Termatrac™

# *iTraker PRO User Guide*

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**FCC ID: 2BEMQ-T5B**

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 iTraker. 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.

## Table of Contents

# 1. Overview

## 1.1 Conventions

The following conventions are used throughout this document.

| 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. |

Table 1 Conventions

## 1.2 Definitions

| Term | Description |
|---|---|
| Accelerometer or Shake | A device for detecting physical movement of the iTraker in any direction. |

| Term | Description |
|---|---|
| Bluetooth LE® | 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 Service Centre. The Calibration Date indicates when the next scheduled maintenance is due. The sensors in the iTraker will continue to operate after the Calibration Date has passed. However, any reports generated will display the words "NOT CALIBRATED" in all scan logs. |
| Calibration Centre | The location where the Termatrac iTraker 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 iTraker App has begun and is waiting for the Operator to select a function to administer Scan Logs or begin a Pest investigation process. |
| Job | Investigative work carried out by the Operator. This usually results in Scan Logs and Notes about the termite/ pest activity observed. |
| Job Location | The physical address of where the termite/ pest investigation work will be carried out. |

| | |
|---|---|
| Operator | The Termatrac Certified Technician who carries out pest inspections in the field. |
| Pairing | This is the process used in a Bluetooth network to ensure devices on the same Bluetooth network can communicate with each other. |
| Mobile Device | An Android or Apple based display device, which is used to control the iTraker and display the output of any sensor readings. This is normally a phone but could also be a tablet. |
| Public Information | iTraker information that is not sensitive to the Operator and is known already e.g. serial number for the device. |
| Reference Value | This value represents a reference value set by the Operator or by the iTraker when a sensor is first started. The Mobile Device will display the difference between the current value and the Reference Value. (refers to Moisture and Temperature Sensor Only) |
| Leased Device | An iTraker that will be 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, temperature, or moisture) recorded by the Mobile Device running the iTraker program for a preset time period. |
| Sensors | The iTraker contains a radar, temperature 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 tapping on the display graph. This will reset the Reference Value to the current value of the sensor is displaying.<br>(refers to relative moisture and temperature sensor) |

| | |
|---|---|
| Signature | A common characteristic of a waveform that can be readily identified in any Scan Log. |
| iTraker | The handheld device containing the sensors used to detect termites and other insect activity. |
| iTraker App | The app used on Mobile Device for operating the iTraker and managing the Scan Logs. |

Table 2 iTraker Definitions

## 2. Introduction

The iTraker is an innovation in pest detection and tracking technology. This detection technology is of great assistance and an essential tool for professionals
working in the pest inspection field.

The iTraker includes the following components:

- iTraker which contains the sensors used to detect and track pests.
- USB-C Charging Cable
- iTraker Stand
- Metal disc for magnetic attachment to phone
- Lanyard
- Carry Pouch

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

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

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

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

The major features of the iTraker include:

- Real time control of the iTraker and visual feedback using a wireless Bluetooth connection to an Android or Apple phone or tablet.
- Enhanced pest detection radar.
- Moisture sensor which operates in Relative Mode, showing changes from a reference point or in Direct Mode showing a meter with moisture percentage.
- Temperature sensor with laser pointer.
- Unit stability indicator to define differences in physical movement and pest movement.
- Data logging.
- Report Generation software via an account on the Termatrac Online web site.

## 3. Safety Precautions

This device 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 should place the iTraker in its Carry Pouch when not in use to ensure a high level of physical protection.

The iTraker must be kept dry at all times. Failure to ensure this may cause the instrument to fail, cause false readings and may void the warranty.

The iTraker contains a laser pointer to indicate the location where a temperature 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. The 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 nearby.

The Termatrac iTraker 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 pest movement, the emission is much lower than the emission from a mobile phone. The iTraker is EMC approved indicating that the emissions are well within Australian and International Standards.

In the interests of safety:

- Never look into the radar sensor while the iTraker is operating.
- Do not point the radar sensor at anyone while the iTraker is operating.
- Do not point the laser beam at anyone while the iTraker is operating.
- Turn the iTraker off when not in use.
- The operating temperature range of the Device is between 15°C and 45°C.
- It is recommended to avoid prolonged radar exposure to skin or any parts of the anatomy

# 4. iTraker Overview

## 4.1 Components

### 4.1.1 Carry Pouch

This is a specially designed case that houses the components of the iTraker. The soft interior lining protects the iTraker from scratches and scuffs. It has an internal mesh pocket that could hold the cables, stand and phone. The location of the iTraker components are shown in iTraker.


Figure 1. iTraker Suite

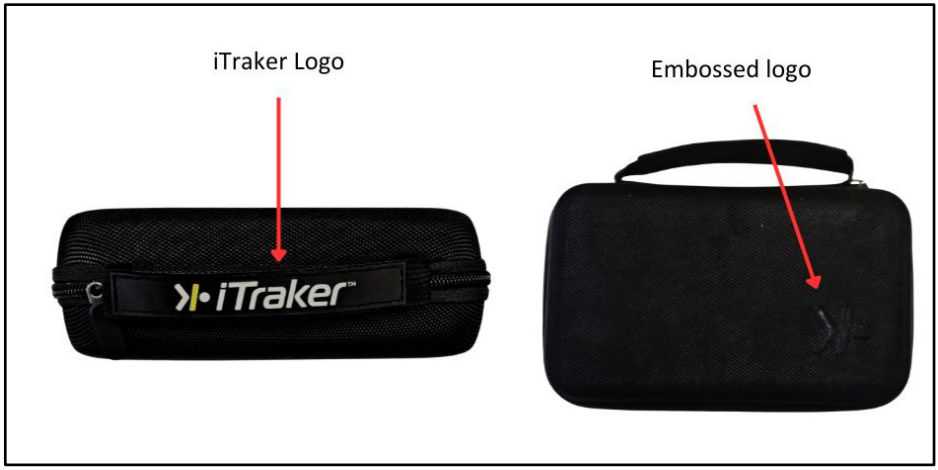



Figure 2. iTraker Carry Pouch

The embossed Carry Pouch features a durable exterior hard EVA that protects the iTraker from bumps and drops. It features a soft interior lining that protects the iTraker from scratches and scuffs. The zipper pulls for quick and easy access. The internal mesh pocket is ideal for holding cables and iTraker stand. The dimensions are 20cm by 12cm by 7cm.

### 4.1.2 iTraker

This is the handheld instrument which contains the sensors for use in pest detection. As the iTraker is not waterproof, do not store in wet environments or use in heavy rain. Ingress of moisture into the iTraker may cause faults or failures and possibly void any warranties. The iTraker comprises three sensors which take advantage of pest behaviour to help Pest Control operators identify pest infestations.

*The iTraker Sensor locations and the stand are shown in iTraker Sensors and Stand.*


Figure 3 iTraker Sensors


Figure 4 iTraker Stand

## Detailed Description

The outer case of the iTraker incorporates a rubber over-mould which provides a tactile surface to allow the iTraker to be easily and firmly held. The rubber over-mould provides limited impact protection if the iTraker is dropped onto a hard surface.

### 4.1.3 iTraker App

The iTraker is operated through and displays sensor data on a contemporary Android or Apple mobile device. Communication is facilitated via Bluetooth LE, with the mobile app overseeing the Bluetooth connection and handling communication.

The iTraker App can be downloaded via Google Play Store or Apple App Store, find the app by searching for iTraker or Termatrac.

** The app T3i Operate for the older T3i Termite Detection device is NOT compatible with the iTraker.

The iTraker App provides real-time visual indication of the current iTraker state and display information obtained from the iTraker sensors in an easy to view format.

### 4.1.3.1 Charging

Use the supplied USB-C Charging Cable to charge the iTraker. It can be charged through a laptop's powered USB port or an AC outlet using a DC Adaptor (DC adapter not included). The charging time may take up to 3 hours to complete. Once the iTraker is fully charged, the LED changes from orange to green.


