDA is connected to the T3i Device.
- T3i Operate is running.
- A Job is active.
- A Scan is being performed.

This button will cause the last ten (10) seconds of displayed activity to be stored on the PDA. This button will act in the same manner as the `Save Log` button in the T3i Operate program. Once a Scan Log has been stored it can be viewed at a later date, or downloaded to a PC.

8.2 LED Indicators

8.2.1 LED Display

The four(4) LEDs in the T3i Device are capable of displaying a range of colors. Different colors and patterns are used to indicate that

certain actions are underway or a particular event has occurred.

For example, when the batteries are first inserted into the T3i Device, the LEDs will illuminate momentarily indicating a self-test process is underway. At the completion of the self-tests, the LEDs will go out and the T3i Device will enter a standby mode.

The remainder of this section will indicate the most common LED patterns. If any LED pattern is displayed which is not described below, contact the Distribution Center.

8.2.2 Power LED

The Power LED is used to indicate the state of the T3i Device and whether it has a Bluetooth wireless connection to the PDA. This is described in [Power LED States](#)^[32] table.

Table 5 Power LED States

Led Color	T3i State	Description
Off	Sleep	Device is in Sleep mode waiting on Power button to be pressed.
White or Yellow	On	Device is powering up and performing self-tests.
Green	On – Bluetooth unconnected	Device is on and waiting for connection to a PDA.
Blue	On – Bluetooth connected	Device is on and connected to a PDA.
Yellow	Flashing	Battery level is down to 10% and they should be re-charged or replaced.
Red	Flashing	Battery is flat, the device will shut down and enter Sleep mode. It will not power up until batteries are replaced.

The Power LED in [Power Led Location](#)^[33] indicates the T3i Device is on and a Bluetooth wireless connection has been made to the PDA.

Figure 8 Power Led Location



8.2.3 Radar Sensor LED

The Radar Sensor LED is used to indicate the status of the radar detector as shown in [Radar LED Sensor LED States](#)^[33].

Table 6 Radar Sensor LED States

Led Color	T3i State	Description
Off	Sleep	Radar is inactive.
Green	On – scanning	Radar Sensor is active.

The Radar Sensor LED shown in [Radar Sensor LED](#)^[34] indicates the Radar Sensor is operational.

Figure 9 Radar Sensor LED



8.2.4 Thermal Sensor LED

The Thermal Sensor LED, as shown in [Thermal Sensor LED](#)^[34] is used to indicate the status of the Thermal Sensor and laser pointer.

Table 7 Thermal Sensor LED States

Led Color	T3i State	Description
Off	Sleep	Laser Pointer and Thermal Sensor are inactive.
Red	On	Laser Pointer and Thermal Sensor are active.

The Thermal LED in, as shown on [Thermal Sensor LED](#)^[35] indicates the Thermal Sensor is operational.

Figure 10 Thermal Sensor LED



8.2.5 Moisture Sensor LED

The Moisture Sensor LED is used to indicate the status of the Moisture Sensor as shown in [Moisture Sensor LED States](#)^[35].

Table 8 Moisture Sensor LED States

Led Color	T3i State	Description
Off	Sleep	Moisture Sensor is inactive.
Blue	On	Moisture Sensor is active.

The Moisture LED in [Moisture LED](#)^[36] indicates the Moisture Sensor is operational.

Figure 11 Moisture LED



9 Common Activities

9.1 T3i Device

9.1.1 Device Details

By selecting the `Menu` button at the bottom of the screen and then selecting `Device Details`, information about the T3i Device will be displayed. Some of this information is relevant to Termatrac only. This screen will display details about the connected T3i Device.

The information listed is:

- Serial Number,
- Company Name,
- Firmware Version,
- Build Tag,
- Usage Mode,
- Expiry Date.

9.1.2 Options

By selecting the `Menu` button at the bottom of the screen and then selecting `Options`, the user settable options for the T3i Device will be displayed. These will cause warnings to be displayed on the PDA screen when the threshold levels have been reached.

Warning can be set for the following attributes:

- Low Battery Warning (25%).
- Device Expiry Warning (14 days).
- Device Inactivity Timeout (29 mins).

The values indicated in brackets in the above list indicate the default values set when the T3i Operate program is shipped.

The buttons at the bottom of the screen will display additional settings for these sensors:

- Radar,
- Thermal,
- Moist(ure).

9.1.2.1 Radar

Radar Scan Gain

The Gain setting used when the sensor starts is displayed as `Radar Scan Gain` setting. It may be changed here by sliding the bar graph control to the left or right.

Note: The numeric value displayed on the right hand side of the screen will not be updated until this screen is refreshed.

Scan View Graph

The Radar display, when the T3i Device is scanning, may be one of the following views:

- Bar Graph (pulsing),
- Line Graph (continuous),
- Combined (Bar and Line graph for Radar, Line graph for Accelerometer).

The view can be changed by using the selections for the `Live View Graph` option. Click on the down arrow in the text box and select the desired view. See also [Setting Live View Graph](#)⁵⁶.

9.1.2.2 Thermal

Thermal Scan Gain

The gain setting used when the sensor starts is displayed as `Thermal Scan Gain` setting. It may be changed here by sliding the bar graph control to the left or right.

Note: the value displayed on the right hand side of the screen will not be updated until this screen is refreshed.

Thermal Unit

The Thermal display will indicate the difference between two points in either Celsius or Fahrenheit. The choice of which units to use can be made by selecting `Menu` at the bottom of the PDA screen, then selecting `Options`. Select the `Thermal` tab at the bottom of the screen.

A Thermal Unit drop down list box will be displayed. Click on the down arrow and select the desired unit for the thermal sensor.

9.1.2.3 Moist

Moisture Scan Gain

The gain setting used when the sensor starts is displayed as `Moisture Scan Gain` setting. It may be changed here by sliding the bar graph control to the left or right.

Note: the value displayed on the right hand side of the screen will not be updated until this screen is refreshed.

9.1.3 Help

By selecting the `Menu` button at the bottom of the screen, selecting `Help`, then `About`, the following information will be displayed:

- T3i Operate Version,
- T3i Operate Build,
- Last Used Device,
- Last Used date,
- Last Used time.

9.1.4 Exit

By selecting the `Menu` button at the bottom of the screen and then selecting `Exit`, the T3i Operate program can be terminated. A **Confirm** dialogue message will be displayed. Select `Yes` to close the program and return to the PDA home screen.

9.2 Job Activities

9.2.1 Job Location

When using the T3i Device it is helpful to understand the terms that will be used from time to time. The details captured by the T3i Device are specific to a location. The location or address will not change over time, unlike the owner (or customer) who may change over the years. The history of a location remains intact and is applicable for whoever the current owner is.

The Job Location is the unique means of identifying and storing information and this will not change once it is stored.

9.2.2 Job

For each Location, certain activities will be carried out and this will be called a Job. The Job indicates when an activity was carried out, by whom, the type of activity and so on.

9.2.3 PDA Scan Log

During the course of a Job, the T3i Device may return information from one of the sensors (Radar, Thermal or Moisture). This information is known as a Scan and is displayed on the PDA screen.

There is an option available to capture the Scan information. When the option to save the scan is chosen, a Scan Log is created. It is this Scan Log which will be stored on the PDA, to be later uploaded to the Job Manager program running on a PC.

The Scan Logs will be one of the following:

- Radar - indicating termite movement.
- Thermal - indicating changes in surface temperature.
- Moisture - indicating changes in the moisture level within a material.

9.3 Job Manager Program (on PC)

9.3.1 Add a Customer Location

Before any information can be recorded and stored about a customer, their details should be added to the Job Manager program

running on the PC. The location details are added to the Local Jobs panel on the left hand side of the Job Manager program.

To add a new customer location, perform the following steps:

1. From the Job Manager menu, select `File`, then `New Location`. Alternatively, right click the mouse anywhere in the Local Jobs panel and select `New Location` from the drop down menu.
2. On the right hand side the Job Location panel will be automatically selected ready to accept the New Location details.
3. Enter the locations details in the Location Address panel. Make sure the layout of the location address details are correct as it will be copied "as is" to any report generated.

Note: Once these details are entered and saved, they can never be altered. However, these details can be deleted and the correct details entered again.

4. When the address details have been entered, click the `Save` button to create a new entry in the Local Jobs panel. Alternatively, click the `Cancel` button to abort adding a new location.
5. If the `Save` button was selected, a default house icon will now appear in the Local Jobs panel next to the address entered.

9.3.2 Remove a Customer Location

To remove a Customer Location, perform the following steps:

1. Highlight the location to be removed by placing the mouse cursor over the location and clicking the left mouse button.
2. From the `File` menu select `Delete`, or right click the mouse button with the mouse cursor over the highlighted location and then select `Delete` from the drop down menu. Alternatively, with the location highlighted, press the `[Del]` key on the computer keyboard.
3. A Confirm dialogue box will be displayed asking to confirm the delete operation. Click on `Yes` to complete the delete

operation, otherwise click **No** to leave the location details intact.

4. Upon confirmation of the delete operation, the location and any of its associated jobs will be removed from the Local Jobs panel.

9.3.3 Create a Customer Job

Before any details can be recorded for a location, it must have a job created for it. The job outlines what kind of work will be undertaken at the location. Also, details about the customer and the operator can be entered when creating a job.

To create a new customer job, perform the following steps:

1. Highlight the location for the new job by placing the mouse cursor over the location and clicking the left mouse button.
2. From the **File** menu select **New Job**, or right click the mouse button with the mouse cursor over the highlighted location and then select **New Job** from the drop down menu. Alternatively, with the location highlighted, press the **[Ins]** key on the computer keyboard.
3. The Job panel will be automatically selected displaying the information associated with a job. This information will be displayed when a report is generated.
4. In the **Date and Time** field, enter in a date directly or use the drop down arrow at the end of the text box and select a date using the calendar view. This date can only be the current date or a date in the future. Any date in the past will not be allowed in for this entry.
5. The **Job Number** field is an optional field and any characters can be used to represent a job number. This may be useful to relate your company's financial transaction to an activity performed at a location.
6. The **Customer Name** is an optional field and any characters can be used to indicate who asked for the termite investigation work to be carried out.
7. The **Operator ID** field is an optional field and any characters can be used to indicate who carried out the field work.
8. The **Building Category** indicates the type of building where the inspection work will be carried out. This is a text field and

will accept any characters typed in. Optionally, some of the more popular building categories have been pre-defined and can be selected by clicking on the arrow at the end of the text box. If a pre-selected building category is selected, the PDA store scan log feature has a list of typical rooms or structures for each entry in the list. This can be very useful when entering information for each room when capturing scan logs.

9. The `Job Type` indicates the nature of the inspection work to be carried out. This is a text field and will accept any characters typed in. Optionally, some of the more popular job types have been pre-defined and can be selected by clicking on the arrow at the end of the text box.
10. When all details are correct, save this information by clicking on the `Save` button. Alternatively, click on the `Cancel` button to abort the create job operation. An entry for Building Category and Job Type are mandatory and must be filled in for a job to be valid.

9.3.4 Configuring Thermal Units

Thermal Scan logs in the Job Manager and Report Generator can be displayed in degrees Celsius (°C) or Fahrenheit (°F). Generally, the thermal unit is automatically selected based on the region settings in Microsoft Windows.

To manually select the thermal unit, click `Tools` from the menu in Job Manager followed by `Thermal Unit`. Alternatively, double click `Thermal Unit:` in the status bar as shown in [Job Manager](#)^[44] to display a screen similar to [Configuring Thermal Units](#)^[44].

