



# SavvyLevel™

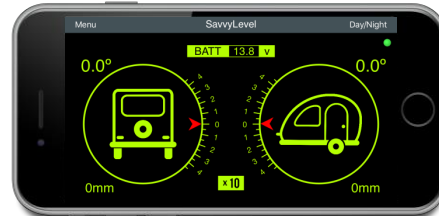
Apple User Guide v2.0a (Interim)

SavvyLevel Plus

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# 1 What is SavvyLevel?



SavvyLevel is a complete integrated remote levelling system designed for caravans, campers, 4WDs and RVs.

For use with Apple and Android smart phone/tablets that communicate to a tiny Bluetooth® device mounted inside your caravan. It is extremely easy to use and boasts an amazing accuracy within 0.1 degree across its operating temperature range. Once installed it only requires a simple one-time level calibration.

An optional one-time entry of two dimensions provides an additional height result in mm.

## 2 Key Features

- For use with iPhone 4 and Android v4.3.1 (JellyBean) or newer smart devices.
- Designed to be powered by your RV or Caravan's power supply (flexible 7 to 30 volts).
- Extremely simple to operate.
- Auto connects when device is in range.
- Data encrypted for extra security.
- Voltage reporting at the point of connection.
- Each device is 100% factory tested and calibrated.
- Includes thermal calibration and compensation resulting in superb precision of  $\pm 0.1$  degree over normal operating temperatures.
- Engineered to the highest standards using only the finest materials.
- Day/Night viewing modes.
- Supports landscape and portrait orientation.
- X10 zoom feature to easily obtain a perfect level.
- Inclinometer style gauges indicates  $\pm 45$  degrees and  $\pm 4.5$  degrees in zoom mode.

### 3 Specification

- Wireless Bluetooth LE v4.1
- Device range up to 65m in the open environment.
- Accuracy better than  $\pm 0.05$  of a degree with a precision of  $\pm 0.1$  of a degree at zero calibration temperature.
- Ultra-wide supply voltage from 7v - 30v @ 95% efficiency.
- Reverse polarity damage protection.
- Low operating current < 12 mA @ 12v
- Operating temperature extremes -40 to +85°C
- $\pm 45^\circ$  pitch and roll in normal operation.
- $\pm 4.5^\circ$  in zoom (x10) mode.
- Physical dimensions: measures 62 x 62 x 22 mm.

### 4 Installation

Please refer to '*Installation Guide*' sheet.

### 5 Download the application

'SavvyLevel' is a free app that needs to be installed on your smart phone so that it can communicate with the SavvyLevel device installed in your Caravan/RV. SavvyLevel uses Bluetooth low energy connection.

For use with:

- iPhone, iPad 4 or newer models
- Android v4.3.1 (Jelly Bean) or later.

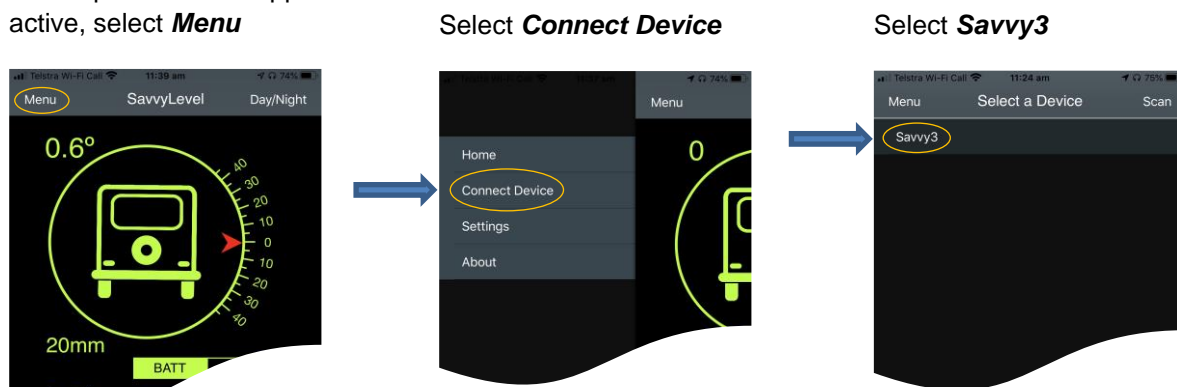
SavvyLevel is available on the App Store and on Google Play™. Search for 'SavvyLevel', then download and install the app.