Figure 5. iTraker Plugged into DC Adaptor with USB-C charging cable.

# 5. iTraker Description

## 5.1 Plastic Case

The outer case of the iTraker is constructed out of a sturdy ABS plastic. This provides the protection needed for the electronic sensor circuits used to measure the environment and detect pest activity.

The plastic case is not waterproof however, it will provide some protection against the ingress of dust and moisture.

## 5.2 Hand Held Operation

The iTraker case has been designed to ergonomically fit into the palm of the hand. The iTraker has been designed for easy, one-handed operation. This is aided by a rubber over-mould which provides a non- slip, tactile surface to ensure the iTraker is easy to hold and operate.

Care should be taken to hold the iTraker very still when using the Radar Sensor. Above a Gain setting of 7, hand held operation should be avoided.

## 5.3 Stand Mount

The iTraker also contains a mounting point for a camera stand attachment. This allows the iTraker to be mounted on a stand and then raised up to the ceiling, or other out-of-reach areas, to allow the analysis of surfaces beyond the reach of an arm.

The stand mount option should be used when the iTraker requires a stable platform to prevent potential hand tremors.

Tripods and monopods can be purchased from Termatrac, with their uses being demonstrated in Tripod and Monopod against Wall (see Figure 6) . The monopod can also be held by hand when being used with the moisture sensor, allowing the user to easily reach places that would otherwise be hard or uncomfortable to reach, as seen in Monopod held to wall (see Figure 7).

Figure 6 Tripod against Wall - Radar Sensor

Figure 7 Monopod held to the wall- Direct Moisture Sensor

## 5.4 Stand

The iTraker Stand is normally detached from the iTraker and can be affixed to the magnetic plate located on the back of the iTraker. It enables the iTraker to be positioned at various angles relative to the floor. This feature proves especially beneficial for examining skirting boards for signs of pest activity or inspecting ledges in corners.

The iTraker stand can be seen in use.

Figure 8 iTraker Stand in Use

## 5.5 Sensors

### 5.5.1 Sensor Descriptions

#### 5.5.1.1 Radar

The iTraker uses radar technology to detect the movement of pests within building structures. The radar emits high frequency waveforms which can penetrate most building materials and detects any difference in the reflected waveform. These differences come about because of interference caused by moving pest shaped objects. The detected differences are displayed on the Mobile device screen.

Care must be taken when using the iTraker on the higher Gain settings. Any movement by the Operator adjacent to the Radar Sensor may cause unwanted interference in the radar circuit resulting in erroneous readings. It is advisable to use the stand or a camera type stand (see Tripod against wall Figure 6 )to hold the device and be positioned well behind the radar face.

If the iTraker is not held completely still on the wall, the small movements caused by an unsteady hand may show up as pest activity. As small hand movements cannot be readily seen, the iTraker has a built-in movement sensor referred to as an shake. Most movement of the iTraker is now detected and displayed in a separate graph on the Mobile device screen.

The Operator will see pest activity along with movement detection waveform in the iTraker App. There will be enough correlation between both waveforms to indicate the Operator is causing false reading by not holding the iTraker steady. It may be the case where the iTraker is resting on a wall which is itself vibrating. The movement sensor will display this movement too. In this case a stand should be used with the iTraker flushed up against the wall.


Figure 9 iTraker and Radar Data


Figure 10 iTraker Radar Sensor

### 5.5.1.2 Temperature

The Temperature Sensor measures the infra-red wavelength emissions from an object. This is an indication of its temperature. The Temperature Sensor is capable of measuring the surface temperature of structures (walls and ceilings) from some distance away. Please note, this sensor does not take readings from inside the object like the Radar and Moisture sensors. The actual surface where the temperature is being read from is indicated by the red spot of a laser pointer. This approach makes it much easier to target the Temperature Sensor at a specific part of a structure being investigated.

The Temperature Sensor displays the difference in temperature between two points. When looking for unusual situations such as a pest infestation, a difference in surface temperature may indicate that this area needs closer investigation. The actual temperature value is not as important as the difference in temperature. For this reason the iTraker will show the relative temperature value from where the device was last referenced.

When the Temperature Sensor starts up it will sample the first object in its view by tapping the Mobile device it will emit a beep. This operation is termed as setting a "Reference value". This will be the reference point for the bar graph movement. If the relative temperature increases, a red bar will be displayed moving from left to right. If the relative temperature decreases, from the point of reference a blue bar will be displayed moving from right to left.

The Temperature Sensor has a 12:1 aspect ratio. This means at 12 feet (3.7m) from the wall the Temperature Sensor will read an average value within a 1 foot (30cm) diameter circle. Termatrac recommends using the Temperature Sensor from 3-6 feet (1-2m) away from the wall.

To "re-reference" the Temperature Sensor and make the current value the new reference point, tap the bar graph on the iTraker App display.

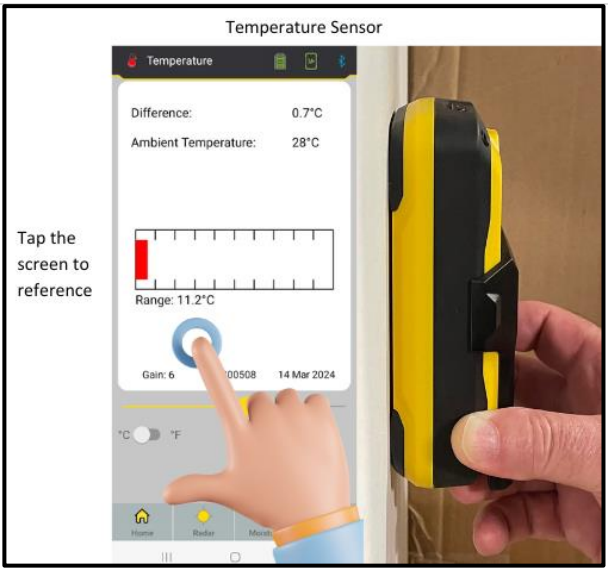



Figure 11 iTraker Temperature Data


Figure 12 iTraker and Temperature Sensor

#### 5.5.1.2 Moisture

The moisture within any material will affect many characteristics of that material. In the case of the iTraker, the moisture will affect electrical conductivity of the material. The iTraker measures the conductivity of a material and calculates a corresponding moisture estimation.
The iTraker has a Moisture Sensor located on the top surface, black UHMWPE(Ultra-high-molecular-weight polyethylene) scuff pads are located on the top and bottom outer edges of the iTraker allowing the iTraker to be rested on a surface at the correct distance to read a moisture value.

##### 5.5.1.2.1 Relative Mode

It is important to note that the Moisture Sensor in relative mode does not display the absolute moisture value. It does show the relative difference in moisture between two points.
When the first valid moisture reading is taken (after calibration), this will become the new reference, or "Reference value" for the graph. It is advisable to start the moisture sensor in an area where there is no moisture to allow a "dry reference value" to be set. Then move the iTraker towards the suspect area to ascertain which direction the relative moisture level is moving. The "reference value" can be reset to the current value by tapping on the bar graph or pressing the pin icon at the bottom of the Mobile device screen.


Figure 13 iTraker Moisture Sensor Location

### 5.5.2 Moisture Sensor Scuff Pads

The Moisture Sensor is located under the top surface of iTraker. The area of the Moisture Sensor is within the black u-shaped pad. This black pad is to be flused against a surface where a moisture reading is to be taken.

The correct operation of the Moisture Sensor depends upon the Moisture Sensor pads being in good condition. The pads will be checked during each scheduled calibration of the iTraker. The two Moisture Sensor Scuff Pads can be seen in iTraker Moisture Sensor Wear Pads .


