

User Guide for HangarBot Door Sensor


DCN-8000-55-v1

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1. Product specification

- Wireless data uplink to HUB
- Monitors magnet proximity
- Internal temperature sensor
- Rechargeable Battery - 2000mAH
- Dimensions 100mm x 50mm x 28mm
- Weight 8 oz ???
- Operating Temperature Range: -40 °C to +85 °C

2. Box Contents

Door Sensor QTY 1	
MicroUSB charging cable QTY 1	 A black MicroUSB charging cable with a standard USB-A connector on one end and a MicroUSB-B connector on the other. The cable is coiled in the center of the image.

Magnet QTY 1	
MODE Switch Pin QTY 1	
VELCRO tape strip QTY 1	

3. Charging the door sensor

- Connect the microUSB cable from a USB power source to the micro USB port in order to charge the door sensor.
- Charge time will be a function of the USB charging current available and the state of charge of the battery.
- Press the MODE switch on the side of the unit two times to indicate the battery state of charge.
- The mode switch is accessible through the pin hole on the right side of the door sensor.
- The STATUS LED should display green color to indicate the battery has at least at 20% charge.
- If the STATUS LED is YELLOW or RED please charge immediately.
- To determine if the battery is fully charged you have to see that the charge LED is extinguished while connected to a charger.

4. LED indicators



Figure 1 Door Sensor LED indicators

- a. **CHARGE LED:** Solid **GREEN** when the door sensor is charging the battery. Off when the battery is fully charged.

b. **STATUS LED:**

- i. Door sensor pairing status with HUB.

Sensor Paired	STATUS LED
No	Flashing Green
Yes	none

- ii. Normal operation mode after the sensor is paired

Magnet detected	STATUS LED
yes	none
No	Momentary RED

- iii. MODE switch: Pressed once (Magnet Alignment Mode)

Sensor Alignment Mode	STATUS LED
Alignment Mode entered (15 second window)	Flashing GREEN
Magnet is Aligned	Solid RED
Alignment Mode Exit	Short Flashing WHITE

- iv. MODE switch Pressed 2 times (Battery charge state mode)

Battery Charge status	STATUS LED
> 20% charge	Momentary GREEN
> 10% charge	Momentary YELLOW, charge soon
< 10% charge	Momentary RED, Charge immediately

- v. Door Sensor reset. Press MODE switch 5 times within 2 seconds. This resets the door sensor to an unconnected state with the HUB. Reinitializes the Door Sensor software.