Figure 12 Job Manager

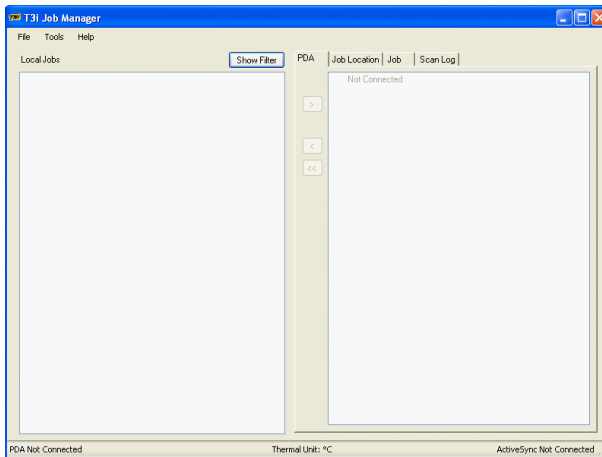
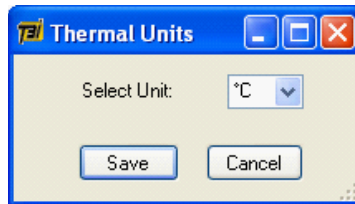


Figure 13 Configuring Thermal Units

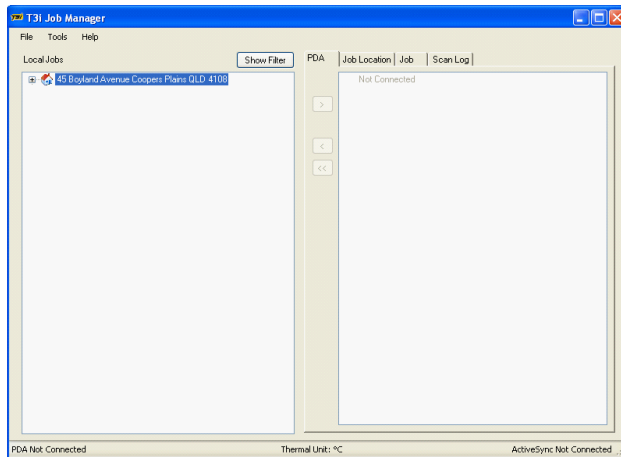


Note: Clicking Save will cause the screen to be refreshed.

9.4 Connect a PDA

Job Manager is used to transfer information to and from the PDA to a PC. With Job Manager running on your PC and no PDA connected, the screen will look similar to [Job Manager No PDA Connection](#)^[45].

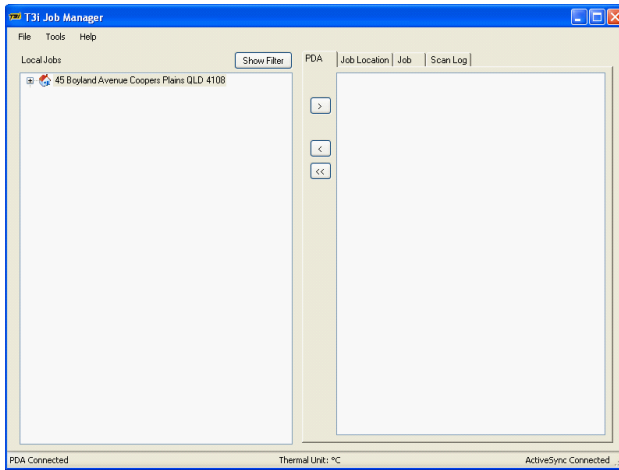
Figure 14 Job Manager No PDA Connection



The status of the PDA connection is indicated at the bottom of the screen as ActiveSync Not Connected and PDA Not Connected. The thermal unit selected is also displayed.

The PDA is connected to the PC using the USB cable provided in the T3i Suite. The PC will automatically begin establishing a communications channel to the PDA once the cable is connected. This will be indicated by the updated bottom line of the Job Manager screen as shown in [Job Manager PDA Connected](#)⁴⁶.

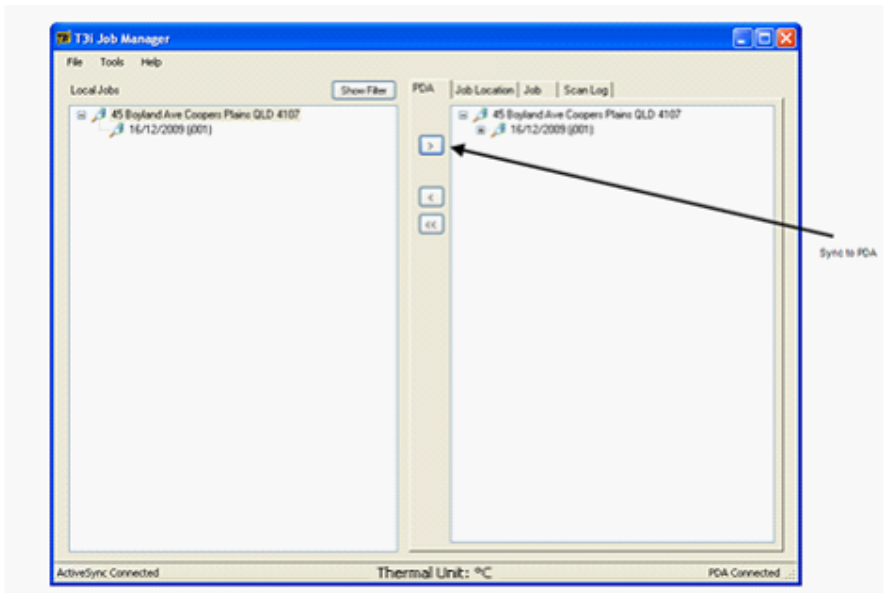
Figure 15 Job Manager PDA Connected



9.5 Transfer Jobs from PC to PDA

Each job must be transferred individually from the PC to the PDA using the Sync to PDA button as indicated in [Transfer Jobs to PDA](#) 47.

Figure 16 Transfer Jobs to PDA



Once the Sync to PDA button has been clicked, and the **Confirm** box acknowledged with **Yes**, the jobs become visible under the PDA tab on the right side of the Job Manager screen.

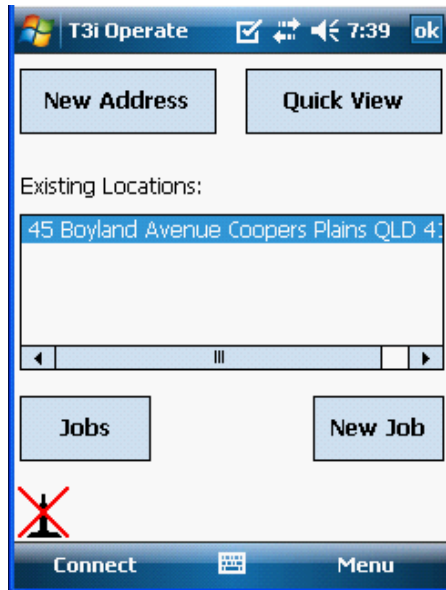
This job will appear on the PDA when the T3i Operate program is run.

9.6 Use T3i Operate on the PDA

9.6.1 Starting T3i Operate

To start the T3i Operate program on the PDA, select **Start** at the top of the PDA screen. From the **Programs** menu, scroll down and select **T3i Operate**. After the initial splash screen is shown the PDA will display the T3i Operate Home Screen as shown in [T3i Operate Home Screen](#)^[48].

Figure 17 T3i Operate Home Screen



To complete the process, ensure the T3i Device is on and operating correctly (Power LED is green) and then select the **Connect** icon or the **Connect** button to establish the Bluetooth wireless connection link.

When the link has been established the **Connect** icon will update the connection status and the T3i Device Power LED will turn from green to blue. The green LED on the top left hand corner of the PDA will also turn blue.

9.6.2 Device Login

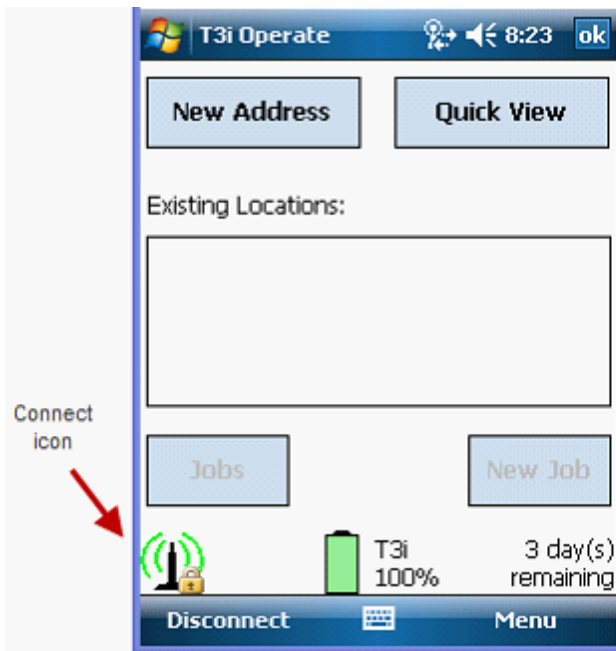
The T3i device can operate in **Leased Usage Mode** or **Purchased Usage Mode**. No login is required for Leased Usage mode. In Purchase Usage mode, the operator must present a password to access the full features of the T3i Device.

To enter an operator password for a Purchased T3i Device, perform the following steps:

1. Press the **Connect** icon as shown in [Connect Icon](#) ⁴⁹.

Alternatively, press the `Menu` button and then select `Login`.

Figure 18 Connect Icon



2. When the password screen as shown in [Operator Password Entry](#)^[50] is displayed, enter in your Operator password and click on the `Enter` button.

Figure 19 Operator Password Entry



If the `Remember Password` tick box is checked, the password entered will be remembered. This means that the password will be asked for the next time you use the T3i Device.

Care must be taken with the access to the T3i Device as no check for ownership (knowledge of the password) is needed to operate the T3i Device when the password is remembered.

To disable this feature a new password must be set. To do this see the section on [Change Operator Password](#)^[50].

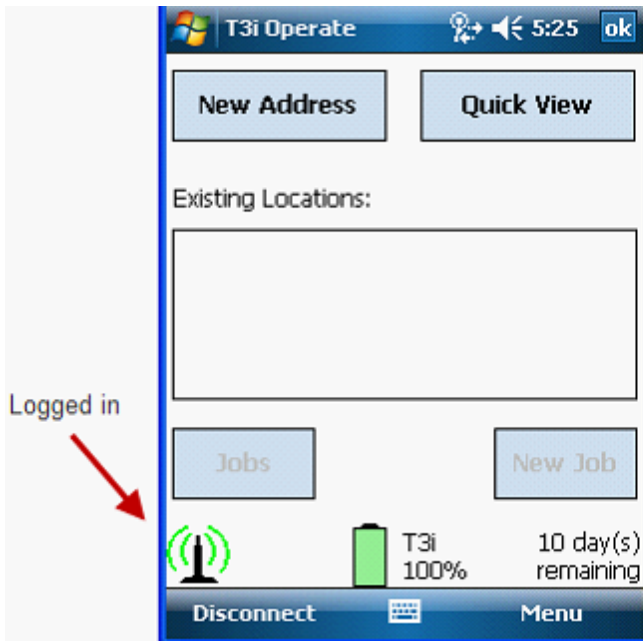
3. Keep this Operator password **confidential** at all times.

9.6.3 Change Operator Password

It is recommended that you change your password as soon as you receive your T3i Device. To change your password, perform the following steps:

1. Make sure you are logged into the device as shown in [Logged In](#)^[51].

Figure 20 Logged In



2. Press the Menu button and select Change Password.
3. A password change screen as shown in [Changing Password](#)^[52] will be displayed (numeric keyboard example given).
4. Enter your old password.
5. Enter the new password. Confirm the new password by entering it again.

