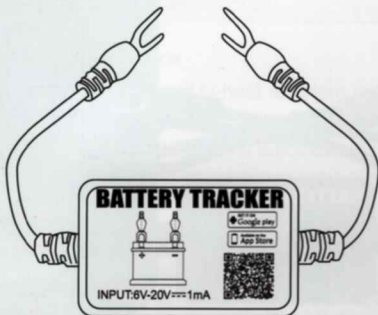




ANTIGRAVITY BATTERIES



BATTERY TRACKER

Bluetooth 4.0 Battery Monitor

App requires Smart Phones with Android 5.0 or iPhone 5s or higher

BATTERY TRACKER

Bluetooth Vehicle Battery Monitoring System

By **ANTIGRAVITY BATTERIES**

Owners Manual



Battery Tracker
BlueTooth Monitor

APP

Thank you for purchasing the Battery Tracker by Antigravity Batteries! The Battery Tracker monitors your battery status through your Phone by using our Battery Tracker App. Easily monitor your voltage, check the performance of your battery during starting and check if your Alternator is charging. The Battery Tracker stores battery data for 31 days, and will even send a warning to your phone if your battery is getting low and needs a charge.

The Battery Tracker easily installs in minutes, can be used with Android or Apple Operating systems and works with any Vehicle that uses a 12v system. A Lead/Acid or Lithium version are available, this manual covers both.

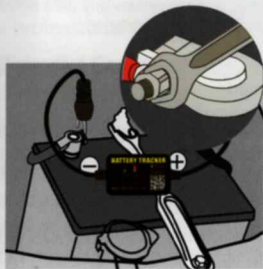
1.0 Product Parameters

Average Current	1mA	Short-circuit Protection	Built in
Input Voltage	6~20V	Reverse Connection Protection	Built in
Operating Temperature	-40℃~90℃	Bluetooth	4.0
Physical Dimensions	7 x 5 x 1.8cm	Bluetooth Name	Battery Tracker
Voltage Accuracy _(9-16V)	±0.03V	App Keyword	Battery Tracker

2.0 Product Safety Performance

Product Case and Wires are made of hi-heat resistant materials for long life. Additionally, the Battery Tracker has built-in short circuit protections, reverse polarity and over current protections that will automatically shut down the unit to prevent damage damage product or vehicle in case of mis-connections.

3.0 Install the Battery Tracker



(Fig 1)

1. Loosen the nut (no need to remove it) on your battery cable clamp for the Positive(+) Terminal and slide the **RED** Fork Connector of the Battery Tracker behind the bolt and retighten clamp to normal torque specifications.
2. Repeat for the Negative(-) Clamp side.
3. Clean an area on the battery where you want to attach the Battery Tracker and use the provided Velcro to attach the Battery Tracker. If possible mount in an area free from obstruction for the best signal for Bluetooth .

4.0 App Installation



(Fig 2)



Battery Tracker



Battery Tracker

GET

(Fig 3)



1. Scan the QR code of the product located on face of Battery Tracker.(Fig 2)
2. Search "Battery Tracker" on App Store or Google Play to download app. (Fig 3).
3. Install the application on your Mobile Device.

4.1 App Operation

1. After installation run the App. Make sure you turn ON the Bluetooth for your Phone/Tablet so the Battery Tracker can send data to your it.
2. Please allow App to access your location and send notifications even when not using the App. This will allow you to receive automatic notifications if you battery is low.

"Battery Tracker" Would Like to Send You Notifications

Notifications may include alerts, sounds, and icon badges. These can be configured in Settings.

