

ANTIGRAVITY BATTERIES

BATTERY TRACKERS

USER MANUAL



CONTENTS:

WELCOME

WARNINGS

1 PRODUCT SPECS _____ Page 1

2 PRODUCT SAFETY _____

3 INSTALL THE TRACKER _____ Page 2

4 APP INSTALLATION _____

5 VOLTAGE TEST _____ Page 3

6 SYSTEM SETUP _____ Page 5

7 CRANKING TEST _____ Page 6

8 CHARGING TEST _____ Page 7

9 CONTACT INFO _____ Page 8



Welcome

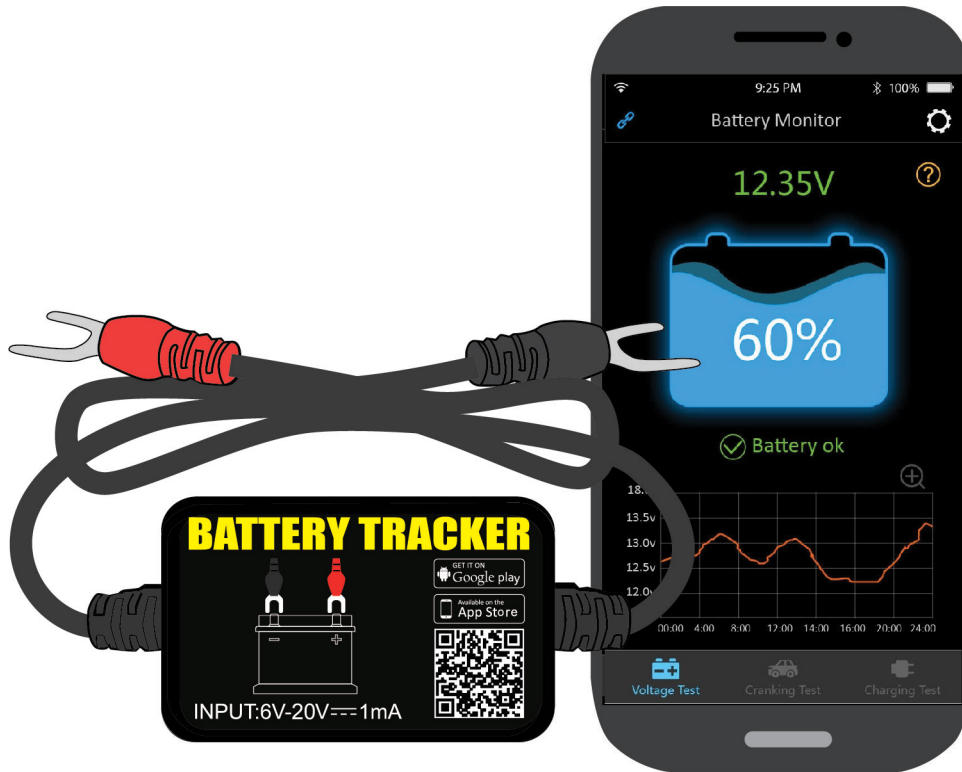
THANK YOU

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. Lead/Acid or Lithium versions are available; this manual covers both.

For more information feel free to Contact us.

info@antigravitybatteries.com
antigravitybatteries.com
themicrostart.com
310 527 2330

Antigravity Batteries
15622 Broadway Center St.
Gardena CA
90248



Warnings



PRECAUTIONS & GENERAL INFO

PLEASE READ AND UNDERSTAND ALL INFORMATION BEFORE USING THIS PRODUCT.

- 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, or 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 cases 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 Phone's Bluetooth is "ON" and within range of the Battery Tracker and has no issues that might block the Bluetooth signal to the phone.



Bluetooth Vehicle Battery Monitoring System



BTR-1 (LITHIUM)



BTR-2 (LEAD/ACID)

Specifications

AVERAGE CURRENT: 1 mA	SHORT-CIRCUIT PROTECTION: BUILT-IN
INPUT VOLTAGE: 6-20V	REVERSE-CONNECTION PROTECTION: BUILT-IN
OPERATING TEMPERATURE: -40°C-90°C	BLUETOOTH: 4.0
PHYSICAL DIMENSIONS: 2.75 x 2 x 0.7 INCHES	BLUETOOTH NAME: Battery Monitor (EDITABLE)
VOLTAGE ACCURACY: ±0.03V	APP KEYWORD: Battery Tracker BMR

PRODUCT SAFETY PERFORMANCE

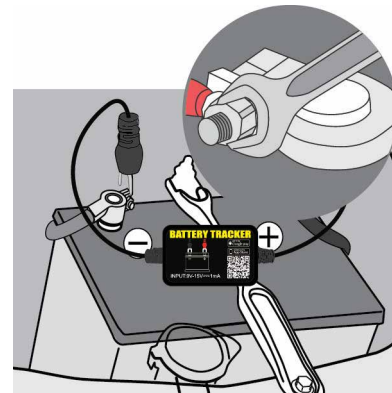
Product Case and Wires are made of hi-heat-resistant materials for long life. Additionally, the Battery Tracker has built-in Protections against short-circuit, reverse polarity and over-current, which will automatically shut down the unit to prevent damage to the product or vehicle in case of misconnections.