Figure 21 Changing Password

T3i Operate

Old Password

1234

New Password

5678

Confirm New Password

5678

Remember Password ☐

123 [] { } 7 8 9 # % = < >

^ , . < > 4 5 6 + - * /

⌘ ° : \ | 1 2 3 ↓ ↑ ← →

\$ ¢ € £ ¥ (0) Tab space <

Cancel Update

If this password is to be automatically entered each time you use the T3i Device, tick the `Remember Password` box. If this password is **NOT** to be remember and is to be entered each time, leave the `Remember Password` tick box clear as shown in [Changing Password](#)⁵².

Click on the `Update` button and your password change will take effect immediately.

Keep this password confidential at all times.

9.6.4 Quick View

The Quick View function allows the T3i Device to be used in a "view only" mode. This is where the T3i Device sensors can be used however, none of the information displayed by the sensors can be stored.

To enter this mode, click on the `Quick View` button on the T3i

Operate Home Screen. A list of sensors will then be displayed. To select any of these sensors, click on its button. The T3i Operate will then show the sensor output and the T3i Device LEDs will indicate the sensor being used.

This mode of use will allow a location to be inspected quickly for the presence of termites, or obtaining information about the environment.

9.6.5 Start a Job

Every job is related to a Location which must appear in the Existing Locations panel in T3i Operate Home Screen.

To start a job, first highlight the desired location and then click on the `Jobs` button. The sensor selection screen will now be displayed.

Note: A pre-entered job can only be undertaken on its target date. If a Job has been created using Job Manager for another date then it can only be done on that date.

If the target date for a job is not the current date, selecting that location will only allow the job information to be viewed.

If a Job needs to be undertaken on a date other than the target date, a new job has to be created for the same address.

A new job can be created anytime by clicking on the `New Job` button when the T3i Operate Home Screen is being displayed. Creating a job will be a similar process to that undertaken with Job Manager. The same information fields are presented and must be completed. Additionally the `Address` field may be updated which will result in a new location being created.

This is useful when doing inspections on a block of units for example. The street address of the unit block is the same, however a unit number may be added to the address to provide a unique entry for each unit being inspected.

9.6.6 PDA Save Log

The `Save Log` button will record the last ten (10) seconds of sensor data. If certain readings are to be kept for record keeping or future reference, click on the `Save Log` button. The recorded information saved will now be displayed on the PDA screen.

If you do not want to save these scans, press the `Scan Again` button to return to the active screen and repeat this procedure. If the information is satisfactory, click the `Save Log` button to keep the information in a scan log.

When a Scan Log is to be saved, it will be assigned a unique log number automatically, and T3i Operate will present a number of fields to be filled in. This information will form the basis of the Report generated for this location. Therefore, this information should be concise and accurate.

If the scan log information is complete and accurate, it will make the `Report Generation` process very easy.

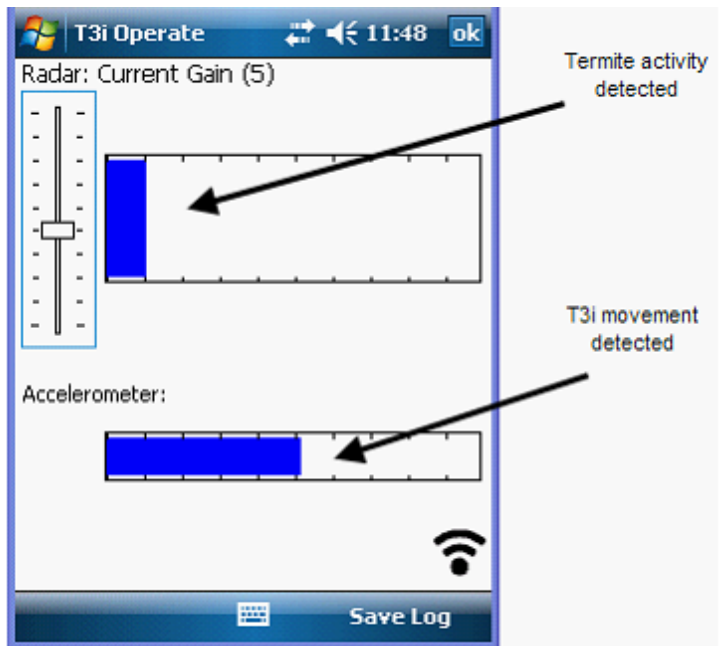
9.6.7 Using Sensors

9.6.7.1 Radar

To activate the termite detection radar, click on the Radar button. The PDA screen will look like [Radar Sensor](#)⁵⁵. This screen shows the termite activity using the Bar graph display mode.

Also shown is movement in the Accelerometer in Bar graph display mode. This indicates the T3i Device was physically moving when the reading was taken. This will cause doubt over the termite activity reading. It is very important to ensure the T3i Device is held still with no activity showing on the Accelerometer bar graph when termite activity graph is being viewed.

Figure 22 Radar Sensor



The **Save Log** button will record the last ten (10) seconds of the Radar Sensor values. If there are certain readings you wish to keep for records or future reference, click on the **Save Log** button.

The recorded information will now be displayed on the PDA screen. If this does not indicate the correct radar pattern you want to keep, press the **Scan Again** button to return to the active radar sensor screen. Otherwise, click the **Save Log** button to keep the information.

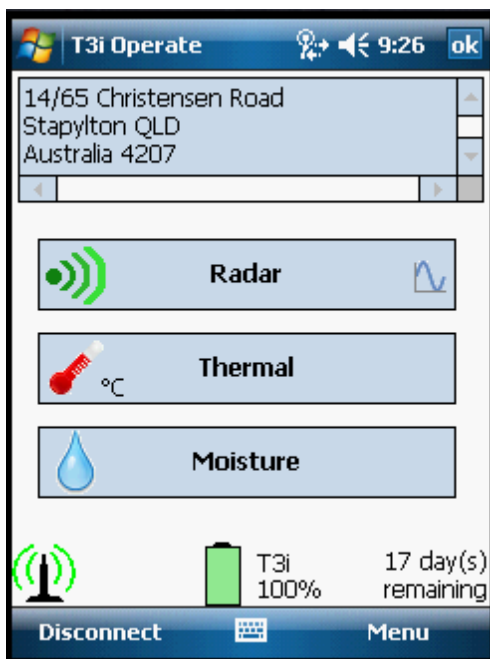
When a scan log is saved and its unique number allocated, T3i Operate will present a number of fields to be filled in. The unique number can be written onto a "tag" which may be adhered to the location where the scan log was taken. This will provide an easy method to repeat the measurement again, at the same location, at some time in the future. In this way, the effectiveness of treatments can be quantified.

A number of drop-down selections will make the entry of correct data much faster and easier. Also provided is a **Text Note** button.

This will allow any additional information relevant to the scan or location to be entered and kept.

Click the **Save** button when all the information has been entered. At this point the T3i Operate program will return to the Sensor selection screen. A waveform icon has now been added to the Radar button as shown in [Radar Log Saved](#)^[56]. This indicates that a log has been saved for the Radar Sensor.

Figure 23 Radar Log Saved



9.6.7.1.1 Setting Live View Graph

For T3i Operate Version 2.12 onwards, the radar Live View Graph format has been extended to include a Line Graph. This Line Graph shows the termite activity in a continuous moving line from right to left across the PDA screen.

Any movement detected will be on screen for about ten (10) seconds. This allows more time to analyse the termite activity.

To change the radar view to Line Graph, perform the following step:

1. Click the `Menu` button on the PDA screen.
2. Select `Options`, and then the `Radar` tab at the bottom of the screen.
3. Click on the down arrow in the `Live View Graph` text box and select `Line Graph`.
4. Click `ok` or press the `ok` button to save the new setting.

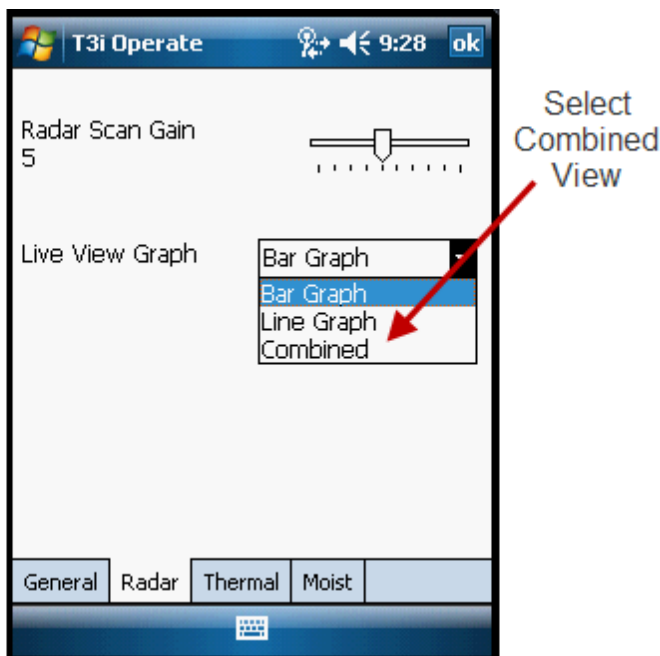
9.6.7.1.2 Setting Combined View

The Combined View for the Radar sensor allows the Bar and Line Graph to be displayed at the same time on the PDA screen. It has the advantage of being able to easily detect any termite movement by observing the blue bar graph flashes. Once movement has been detected the nature and amount of movement can be viewed on the Line Graph. The Line Graph allows any waveform to be in view for ten(10) seconds.

To set the Radar to Combined view, perform the following steps:

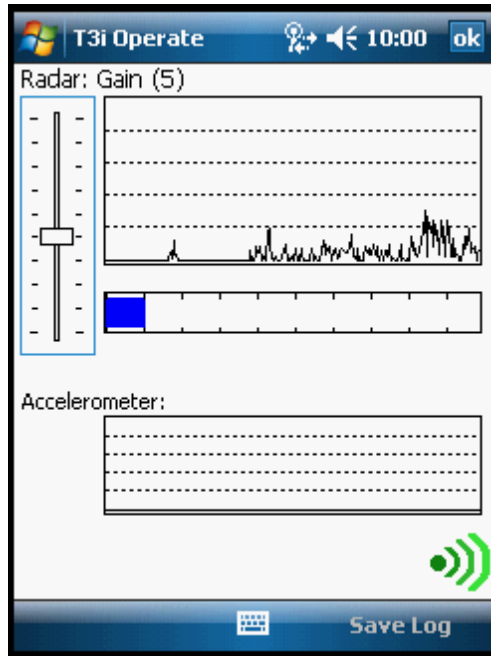
1. Select `Menu` and then select `Options`.
2. From the tabs on the bottom of the page, select `Radar`.
3. Click the drop down box next to `Live View Graph` and select `Combined` as shown in [Selecting Combined View](#)⁵⁸.

Figure 24 Selecting Combined View



The resultant view will be similar to that shown in [Combined View](#) ⁵⁹.

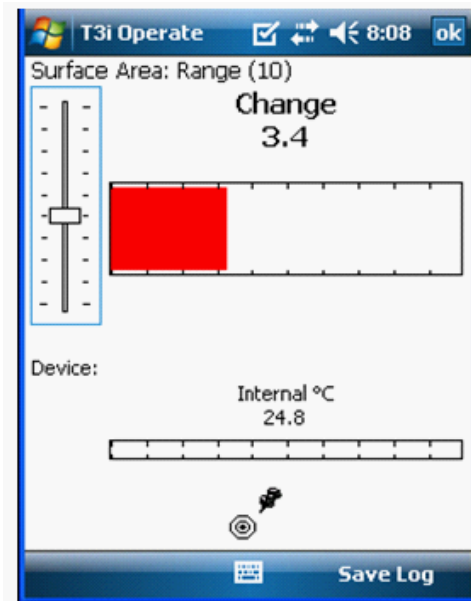
Figure 25 Combined View



9.6.7.2 Thermal

To activate the thermal sensor with laser pointer, click on the Thermal button. The PDA screen will look like [Thermal Sensor](#) ^[60].