Figure 14 iTraker Moisture Sensor Wear Pads

## Button and LED Indicator

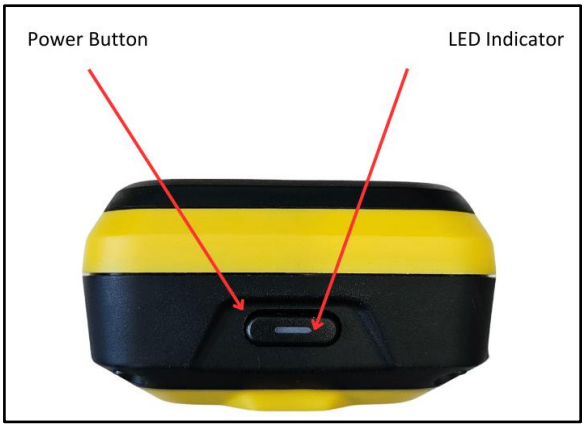



Figure 15 iTraker Button and LED Indicator Locations

### 5.6.1 Power Button

To power up the iTraker, press and release the Power button. This will initiate a brief start up self-test sequence. At the end of this sequence the Power LED will be flashing green colour.

To power down, press and release the Power button. All the LED will turn off and the device will enter a powered down mode.

### 5.6.2 LED Indicators

#### 5.6.2.1 Power LED

The Power LED is used to indicate the state of the iTraker and whether it has a Bluetooth wireless connection to the Mobile Device. This is described in Power LED States table.

| Led Colour & State | iTraker State | Description |
|---|---|---|
| Green Flashing | On – Bluetooth unconnected | Device is on and waiting for connection to a mobile device. |
| Blue | On – Bluetooth connected | Device is on and connected to a mobile device |
| Orange | Charging | iTraker is powered off and connected to charger via USB C Cable, charging in progress |
| Green | Fully Charged | iTraker is powered off and connected to charger via USB C Cable, changing is complete |
| Red Flashing | Fault | iTraker Internal Fault |

Table 3 Power LED States

# 6. iTraker Ready for Use

This section will help you prepare the iTraker for first time use.

## 6.1 Mobile Display Device (Phone or Tablet)

The Mobile Device runs an app called iTraker which is used to control the iTraker. This app will establish the Bluetooth connection with the iTraker and control the scanning operations.
The iTraker app provides a facility to view the output of the current sensor scanning operation. This scan data may be stored in the mobile device for later review, or uploaded to the Termatrac Cloud service for inclusion in customer reports.
See section Use iTraker with a Mobile Device for details on the iTraker app.

### 6.1.1 Pairing to Bluetooth Devices

Before the iTraker can be used it must be "paired" with a Mobile Device. This operation is carried out automatically by the iTraker app.

The Mobile Device must have Bluetooth LE capability built-in to establish a link with any device capable of supporting a Bluetooth LE wireless connection. The Termatrac iTraker is such a device.

The pairing process will establish a link between a specific iTraker and a Mobile Device. This will ensure the Mobile Device will connect to the supplied Termatrac iTraker. If the Mobile Device, or the iTraker, is to be changed in the future, this Bluetooth pairing process must be carried out again.

## 6.2 Battery Level

The iTraker app constantly shows the current state of the iTraker battery level on the battery icon at the top of the iTraker app screen.

When the battery icon is showing green, the iTraker is okay to use.

When the battery icon is Orange, the iTraker can continue to be operated but it is strongly recommended to charge it at this point. At a preset level, the low battery warning will be displayed on the iTraker app screen. This is an indication that the iTraker will need recharging soon. If the iTraker battery reaches an unacceptably low level, the iTraker app will display a message to charge the iTraker now and no further action can be performed.

# 7 iTraker Quick Start

## 7.1 Turning On the iTraker

To turn on the iTraker, perform the following steps:

1. Press the button (shown in Button Locations Figure 15 )to start the iTraker. The Power LED will flash green indicating it is in a ready state. The device is now ready for a connection from a Mobile Device using Bluetooth wireless connection technology.
2. If the Power LED does not turn on or quickly flashes orange this may indicate the iTraker requires charging.
3. If the Power LED is Red this indicates an internal fault, in which case contact local Distribution Centre.

## 7.2 Establishing a Connection

To establish a connection between the Mobile Device and the iTraker, perform the following steps:

1. Ensure the iTraker is switched on and the power LED is flashing Green.
2. Open the iTraker App on the Mobile Device
3. If the iTraker has not been used before, or this is the first time use of the iTraker App, navigate through the “Onboarding” screens, paying careful attention to the information provided, until the “Select Your Serial Number” screen is displayed. If you have followed Step 1 & iTraker is powered on & LED is flashing Green then you will see the iTraker serial number listed. Tap the serial number to Connect with your iTraker.
4. On successful connection the iTraker Power LED will change to solid Blue and the iTraker App will open the Home screen with iTraker icons at top right showing the iTraker status.

## 7.3 Operating the iTraker

The main screen of the iTraker app shows a menu with a button for each of the 3 sensors.

- Select the desired sensor to be used by selecting the Radar, Temperature or Moisture buttons.
- Operation of a selected sensor will be indicated by the appropriate screen being displayed along with sensor data on the iTraker App screen.

## 7.4 Shutting Down iTraker and iTraker App

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

- Tap the Home button in the bottom left hand corner of any scanning screen to return to the Main menu.
- Select the Exit button, the Yes button to exit the iTraker App.
- The iTraker Power LED will now flash Green indicating it is not connected, either press the power button to turn the iTraker off or it will automatically turn itself off after 3 minutes when the Power Led will turn off.

# 8. Common Activities

## 8.1 Use iTraker on the Mobile Device

### 8.1.1 Starting iTraker App

To start the iTraker App on the mobile device, locate the iTraker App icon on one of the mobile device screens. It is suggested to move the iTraker App icon to the mobile device Home Screen for easy access.


Figure 16 iTraker App

After the initial On-Boarding screens and connection with iTraker is established, the iTraker Home screen is displayed.

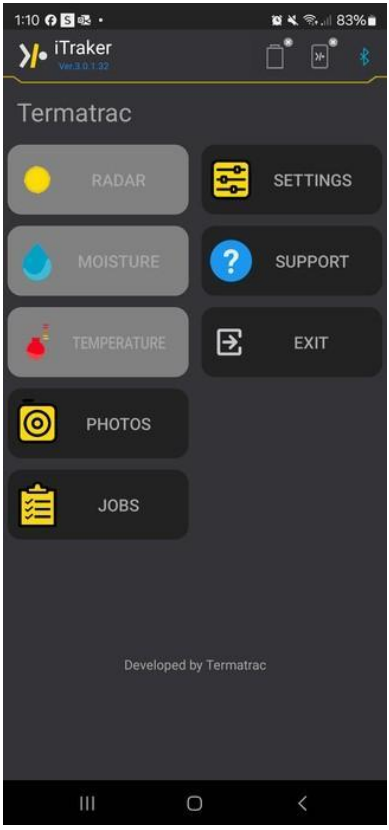



Figure 17 iTraker Home Screen

If the connection with iTraker has not been established, the Radar, Moisture & Temperature buttons on the iTraker App Home screen will be disabled and not available for use.

To exit the app, select the Exit button. Exiting the app will also disconnect the Phone from the iTraker.

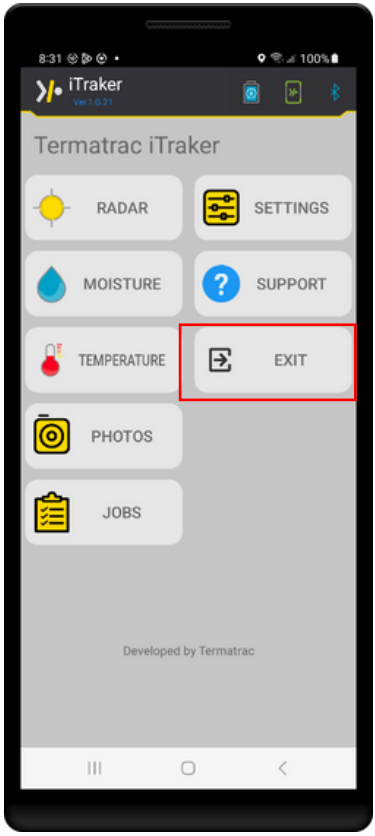



Figure 18 iTraker Home Screen: Connected

### 8.1.2 Using iTraker Sensors

#### 8.1.2.1 Radar

To activate the radar sensor, tap the Radar button. This is the yellow radar icon that is located at the top of the three sensors on the iTraker App home screen, as seen in iTraker Home Screen: Connected .
The iTraker App screen will look like Radar Sensor.
This screen shows activity using the Bar graph display mode.
Also shown is movement in the 'Shake' bar graph display mode. 'Shake' displays any movement that was picked up by the accelerometer in the iTraker. This indicates the iTraker was physically moving when the reading was taken. This will cause doubt over the pest activity reading. It is very important to ensure the iTraker is held still with no activity showing on the 'Shake' bar graph when the pest activity graph is being viewed.

