

# Garage Door Controller User Manual

By: Jim Schrempp and Bob Glicksman; v1, 7/25/2020

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[https://github.com/TeamPracticalProjects/Garage\\_Door\\_Controller/blob/master/Terms\\_of\\_Use\\_License\\_and\\_Disclaimer.pdf](https://github.com/TeamPracticalProjects/Garage_Door_Controller/blob/master/Terms_of_Use_License_and_Disclaimer.pdf)



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# **OVERVIEW.**

The Garage Door Controller system is operated through an Android<sup>1</sup> App. The App is usually installed on the user's smartphone but can be installed and run from any Android device. The App must first be installed and configured before it can be used. Complete instructions for installing and configuring the App can be found in section 6 of the "Garage\_Door\_Controller\_Build\_And\_Installation\_Instructions", located at:

[https://github.com/TeamPracticalProjects/Garage\\_Door\\_Controller/blob/master/Docs/Garage\\_Door\\_Controller\\_Build\\_And\\_Installation\\_Instructions.pdf](https://github.com/TeamPracticalProjects/Garage_Door_Controller/blob/master/Docs/Garage_Door_Controller_Build_And_Installation_Instructions.pdf)

This document describes the use of the App. The App is used to communicate with the Particle Photon device in this project. It is the Photon device that actually obtains the garage door distance measurement, makes the garage door open/closed decision, and activates opening/closing the garage door. See the project "Overview" document for further details:

[https://github.com/TeamPracticalProjects/Garage\\_Door\\_Controller/blob/master/Overview.pdf](https://github.com/TeamPracticalProjects/Garage_Door_Controller/blob/master/Overview.pdf)

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<sup>1</sup> An iPhone (iOS) version of the App is not available at this time. Our apologies to iPhone users.

## APP USER GUIDE.

Figure 2-1. shows the *Garage Door Controller App* main screen. This is the only screen that you need to use when operating or statusing the garage door. The Setup screen is needed to log in to your Particle account and select the Photon device that is used in this project. In general, Setup need only be performed once – at the time that the App is installed. Thereafter, Setup is not used unless you change the Photon device in your project. The installation and Setup procedure is fully document in section 6 of the “Garage\_Door\_Controller\_Build\_And\_Installation\_Instructions”; see above for the link.