Figure 26 Thermal Sensor



When the thermal sensor starts, the PDA will emit a small beep. This indicates a reference value has been set and all thermal readings will be displayed as a difference in value from this point (reference point).

The reference value is whatever the T3i Device Thermal Sensor was pointing to when it was first activated. If the Thermal Sensor is now pointed to a slightly warmer surface, the *Change* value will be a small positive number (1 or 2 for example). The bar graph will indicate an increase in value (warmer) by a red bar starting from the left hand side.

Conversely, if the thermal sensor is pointed to an area colder than the reference point, this is indicated by blue bar starting from the right hand side.

The reference value can be reset to the current value at any time by pointing the laser at a surface you want to use as a reference point and then pressing the pin icon or by tapping a point anywhere within the Thermal Sensor bar graph. The resetting of the reference value will be confirmed with a small beep from the PDA, and this will

become your new reference point.

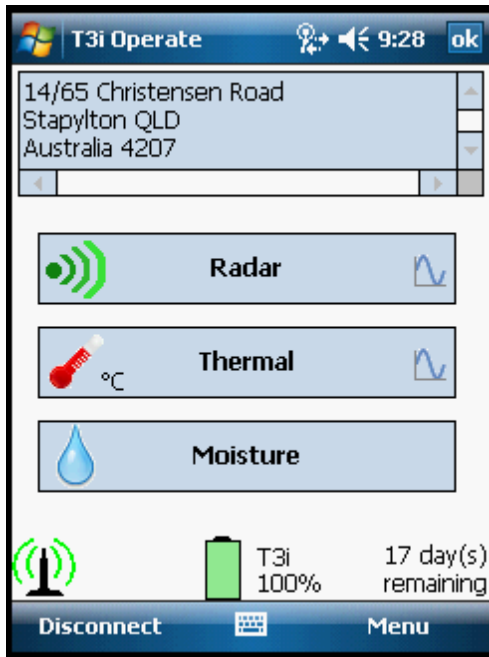
The `Save Log` button will record the last ten (10) seconds of the Thermal Sensor values. If there are certain readings you wish to keep for records or future reference, click on the `Save Log` button. The recorded information will now be displayed on the PDA screen. If this does not indicate the correct thermal pattern you want to keep, press the `Scan Again` button to return to the active thermal sensor screen. Otherwise, click the `Save Log` button to keep the information.

When a scan log is saved and its unique number allocated, T3i Operate will present a number of fields to be filled in. This information will form the basis of the Report generated for this location, therefore this information should be concise and accurate.

A number of drop-down selections will make the entry of correct data much faster and easier. Also provided is a `Text Note` button. This will allow any additional information relevant to the scan or location to be entered and kept.

Click the `Save` button when all the information has been entered. At this point the T3i Operate program will return to the Sensor selection screen. A waveform icon has now been added to the Thermal button as shown in [Thermal Sensor Log Saved](#)⁶². This indicates that a log has been saved for the Thermal Sensor.

Figure 27 Thermal Sensor Log Saved



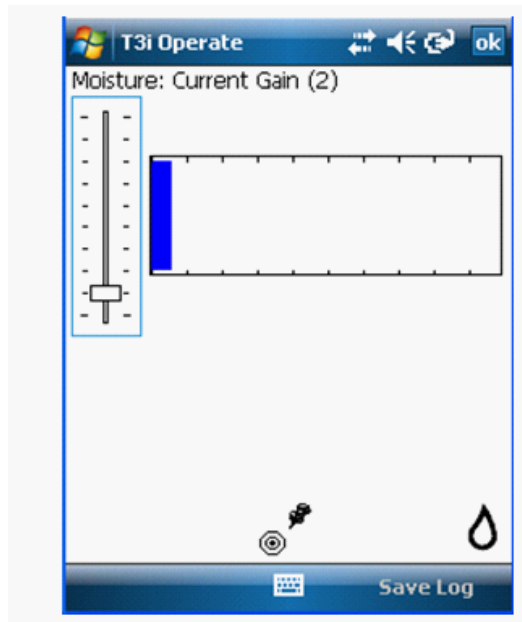
9.6.7.3 Moisture

To activate the Moisture Sensor, click on the **Moisture** button. The Moisture sensor will begin a calibration phase, and when this is complete, the PDA screen will look like [Moisture Sensor](#)⁶³.

When the Moisture Sensor starts, the PDA will emit a small beep. This indicates a reference value has been set and all Moisture readings will be displayed as a difference from this point (the reference point).

The initial reference value is established by the moisture content of the material the T3i Device Moisture Sensor was resting against when it is activated. If the Moisture Sensor is now moved to a more moist surface, this will be indicated by a blue bar starting from the left hand side of the bar graph. Conversely, if the Moisture Sensor is moved to an area that is less moist, this will be indicated by red bar starting on the right hand side of the bar graph.

Figure 28 Moisture Sensor



The reference value can be reset to the current value at any time by resting the Moisture Sensor against the surface you want to use as a reference point and then pressing the pin icon or by tapping a point within the Moisture Sensor bar graph. The resetting of the reference value will be confirmed with a small beep from the PDA and this will become your new reference point.

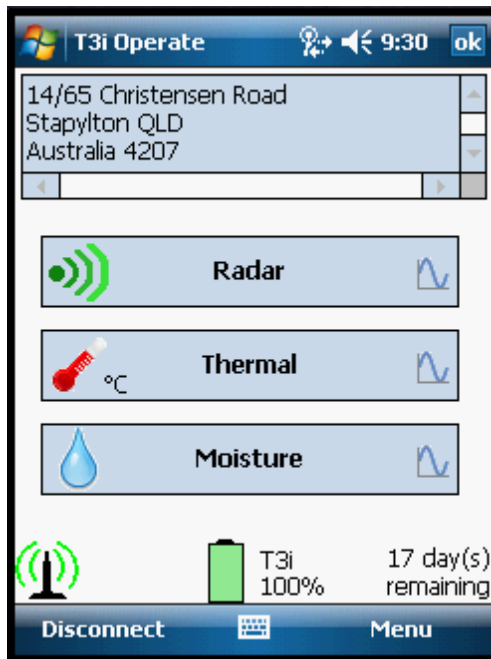
The **Save Log** button will record the last ten (10) seconds of the Moisture Sensor values. If there are certain readings you wish to keep for records of for future reference, click on the **Save Log** button. The recorded information will now be displayed on the PDA screen. If this does not indicate the correct moisture pattern you want to keep, press the **Scan Again** button to return to the active moisture sensor screen. Otherwise, click the **Save Log** button to keep the information.

When a scan log is saved, and its unique number allocated, T3i Operate will present a number of fields to be filled in. This information will form the basis of the Report generated for this location therefore, this information should be concise and accurate.

A number of drop-down selections will make the entry of correct data much faster and easier. Also provided is a **Text Note** button. This will allow any additional information relevant to the scan or location to be entered and kept.

Click the **Save** button when all the information has been entered. At this point the T3i Operate program will return to the Sensor selection screen. A waveform icon has now been added to the Moisture button as shown in [Moisture Sensor Log Saved](#)^[64]. This indicates that a log has been saved for the Moisture Sensor.

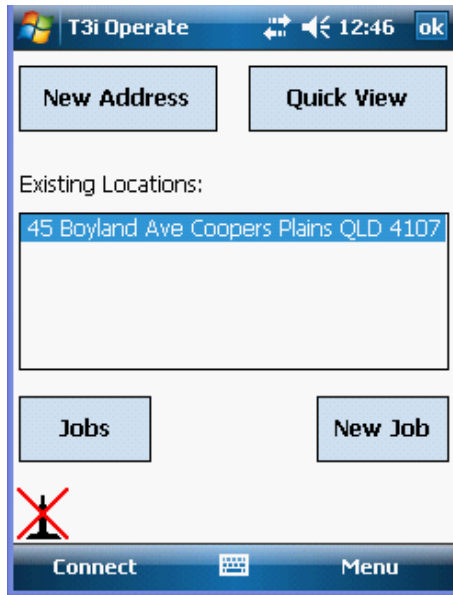
Figure 29 Moisture Sensor Log Saved



9.6.8 View Job Details

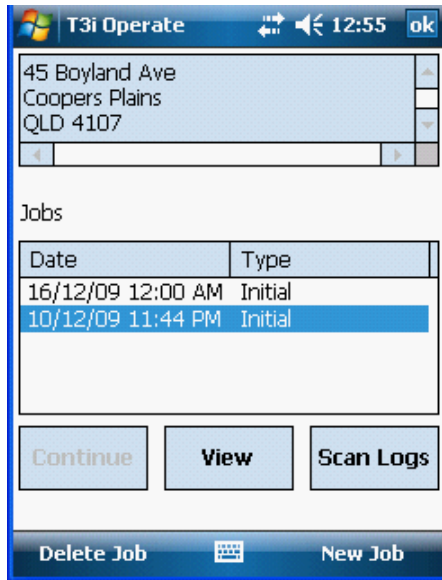
If the Scan Logs are present on the PDA, they can be viewed at any time irrespective of whether the PDA is connected to the T3i Device or not. [T3i Operate Home Screen](#)^[65] shows the PDA screen once the T3i Operate program is ready for use but has no T3i Device connected.

Figure 30 T3i Operate Home Screen



To view any stored information, select its location by highlighting it from the Existing Locations panel. Then press the **Jobs** button to display all of the jobs for that location as shown in [Jobs List](#)⁶⁶.

Figure 31 Jobs List



If there are no logs for the job selected, the `Scan Logs` button will not be active. In [Jobs List](#)^[66] the job selected has the scan logs stored for it.

At this point the `View` button will display the job details that were initially entered using Job Manager. Pressing the `View` button will show a screen similar to [Job Details](#)^[67].

Figure 32 Job Details

T3i Operate 12:59 ok

Address*

45 Boyland Ave
Coopers Plains
QLD 4107

Job Number j002

Customer Name Termatrac Pty Ltd

Operator ID tac

Building Category* Commercial

Job Type* Initial

* mandatory field

Done Done

Press the Done or OK buttons to return to the Jobs List screen.

9.6.9 Viewing Scan Logs


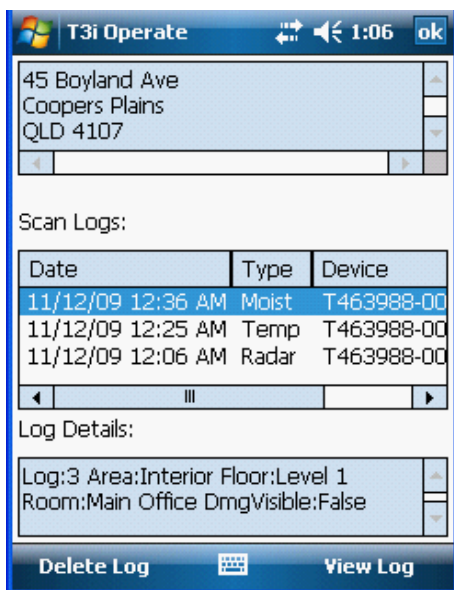
Ensuring the correct job is highlighted, press the Scan Logs button. A list of Scan Logs will now be displayed as shown in [Scan Log List](#) .