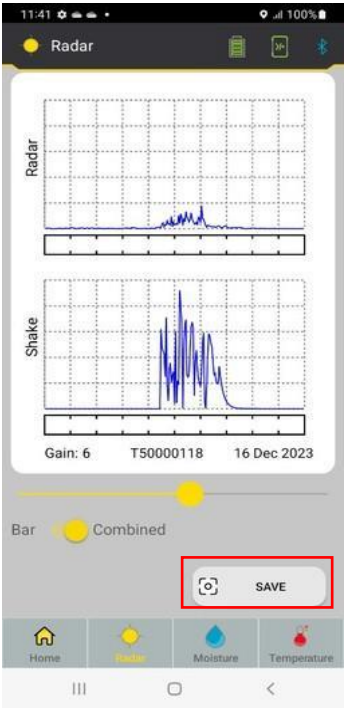



Figure 19 Radar Sensor

The Save 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, tap on the Save button.

The recorded information will now be displayed on the Mobile Device screen. If this does not indicate the correct radar pattern you want to keep, press the Cancel button to return to the active radar sensor screen. Otherwise, tap the Add Scan To Job button to keep the information. For more information on saving scans, see Capturing Scans .

When generating a report on Termatrac Online, the Gain setting can be changed by sliding the yellow dot on the Gain setting meter.

The gain setting will determine the scale of the graph that the scans are displayed on. The Gain setting can be changed on Scans that have already been saved, which is explained in the Termatrac Online User Guide - Editing Job Data.

### 8.1.2.2 Temperature

To activate the temperature sensor with a laser pointer, tap on the Temperature button on the iTraker App home screen, as seen in iTraker App Home Screen: Connected.

The Mobile Device screen will look like Temperature Sensor.

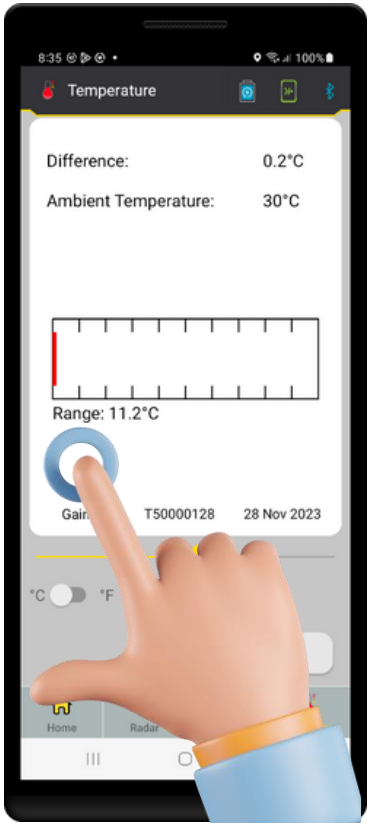



Figure 20 Temperature Sensor

The reference value is whatever the iTraker Temperature Sensor was pointing to when it was first activated. If the Temperature Sensor is now pointed to a slightly warmer surface, the Difference value will increase and the bar graph will turn red starting from the left hand side, as seen in Temperature Sensor.
Conversely, if the Temperature sensor is pointed to an area colder than the reference point, this is indicated by a 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 by tapping a point anywhere within the Temperature Sensor bar graph. The resetting of the reference value will reset the Change value to 0.0°C/°F, and this will become your new reference point.
The Save button will record the last ten (10) seconds of the Temperature Sensor values. If there are certain readings you wish to keep for records or future reference, tap the Save button. The recorded information will now be displayed on the Mobile Device screen. If this does not indicate the correct temperature pattern you want to keep, tap the Cancel button to return to the active Temperature sensor screen. Otherwise, tap the Add Scan To Job button to keep the information. For more information on saving scans, see Capturing Scans.

When generating a report on Termatrac Online, the Gain setting can be changed by sliding the blue dot on the Gain setting meter. The Gain setting will determine the scale of the graph that the scans are displayed on. The Gain setting can be changed on Scans that have already been saved, which is explained in the Termatrac Online User Guide - Editing Job Data.

### 8.1.2.3 Moisture

To activate the Moisture Sensor, Tap on the Moisture button on the iTraker App home screen, as seen in iTraker App Home Screen: Connected Figure 18.

There are two types of moisture sensors in the iTraker, the Direct Moisture sensor and the Relative Moisture sensor. You can switch between the meter displays by tapping on the Relative <> Direct Switch.

Direct Moisture Sensor

The Direct Moisture meter, as seen in Direct Moisture Sensor Figure 19, shows a meter style interface with a moisture percentage.

When the meter reaches a certain moisture level, that can be set by the operator, the Mobile Device Will Begin Beep. The beeping will become more frequent as the moisture level rises. The levels at which the beeping occurs can be specified in the Direct Moisture Settings screen as seen in Selecting Direct Moisture Options Menu. The sound alerts can be switched off completely in the Settings. For more information on how to do so, see Direct Moisture Setting.


Figure 19 Direct Moisture Sensor

### 8.1.2.3.1 Moisture Setting

Select the material being measured to set the Material Algorithm correctly.

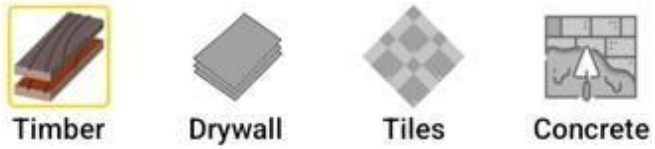
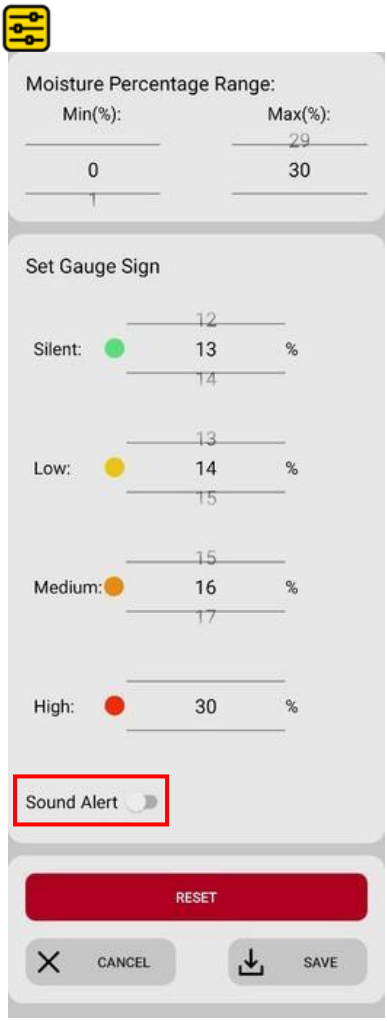



Figure 20 Moisture Settings




**Direct Moisture Setting**

Figure 21 Direct Moisture Settings

**Moisture Percentage Range**
Set Minimum and Maximum percentages for the Moisture Gauge
**Set Gauge Sign**
Set Moisture Alert levels
The Direct Moisture meter will automatically be set to produce sound when the iTraker is exposed to high moisture levels, with more frequent beeping occurring as the level of moisture increases.