Don't Allow

OK

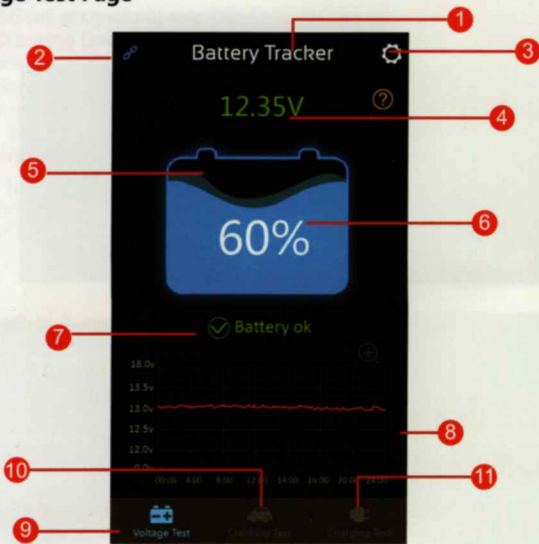
Allow "Battery Tracker" to access your location even when you are not using the app?

Allow Access: When close to vehicle, the battery and related system data will be automatically sent to the app with a fault notice if it exists.

Don't Allow

Allow

5.0 Voltage Test Page



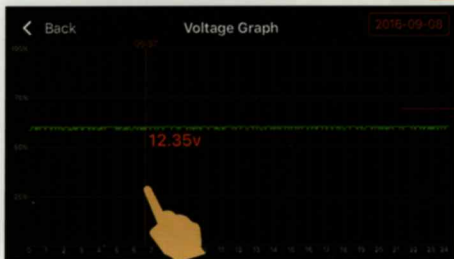
(Fig 7)

The Voltage Page (above) shows the following

1. The Default Name of the Battery Tracker will be the device ID No. The user can Change the Nickname in the Settings Page (the Gear symbol).
2. The Bluetooth Connection status is indicated here. Blue is Connected, Red is un-connected. By default it will connect to the last device automatically when in range.
3. The Settings Icon (Gear Symbol), click to enter System Settings.
4. Real-Time Voltage reading for the Battery.

5. When Charging, the Battery Icon will be animated.
6. The Real Time percentage of Charge for the Battery you have connected the Battery Tracker to.
7. General Battery Charge Status: Battery OK (Green), Charging (Green), Low Power (Red).
8. This is a Real Time Battery Voltage Graph of your voltage over a 5 minutes span. This page allow you to monitor the current voltage and fluctuations in voltage Graphically.
9. This bottom row indicates the available Battery Tracker App Pages. The page you are currently on is lit in Blue. Volt Test, Crank Test, or Charge Test are the available pages to select from.
10. This is the Cranking Test icon, when selected takes you to the Cranking Test page. The Cranking Test is automatic when you start the car the results will be given.
11. This is Charging Test icon, when selected you will be taken through a charging test.

5.1 Voltage Page - Voltage History Graph



(Fig 8)

2016-05						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

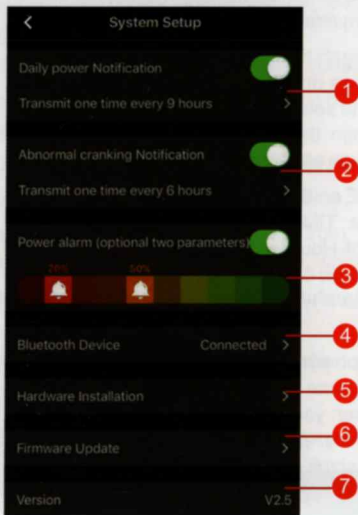
(Fig 9)

5.1 Voltage History Graph cont.

1. To access the the Voltage History Graph (*Fig 8*). Press once on the the Real-Time Voltage Graph on the Voltage Test Page. This opens the Larger Voltage History Graph. (*Click the "Back" button on the upper left of the screen to go back to to the Voltage Page at anytime*)
2. Each page of the Voltage History Graph has the Date of the History Graph at the top center of the page with arrows on either side of the date. You can press on the Date to show a Calendar to select a specific date (*see Fig 9*). Or you can scroll back or forward through the dates to access your voltage history by pressing the arrows located on either side of the Date.
3. The History Graph has the VOLTAGE on the left side (y-coordinate), and on the bottom (x-coordinate) shows the TIME (Hours) over 24-Hours. The voltage is logged every 2 minutes for 24-Hours each day. So you can view the voltage during any of the previous 31 days of history. (*If the Battery Tracker is disconnected from the battery then there will not be data available for days not connected.*)
4. To get more out of your History Graph you can slide your finger from left to right on the screen to view the exact time and voltage reading during any period of the 24hours for that day. When you slide your finger a Text Display will pop-up and show the voltage for that period of time. If you continue to slide your finger over the graph it will scroll showing the voltages during that time periods. (*See Fig. 8*)