4. Add Device ID to the Mobile App

Add your Door Sensor to the HangarBot app

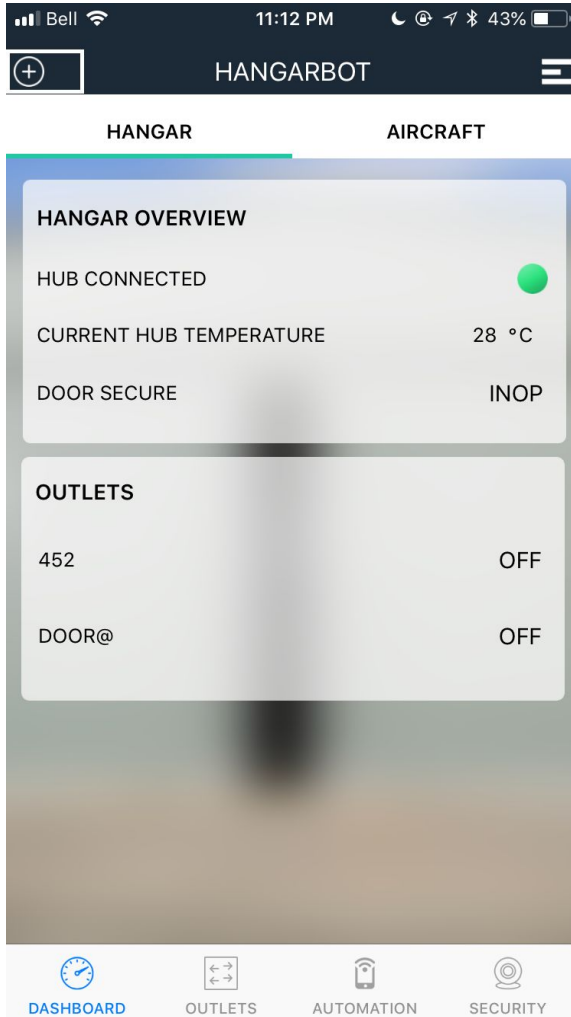


Figure 1

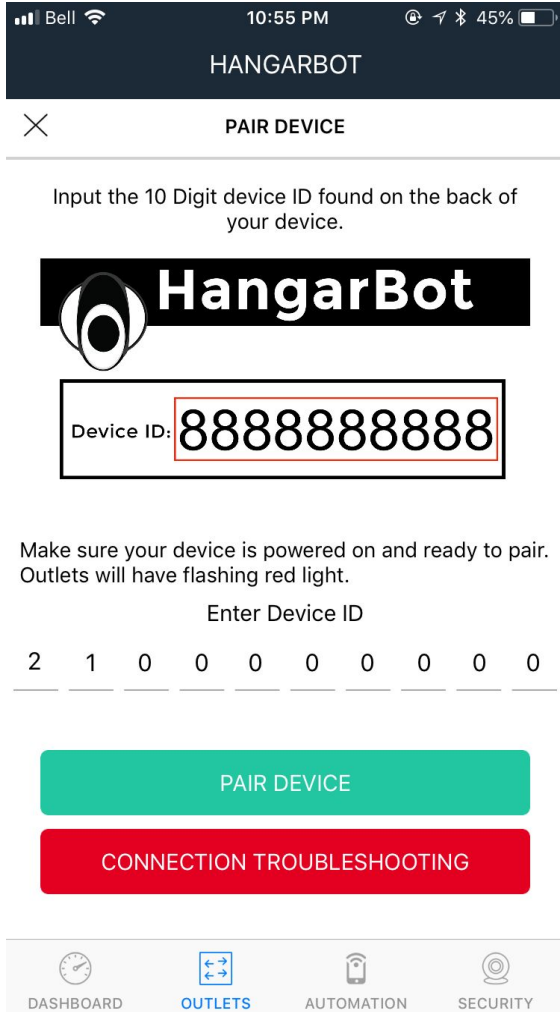


Figure 2

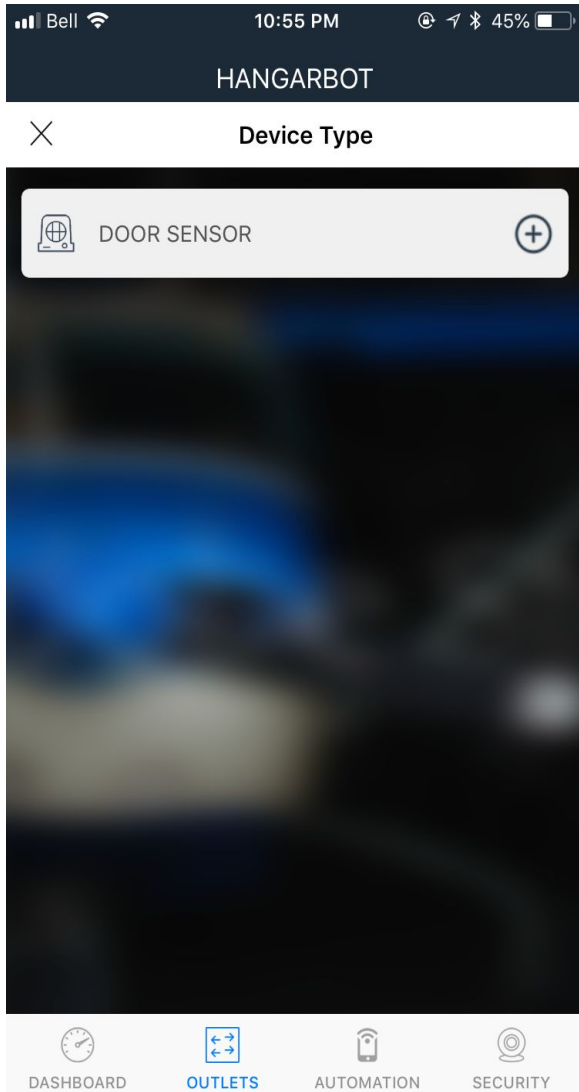


Figure 3

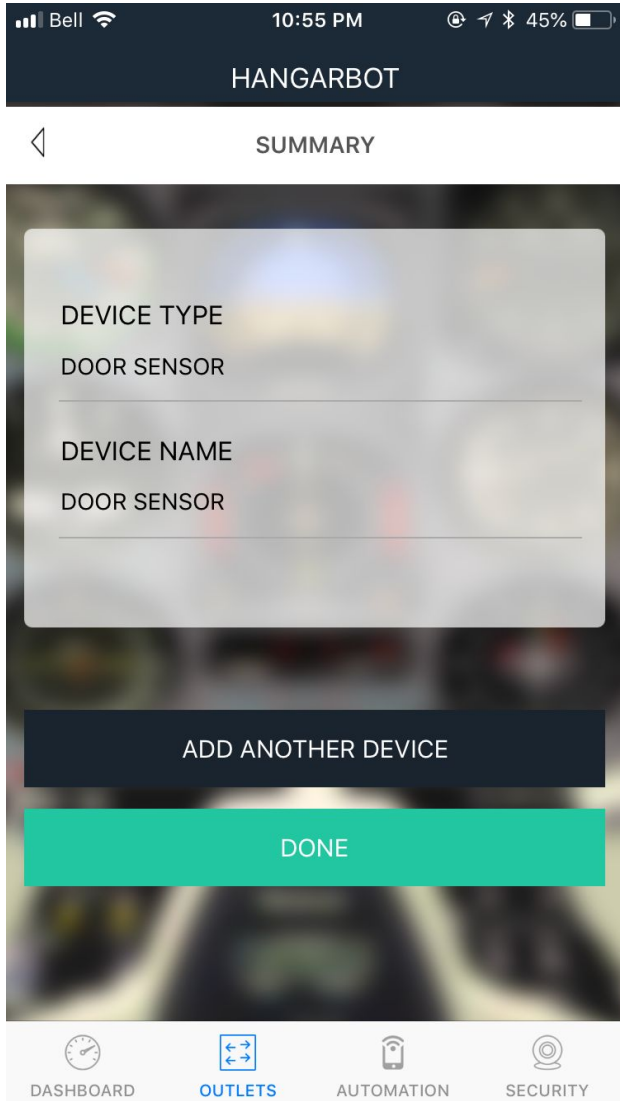


Figure 4

5. How to Attach Your Door Sensor

- 1) Using the velcro strip
 - a) The velcro strip is adhesive on both backs. It is for attaching the door sensor in the location you determine. One is applied to the door sensor, the other in your location. Take care that you do not cover the mode switch pinhole. Make sure the USB socket is accessible so you will be able to recharge the unit.
- 2) Using the mounting holes
 - a) The mounting holes are most useful if you have a wooden surface, or wall board, that you want to locate the door sensor on. Since there is no way to determine the surface thickness you are using, you will have to determine the length and type of screw to use. Caution! Do not use magnetic screws at the USB end of the unit!
- 3) Mounting using some type of adhesive or glue is not recommended.

Mounting Notes

1. The door sensor is also sensitive to magnetic fields on both sides and the USB charging port end of the unit.
2. Not for exterior environments that are subject to weather.
3. Not for environments that are subject to water.

6. Door Sensor Magnet Placement

