AgriCision


onTrak by AgriCision

# GPS Tractor Guidance System

# User Guide

## Copyright



Agricision Limited
Applehouse Farm
Burchetts Green
Maidenhead
Berks SL66QP
United Kingdom

Publication Number 100901
Issue 4
March 2024



**Wherever you see this symbol**

**you can click on it for more information.**

## Warranty

The onTrak device is warranted for two years from date of purchase. In the event of failure due to faulty materials or workmanship it will be replaced or repaired free of charge. Please contact Agricision Ltd for return instructions.

This warranty does not extend to accidental damage or faults caused by fair wear and tear or by water ingress due to misuse.

The battery, in common with all rechargeable batteries, has a finite life, and will not be replaced under warranty if it has reached the end of its normal life. However, provided that it has not been misused, the battery is covered by the warranty if it has failed to deliver the expected life due to faulty manufacture.

**Contents**

## 1 Introduction to the onTrak system

The onTrak Global Positioning System (GPS) tractor guidance system by Agricision is a cost-effective and simple to use solution to assist a driver to steer his tractor on the correct line for optimum efficiency and to record details of the field and work done. It consists of the onTrak device, which is a self-contained unit placed on the tractor bonnet in the driver's line of sight and requiring no wiring, together with an app that runs in an Apple or Android phone or tablet ("iDevice").

The onTrak device and the iDevice connect automatically using Bluetooth Low Energy (BLE). Once they are connected, and the user has input basic settings into the app, such as implement width, the principle of operation is that the onTrak device knows its location, using GPS, and its heading, using a combination of GPS and its integrated gyroscope, and the app knows the correct line that the tractor should be following. The onTrak device sends its position and heading data to the app, which compares them with its optimum data and calculates any corrections that may be required. It sends instructions to the onTrak device to illuminate Light Emitting Diodes (LEDs) to show the driver the steering corrections needed.

To achieve standard accuracy, no other system components are required apart from the onTrak device and the iDevice. No GPS subscription service is required to achieve the specified accuracy. No Internet or phone connection is required for the app to operate.

Enhanced accuracy is available by using the onTrak ion version, and ultimate accuracy can be achieved by subscribing to Agricision's veriTrak correction service. To make use of this service an Internet connection to the iDevice is required via the user's normal mobile data service. ▶

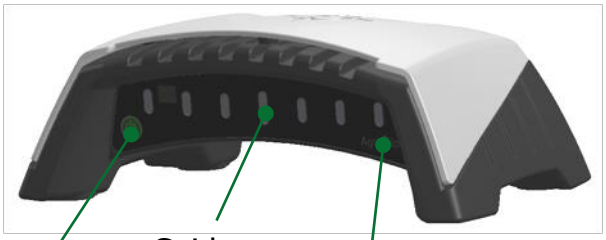
## 2 Introduction to the onTrak device

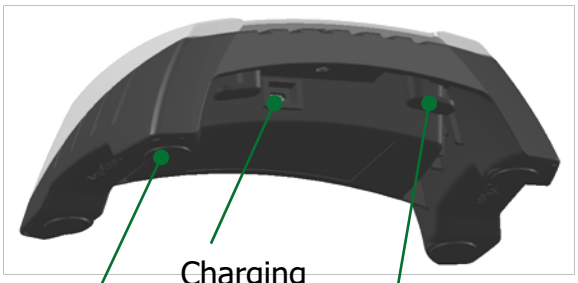
Two versions of the onTrak device are available – onTrak Original with a grey top cover and onTrak ion with a white top cover.

Both versions of the onTrak device contain a GPS receiver and other sensors, guidance LEDs, a BLE radio for communicating with the iDevice, and a rechargeable battery, all housed in a waterproof case which can be attached to the tractor bonnet.

The onTrak ion device contains a higher precision GPS receiver and advanced sensors for terrain correction in place of the standard receiver of the onTrak Original.

## 2.1 External features of the onTrak device




- ON/OFF Button. Press to switch the device ON. Press again to switch OFF.
- Guidance LEDs. These indicate to the driver whether the tractor is on track or whether any course corrections are needed. The green centre LED also indicates Bluetooth status.

  The meanings of the various indications are as follows:

Switched off

(Centre green LED Flashing) -
The device is searching for a Bluetooth connection to the app

The device is connected to the app via Bluetooth. No A/B line has been set

The machine is on track - no course correction is required

A small course correction to the right is required. A short nudge on the steering should be enough to correct the error. Don't continue steering until the green light shows - you will probably overshoot.

A large course correction to the right is required

A course correction to the left is required

Firmware update is in progress ▶

- Charging LED. This indicates when the charger is connected and when the battery is charging.

**NOTE.**
It is recommended that the device should be switched off and its battery recharged after work. The device is not designed to be used while on charge.

The meanings of the various indications are as follows:

Charger not connected

Charging is in progress. Time to recharge a completely empty battery is approximately 5 hours.
(There is no need to disconnect the charger when charging is complete. No damage will be done if the device is left on charge continuously.)

Charging is complete (with the device switched off), or, if the device has been left with a flat battery for a long time, may briefly indicate initial pre-charge conditioning.
(With the device switched on, and the charger connected, the Charging LED stays orange even when the battery is full. Use the device battery indication in the app to determine when the battery is full.)

- Magnetic feet. These are used to attach the device to the tractor bonnet. Keep the feet clean, and do not slide them across the bonnet, in order to avoid damaging the tractor's paintwork. If the bonnet is not made of steel, the self-adhesive steel discs supplied can be used. Follow the instructions on the template supplied.
- Charging socket. This is located under a waterproof cover. Be sure to replace the cover when no cable is connected, in order to prevent water and dust from penetrating the waterproof compartment. Use the USB cable supplied to connect the device to any USB mains charger (for example the one used to charge the iDevice) or cigar lighter adapter.
- Cable storage hooks. These can be used to store the charging cable if required.

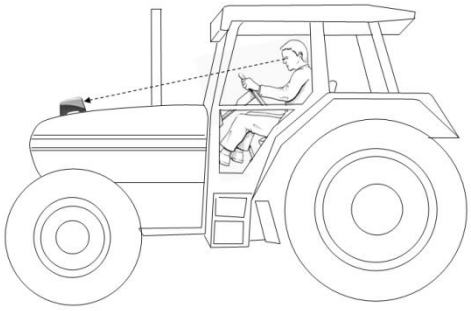
## 2.2 Installation of the onTrak device

A major benefit of the Agricision system over other systems is that the guidance indication is positioned in the driver's line of sight and at a comfortable distance from his eyes. Staring at other in-cab displays, and frequently changing from close focus to distant focus, leads to driver fatigue, but the onTrak is positioned so that the driver does not need to look away from the area where he should be concentrating, i.e. where he is going, to be able to see and follow the guidance indications.