Figure 33 Scan Log List

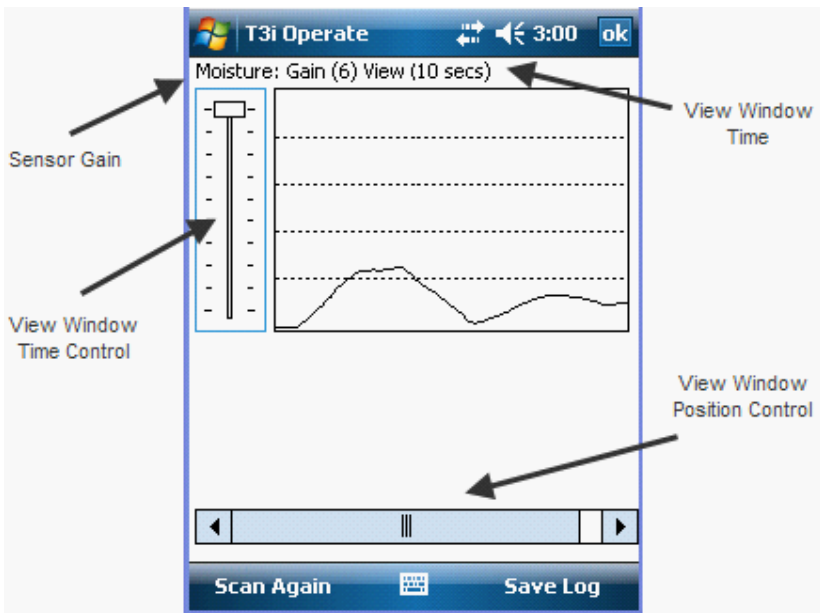


Remember, if there is more than one item in a list, the first entry is highlighted. Shown under the Scan Logs heading in [Scan Log List](#)^[68] are the Scan Logs listed in the reverse order to which they were taken: the first log taken is at the bottom of the list, and the latest scan log taken is at the top of the list.

At this point a scan log can be deleted by pressing the `Delete Log` button. A **Confirm** window will open up to verify the delete operation is to be completed.

Pressing the `View Log` button will display the waveform recorded for the selected sensor. If the latest scan log is to be viewed in [Scan Log List](#)^[68], the moisture waveform will be displayed as shown in [Moisture Scan Log](#)^[69].

Figure 34 Moisture Scan Log



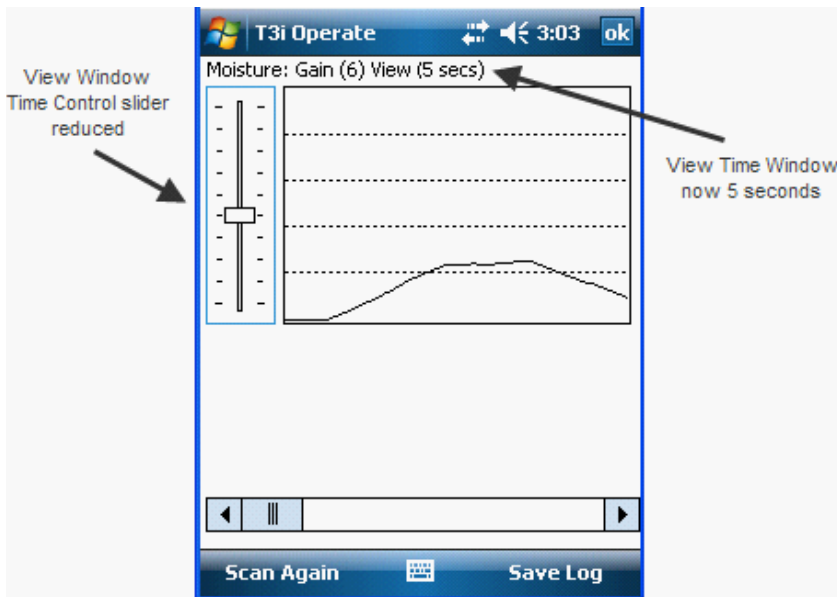
This Moisture Scan log was over the 10 second scan log period. Note that the Sensor Gain and the View Window Time Control are set at 6 and 10 seconds respectively.

The scan log details cannot be altered at this point, only deleted.

The size of the View Window can be changed using the View Window Time Control slider. In [Moisture Scan Log](#)^[69], the View Window Time Control slider is set to show the full 10 second waveform on the screen. As the slider is moved down, the size of the View Window will decrease, the lowest setting is 1 second. This has the result of expanding out the waveform from one x 10 second screen to ten x 1 second screens showing parts of the waveform in far greater detail.

For example, if the View Window Time Control was moved to show 5 seconds of the waveform, the resulting screen would look like [Moisture Scan Log First 5 Seconds](#)^[70]. Here the first 5 seconds of the waveform have been expanded out to take up the full screen. This allows detailed analysis of the waveform.

Figure 35 Moisture Scan Log First 5 Seconds




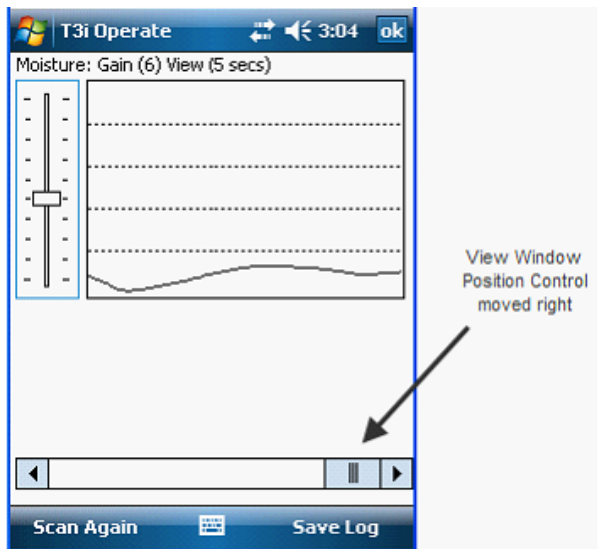
To display the next 5 seconds, move the View Window Position Control to the right. The screen will now show the next 5 seconds (last half of the original screen) of the waveform as indicated by [Moisture Scan Log Next 5 Seconds](#) .

Figure 36 Moisture Scan Log Next 5 Seconds



If the Save Log button is selected, the details of where and how the Scan Log was taken are displayed. Note that these details can only be viewed and not altered.

9.6.10 Create New Job on PDA

A job created with Job Manager can only be undertaken on the day it has been allocated to. If a job is to be done on a day other than specified, then a New Job must be created for the current day.

To create a new job, highlight the desired location in the Existing Locations panel and press the `New Job` button. T3i Operate will display the current address details which may be amended if required. The job details will need to be entered before this job can be saved. The display will look similar to [New Job](#)^[72].

Figure 37 New Job

T3i Operate 11:26 ok

Address*

45 Boyland Ave
Coopers Plains
QLD 4107

Job Number

Customer Name Termatrac Pty Ltd

Operator ID tac

123 1 2 3 4 5 6 7 8 9 0 - = < >
Tab q w e r t y u i o p []
CAP a s d f g h j k l ; ' < >
Shift z x c v b n m , . / < >
Ctl áü ` \ < >

Cancel Save

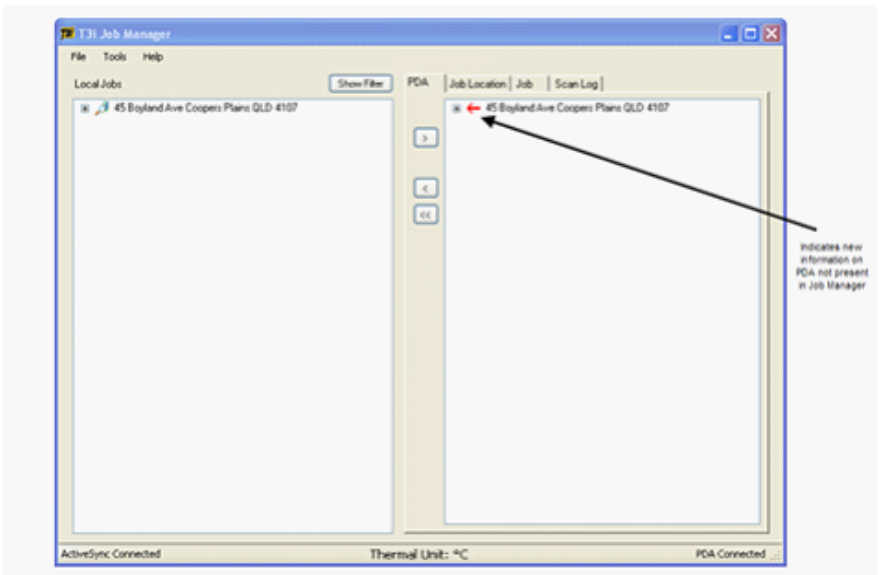
9.7 Transfer Scan Logs to PC

To transfer the information obtained in the field back to the Job Manager program requires the PDA to be connected to the PC with the USB cable.

Once this is done and the Job Manager program is running, the new information will be indicated as a red arrow as shown in

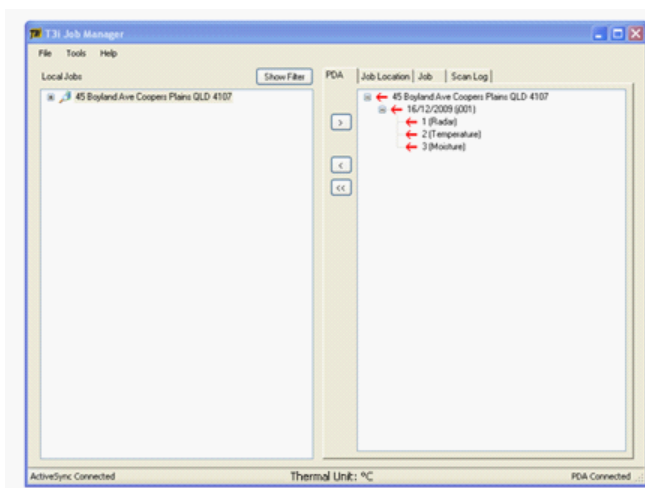
[Job Manager Showing New Information](#)⁷³.

Figure 38 Job Manager Showing New Information



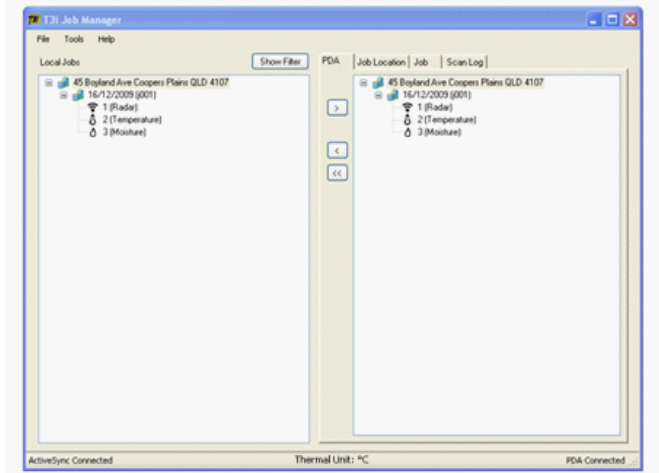
Clicking on the '+' sign next to the red arrow and expanding the sub tree will show the job and the scan logs taken in the field. This may look like [New Information Expanded](#)⁷³.

Figure 39 New Information Expanded



Press the << button to transfer all the new jobs and Scan Logs to the Job Manager program. The Job Manager screen should be similar to that shown in [PDA Information Transferred to Job Manager](#)^[74].

Figure 40 PDA Information Transferred to Job Manager



At this stage the information has appeared in the Local Jobs panel and is stored on the PC. The information in the PDA can be deleted by highlighting it and either selecting **Delete** from the **File** menu or right clicking above the entry and then selecting **Delete**.

9.8 View Scan Logs

A Scan log can be viewed by clicking on the Scan Log heading under its Date entry. This will then display all the details currently recorded for that Scan Log.