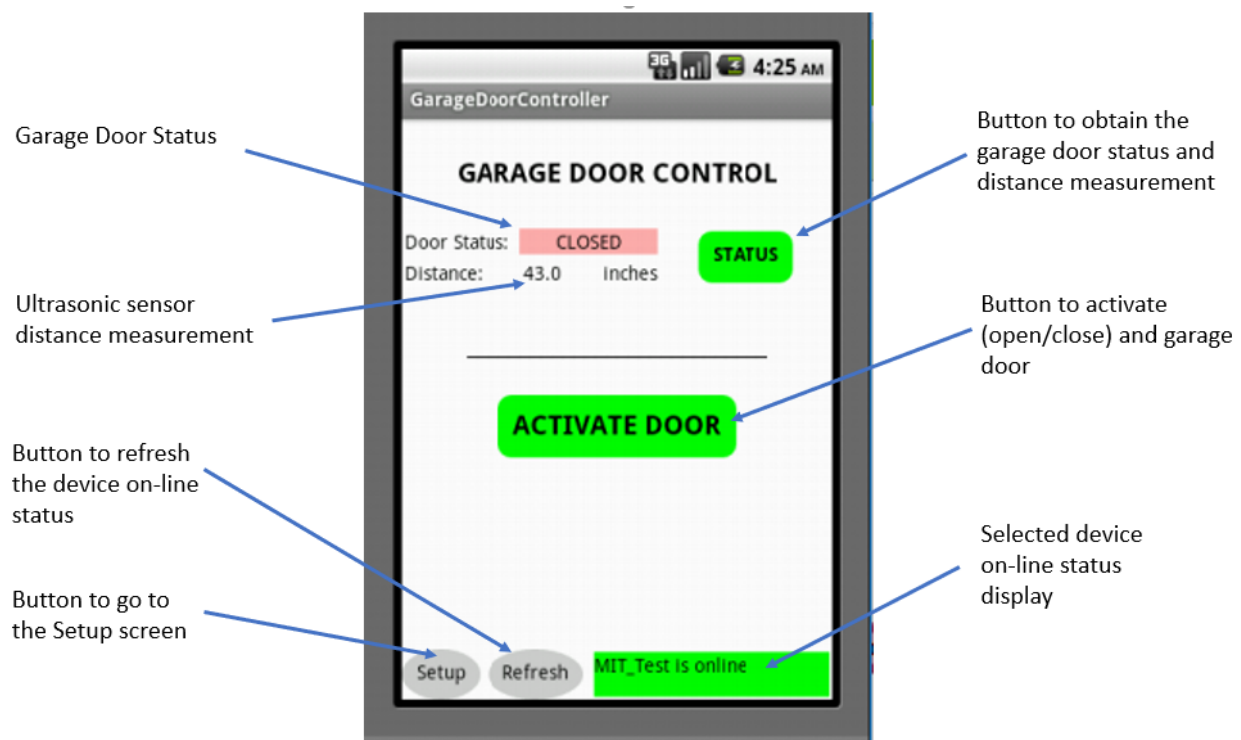


Figure 2-1. App Main Screen.

Referring to figure 2-1:

- **Garage Door Status:** This field displays the current status of the garage door, after tapping the “STATUS” button. The status is either “CLOSED” (pink background) or “OPEN” (green background). When the App is first opened, the status may display “UNKNOWN” (gray background), indicating that the status information has not been obtained. However, the Android OS caches app pages for a while, so the Garage Door Status may display the previous reading rather than UNKNOWN when you first open the App. The status display is not automatically refreshed – you have to tap the “STATUS” button to update the display.

- Ultrasonic Distance Measurement: This field displays the ultrasonic sensor distance measurement in inches (to the nearest 1/10 inch). The measurement is not automatically refreshed – you have to tap the “STATUS” button to update it. When the App is first opened, the distance may display “UNKNOWN” (gray background), indicating that the information has not been obtained. However, the Android OS caches app pages for a while, so the App may display the previous reading rather than UNKNOWN when you first open the App. The measurement data is useful to calibrate the open/closed decision distance and may also be useful in determining if a car is in the garage or not.
- STATUS button: You must tap this button to obtain the current garage door status and the current distance measurement. You can tap this button whenever you wish to obtain the latest information. The “STATUS” button obtains both the open/closed status and the distance measurement. It may take a second or so to actually get this information after the “STATUS” button is tapped. The “STATUS” button turns gray after it is tapped and it returns to green when the garage door status is obtained from the garage door controller device.
- ACTIVATE DOOR button: You tap this button to activate the garage door. Tapping this button has the same effect as tapping the button on the original garage door remote. If the door is closed, tapping this button will open it, and visa-versa. The “ACTIVATE DOOR” button turns gray when you tap it and returns to green after it is done activating the door (“pressing” the remote’s button). The garage door may take additional time before the opener operates and the new status (open/closed) won’t be available until the door itself is actually fully open or closed.
- Device Status Display: The status of the selected Particle device (Photon) is shown in the lower right hand corner of the App. The status is automatically queried for when the App is first opened, but the Android OS may cache the prior status for a while. The name of the Particle device (Photon) used on your project should show on this display as well is the message that it is on-line. In addition, the display background should be green. This means that the Photon is on-line to the Particle cloud and can be accessed via the App. When a new request for device status is made, this field will turn yellow, meaning that the App is asking the Particle Cloud for the device’s on-line status. After a short time, this field will either turn green (if the device is on-line and responding to the ping) or it will turn red (if the device does not answer the ping). You cannot operate the garage door opener App while this field is yellow or red. If your device was off-line (e.g. unplugged) and you corrected the problem (e.g. plugged it in), you must tap the “REFRESH” button (just to the left of this display field) to re-ping the Photon for updated on-line status information.
- REFRESH button: Tapping this button pings the project’s Particle device (Photon) for its on-line status. This ping is automatic when the App is opened, but you can ping the

device at any time by tapping this button. The Device Status Display field will turn yellow when you issue a new ping and should turn green, after a short time, if the Photon is on-line.

- SETUP button: Tapping this button takes you to the App's Setup screen. In general, you will not need to go to the Setup screen after you first configure the App. However, if you change the Particle device in your project, you will need to go back to the Setup screen in order to select the new device to use with the App. See section 6 of the document "Garage\_Door\_Controller\_Build\_And\_Installation\_Instructions" for information about the Setup screen.

When you are done using the App, we strongly recommend that you close it. Keeping the App open on your phone leaves you vulnerable to accidentally tapping the ACTIVATE DOOR button and opening up your garage door unintentionally!