## 6 Connecting

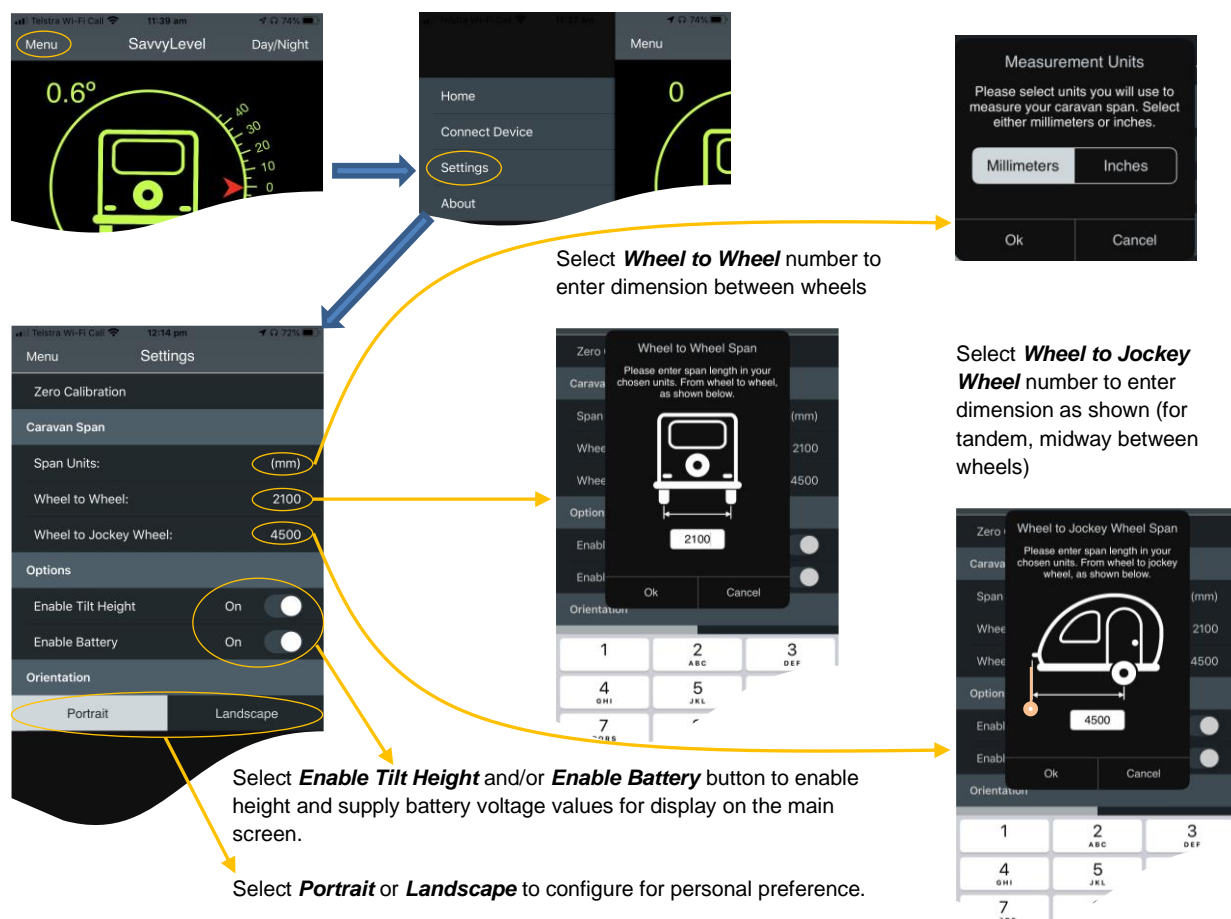
SavvyLevel does not need to be paired like many other devices. All you need to do is connect to your device with the app and it will remember that connection. Please note that only one mobile device can be connected to your SavvyLevel at any one time.

With your SavvyLevel device powered and app active, select **Menu**



## 7 Personalising your device

With your SavvyLevel device powered and app active, select **Menu** then **Settings**.



## 8 Zero Level Calibration

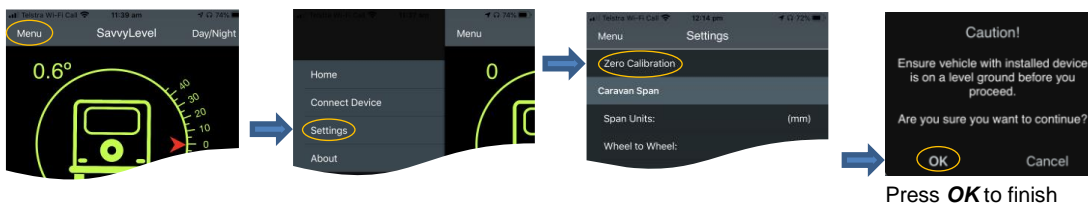
Zero level calibration only needs to be performed once after the SavvyLevel device is first installed. It uses sophisticated thermally compensated algorithms to achieve unprecedented precision over a wide range of operating temperatures.