Additional benefits of having the GPS receiver on the bonnet of the tractor rather than on the roof include:

- Easy swapping from tractor to tractor - the device can be reached from the ground without the need for a ladder.
- Increased sensitivity to off-course errors - the front of the tractor is the first part to deviate from the correct line and the GPS receiver can sense any errors, and the system can generate correction responses, a fraction of a second earlier.
- Reduced sensitivity to terrain fluctuations - the lower the GPS receiver is above the ground the less is the influence of pitch and roll of the tractor on sloping ground.
- Reduced vulnerability to damage from overhanging trees etc.

In order for the GPS receiver to have a clear view of the sky, it should be placed as far away from the tractor cab as possible.



The onTrak device should therefore be placed on the end of the tractor bonnet, on the centre-line of the tractor, using the slope of the bonnet to adjust the angle of the device so that the front panel is facing directly towards the driver.

Once the onTrak device has been installed and switched on, after an LED test sequence it automatically starts searching for the app running in the iDevice and needs no further adjustments.

## 3 Introduction to the onTrak app

The onTrak app is available free from the Apple App Store or Google Play Store. Just search the store relevant to your iDevice for "agricision ontrak" and download the app.


Visit the store regularly for updates to the app containing important improvements and enhancements. ▶

Launch the app by tapping the icon on the Home screen of the iDevice.

The first time the app is launched, some key points about its operation are displayed.

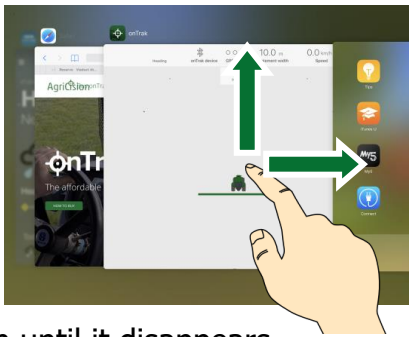
The iDevice should be carried inside the tractor cab. After initial setting it does not need to be visible to the driver, but mounting it in a place where it can be seen and controlled is helpful, especially when turning at the headlands.

### NOTE: Close the app!

It is important to close the app when you have finished using it. (Simply tapping the Home button just removes it from the screen but does not close it completely.)

This is because:

- While it is open, the app continues to use system resources, including memory and battery power, even if it is not connected to an onTrak device.
- After being disconnected from a device, the app continues to search for one. However, after a long period of disconnection, the app abandons the search and will not then find an onTrak device again until it has been closed and re-launched.



To close the app:

- Double-tap the Home button, pull up the bottom bar, or tap the Recents button (■ / III) on the iDevice. All of the open apps will be displayed, arranged like a pack of cards.
- Find the onTrak app and swipe it off the screen until it disappears.

As soon as the app is launched, it automatically searches for any onTrak device within range, and connects to the first one it finds (if there are more than one). The app and the onTrak device are then exclusively paired together and will not connect to any other Bluetooth devices. (This does not prevent other apps in the iDevice from connecting to other types of device. For example, a phone can be connected to a Bluetooth headset and used to make and receive calls while simultaneously running the onTrak app connected to the onTrak device.)

If the app and the onTrak device fail to connect automatically within a few seconds, this could be caused by:

- One of them is already connected to another onTrak app / device
- The app needs to be closed and relaunched ▶

Zoom:
At any time the field view can be zoomed using the normal "pinch in / out" gestures

## 3.1 Features of the onTrak app (Tablet)

### 3.1.1 Tablet Home screen

**The top bar contains information about the system and the current field**

Tap to save the A/B line and/or Boundary to a named field ▶

Name and area of the current field ▶

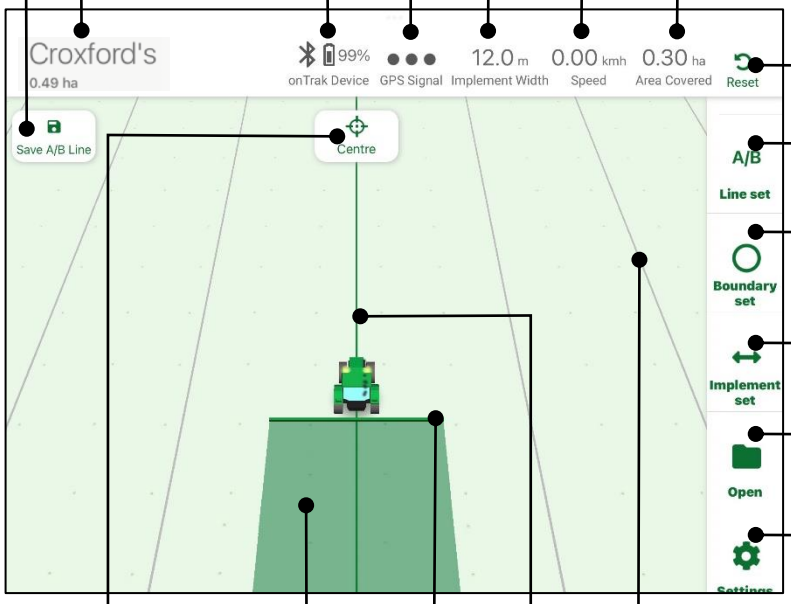
Status of the connected onTrak device:
indicates Bluetooth connected
99% indicates battery level

Status of the GPS signal:
● ● ● indicates 8 or more satellites in use (good fix)

Implement width in use ▶

Current speed

Total area covered while recording has been switched on ▶




**The side bar contains controls:**

Tap to reset the area recorded

Tap to display or hide the A/B line setting controls ▶

Tap to display or hide the Boundary setting controls ▶

Tap to display the implement setting controls ▶

Tap to open a previously saved field ▶

Tap to go to the Settings screen ▶

Inactive guidance lines. Simply drive close to any line to make it the active line