Installation



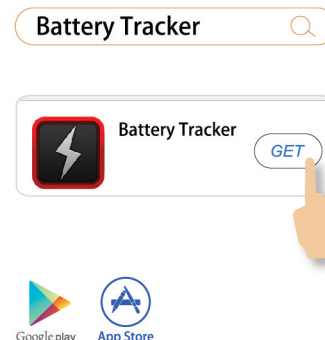
INSTALL THE BATTERY TRACKER

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



APP INSTALLATION

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



APP OPERATION

- 1) After installation, run the App. Make sure you turn ON the Bluetooth for your Phone or Tablet so the Battery Tracker can send data to 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 your battery is low.



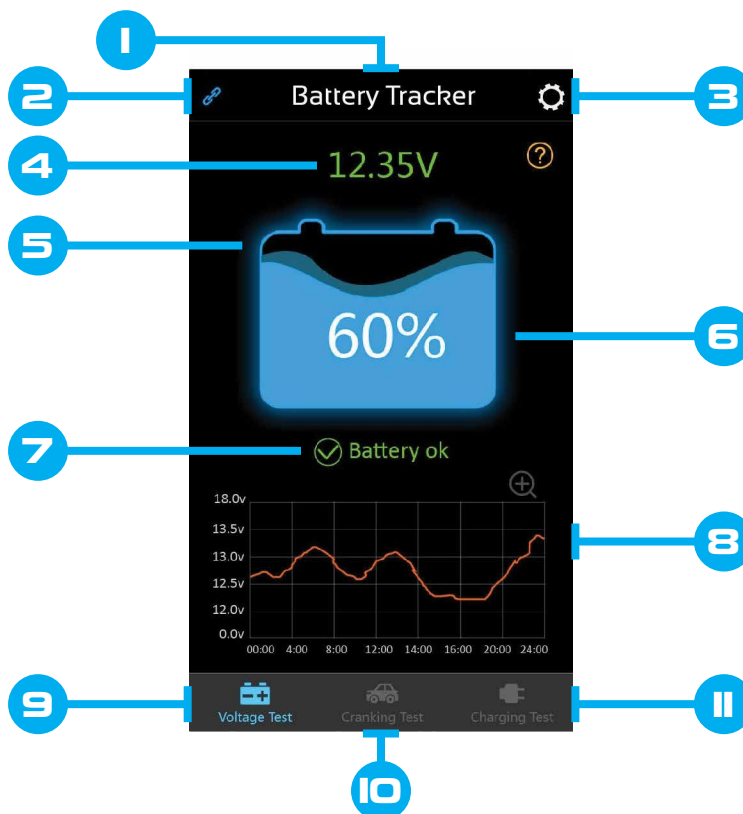
Voltage Test Page



VOLTAGE TEST

The Voltage Test page shows the following:

- 1) The Default Name of the Battery Tracker will be the device ID number. 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 allows 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 CrankingTest page. The Cranking Test is automatic; when you start the car the results will be given.
- 11) This is the Charging Test icon, when selected you will be taken through a charging test.

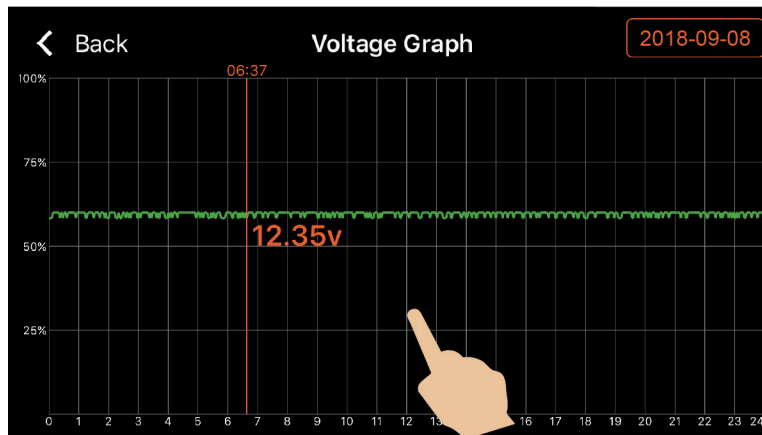


Voltage Test Page (Continued)



VOLTAGE HISTORY GRAPH

- 1) To access the Voltage History Graph, 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 the Voltage Page at any time.)
- 2) Each page of the Voltage History Graph has the Date of the History Graph at the top 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. 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 24 hours 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 those time periods.