For best results calibration should be performed at temperatures around 5°C to 30°C, with the SavvyLevel device stabilized to ambient temperature (leave it powered for about half an hour).

To calibrate:

1. Place your caravan/RV/4WD or trailer on level ground or your preferred level for comfortable use.
2. Make sure your SavvyLevel device is powered.

Select **Menu**, **Settings** and then select **Zero Scale**; press OK to complete the action.



## 9 Basic Operation

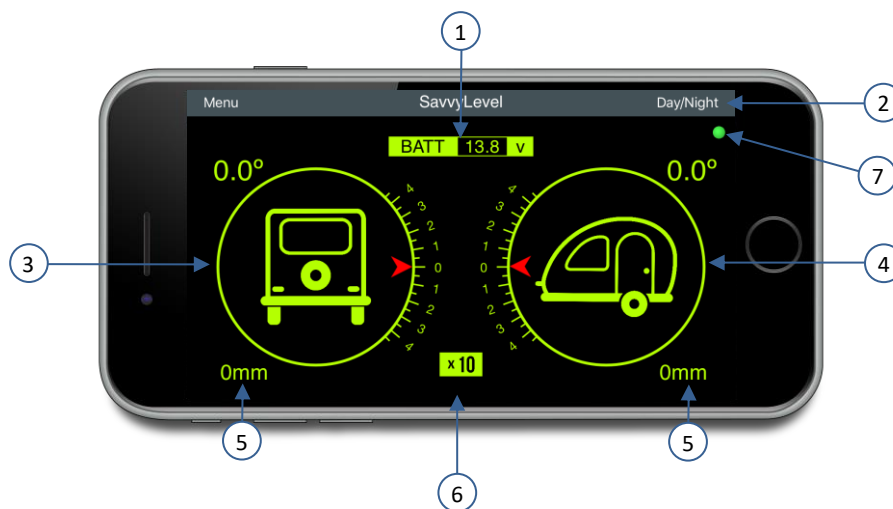






Figure 6

Double tap screen to change gauge scale from normal scale ( $\pm 45^\circ$  tilt) to zoomed scale ( $\pm 4.5^\circ$  tilt). Because zooming feature exaggerates the tilt it is very easy to visually obtain a perfect level. Double tap again will return display back to normal operation.

1. Connection point voltage indicator (correct to one decimal place) remotely monitor the battery voltage from where the SavvyLevel is connected.
2. Select between day and night mode (above image in night mode).
3. East – West (roll) inclinometer gauge. Viewed from the rear of your caravan.
4. North – South (pitch) inclinometer gauge. Viewed from the left side of your caravan.

5. Tilt height representation in millimetres or inches.
6. Zoom scale indicator.
7. Bluetooth connection status LED indicator.

|   |        |   |
|---|--------|---|
|  | Green  | Connected and receiving data from the device.         |
|  | Blue   | Connected but not receiving any data from the device. |
|  | Yellow | Trying to connect.                                    |
|  | Red    | Disconnected.   |

## 11 Troubleshooting

**Q** – I get poor Bluetooth signal range.

**A** – The most likely cause is that there are too many signal obstructions (metallic objects) in a direct path, between your Smartphone and your SavvyLevel device.

Try to operate your Smartphone in a different location. Try opening hatches or window coverings in your caravan where your SavvyLevel is installed. Try to place your SavvyLevel in a better location. Refer to the '*Installation Guide*' sheet.

**Q** – I get a message 'No data from device'.

**A** – Check the Smartphone status LED.

|                       |  |
|-----------------------|--|
| Flashes RED or YELLOW | <p>Check if device has power. If using a small 9v battery or similar check that it is not flat. When testing the device use a new fully charged battery.</p> <p>Check if you are within Bluetooth range of the device.</p> <p>Check if there is another Smartphone already connected (Only one device can be connected to the device at any one time).</p> |
| Flashes BLUE          | You are just at the limit of reliable data signal connection - move closer.  |

## 12 NOTES

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**Visit us at:**

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