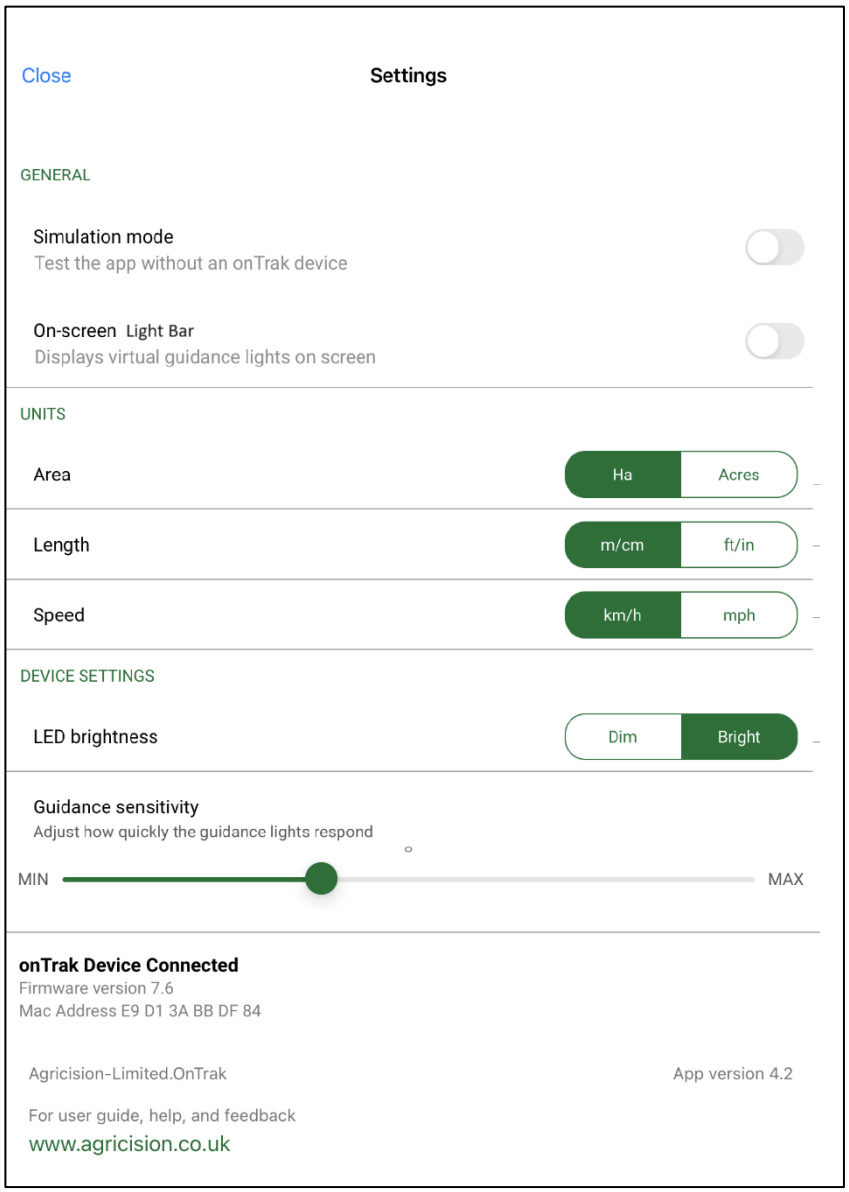
Active guidance line:
The line nearest the tractor automatically becomes the active line.

Implement:
▬ (and tractor headlights on) indicates recording is switched on
▬ indicates recording is switched off

Recorded area:
Tap anywhere in the field area to switch recording on/off ▶

Centre:
Tap to adjust all of the guidance lines to bring the active line into the centre of the implement

### 3.1.2 Tablet Settings screen




Simulation mode:
Tap to switch on/off a simulator to exercise the app ▶

On-screen Light Bar:
Tap to switch on/off a graphic of the guidance lights on the Home screen ▶

Area units:
Set the units used to measure field size and area covered

Length units:
Set the units used for implement settings

Speed units:
Set the units used to measure speed

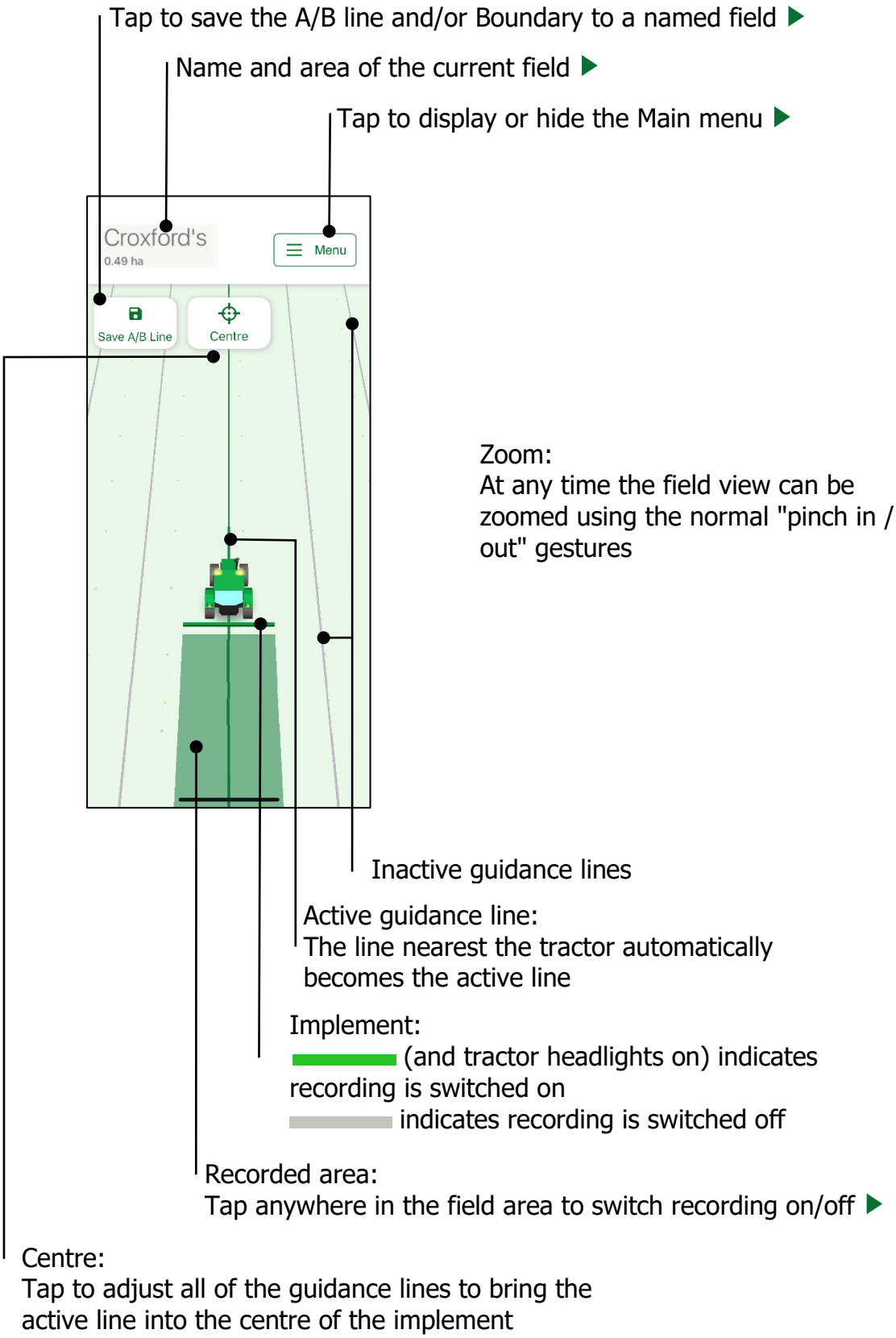
LED brightness:
Set to Dim for low light conditions.
Set to Bright for normal daytime conditions