The Text Note field can be altered by highlighting any text and updating it. If any information is changed in the Text Box, the **Save Note** button will become active. Click on the **Save Note** button to save the changes made to the Text Note.

Waveform Signatures

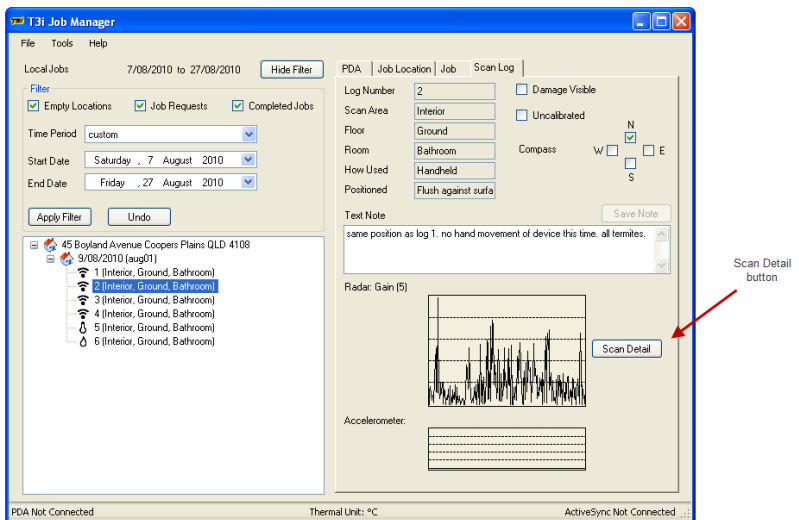
The Radar Scan Log will also enable the **Scan Details** button. If the **Scan Details** button is clicked, a new window is displayed

which will allow the scan waveform to be expanded similar to this operation in T3i Operate. By expanding the time base (move the Radar Gain control towards the bottom of the screen), the Radar Scan Log to be expanded to allow a better analysis of termite movement. Based on the waveform a Signature may be detectable within the peaks, troughs and delays occurring in the waveform.

To expand the Radar waveform, perform the following steps:

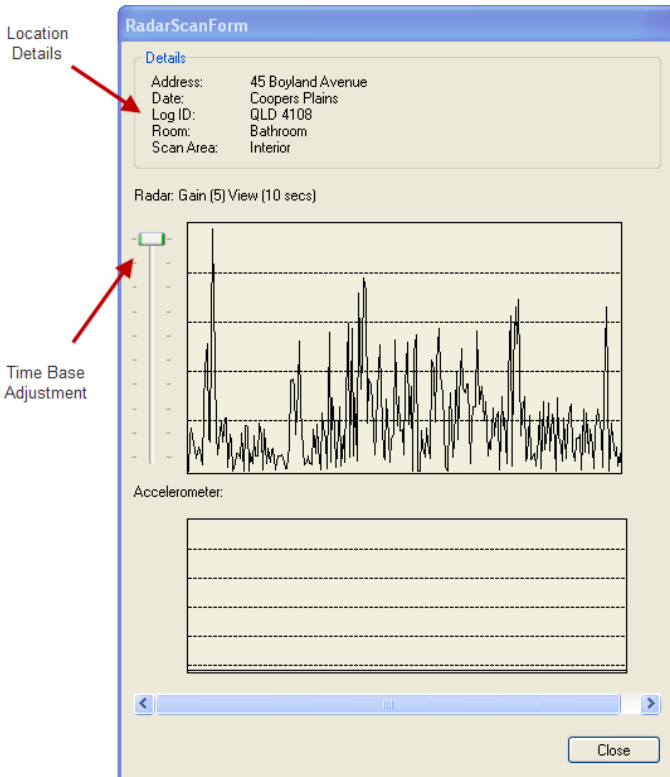
1. Click on the Scan Details button in Job Manager as shown in [Scan Detail Button](#) ⁷⁵.

Figure 41 Scan Detail Button



2. A new window will open up showing the Scan Log along with the location details and a time base adjustment. This can be seen in [Radar Scan Details](#) ⁷⁶.

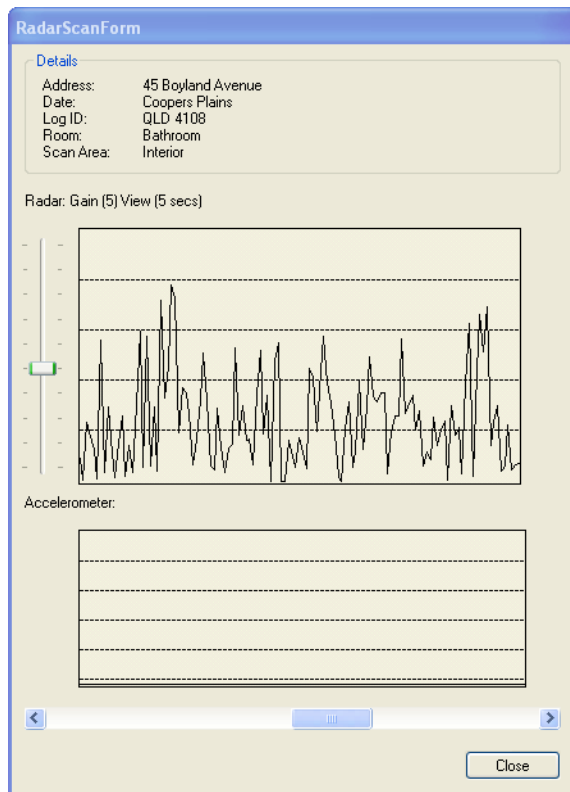
Figure 42 Radar Scan Details



To adjust the time base, perform the following operation:

1. click and hold the control slider under the Radar: Gain label.
2. Drag down the slider control until the desired time display is shown after the View label.
3. Click and hold the slider control at the bottom of the screen, move the control to the right (or left) to scroll through the expanded radar waveform. [Radar Scan Expanded](#)^[77] shows an example of this.

Figure 43 Radar Scan Expanded



As many Radar Scan Logs as needed can be displayed simultaneously by just selecting the Radar waveform from any job in the Local Jobs panel in Job Manager.

When finished viewing the Scan Log, click the `Close Window` button to return to the Job Manager window.

9.9 Delete Scan Logs from PDA

The T3i Operate program contains a list of locations displayed in the Existing Locations panel.

Details for a job, or jobs, carried out will be associated with the locations.

For each job a number of scan logs may be captured. The scan logs contain details about where the scan log was taken as well as the sensor scan data.

A scan log for a job can be deleted from the PDA at any time. To delete a scan log, perform the following steps:

1. Highlight the location containing the job to be deleted in the `Existing Locations` panel in the T3i Operate home screen.
2. Click on the `Jobs` button to display the jobs undertaken at that location.
3. Highlight the job. If there are scan logs stored for this job the `Scan Logs` button will become active. Click on the `Scan Logs` button.
4. Select the scan log by highlighting it and then click on the `Delete Log` button.
5. Press the `Yes` button in the Confirm dialogue box to delete the scan log.

9.10 Delete Locations from PDA

A location can be created using Job Manager or using T3i Operate. Once a location is created it cannot be altered in any way.

Locations exiting on the PDA can only be deleted using the Job Manager program.

To delete a location from the PDA, perform the following steps:

1. Start Job Manager and connect the PDA using the USB cable. Ensure that the `PDA Connected` and `ActiveSync Connected` appear in the status line at the bottom of the T3i Job Manager window.
2. Select the `PDA` tab in the right hand panel (if not already selected).
3. Under the `Job Location` tab will be the locations found in the PDA.
4. Highlight the location to be deleted.

5. Delete the location in any of the following ways:

- Right click on the location and select `Delete`.
- From the `File` menu, select `Delete`.
- Press the `[Del]` key on the keyboard.

6. Click on `Yes` when the Confirm dialogue box is displayed.

The location will be removed from the PDA and will not be present in the Existing Locations panel when T3i Operate is next started.

9.11 Generate Reports

Once the customer data is transferred to the Local Jobs panel of Job Manager, a report can be generated to inform other people (home owner, supervisors etc) of the results of the inspection.

9.11.1 Report Overview

The Reports are generated by the Report Generator program. This can be run from the icon on the desk top or from within the Job Manager program.

The Termatrac report is created as a supplement to a Timber Pest Report. It does not take the place of a Timber Pest Report but provides an additional document where termite activity information and readings can be documented. This information can then be referenced by the main Timber Pest Report.

9.11.2 Report Format

The format of the Report is a heading block followed by the termite inspection information arranged in order by all of the areas inspected at a location.

The Report heading block will contain information which is extracted from the details in the Job Manager program. This will be:

- Pest Inspector details.
- Date and time of inspection.
- Timber Pest Report reference.

- Location.
- Customer.

The termite inspection information will be arranged in a series of sections with the section name being an area at the location, for example Internal Ground Lounge or Internal Level 1 Bedroom.

Under each section or area heading will be the sub headings for each of the sensors used in the inspection activity, followed by a summary for that area. For example if the radar, thermal sensor and moisture sensor were all used for Internal Ground Lounge, the following sub headings would appear:

1. Internal Ground Lounge
 - 1.1 Radar Scan
 - 1.2 Thermal Scan
 - 1.3 Moisture Scan
 - 1.4 Summary.

9.11.3 Creating the Report

To create a Report from the Job Manager program, perform the following steps:

1. Highlight the Job in the Local Jobs panel.
2. From the File menu, select Generate Report, or click the right mouse button and select Generate Report.
3. The Report Generator program will start showing the details extracted from Job Manager in the Preamble tab. This information can be updated with the exception of the date and time information. See [Report Generator Heading Block](#)⁸¹.

Figure 44 Report Generator Heading Block

T3i Report Generator

File Help

Report Report Details Position Scan Log

This Termatrac® test report is a supplementary report only, which **MUST** be read in conjunction with the full timber pest report. This report can not be relied upon without the full timber pest report and is only a record of the test findings.

These Termatrac® tests were carried out by:

holding Termatrac® accreditation certificate No.

at:

on:

Timber Pest Report Number:

Report for building at:

Report requested by:

Add Position

- Click on the **Position** button to create an entry for an area that was inspected. The **Record** tab will now be selected in the Report Generator program and optionally, summary information can be added. See [Report Generator Area Summary](#) ⁸¹.

Figure 45 Report Generator Area Summary

T3i Report Generator

File Help

Report Report Details Position Scan Log

Log Site Position:

Scan Log: will appear in the report before the Summary.

Log Site Summary

Insect type determined

☒ None

☐ Subterranean Termite

☐ Dry Wood Termite

☐ Other

Test was

☒ Conclusive

☐ Inconclusive

Note: At the time of Termatrac® testing it was impossible to confirm insect activity. It is advisable to reinspect and test this area at a different time of day or a later date to perform a more invasive inspection.

Comments

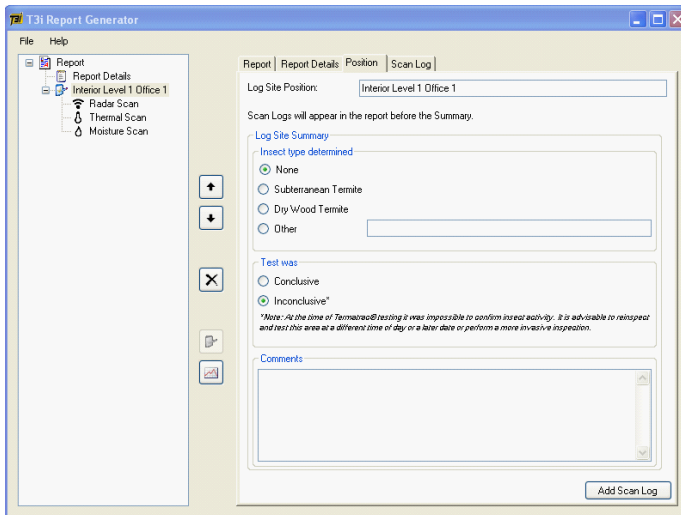
Add Scan Log

At this stage the Log Site Position can be left blank as it will

assume the information from the first area scan information selected in the next step.