**Sound Alert**
Turn On/Off Moisture Level Sound Alert
**Reset**
Reset all values to Defaults
**Cancel**
Return to Moisture screen without changing settings
**Save**
Save Settings and return to Moisture Screen

Relative Moisture Sensor

The Relative Moisture sensor, as seen in Relative Moisture Meter Figure * , shows the difference in moisture from a reference point. This mode is useful for finding the wettest part of an area, or for scanning fibro type materials.

When the Moisture Sensor starts, a reference value has been set and all of the Relative 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 iTraker 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 a red bar starting on the right hand side of the bar graph.

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 tapping a point within the Moisture Sensor bar graph.

When the sensor reaches a certain moisture level that can be set by the operator, the Mobile Device will begin to beep. The beep will become more frequent as the moisture level rises. The levels at which the beeping occurs can be specified in the Relative Moisture Settings screen as seen in Selecting Relative Moisture Options Menu. The sound alerts can be switched off completely in the Settings. For more information on how to do so, see Relative Moisture Settings Figure *.

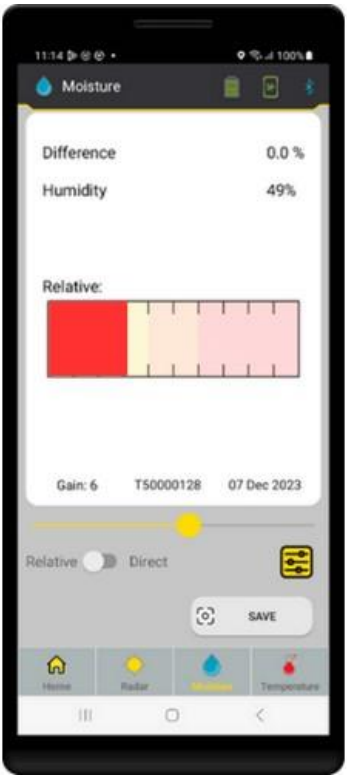



Figure 22 Relative Moisture Sensor

**Relative Moisture Settings**


Figure 23 Relative Moisture Settings

**Set Gauge Sign**
Set Moisture Alert levels
The Relative Moisture sensor will automatically be set to produce sound when the iTraker is exposed to high moisture levels, with more frequent beeping occurring as the level of moisture increases.
**Sound Alert**
Turn On/Off Moisture Level Sound Alert
**Reset**
Reset all values to Defaults
**Cancel**
Return to Moisture screen without changing settings
**Save**
Save Settings and return to Moisture Screen

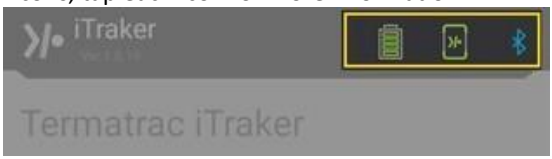
For both Direct and Relative Moisture Sensors:

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

For more information on saving scans, see Capturing Scans when generating a report on Termatrac Online, the Gain setting can be changed by sliding the blue dot on the Gain setting meter. The Gain setting will determine the scale of the graph that the scans are displayed on. The Gain setting can be changed on Scans that have already been saved, which is explained in the Termatrac Online User Guide - Editing Job Data.

## 8.2 iTraker Information

Information about the connected iTraker can be found in the top 3 iTraker icons, tap each icon for more information.




**Battery**

Shows the iTraker Battery Information

This icon will change depending on the iTraker Battery State

| | |
|---|---|
|  | iTraker Battery has 75% to 100% charge |
|  | iTraker Battery has 50% to 75% charge |
|  | iTraker Battery has 25% to 50% charge |
|  | iTraker Battery has 10% to 25% charge |
|  | iTraker Battery has 0% to 10% charge |
|  | iTraker App is not connected to iTraker |
|  | iTraker is connected to charger and charging is in progress |
|  | iTraker is connected to Charger and Battery is fully charged |
|  | Battery error, restart iTraker and connect to iTraker App again, if error still shows then contact your Distribution Centre. |

Table 4 iTraker Battery Information

**iTraker**

| | |
|---|---|
|  | iTraker is Connected and status is OK |
|  | iTraker is not connected |
|  | iTraker error, restart iTraker and connect to iTraker App again, if error still shows then contact your Distribution Centre. |

Table 5 iTraker Connection Information

**Bluetooth**

| | |
|---|---|
|  | Mobile Device Bluetooth may be turned off, Open your Mobile Device (Phone or Tablet) Bluetooth settings & ensure Bluetooth is turned on |
|  | Mobile Bluetooth is supported and is On. |
|  | Mobile Device Bluetooth error, the Mobile Device may not support Bluetooth LE or has a Bluetooth error. Power Off/On your Mobile Device and check again, if the error persists then contact your Mobile Device Provider |

Table 6 Bluetooth Connection Information

**Battery Information**

Tap the Battery Icon for more Information about the iTraker Battery

| Connected To iTracker | Not Connected To Tracker |
|---|---|
|  |  |



Table 7 iTraker App Battery Information

**iTraker Information**

Tap the iTraker Icon for more Information about the iTraker

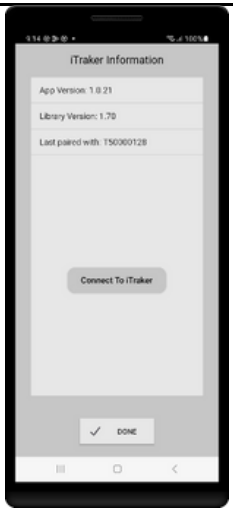
| Connected To iTracker | Not Connected To Tracker |
|---|---|
| | |
|  |  |



Table 8 iTraker App Connection Information

**Bluetooth Information**

Tap the Bluetooth Icon for more Information about the Mobile Device Bluetooth.

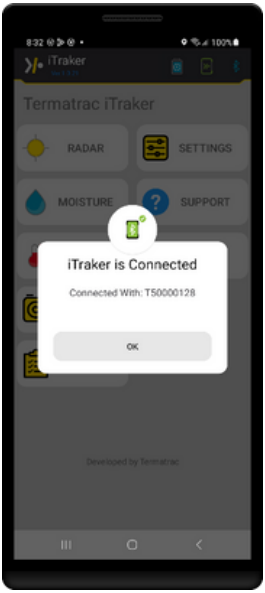
| Connected To iTraker | Not Connected To iTraker |
|---|---|
|  |  |

Table 9 iTraker App Bluetooth Information

### 8.2.1 App Setting

Tap the Settings button on the Homescreen to set iTaker App Settings.

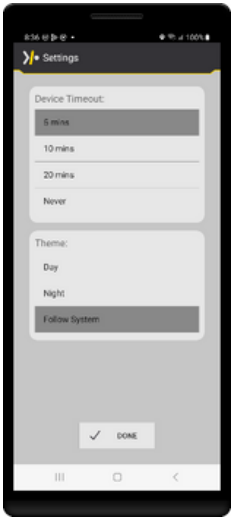



Figure 24. iTraker App Settings: Device Timeout

**Device Timeout**

Set the maximum time for continuous use of an iTraker Sensor, after the preset time the iTraker App will disconnect from the iTraker and return to the Home screen.

One minute before the device is about to timeout, a little clock will flash under the scan window whilst the Mobile Device makes a beeping noise. This clock will only appear during a scan activity. The clock can be seen in the Timeout Clock Figure 24. When the device times out, the Mobile Device will disconnect from the iTraker.

**Theme**

Select Day or Night Manually or follow the setting as configured in your Mobile Device theme settings.

**Done**

Save Settings and return to the Home screen.

### 8.2.2 Exit

By selecting the Menu button at the bottom of the screen and then selecting Exit, the iTraker app can be terminated. A Confirm dialogue message will be displayed. Select Yes to close the program and return to the Mobile Device home screen.

## 8.3 Collecting Information

### 8.3.1 Job Activities

#### 8.3.1.1 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.

#### 8.3.1.2 Job Location

When using the iTraker it is helpful to understand the terms that will be used throughout this document. The details captured by the iTraker 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.

