User Guide for HangarBot Door Sensor DCN-8000-55-v1

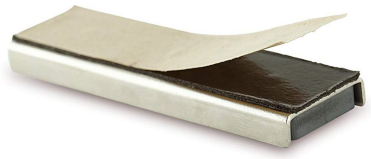
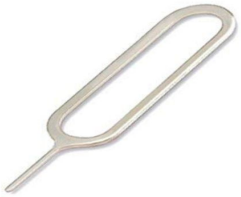
HANGARBOT

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	

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

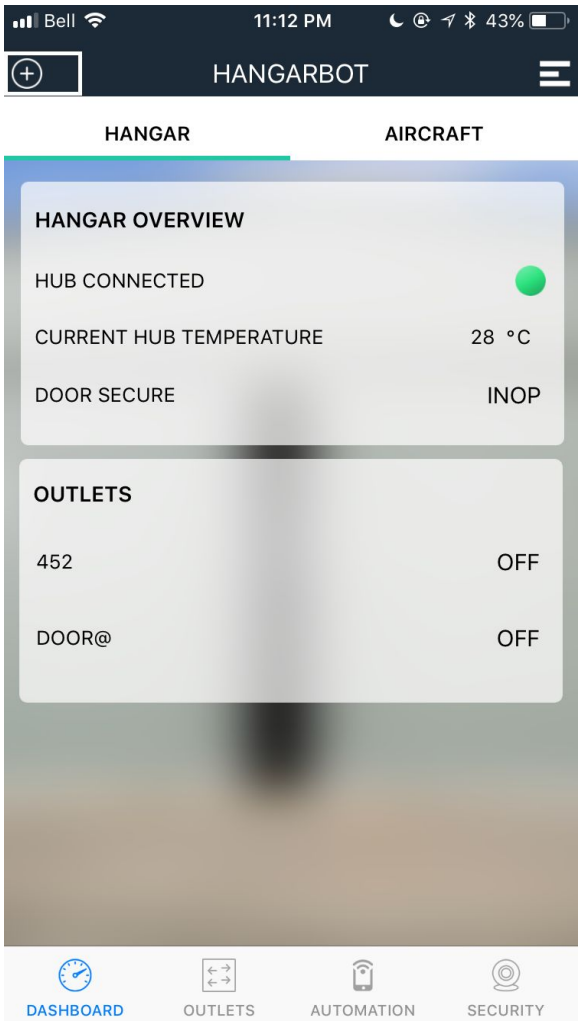


Figure 1

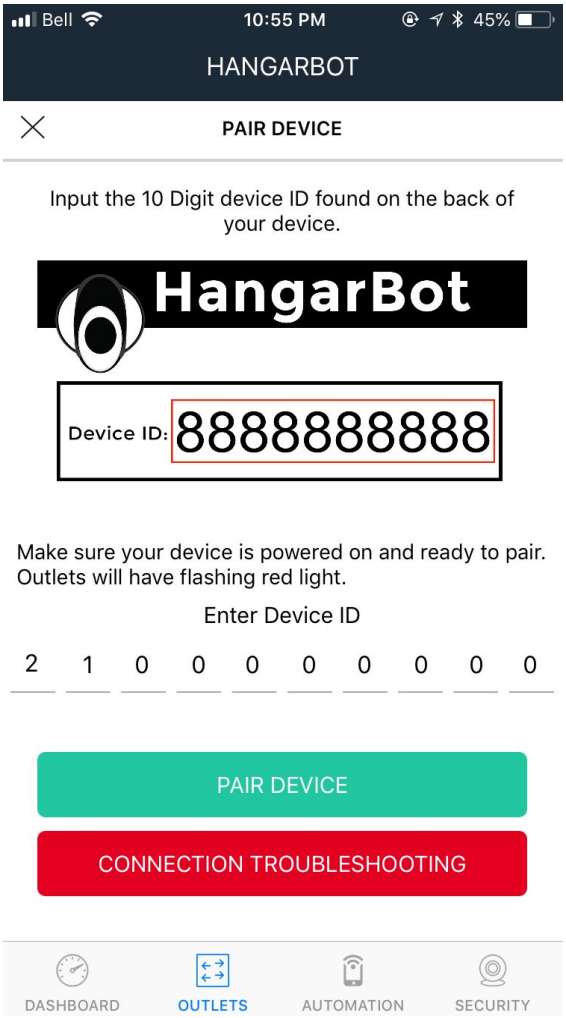

Bell
10:55 PM
45%
HANGARBOT
PAIR DEVICE
Input the 10 Digit device ID found on the back of your device.
HangarBot
Device ID: 8888888888
Make sure your device is powered on and ready to pair.
Outlets will have flashing red light.
Enter Device ID
2 1 0 0 0 0 0 0 0 0
PAIR DEVICE
CONNECTION TROUBLESHOOTING
DASHBOARD
OUTLETS
AUTOMATION
SECURITY