Guidance sensitivity:
Slide the control left to reduce the sensitivity (for novice users)
Slide the control right to increase the precision (for experienced users)

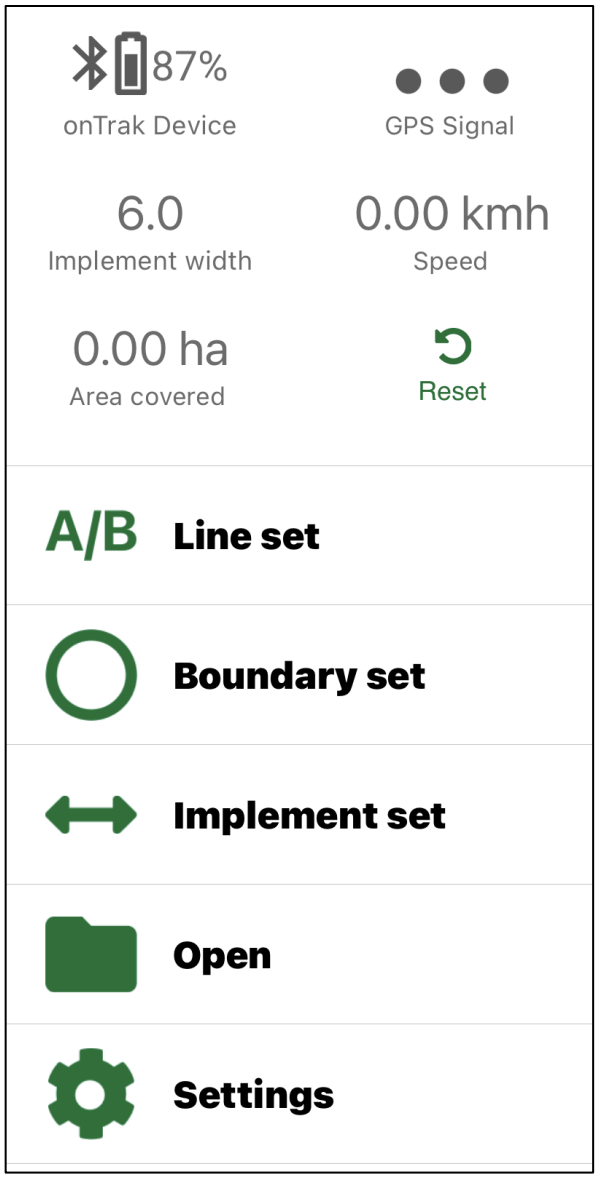
Connected device information:
Firmware version / MAC address

## 3.2 Features of the onTrak app (Phone)

### 3.2.1 Phone Home screen



### 3.2.2 Phone Main menu




Status of the connected onTrak device:
indicates Bluetooth connected
87% indicates battery level

Status of the GPS signal:
● ● ● indicates 8 or more satellites in use (good fix)

Implement width in use ▶

Current speed

Total area covered while recording has been switched on ▶

Tap ↺ to reset the area recorded

Tap to display or hide the A/B line setting controls ▶

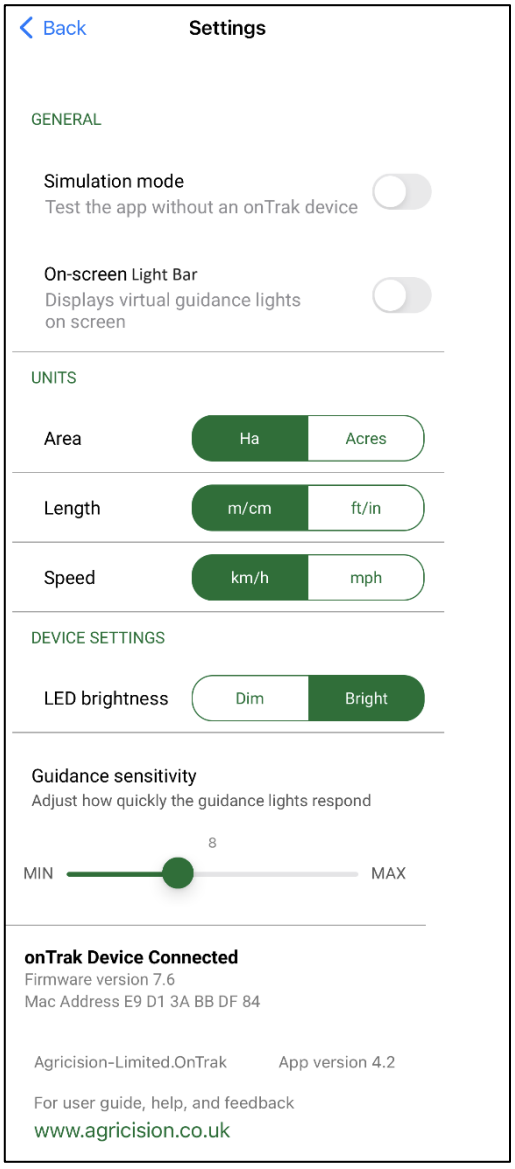
Tap to display or hide the Boundary setting controls ▶

Tap to display the implement setting controls ▶

Tap to open a previously saved field ▶

Tap to go to the Settings screen ▶

### 3.2.3 Phone Settings screen




Back:
Tap to apply the new settings and return to the Home screen

Simulation mode:
Tap to switch on/off a simulator to exercise the app ▶

On-screen Light Bar:
Tap to switch on/off a graphic of the guidance lights on the Home screen

Area units:
Set the units used to measure field size and area covered ▶

Length units:
Set the units used for implement settings

Speed units:
Set the units used to measure speed

LED brightness:
Set to Dim for working in low light conditions.
Set to Bright for normal daytime conditions

Guidance sensitivity:
Slide the control left to reduce the sensitivity
Slide the control right to increase the precision

Connected device information:
Firmware version / MAC address

# 4 Using the onTrak system

## 4.1 Getting Started

These simple steps are all that is required to use the onTrak system for basic guidance:

