User Guide

# Running the Raspberry Pi Application

## Prerequisites

Please ensure that you follow the Installation and Configuration Guide before you continue onto the user guide.

## Running

To run the application you need to plug the OBDII dongle into the OBD port in your car. Start your car and power up your Raspberry Pi. The Raspberry Pi will automatically connect to the OBDII dongle and run the application. You can now complete your journey. Once you have completed your journey, switch off the ignition. The Raspberry Pi will generate a report and you will now be able to access that report through the Ionic application.

# Running the Ionic Application

## Prerequisites

As indicated above in Running the Raspberry Pi section please ensure that you have followed the Installation and Configuration Guide before you continue onto running the Ionic Application.

## Browser

To run the ionic application on your browser, navigate to the app folder through a terminal and run the following command

ionic serve

The app can also be run using an iOS or Android emulator through a browser. To run through an iOS emulator type the following command into your terminal:

ionic cordova build ios

ionic cordova emulate ios

Or to run through an Android emulator type the following command into your terminal:

ionic cordova build android

ionic cordova emulate android

## On iOS Device

### Requirements

* Mac OS X or greater
* [Xcode](https://itunes.apple.com/bw/app/xcode/id497799835?mt=12)
* An [Apple ID](https://itunes.apple.com/bw/app/xcode/id497799835?mt=12)

Create a provisioning profile:

1. Open Xcode > Preferences
2. Click on ‘Accounts’
3. Click on ‘Add Apple ID’

Build and run:

1. Navigate to the ionic folder in terminal and run:

ionic cordova build ios –prod

1. In Xcode, open obdii.xcodeproj from ionicApp/platforms/iOS
2. Connect an iOS device to your computer via USB
3. Select the device as the target and run

Device:

1. Open the ‘Settings’ app on your iOS device
2. Go to ‘General > Device Management’. You’ll see the email address associated with the Apple ID or Apple Developer account you used to code sign your app.
3. Tap the email address
4. Tap ‘Trust <your\_email>’:

## On Android Device

### Requirements

* [Java JDK](http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html)
* [Android Studio](https://developer.android.com/studio/index.html)
* Updated Android SDK tools, platform and component dependencies. Available through Android Studio’s [SDK Manager](https://developer.android.com/studio/intro/update.html)

### Running

1. [Enable USB debugging and Developer Mode](https://developer.android.com/studio/run/device#developer-device-options) on Android device
2. Navigate to ionicApp folder in the command line and run:

ionic cordova run android –device

1. Copy and paste the apk to the Android device and run it

## Using the Ionic App

The UI of the app is fairly simple and consists of three pages. The first page displays all of the Highest RPM, Average Speed and Distance travelled from each of the records from the database. It also provides a driver economy rating at the top that when tapped explains what this means.

Tap on one of the records to see an expanded view of the data. The Highest ROPM, Average Speed and Distance Travelled can be viewed plotted out on graphs by tapping on the clipboard tab on the bottom right.