Figure 2

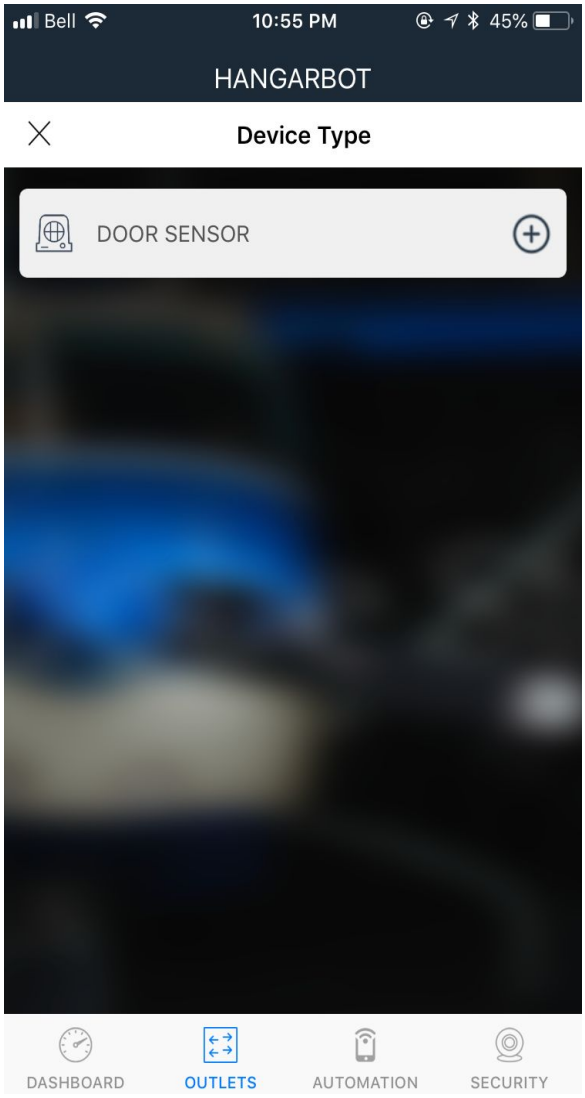

Bell
10:55 PM
45%
HANGARBOT
Device Type
DOOR SENSOR
DASHBOARD
OUTLETS
AUTOMATION
SECURITY

Figure 3

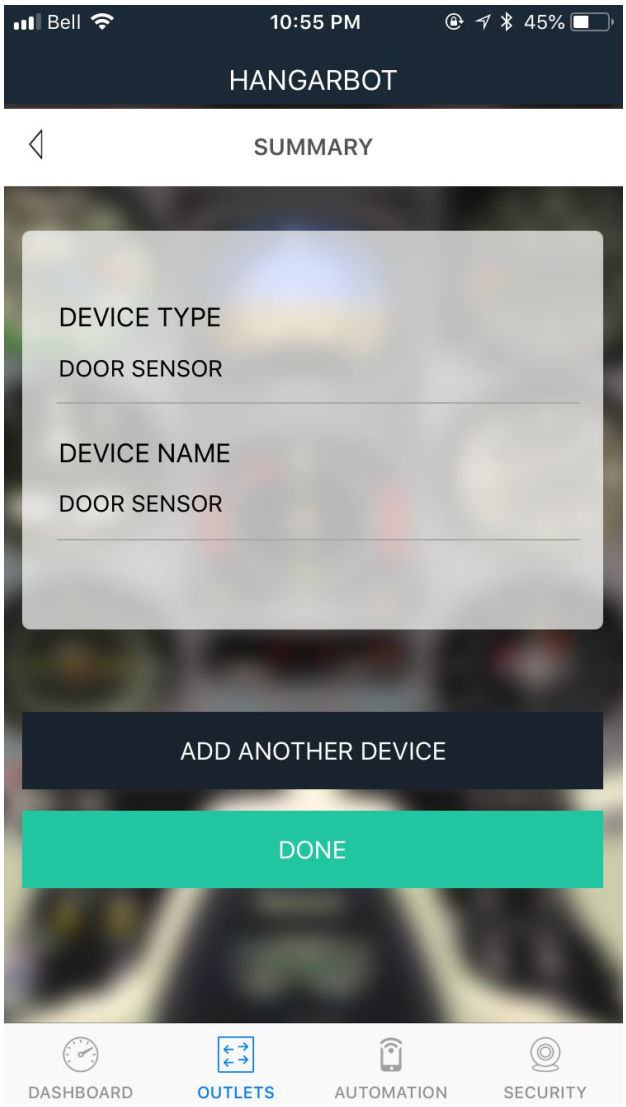

Bell
10:55 PM
45%
HANGARBOT
SUMMARY
DEVICE TYPE
DOOR SENSOR
DEVICE NAME
DOOR SENSOR
ADD ANOTHER DEVICE
DONE
DASHBOARD
OUTLETS
AUTOMATION
SECURITY