6. System Setup Page (the Gear Icon)

Systems Setup allow you to set your alerts for low battery, change the name of the Battery Tracker in case you have multiple Battery Trackers, and select which Battery Tracker to use if you have other Cars with a Battery Tracker.



(Fig 10)

1. Daily Notification Alert Setup: Green is ON, Gray is OFF. Tap to set how many hours between notifications.

2. Abnormal Cranking Notification: Green is on, Gray is off. Tap to set how often alerts are transmitted.

3. Power Alarm: Slide the bell icon, to adjust. When battery falls to either % value, user will receive a notification about the charge level of the battery.

4. Bluetooth Device: Click to enter this page. Click "Edit" to either edit the Battery Tracker name, or select another Battery Tracker from the list of Battery Trackers within range of your Bluetooth. For Example if you have 3 cars and all have Battery Trackers, each Tracker will show up in the Historical Device list.

4.(cont.) You can then select the Battery Tracker for a particular vehicle.

5. Hardware Installation: Instructions and diagram for installation of a Battery Tracker.

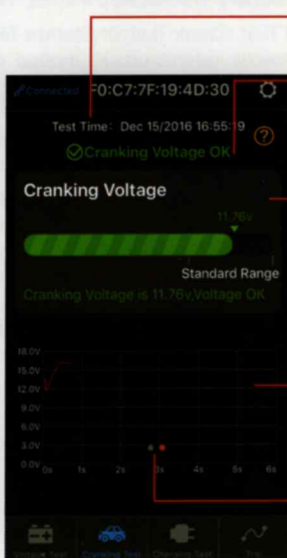
6. Firmware Upgrade: User can review the App version, also can upgrade new firmware once new versions available.

7. Version: Displays the current app version number.

7. Cranking Test Page

On each Start attempt of your vehicle the Battery Tracker will automatically log the Cranking Data and store the result on the Cranking Test Page, even if you were not on this page when you started your vehicle. If you have done 5 starts during a 24 Hour period all 5 starts will be logged and you can swipe to find previous start attempts. Data is only stored for one day, but the data can also be reviewed on the Voltage History Graph that stores data for 31 days (found on the Voltage page by clicking on the small graph).

This can be a way to see if your battery is getting weaker and not staying in a high enough voltage range during the Start, which may indicate an aging battery or a low state of charge.

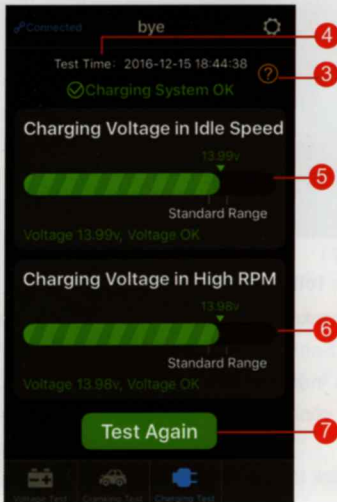
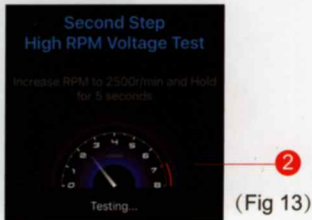
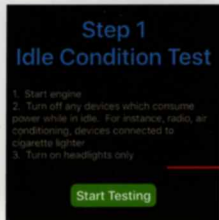


(Fig 11)

1. Date and Time of the Cranking Test. (test is automatic)
2. General Indication of Cranking Voltage. Reading will be "OK" in Green Color, or "Low Voltage" in Red Color when below 9.6V.
3. Displays the actual cranking voltage values, You will see the lowest voltage-drop indicated during the start attempt in this graphic. If the cranking voltage is higher than 9.6V, it indicates normal/good operation.
4. The Cranking Voltage Graph gives a graphic of the Voltage drop and over the number of seconds the Start took place.
5. Depending the number of Starts made, orange dots will show up for different start attempts. You can swipe left or right to review.

