# Roximal User Documentation:

**Arduino version 1 with black case:**

Flip switch to turn on. White LED light will come on to indicate that it’s turned on. This version is only compatible to connect to android devices that support Bluetooth Low Energy.

**Arduino version2 with clear case:**

Flip switch to turn on. Flashing red light inside the box indicates that it has been turned on. The light will stop flashing and another solid green light will appear when connected to the android application. This device will support a larger range of phone as it isn’t restricted to Bluetooth Low Energy.

**Android Application:**

**Connecting:**

To connect the application to the Arduino:

* Make sure the Arduino is turned on.
* Open the application and make sure it is on the main page.
* On the main page the application should automatically connect to the Arduino. If it’s not scanning (indicated by the spinning circle at the bottom of the screen) you can tap the circle at the bottom to manually start the scan.
* When the connection is successful the spinning circle will change to a tick and the text at the bottom should indicate that it’s connected.

**While connected:**

When an object passes within 1.5 meters of the sensor on the Arduino the phone should vibrate and beep to indicate that it detected something. The application will only maintain the connection while on the main page of the application. The phone will also not log any of the information if it cannot determine where the phone is through GPS, so it likely won’t work indoors.

**Viewing the data:**

The data can be viewed as raw data by tapping the “View Data” option on the main page. This displays passing distances, GPS coordinates and time stamps as text. The data can be sorted by date using the drop down menus at the top of this screen.

To view the data on a map, tap “Map” option from the main page. If the phone is connected to the internet this will load up a map. The map can be navigated by swiping in the opposite direction you want the map to move. You can zoom in and out of the map by pinching your fingers on the screen. The map will display each instance of something passing close to the Arduinos sensor as a red marker. The marker can be tapped on to open up a new menu where you can see the information about the incident or delete the incident. This menu can be closed by tapping off of it or tapping the close button. The data on the map can be sorted by the drop down menus at the top of the page. You can select specific days, months and years to see the data of.

Instructions can also be found on how to use the application from the main screen and tapping the “Instructions” menu item.

**Sending data:**

Sending the data requires the phone to be connected to the internet. To send the data that’s been collected, from the main page tap the “View Data” menu item. At the bottom of the screen tap the “Send Data” button. It will indicate that it’s sending with the text “Sending…” at the bottom of the screen. After a small delay it will indicate in the same area if it was successful sending the data or not.

**Website:** [www.roximal.me](http://www.roximal.me)

The main page gives a brief description of what we are doing and links to various places in the web page. Navigation around the website can be found at the top of the page.

**Map:**

The map page loads up a Google Map with all of the data that has been collected by our users so far. Each incident appears as a red marker on the map. The information about the incident can be viewed by clicking or hover over the markers. If you click on the marker a window will pop up with the information and can be closed by clicked the X on the right side of the window.

Sorting data on the map:

The data displayed on the map can be sorted by the bar on the left side of the map.

To sort the data:

* Pick from the drop downs, any of the dates you want to see data in-between.
* Pick from the drop downs any of the times you want to see data in-between. If both of the times are set to the same then it will display incidents for all times.
* Enter the distances you want to see data in-between. Distance can only be numbers with the minimum being 30 and the highest being 150.
* After you have selected what you want to see, click the “Update Incidents” button.
* The map should now load up with any of the data that was received between the set dates, times and distances.

**How it Works:**

This page explains the different sections of our project and how it all comes together to make the project work as a whole.