- Switch on the onTrak device and place it on the tractor bonnet ▶
- Launch the onTrak app on the iDevice ▶
- Set the implement width ▶
- Wait for the screen and the green centre LED on the device to indicate that the app and the device are connected ▶
- Wait for the screen to indicate that there is a suitable GPS signal ▶
- Set the A/B line ▶
- Follow the guidance LEDs ▶

## 4.2 Implement Settings

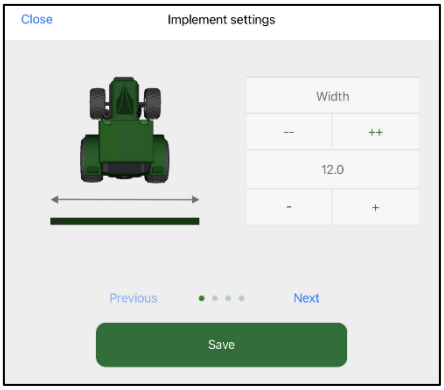
### 4.2.1 Setting the Implement Width

The implement width is a basic setting of the onTrak system. It is used to:

- Determine the spacing between the guidance lines
- Calculate the area covered while recording
- Mark the outside of the field when recording the boundary

To set the implement width:

- Tap Implement set in the main menu to show the implement settings. The first setting displayed is the implement width control:




- Tap -- to reduce the width in 1 metre steps
- Tap - to reduce the width in 10 centimetre steps
- Tap ++ to increase the width in 1 metre steps
- Tap + to increase the width in 10 centimetre steps

The implement width can be changed at any time without affecting the recorded data. When the width is changed, the guidance lines move to the new spacing. Only the A/B line remains where it was.

- Tap Previous / Next or swipe the tractor left or right to move to another implement setting
- Tap Save to confirm the new settings or
- Tap Close to exit without saving

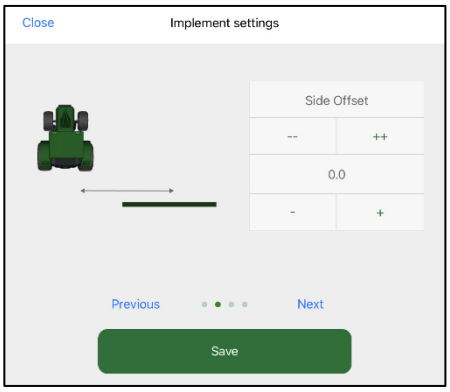
### 4.2.2 Setting the Side Offset

The side offset can be used to set the distance from the centre line of the tractor to the centre line of the implement. It is used for example when the implement is an offset mower or a side-discharge muck spreader. This setting does not affect the guidance function of onTrak, because guidance is always aligned to the centre line of the tractor - it only affects where the recorded area appears relative to the tractor.

To set the Side Offset:

- Tap 

in the main menu to show the implement width setting, then swipe the width setting to the left to display the side offset control:




- Use the controls to adjust the side offset as for the implement width
- Positive settings represent offset to the right of the tractor. Negative settings represent offset to the left. If the implement is directly in line with the tractor, set the side offset to zero.

### 4.2.3 Setting the Rear Offset

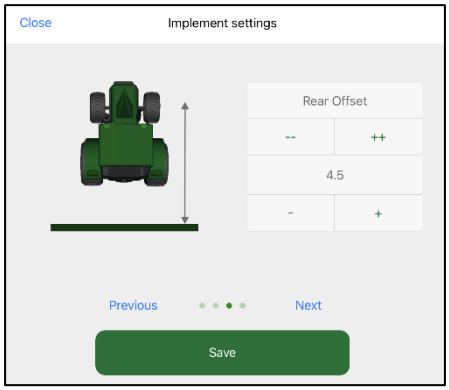
The rear offset can be used to set the distance from the point on the bonnet of the tractor where the onTrak device is fitted, to the working line of the implement. It is used for example for spraying or spreading, when the working area may be a long way behind the tractor and it is important to record the covered area in the correct position relative to the GPS location of the onTrak. It is also important if the onTrak screen is used to judge when to start / stop the implement, or if auto-coverage is used when crossing the headland mark.

As with side offset, this setting does not affect the guidance function of onTrak.

To set the rear Offset:

- Tap 

in the main menu to show the implement width setting, then swipe the width and side offset settings to the left to display the rear offset control:




- Use the controls to adjust the rear offset as for the implement width
- Positive settings represent offset to the rear of the tractor bonnet. Negative settings represent offset to the front. The default value of 4 metres represents a typical distance from the bonnet-mounted onTrak to an implement mounted on the 3-point linkage.

With some implements, for example sprayers or single mowers, it is quite clear where the working line is, and the rear offset can be set accordingly. But for spreaders there is no distinct line, and the spread pattern should be assessed to estimate the average rear offset. And for some implements, for example front/side or triple mowers, there may be more than one working line and a position mid-way between them should be used.

### 4.2.4 Section Control Settings

Implements such as sprayers normally provide a number of sections that can independently be switched on and off. The section control function of onTrak can be used to detect when each section is overlapping an area already covered and indicate that the relevant sprayer section should be switched on or off.

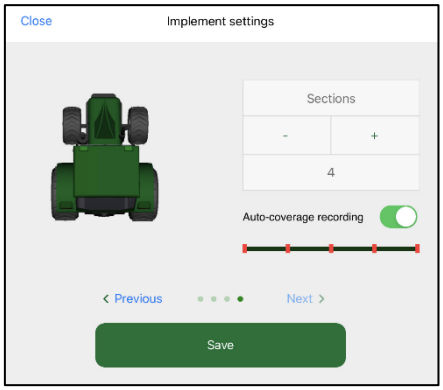
There is also an auto-coverage function that starts and stops the coverage recording automatically at the headland mark, for one or more separate sections.

As with side offset, this setting does not affect the guidance function of onTrak.

To set the number of sections:

- Tap 

in the main menu to show the implement width setting, then swipe the width side offset and rear offset settings to the left to display the section control:




- Use the controls to set the number of sections
- Tap the button to switch auto-coverage on/off

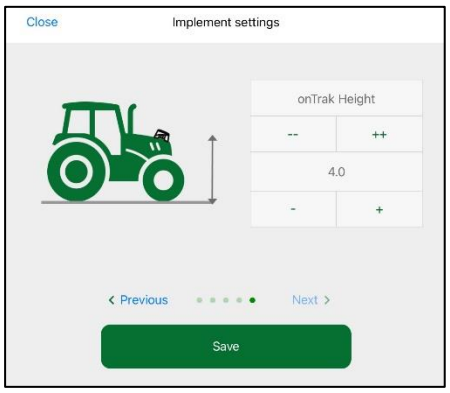
More about the operation of section control and auto-coverage ▶

### 4.2.1 Height Setting

On sloping ground, the position of the GPS receiver will be different from the active position of the implement at ground level. The onTrak ion contains an advanced accelerometer which detects the angle of the device and automatically corrects the position data, according to the height of the device above the ground.