8. Charge Test Page

This Test will allow you to see if your Alternator is charging the battery and working correctly.



1. Go to “Charge Test Page” (Fig 12), follow the Instructions for the Test. This first part of the test will test Charging at idle.

2. For high RPM voltage test, it is necessary to increase RPM as indicated by App and hold for 5 seconds, this will test charging at higher rpm conditions. After doing this the Battery Tracker App will display the results.

3. The (?) will take you to page describing the results of the Charging Test.

4. Indicates the Time of the Test.

5. Indicates Results of Idle Charging. Green is OK, Red is abnormal.

Charge Test Page (cont.)

6. Indicates the results of the higher RPM Charging. Green indicates charging is ok, RED indicates abnormal Charging.
7. To test again you would press the RE-TEST button.

Potential causes of Charging Test indicating LOW VOLTAGE:

If Charging voltage is low, check if V-Belts is slipping or disconnected, check whether the line connection between alternator and battery is normal or not. If V-Belt and line connection is good, please follow the car manufacturer's recommendations to exclude the alternator failure potential.

Potential Causes of Charging Voltage Test indicating HIGH VOLTAGE:

If the alternator output voltage is too high (above 14.8v) and since most Automotive Alternators use built-in voltage regulation, you may need to need to replace alternator assembly. Note that older vehicles use external regulators, in this case you would replace the regulator directly). Common high voltage limits for an Automotive regulator are 14.6V ~14.8. High charging voltages can overcharge and Damage a Lithium Battery. So if any indications show above 14.8v charging immediately have your vehicle checked by a professional.

Potential Causes of Charging Test showing No Voltage Output:

Check whether the alternator cable is connected properly, and the alternator belt are not slipping and are in good condition.

The Tests provided by the Battery Tracker and not meant to take the place of a professional opinion by a Mechanic. They are for alerting you of potential problems before larger problems may occur.

9. WARNINGS

1. Product should NOT be used over the specified voltage range (6-20V), excessive input voltage may damage the Battery Tracker.
2. App requires smartphones with: Android 4.3 and higher, iPhone 4S and higher.
3. When your mobile phone enters Bluetooth range of the Battery Tracker, it will receive notifications from the Battery Tracker. If outside of range the Battery Tracker will not sync with phone though data will still be tracked when away from Vehicle.
4. If you do not choose "allow to access location", you will not receive notification alerts. If you want to use this function in future, you can open the access in phone Settings by selecting "always allow location access".
5. If the daily power Notification alert is not set to on, you won't get the notifications of voltage status. You can set to allow notification both in app and phone's Settings.
6. Make sure not to connect TWO Phones or Devices to the same Battery Tracker. This can create conflicts and the App will not function properly. If you do have a Phone and another Device connected to the same Battery Tracker make sure one of the Devices is well outside of Bluetooth range or conflicts will occur between the two devices trying to access the Battery Tracker. It is suggested only ONE device be connected at a time.
7. Firmware updates will clear all data in the Battery Tracker, please review any data before updating firmware. In most case a firmware or App update will rarely be needed.
8. All historical data will be stored on the phone, an App upgrade will not lose the historical data. But if App is uninstalled, the phone data will be cleared.
9. The Battery Tracker will automatically monitor vehicle battery voltage, cranking and charging systems, but to get historical data transferred to your phone please use the App or make sure the Phone enters range of your Battery Tracker at least one time within each 31 days. Then device historical data will be synchronized to phone at that time.
10. If App can not find Battery Tracker, please ensure your Phones Bluetooth is "ON" and within range of the Battery Tracker and has no issues that might block the Bluetooth Signal to the Phone.

If you have additional questions please contact us at info@antigravitybatteries.com or call 310 527 2330.