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

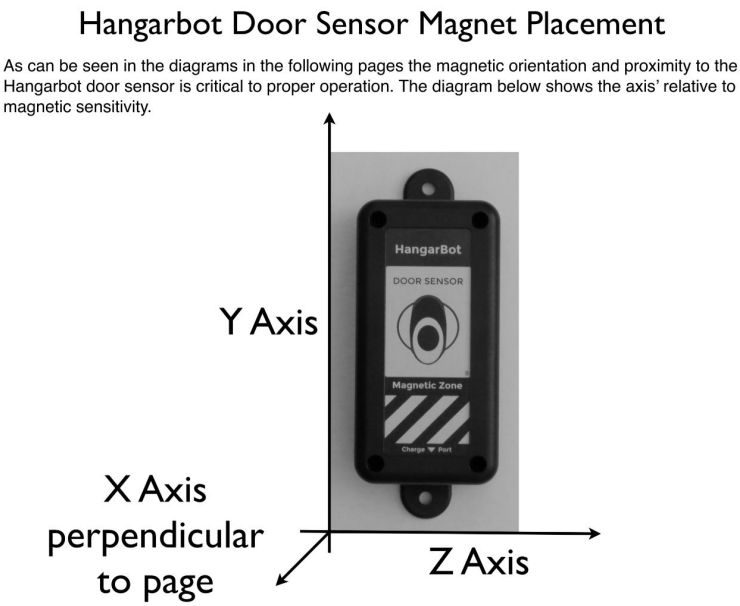


Figure 6

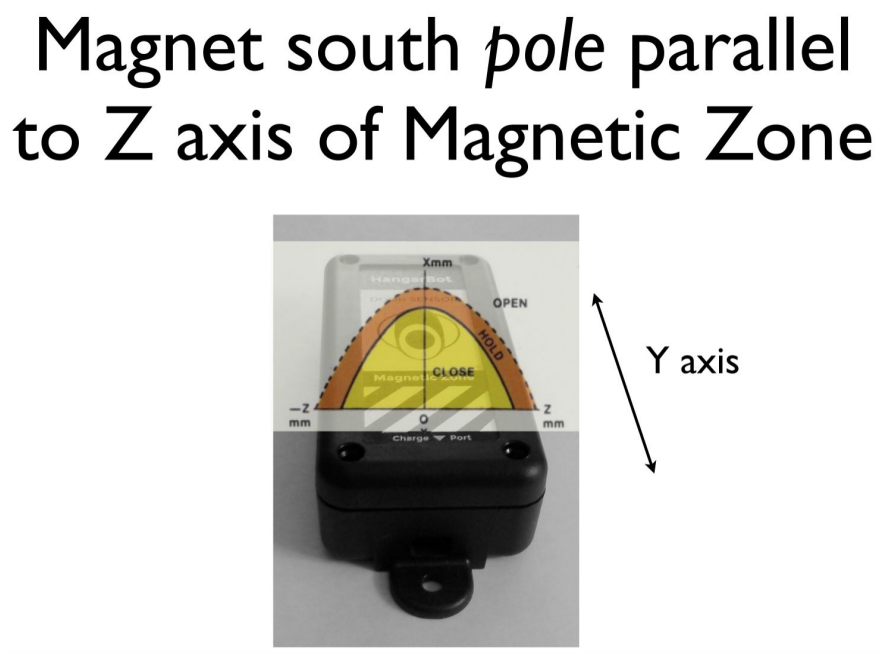


Figure 7

Magnet south *pole* perpendicular to Z axis of

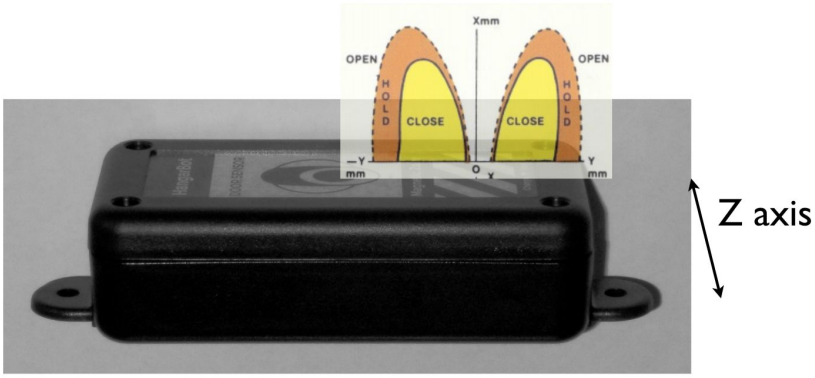


Figure 8

Magnet parallel to Z axis of Magnetic Zone

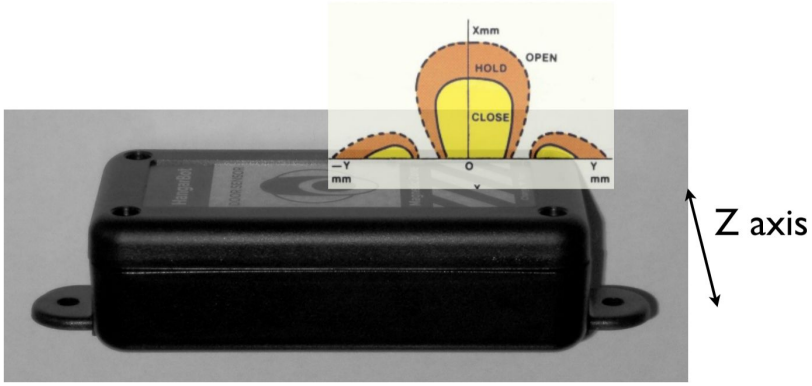


Figure 9

Placement Notes

1. Distance affects proper operation. Closest is best.
2. A stronger magnet, that you provide, will allow placement of the magnet further away if necessary.
3. Magnet orientation is a factor in proper operation.