#### 8.3.1.3 View Jobs

Information on how to View jobs on the Mobile Device can be found in Uploading Scans from Mobile Device 8.3.3 .

Alternatively, jobs can be viewed on the Termatrac Online website.

Please refer to the Termatrac Online User Guide under sections Job Locations and Job Reporting for further information.

### 8.3.2 Capturing Scans

During the course of a Job, the iTraker App shows information on the screen from the active sensors (Radar, Temperature or Moisture). This information is called a Scan.

When something of interest is being measured by any of the sensors on the iTraker, the option to save the current scan is available. This can be done by tapping Save, which is seen in Capture Scan: Save Logs.

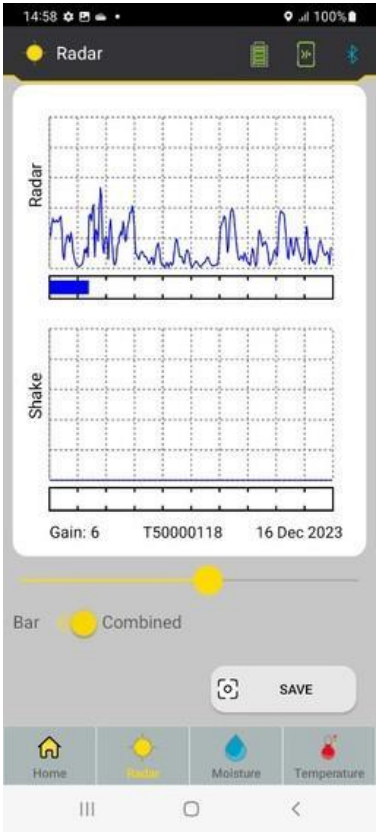



Figure 25 Capture Scan: Save Log

To confirm the capture, the Save button needs to be selected in Capture Scan: Confirm Capture. The Cancel button can be pressed to take the user back to the sensor screen without saving the scan

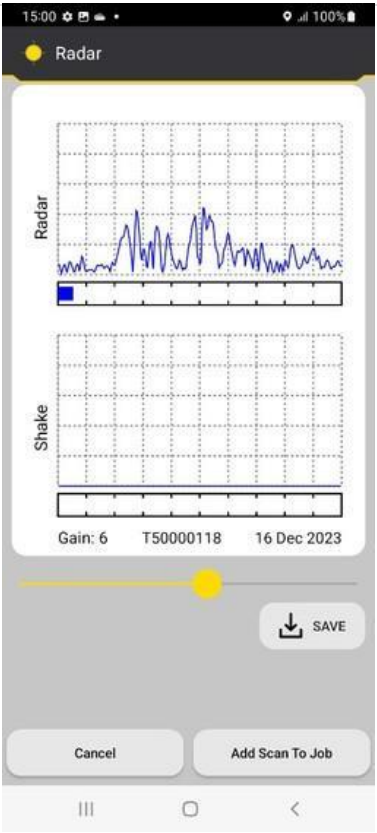



Figure 26 Capture Scan: Confirm Capture

Once a log has been confirmed to be saved, information regarding the scan must be entered. The Scan Log Information screen is shown as seen in Scan Log Information. In order to enter the necessary information about where the scan was taken, each field must be tapped and information either entered manually or selected from a drop-down list. To save the log, the Save button must be selected at the bottom of the screen, which is found by scrolling down the page seen in Scan Log Information. If the log is to be discarded, the Cancel button will cancel the log and take you back to the Home screen of iTraker App.

Note: Although only Current Location and Current Job are mandatory for saving the log, it is recommended that values are selected for every field

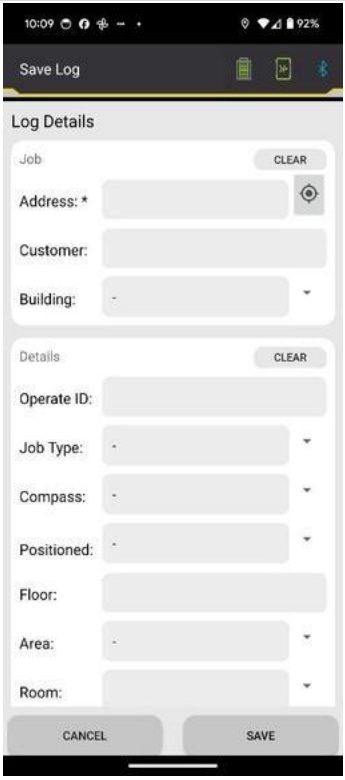



Figure 27 Scan Log Information

### 8.3.2 Uploading Scans from Mobile Device

The syncing of scans is done via the internet and are uploaded to Termatrac Online.

Each scan that has been saved is connected to the serial number of the iTraker, which is connected to the Company that Termatrac has on record as the owner of that iTraker.

Note that before scans can be uploaded, the Company must have an account on Termatrac Online. Please contact your sales agent, or Termatrac directly if you wish to have an account created.

Please refer to the Termatrac Online User Guide under section Getting Set Up.

After selecting Jobs from the Home screen, the Job List screen will display showing list of Jobs previously created. The list can be filtered by Date using the Date filter at the top of the screen.


Figure 28 Selecting View Jobs Menu

It is possible to check if a scan has been successfully uploaded in the Job List screen. The Job List screen can be accessed by selecting the Jobs button on the Home Screen

After selecting View Jobs in the main menu, the Job List screen will appear, allowing you to view all jobs.
Underneath this, the list of saved scans is displayed, with a small picture of a cloud next to each scan. Both of these images can be seen in Cloud Upload Images Figure 30 . The cloud image with the small green tick on it means that the scan has been successfully uploaded to the server. The cloud image with

the small yellow exclamation point means that the scan has not yet been uploaded to the server.

Tap on a Job address to view the Scans for that job in the Job Readings screen.


Figure 29 Job List


Figure 30 Cloud Upload Image

Each Row in the Job Readings Screen holds the results of a scan from one of the Sensors, Radar, Moisture or Temperature, or from a Photo.

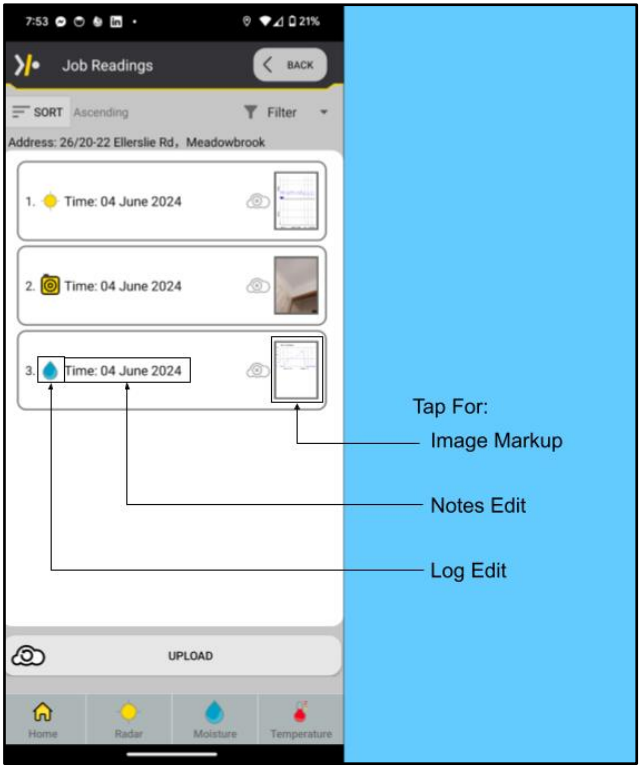



Figure 31 Job Readings

Tap on the Image to show the Image Mark Up screen where you can mark up the image with lines, highlighting areas of interest. From this page you can save the image to your phones local storage or share the image through your phones inbuilt sharing options.