To set the height:

- Measure the height of the device above the ground
- Use the controls to adjust the height setting.



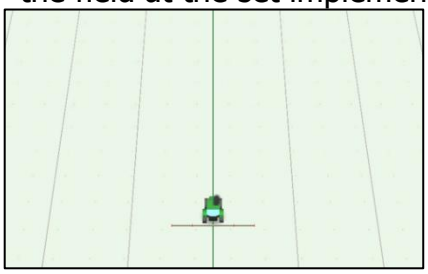
### 4.3 Setting an A/B line

The A/B line is a basic concept of the onTrak system:

- The A/B line is the reference line from which all of the guidance lines are positioned, spaced out parallel to the A/B line at the implement width.
- You can create an A/B line wherever you like in the field, but normally you will choose a line parallel to the longest straight section of the field boundary.
- You can set the A/B line at the same time as recording the boundary if you want to.
- You can record the work done at the same time as setting the A/B line if you want to.

onTrak supports two types of guidance and corresponding A/B line – straight and curved:

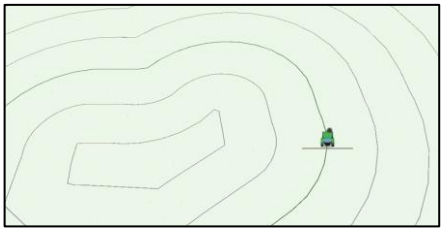
- Straight line guidance uses straight parallel lines equally spaced out across the field at the set implement width.



Straight line guidance

- Curved line guidance takes an A/B line of any shape and replicates it across the field at the set implement width. Curved A/B lines can be open-ended or closed-loop. In order to keep the distance between adjacent lines constant, curves become progressively sharper on the inside of bends and smoother on the outside.

Open-ended curved line guidance



Closed-loop curved line guidance

To set the A/B line:

- Tap A/B Line set to show the A/B line setting controls:


- Select the type of guidance required by tapping

   for straight line

  or

   for curved line.

- Start driving across the field along the line where you want the A/B line to go.
- Tap **Set A Point**. The A point is marked on the screen (A).
- Continue driving along the chosen line until you have nearly reached the headland (for straight line or open-loop curved line) or until you have nearly completed a circuit of the field (for closed-loop curved line).
- Tap **Set B Point**. The B point is marked on the screen (B).
- The guidance lines are shown on the screen, spaced out at the implement width, with the tractor on the green centre line.
- The centre green guidance LED lights brightly to indicate that you are on track. Follow the guidance LEDs to stay on track.

### 4.4 Recording the field boundary

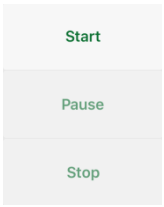
The onTrak system does not use the field boundary for guidance, and it is optional whether you wish to record the boundary or not.

The field boundary can be used to:

- Measure the area of the field
- Show a headland mark on the screen to tell you when to put the implement in and out of work ▶

To record the field boundary:

- Tap Boundary set to show the boundary setting controls:




- Drive to a point half an implement width from the edge of the field
- Tap **Start**. The start of the boundary is marked on the screen
    - (If you want to show the headland on the screen, for later use as a headland mark, or if you want to record the work done, switch on the recording by tapping anywhere in the field area ▶)
- Drive round the boundary, in either direction, keeping the centre of the tractor half an implement width away from the edge of the field.
    - (If you want the A/B line to be parallel to part of the boundary, you can set it at any time as normal ▶)
    - (At any point you can tap **Pause** to suspend the recording temporarily, for example to avoid an obstacle or to fill up with fertiliser or spray. Tap **Resume** when you want to continue recording.)
- When you have nearly got back to the point where you started, tap **Stop**. The boundary line is automatically completed, and the outer line is automatically used to calculate the field area, which is then shown at the top left of the screen.

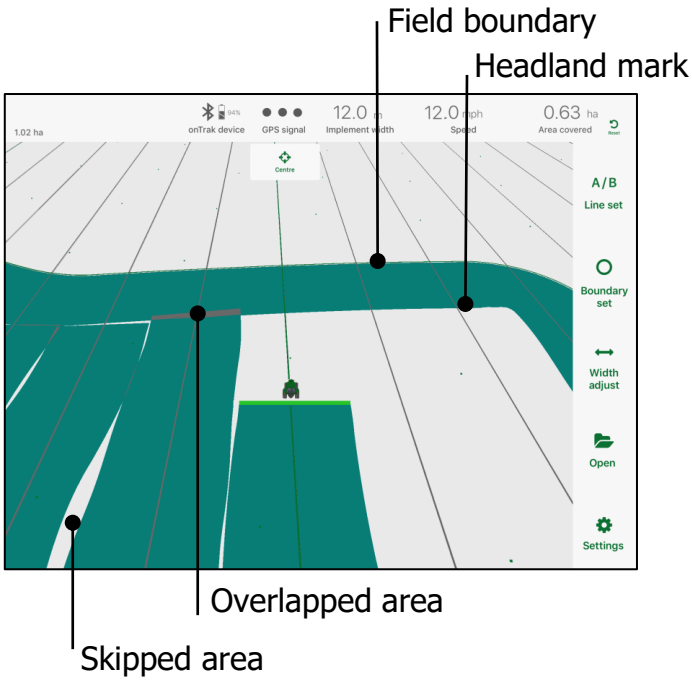
### 4.5 Recording the work done

Recording the work done can be very useful for:

- Keeping field records ▶
- Checking application rates
- Providing evidence to clients ▶
- Providing evidence to authorities of compliance with regulations (eg NVZ) ▶
- Making a headland mark

To use the recording feature:

- Tap the Home screen anywhere in the main field area to switch the recording on / off.
- While recording, the implement bar colour changes to a light green and the tractor headlights illuminate.
- While recording, the area behind the implement is coloured blue to show the work done.
- Areas between recorded strips that have not been covered ("skips") are shown in white.
- Areas that have been covered more than once ("overlaps") are shown in darker blue
- The total area worked is shown at the top right of the screen.
- Tap Reset to clear the recorded area from the screen and to reset the area covered to zero.