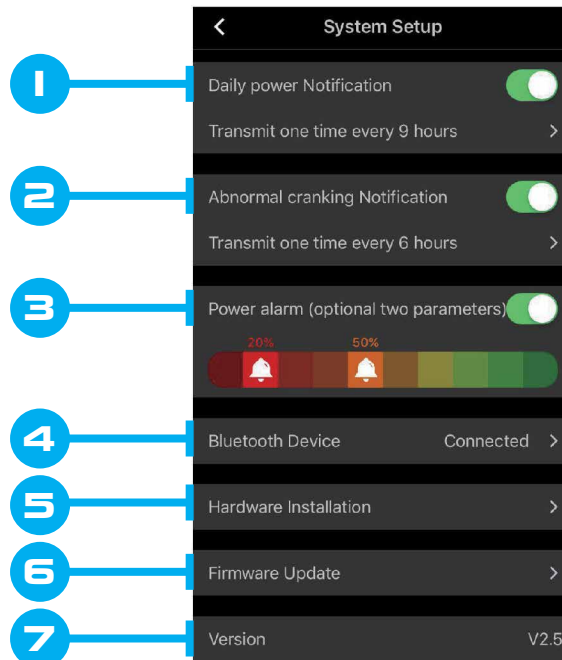
System Setup Page



THE GEAR ICON

System 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.

- 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. 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.



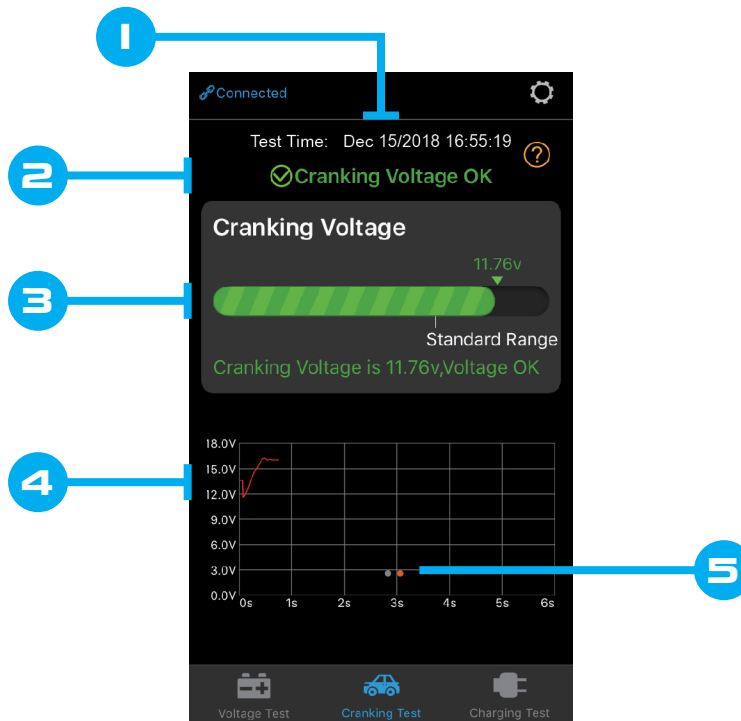
Cranking Test Page



CRANKING TEST

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.

- 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.



Charging Test Page



CHARGING TEST

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

- 1) Go to the "Charge Test" page and follow the instructions. The 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 the Results of Idle Charging: Green is OK; Red is abnormal.
- 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.



Charging Test Page (Continued)



POTENTIAL CAUSES OF TEST INDICATING LOW VOLTAGE

If Charging voltage is low, check if V-Belt 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 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 TEST INDICATING NO VOLTAGE

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



NOTE

The Tests provided by the Battery Tracker are 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.

Contact Us

When you need help or have questions, our knowledgeable support team is here for you! Please feel free to call us during our Office Hours 7:30am-4pm Pacific Time, Monday-Friday; or you can write to us any time!

310 527 2330

Info@AntigravityBatteries.com

15622 Broadway Center St.
Gardena CA 90248

VISIT OUR WEBSITE FOR MORE COOL PRODUCTS, ACCESSORIES AND INFO

SHOP.ANTIGRAVITYBATTERIES.COM