Figure 32 Image Mark Up

Tap on the Text area to show the Record Notes screen where you can either manually type notes for the scan or press & hold the microphone icon to record Voice to Text.

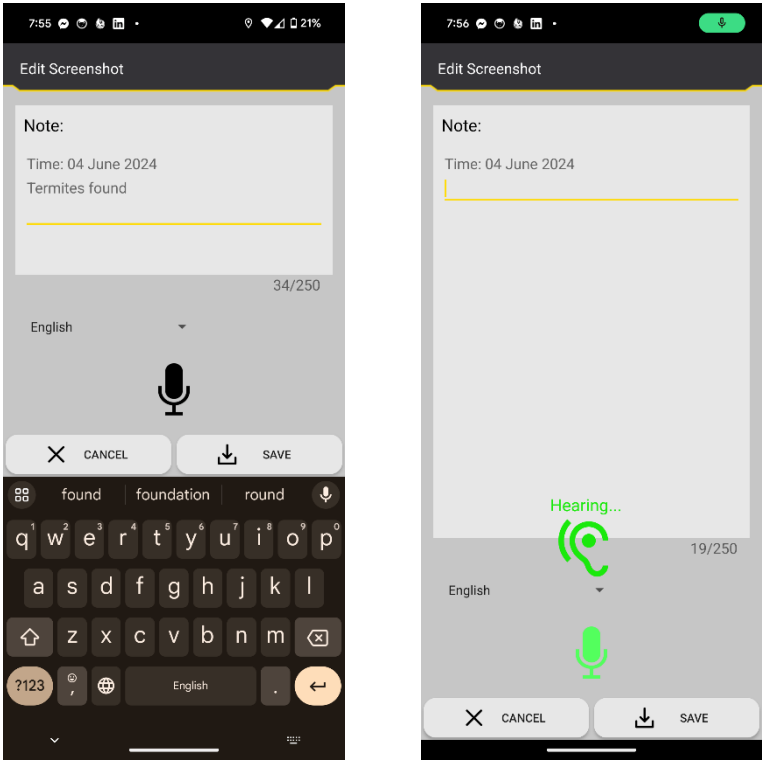



Figure 33 Notes Edit

Tap on the Sensor icon to show the Log Details screen where you can edit the previously entered Log Details.

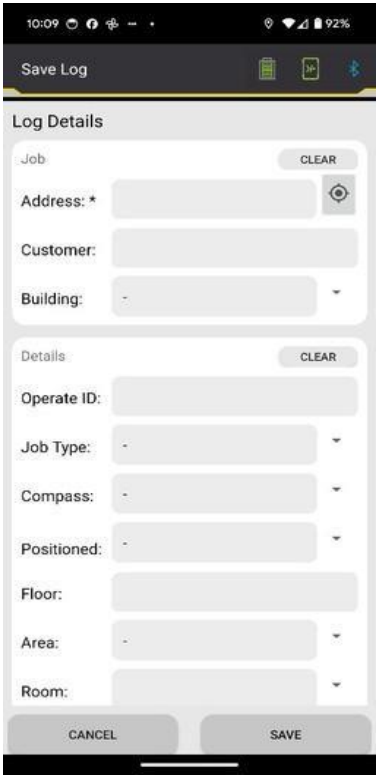



Figure 34 Logs Edit

## 9. Thermal Imaging Camera Component

The Thermal Imaging Camera is located on the middle of the ITraker, between the Temperature senses and the Laser Pointer. The Thermal camera is equipped with a high-resolution sensor capable of capturing thermal images with precision. Its 256 x 192-pixel resolution and 12-micrometer pixel pitch ensure detailed and accurate thermal imaging.

Infrared instruments “DETECT” infrared radiation from the 1st/1000 of an inch (0.0254 MM) of the surface of most solids and liquids.

Therefore, it does not measure or see temperature.

It does not “SEE THROUGH’ most solids or liquids.

We are not looking for “hot spots”.

We are looking for thermal differences.

Termatrac ITraker Thermal Imaging Cameras are compatible with both Android and iOS devices depending on the user’s preference. However, it is only compatible to one operating system which is either Android or iOS.


Figure 35. Thermal Imaging Camera location on the iTraker PRO

## 9.1 Thermal Imaging Camera on ITraker App.

To Start the Thermal Camera on ITraker App, ITraker need to be connected to mobile (Android or IOS depending on Thermal Imaging camera version) via **USB C** type cable.


Figure 36. USB-C Type Cable to connect the iTraker PRO and Mobile Phone

Proceed by, clicking the **Thermal Camera** Icon in the ITracker App.

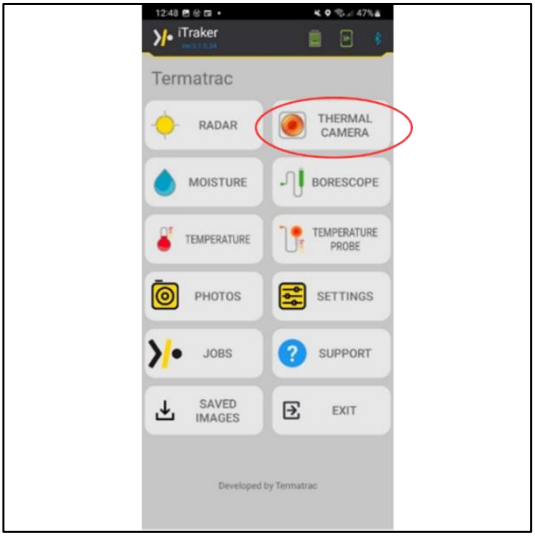



Figure 37. Thermal Camera in iTraker App

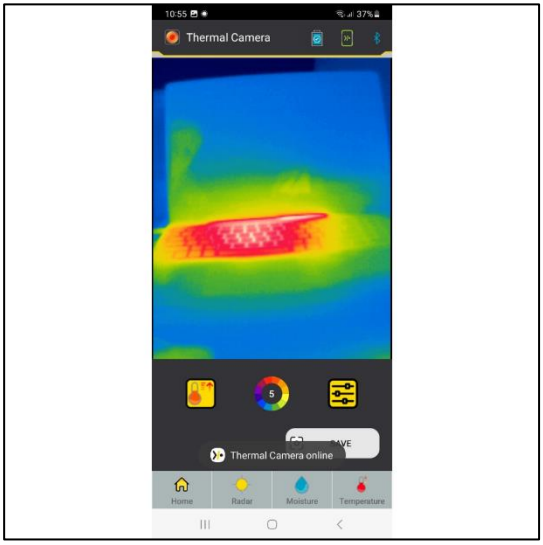



Figure 38. Thermal Camera Image On Rainbow 2 mode pointing at a laptop

## 9. 2 Thermal Camera Settings

Click the “Setting” button to view the Thermal Camera Settings.

The setting consists of six (6) categories:

1. **Correction**: Correct measured temperature errors;
2. **Reflection**: The temperature reflected by the surrounding objects on the target object;
3. **Ambient** : The ambient temperature of the environment in which the target object is located
4. **Humidity**: The atmospheric humidity of the environment in which the target object is located
5. **Emissivity**: The emissivity of the target object;
6. **Restore default**: Restore the above adjustments to the default settings.

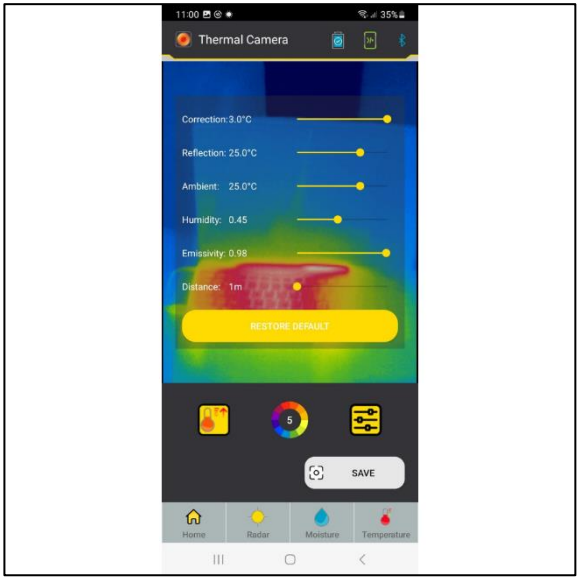



Figure 39. Thermal Camera Settings on the iTraker App

## 9.3 Thermal Camera Colour Palettes

There are 5 colour palettes of the Thermal Imaging that a user can use to view readings.