**NOTE**

- Recording is only possible when driving forwards.
- When reversing, recording is automatically paused until driving forwards again.
- Reversing is indicated by:

- If you are driving forwards, but the onTrak incorrectly shows that you are reversing, correct this error state by tapping the screen to start recording.

To export the recording in order to a save a permanent record:

- Zoom the screen to display the whole field or area required ▶
- Capture a screenshot (Press the Power button and the Home button simultaneously) and save / send it as required.

### 4.6 Section Control Operation

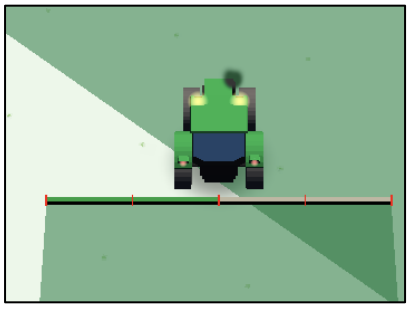
#### 4.6.1 Use of section control

Section control can be used to guide the operator when to switch the implement sections on or off by detecting previously covered work. When crossing a headland mark at an oblique angle, overlaps with previously covered work are indicated as follows:

Section not overlapping – Section should be on

Section fully overlapping – Section should be off

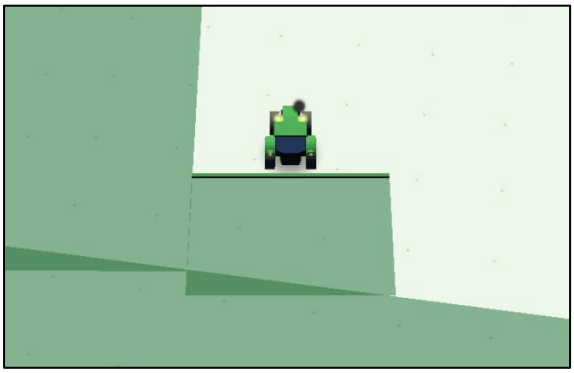
(Flashing) Section partly overlapping – Section should be switched



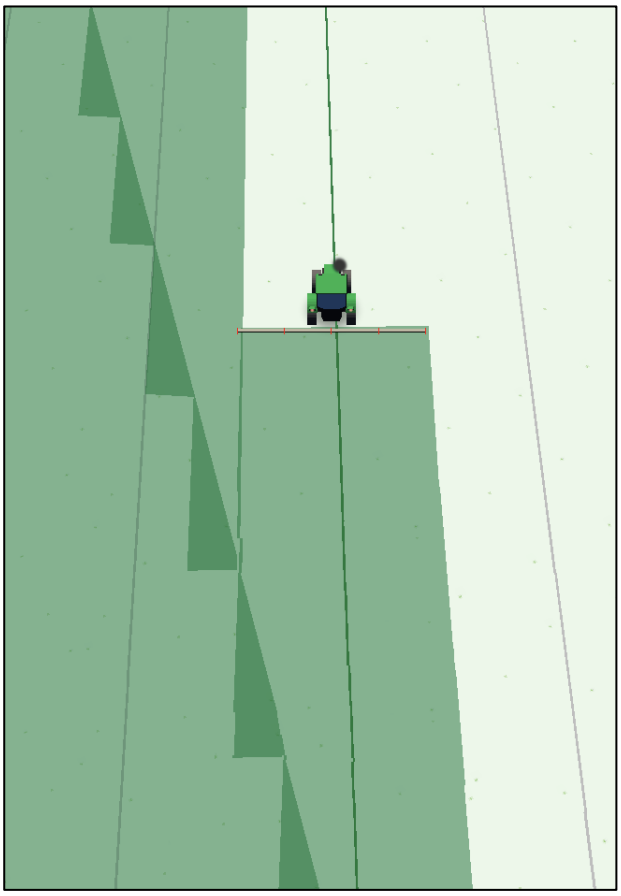
### 4.6.2 Auto-coverage operation

When auto-coverage has been switched on in the implement settings menu, coverage recording is controlled by detecting previously covered work. Coverage recording is suspended when the whole of a section is detected as overlapping a previously covered area. Coverage recording is resumed when any part of a section is detected as not overlapping a previously covered area. This assumes that achieving full coverage is more important than avoiding overlaps, so that all areas are covered, with no skips.

If a field headland has been covered, in one or more passes, and the coverage has been recorded, coverage recording of the main field work will be suspended when the implement passes the headland mark at the edge of the previously covered work and resumed when it crosses back again at start of the next pass.



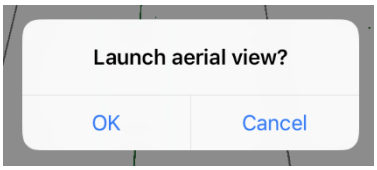
Example of auto-coverage operation at a headland with a single-section implement



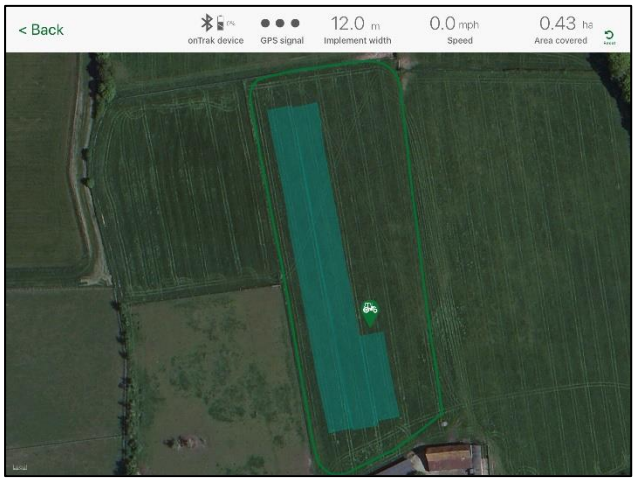
Example of auto-coverage operation at the side of a field with a four-section implement

### 4.7 The Aerial View

Zooming fully out will cause the following message to be displayed:




Tap OK to display a satellite view of the current location:




- The tractor symbol  shows the current location of the onTrak. Tap the tractor symbol to display its Latitude and Longitude. This is continuously updated while in aerial view.
- The green line shows the recorded boundary (if any).
- The blue shaded area shows the recorded coverage (if any) at the time the aerial view was launched (not continuously updated while in aerial view).
- The view can be zoomed and panned using normal screen gestures.

To make a permanent record, capture a screenshot (Press the Power button and the Home button simultaneously) and save / send it as required.

**NOTE**

The satellite view is only available when the iDevice has Internet access. If no Internet access is available in the field, the satellite view can be displayed later when the iDevice next connects to a Wi-Fi or data network.