5. Click on the **Add Scan Log** button and select the scan log for the area being reported on. Click on the **OK** button to add this scan log to the report.
6. Click on the **Add Scan Log** button to add additional logs for this area. Click **OK** to add these to the Report.
7. Select the **Position** tab to create a new entry for another area and repeat steps 4 and 5 above.
8. The sequence of the scan logs and areas can be rearranged by selecting the heading in the left hand panel and click on the up or down arrow icons.
9. When all of the Scan Logs have been added, the Report Generator screen may look like that shown in [Scan Logs Added to Report](#)^[82]. It should be noted that thermal scan logs can be represented in Celsius or Fahrenheit (see section [Configuring Thermal Units](#)^[43]).

Figure 46 Scan Logs Added to Report



10. When all of the areas have been included in the correct sequence, select the **File** menu and then select **Generate**.
11. The Report Generator will ask for a location where the

generated report will be saved to before creating the **Rich Text Format (RTF)** document. Choose any report name however, a decimal point (or dot) should not be used as part of the file name. Report Generator will append a **.rtf** suffix to the file name automatically.

12. The Report will be created, and will be automatically opened in the editor preselected by the Windows Operating System for the RTF format documents.
13. At this stage the Report format and contents can be changed or updated with the exception of the scan information obtained from the T3i Device.

10 Managing Local Jobs

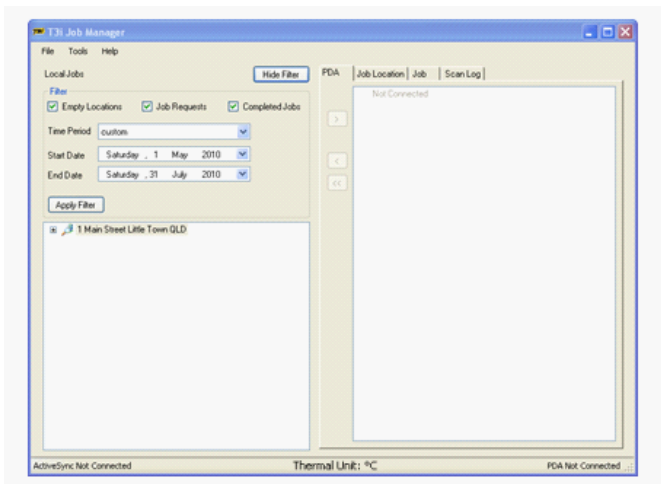
10.1 Overview

After a period of use, the Local Jobs panel may contain a number of entries. Some of these entries may be for jobs that were done and completed some time ago. These jobs no longer need to be displayed.

By using the Show Filter button, only jobs of interest need be displayed. The Show Filter is a powerful feature that also allows job to be “filtered” or displayed based on the job type or date.

Clicking the Show Filter button will display the filter settings currently in use. The screen shown will be similar to [Filter Displayed](#) [84].

Figure 47 Filter Displayed



Once the filter is displayed, it can be hidden again by clicking the Hide Filter button.

By default, all of the job types Empty Locations, Job Requests and Completed Jobs, are selected. If a tick box is empty, that particular job type will not be displayed.

When the filter is first displayed, the Time Period is set to `custom`. The Start Date and End Date are set to a default time period based on the current date. This is defined as being:

- `Start Date`: beginning of previous month.
- `End Date`: end of the next month.

The Start Date and End Date in [Filter Displayed](#)⁸⁴ have been selected based on a day in June 2010.

If these dates are changed, then they will become the default dates for the filter.

Note: The date range shown between the **Start Date** and **End Date** in the filter must include the date and time for the job on the PDA. If the PDA job has a date and time not within the current date range in the filter, it will not be synchronized when the sync icons are selected. This will be indicated by the red arrow at the front of the job, and/or location, remaining after the sync process.

10.2 Time Period

10.2.1 Custom

This option allows any date to be selected as the start and/or end dates for a time period. This will allow a large time frame to be viewed or it can be as small as a day to two. It is important to remember the time period only shows the job within that period.

If a job cannot be found, or is "lost", the time period should be expanded until the missing job is found.

Click on the `Apply Filter` button to update the time period. This will become the default Time Period for Job Manager.

10.2.2 This Month

This option will set the Start Date to the first day of the current month and the End Date to the last day of the current month.

Click on the `Apply Filter` button to update the time period. This will become the default time period for Job Manager.

10.2.3 Last Month

This option will set the Start Date to the first day of the previous month and the End Date to the last day of the previous month.

Click on the `Apply Filter` button to update the time period. This will become the default time period for Job Manager.

10.2.4 Last 30 Days

This option will set the End Date to the **current date** and the Start Date will be set to 30 days before the current date.

Click on the `Apply Filter` button to update the time period. This will become the default time period for Job Manager.

10.3 Apply Filter

Click on the `Apply Filter` button to update the Local Jobs panel to reflect the filter options selected.

11 Troubleshooting

11.1 T3i Device Not Turning On

If the T3i Device batteries are dead flat, then there will be no activity when the Power button is pressed on the T3i Device.

In this case replace the flat batteries with charged batteries

11.2 T3i Device Power LED Flashes Yellow

If the Power LED flashed yellow after the Power button is pressed, the batteries within the T3i Device are low and should be replaced at the first available opportunity.

The T3i Device will continue to operate for a short time before the batteries become flat. At this point the T3i Device will automatically turn off.

11.3 T3i Device Power LED Flashes Red

If the Power LED flashed red after the Power button is pressed, the batteries within the T3i Device are flat and do not have sufficient capacity to operate the T3i Device. The batteries must be replaced with charged batteries before the device will operate.

11.4 T3i Device LEDs are Flashing

If the T3i LEDs are constantly flashing when the batteries are inserted, this indicates this set of batteries do not contain sufficient charge to power the T3i Device correctly. Remove these batteries and replace with fully charged batteries.

11.5 T3i Device LEDs Stay on When Batteries Inserted

When the batteries are first inserted into the T3i Device, it will perform a series of self-tests. These will be indicated by the LEDs turning on and displaying various colors as the tests are run.

At the conclusion of these tests, all of the LEDs will go out and the T3i Device will enter its usual idle state.

If any of the LEDs stay illuminated, this indicates an internal error had been detected. The batteries should be removed and reinserted. If the LEDs remain on, the T3i Device cannot be used and must be returned to the Service Center.

11.6 T3i Device Shows Two Yellow LEDs

The Power and Moisture Sensor LEDs may remain on and are yellow in color when batteries are inserted, or when the Power button is pressed.

This will only occur for a Leased Mode T3i Device which has gone past its Expiry Date.

The T3i Device must be returned for Calibration.

11.7 PDA Not Turning On

If the PDA has not been used for some time, the screen may not respond when the power button is pressed. The batteries in the PDA have a limited life and continue to power the device (in a low power mode) even when the power button is pressed to turn the PDA off.

Connect the PDA to its AC mains charger, or to a PC, to start the charging process. Ensure the LED at the top left hand corner of the PDA is orange/yellow color. Ensure this LED remains on indicating the battery is being charged. If the LED goes out, remove and re-insert the cable connected to the PDA.

11.8 No Bluetooth Connection

The T3i Operate program on the PDA cannot establish a connection if the Bluetooth device in the PDA is not operating.

The Bluetooth device on the PDA is operating if the LED in the top left hand corner is blue. If this LED is not blue, exit the T3i Operate program and start it again from the home screen. As the T3i Operate program starts up, the PDA LED will turn blue indicating the Bluetooth device is operating correctly.

11.9 T3i Freezes

If the T3i Devices does not respond to any of the button presses or any commands from the PDA, it may have entered a waiting state. If

the T3i Device does not recover from its current operation, terminate the T3i Operate program, remove and re-insert the T3i Device batteries and start the operation again.

11.10 T3i Operate Program Not Responding

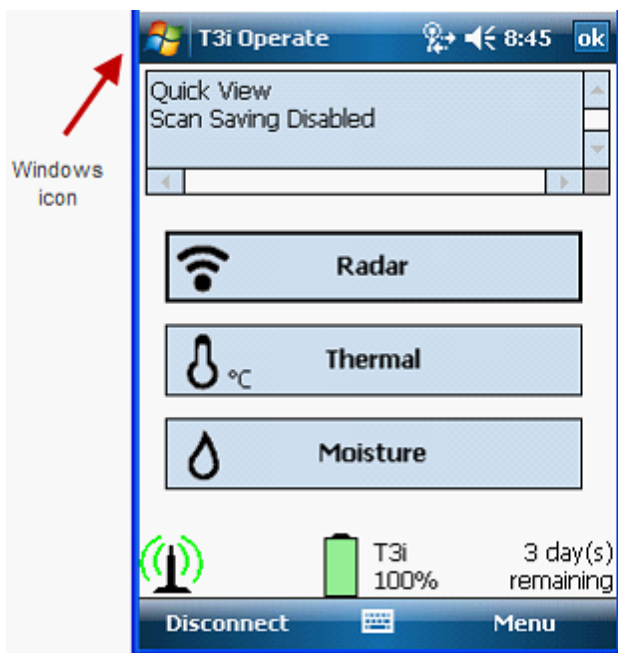
If the T3i Operate program fails to respond to button presses on the screen, it can be shutdown using the PDA's Operating System.

The following information pertains to the **HP iPAQ 100** Classic series of PDAs. For other PDAs, consult the supplementary documentation supplied with this PDA.

To terminate the T3i Operate program, perform the following steps:

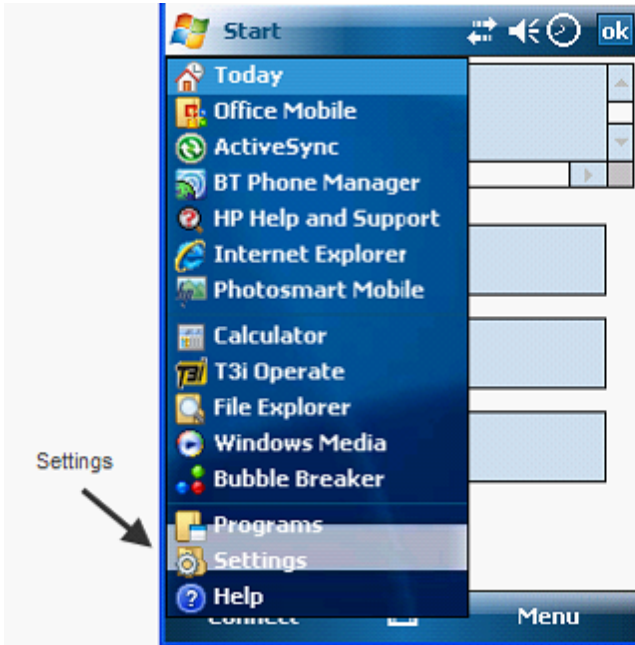
1. Press the Windows icon in the top left corner of the screen as shown in [Windows Icon](#)⁸⁹.