1. Black Hot Mode
2. White Hot Mode
3. Rainbow 1
4. Rainbow 2
5. Rainbow 3

Simply, press the “Colour Wheel” button under the Thermal Image Screen to choose desire mode.

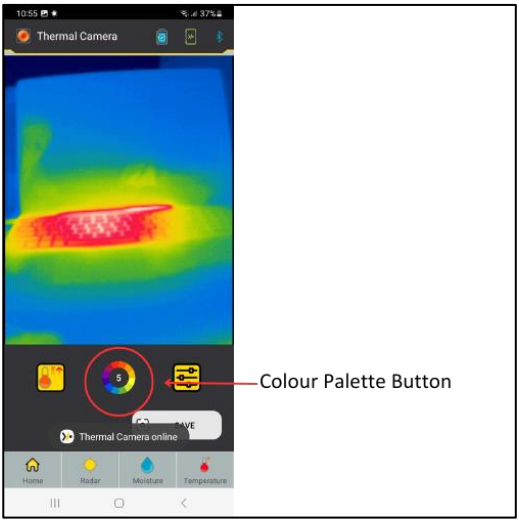



Figure 40. Thermal Camera Colour Palette Button

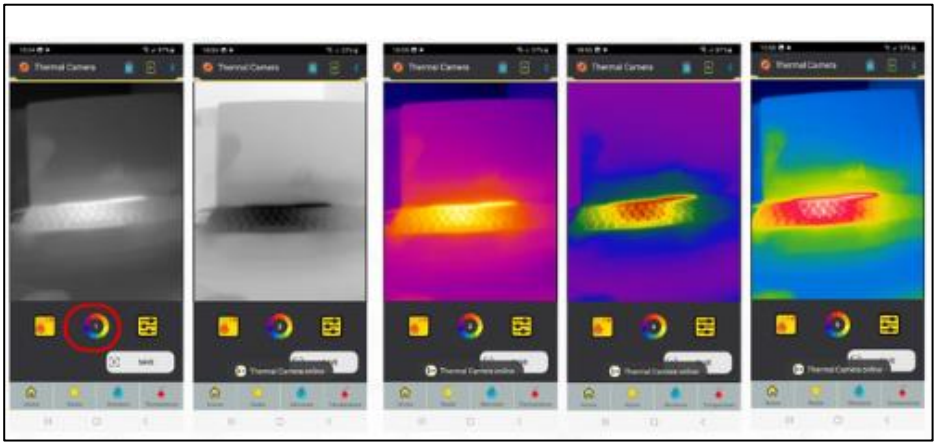


Figure 41. Colour Palette Images

## 9.4 Viewing of Surface Temperature Readings

If Thermal scans are to be saved, it is recommended to have the surface temperature readings on screen. To activate the Isoytherm Scale, click the “Temperature Target Button”.

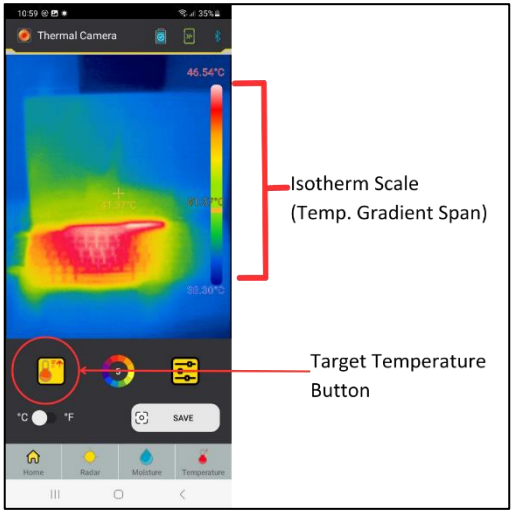



Figure 42. Surface Temperature Reading

## 9.5 Capturing Thermal Images

Saving data is as simple as touching the screen. Record your Thermal Image scans that you consider valuable for your client to view both on-site and off-site, as well as for your own records. This data can be crucial for verifying findings before treatment or demonstrating the success of post-treatment eradication of activity. To capture, make sre that the Thermal Camera is facing on the object or matter that you want to scan, then click the “Save” button. To save the captured scans, click the “Save to Gallery" button.

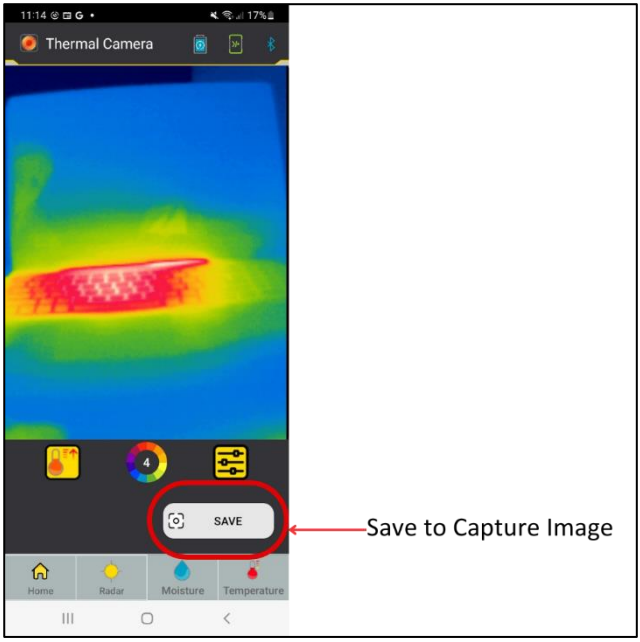



Figure 43. Capturing Thermal Images


Figure 44. Save to Local Storage

## 10. Limitation of iTraker

The Termatrac readings should not be relied upon for the surface types shown in Surface Limitations.

| Surface Types | Limitations | Recommendations |
|---|---|---|
| Metal | The radar does not penetrate these materials as it is completely reflected by the metal. It may also give false readings that indicate termite activity. This is caused by the signal reflecting off the material and back to the iTraker, 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. Aluminium-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 |

Table 10 Surface Limitations

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 iTraker 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.

# 11. FAQ

## 11.1 iTraker Not Turning On

If the iTraker battery is dead flat, then there will be no activity when the Power button is pressed on the iTraker. In this case charge the iTraker using the supplied USB C cable with a compatible charging source.

## 11.2 iTraker Power LED Flashes Orange

If the Power LED flashes orange after the Power button is pressed, the iTraker battery level is low. The iTraker will continue to operate for a short time before the battery is completely exhausted. At this point the iTraker will automatically turn off. In this case charge the iTraker using the supplied USB C cable with a compatible charging source.

## 11.3 iTraker Power LED Flashes Red

If the Power LED flashes red after the Power button is pressed indicates an internal fault. In this case contact your Distribution Centre for further action.

## 11.4 No Bluetooth Connection

The iTraker App on the mobile device cannot establish a connection to the iTraker if Bluetooth in the mobile device is not operating. Ensure that Bluetooth is supported and enabled on the mobile device.

## 11.5 iTraker Freezes

If the iTraker does not respond to any of the button presses or any commands from the iTraker App on the mobile device, it may have entered a waiting state. If the iTraker does not recover from its current operation, terminate the iTraker App, power off/on the iTraker, re-open the iTraker App, connect with iTraker and start the operation again.

## 11.6 No Internet Connection

If your Mobile Device isn't connected to the internet via Wi-Fi or mobile data, you won't be able to upload jobs to Termatrac Online for reporting, and you'll miss out on automatic app updates and improvements that can enhance functionality and security.