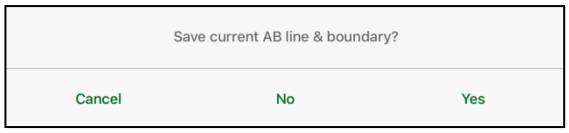
### 4.8 Saving and opening fields

At any time, but normally when you have finished a field, the field data can be saved for later use. Data stored can include:

- Field boundary
- A/B line

To save field data:

- Tap Boundary set or A/B Line set to start the next field. The saving controls are displayed:




- Tap Yes to continue.
  - (Tap No to quit the field without saving, or Cancel to go back.)
- The screen shows a list of the previously saved fields. Each field record shows the data that it contains - A/B line A/B and/or Boundary O:

- Tap Update data in existing field to merge the new field data with that already saved, or Create a new field to make a new record.
- Tap Save to save the new data

To open or delete a previously saved field:

- Tap Open in the main menu. The fields are listed with the nearest ones to your current location automatically recognised.
- Tap the required field. The guidance lines are calculated from the saved A/B line and the current implement width.
- To delete a field, touch and hold any field. When released, all of the field icons wobble. Tap the X that appears in the top right of the field that you want to delete.

To refresh the field list, swipe down the screen.

### 4.9 veriTrak

If the connected onTrak device is an onTrak ion, Agricision's veriTrak correction service can be used to achieve ultimate accuracy. veriTrak is a subscription service that can optionally be purchased from Agricision. The subscription is linked to the device, not to the app, so a device that has an active subscription can be used with any suitable iDevice. Internet access is required for veriTrak to operate.

When the app detects that the connected device is an onTrak ion, and once a GPS location has been found following switch-on, a button appears on the Home screen inviting the user either to start the veriTrak service (if an active subscription exists for the device in use) or to purchase a subscription.

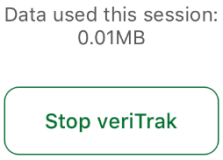

If no active subscription exists for the connected device, tapping the button will take you to the process for purchasing one from Agricision. Follow the instructions on-screen.


If an active subscription exists, tap the button to start receiving the correction service from the Agricision server.


Wait for the connection to the server to be made.


Once connected, the estimated precision is indicated on the dial. Orange indicates that the specified precision has not yet been achieved.


Light green indicates precision within the specified range. Dark green indicates that the ultimate precision has been achieved.




By tapping the button, the data usage can be displayed and veriTrak can be stopped

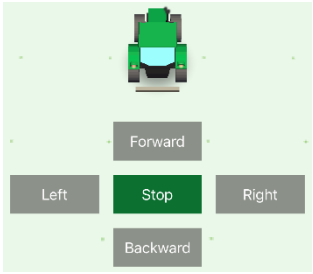

Indicates that the connection to the veriTrak server has failed.

### 4.10 Using the simulator

The simulator is a useful tool to help you become familiar with the app without the need to connect it to an onTrak device.

To use the simulator:

- Tap Settings in the main menu
- Tap next to "Simulation mode" to switch the simulator on/off
- The response speed can be adjusted for the best user experience. (Note that these settings are only for the simulator and have no affect on the normal operation.)
- Tap < Back
- Use the simulator controls to move the tractor




- Operate the app as normal.

### 4.11 Using the Demo onTrak device

A graphic of a virtual onTrak device can be displayed on top of the field area. This can be useful:

- While using the simulator for evaluation or training
- To view the guidance LEDs if the only place the real device can be mounted is out of sight, on a machine with no bonnet (eg a combine or self-propelled sprayer).

To display / hide the virtual device:

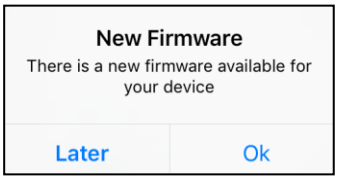
- Tap next to "Demo onTrak device" in the Settings menu.

### 4.12 Updating the software

Visit the app store regularly to take advantage of updates issued by Agricision. The app software and the onTrak device firmware can both be updated by downloading the latest version of the app.

**NOTE**
Always keep the device firmware up to date as old firmware may be incompatible with the latest app version.

Whenever the app connects to an ontrak device that contains out of date firmware it displays this message:




Make sure the device's battery has plenty of charge, then tap Ok and follow the on-screen instructions to load the new firmware into your onTrak device.

## 5 Specification

| | |
|---|---|
| onTrak application | The onTrak application is available free from the Apple App Store and the Google Play Store |
| Operating system requirements | Apple iOS 9.0 and later. Android xxx and later |
| Working units | Hectares, acres, mph and km/h |
| Bluetooth communication | To communicate with the onTrak device the iDevice must support Bluetooth 4.0. The following Apple Devices are compatible with the onTrak system:<br>iPhone 4s, 5, 5c, 5s, 6, 6 Plus, SE, 6s, 6s Plus, 7, 7Plus, 8, 8Plus, X<br>iPad, 3rd, 4th, 5th and 6 th generation, mini, mini 2, mini 3, Air, Air 2, Pro -<br>iPod Touch 5th Generation. |
| Power | LI-ION 3.7V 2050mAh 7.59Wh battery<br>Minimum 24 hour autonomy from full charge<br>5.0 V USB charge<br>5 hour charge time<br>Battery life expectancy - 80% of initial capacity after 400 charge / discharge cycles |
| Enclosure | The enclosure is rated at IP54 using the International Protection Marking, IEC standard 60529 |
| Temperature | Storage -20°C to +45°C<br>Operating -20°C to +60°C<br>Charging 0°C to +45 °C |
| Position receiver | GPS/QZSS L1 C/A, GLONASS L10F BeiDou B1I, Galileo E1B/C SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN<br>**onTrak Original** - 10Hz update rate, 80th percentile 15min, Pass to Pass accuracy <30cm<br>**onTrak ion + veriTrak** – Repeatable accuracy <10cm |
| Operating ranges | Min speed 1km/h<br>Max speed 80km/h<br>Min implement width setting 0.1m<br>Max implement width setting 40m |
| Dimensions | Unit weight 0.75 kg<br>240mm x 150mm x 90mm<br>With package and accessories 1.1 kg<br>250mm x 170mm x 110mm |
| Certification | Agricision onTrak complies with the following standards:<br>Directive 2014/53/EU (Radio Equipment)<br>Directive 2014/35/EU (Safety)<br>Directive 2014/30/EU (EMC)<br>Directive 2011/65/EU (RoHS)<br>Directive 2006/66/EC (Battery)<br>Directive 2012/19/EU (WEEE)<br>FCC/CFR 47: Part 15:2018<br>Canadian StandardICES-003:Issue 6 |