Figure 48 Windows Icon



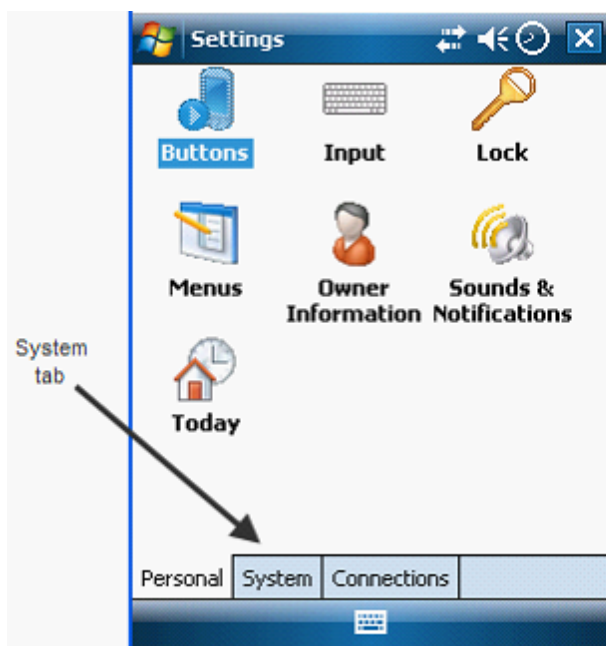
2. This will display a list of installed programs as shown in [Start Menu](#)^[90]. From this list select the Settings item at the bottom of the list.

Figure 49 Start Menu



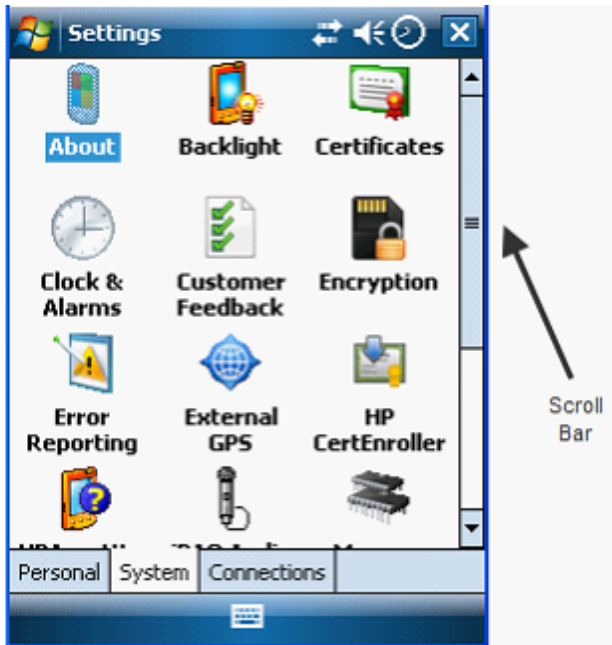
3. From the Settings screen, select the System tab at the bottom of the screen as shown in [Settings Screen](#)^[91].

Figure 50 Settings Screen



4. A screen indicating system icons will now be shown as indicated in [System Setting Screen](#)^[92].

Figure 51 System Setting Screen



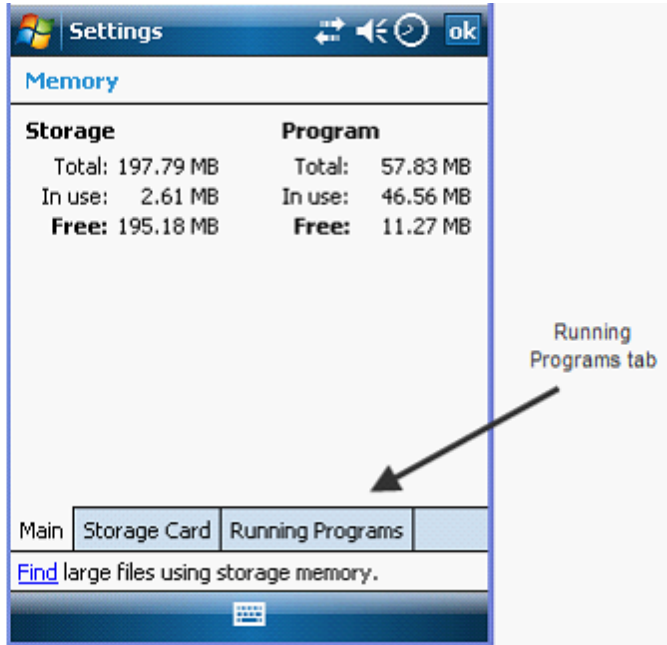
5. Press on the scroll bar and drag it down the screen until the Memory icon comes into view as shown in [Memory Icon](#)⁹³.

Figure 52 Memory Icon



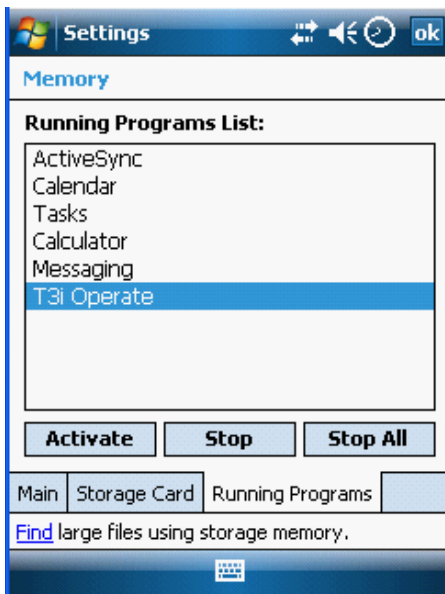
6. Select the Memory icon to show the Memory details as is indicated in [Memory Details](#)^[94]. Select the Running Programs tab at the bottom of the screen.

Figure 53 Memory Details



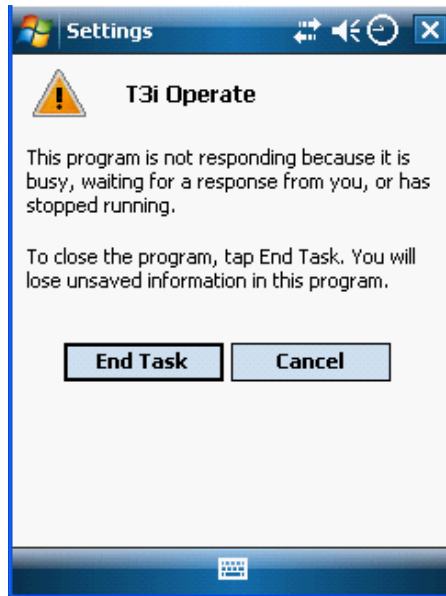
7. A list of currently running programs is now displayed. This list will include an entry for the T3i Operate program. Highlight T3i Operate from the list and the Activate and Stop buttons will become active. This is indicated in [Select T3i Operate](#)⁹⁵.

Figure 54 Select T3i Operate



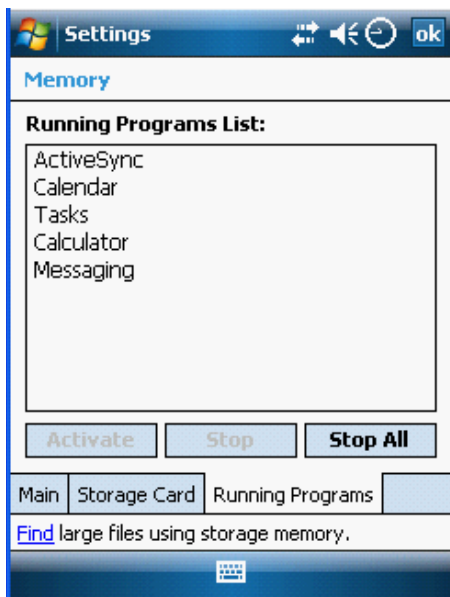
8. Press the Stop button to terminate the T3i Operate program. A confirmation dialogue screen will be displayed as shown in [Terminate T3i Operate](#)^[96]. Press End Task to terminate the T3i Operate program.

Figure 55 Terminate T3i Operate



9. The Running Programs List will now be displayed with T3i Operate missing. This can be seen in [No T3i Operate Running](#) ⁹⁷. Press the OK icon button repeatedly until the main PDA home screen is shown again.

Figure 56 No T3i Operate Running



10. Now turn on T3i Device off and then back on and restart the T3i Operate program as normal.

11.11 PDA Not Charging

The following information pertains to the **HP iPAQ 100** Classic series of PDAs. For other PDAs, consult the supplementary documentation supplied with this PDA.

Occasionally the PDA charging LED will not illuminate when the PDA mains charger is connected. The orange LED may turn on briefly and then go out. This LED must remain on while the PDA is being charged. If this occurs, press and hold in the PDA Reset button with the stylus for a few seconds and then remove the stylus.

The location of the Reset button is shown in [PDA Reset Button Location](#) ⁹⁸.

Figure 57 PDA Reset Button Location



The PDA will display its initial start up screen. Connect the PDA mains charger. The PDA LED should turn orange and stay on indicating the PDA is charging. Let the PDA charge until the LED has turned green. The current level of battery is always shown on the PDA start up screen.

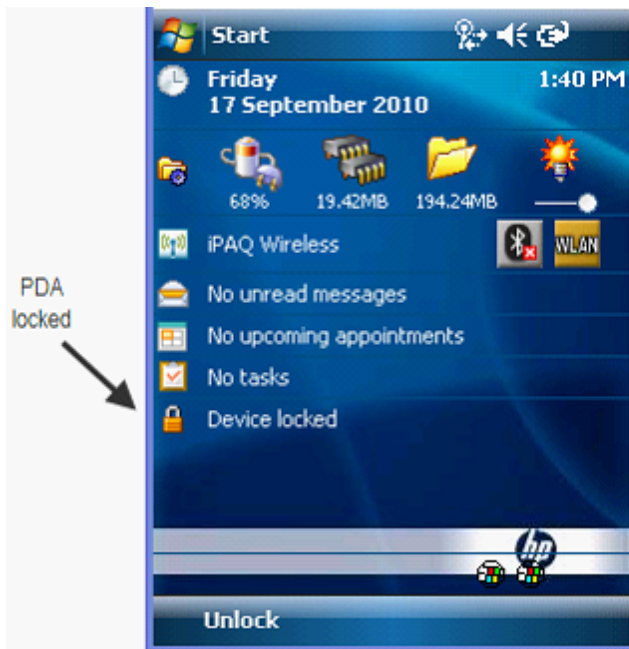
11.12 PDA Screen Not Responding

The following information pertains to the **HP iPAQ 100** Classic series of PDAs. For other PDAs, consult the supplementary documentation supplied with this PDA.

The PDA screen may not respond to any icons or selections made when pressed by the stylus. The PDA screen may appear to have frozen. This may be due the PDA screen becoming locked. This happens when the Device unlocked icon on the screen has been pressed.

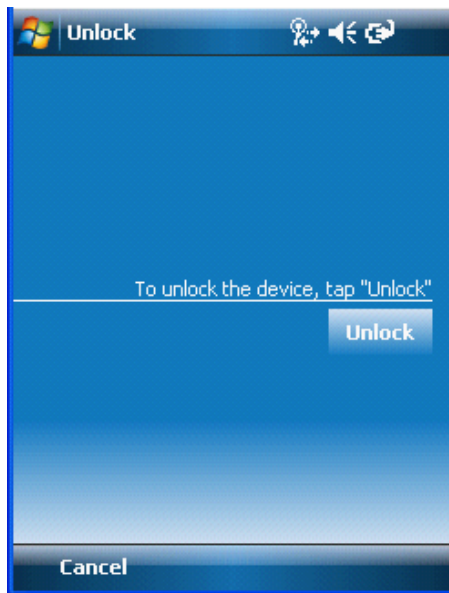
In this case, the screen will look similar to [PDA Locked](#)^[99].

Figure 58 PDA Locked



The PDA can be unlocked by clicking on the Unlock button at the bottom of the screen. The display will change to that shown in [Unlock PDA](#)^[100].

Figure 59 Unlock PDA



Click the `Unlock` button to unlock the PDA screen and allow normal operation again. This can be confirmed by the PDA locked icon (indicated in [PDA Locked](#)^[99]) now indicating Device unlocked.