There is a special mode in the door sensor to optimize the magnet placement and enable reliable detection when door is closed. The special mode is called “**Magnet Alignment**” mode. This special mode can be enabled by pressing the MODE switch on the side of the sensor once. As can be seen in the diagrams in the following pages the magnetic orientation and proximity is critical to the Hangarbot door sensor for proper operation.

Magnet Alignment steps:

1. Enter **Magnet Alignment** mode by pressing the MODE switch 2 times
2. The STATUS LED will flash **GREEN** indicating you entered **Magnet Alignment** mode successfully
3. Align your magnet as close as possible to the magnet zone (see figures 5 thru 9)
4. Once the magnet is detected the STATUS LED will turn **RED** confirming the detection is successful, while in **Magnet Alignment** mode
5. The STATUS LED will flash **WHITE** indicating the **Magnet Alignment** mode is done
6. You will have 15 seconds to perform the magnet alignment procedure
7. If you need more time then just restart the **Magnet Alignment** mode
8. When you are done positioning the door sensor and magnet, then pair your door sensor with your APP
9. Make sure the door sensor has paired successfully with your APP



Figure 5 HangarBot Door Sensor Magnetic Zone

Hangarbot Door Sensor Magnet Placement

As can be seen in the diagrams in the following pages the magnetic orientation and proximity to the Hangarbot door sensor is critical to proper operation. The diagram below shows the axis' relative to magnetic sensitivity.

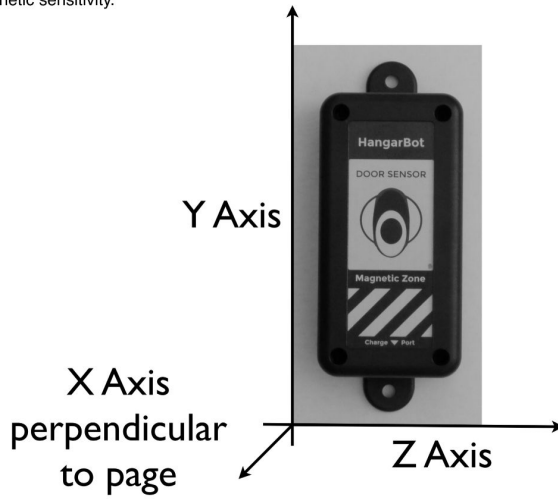


Figure 6

Magnet south pole parallel to Z axis of Magnetic Zone

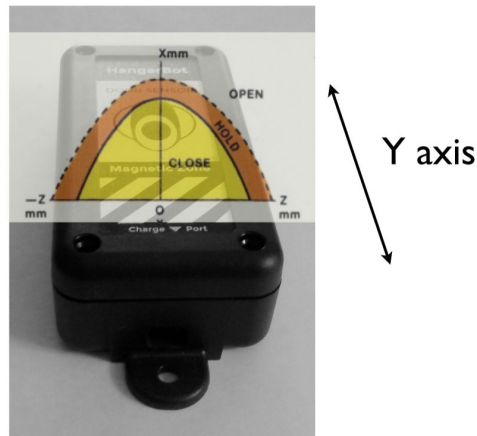


Figure 7

