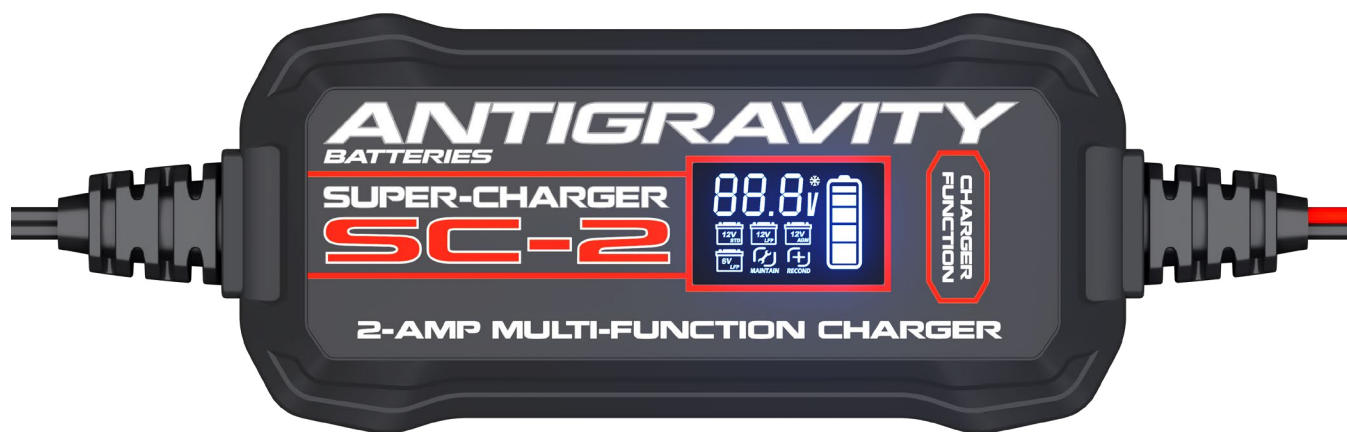


ANTIGRAVITY BATTERIES

SUPER-CHARGER SC-2

USER MANUAL



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DANGER - WARNING!



PRIOR TO USE, READ AND UNDERSTAND THIS MANUAL AND SAFETY INFORMATION. Failure to follow the instructions may result in ELECTRICAL SHOCK, EXPLOSION, or FIRE, which may result in SERIOUS INJURY, DEATH, or DAMAGE TO VEHICLE or PROPERTY. Do not discard this information.



Introduction

THANK YOU

Thank you for purchasing Antigravity Batteries "SC-2 SUPER-CHARGER", a 2-Amp Multi-Function Automotive, Motorcycle and Powersports Battery Charger. The SUPER-CHARGER offers the latest advancements in microchip charging technology as well as features that allow for more functionality.

YOUR ANTIGRAVITY SUPER-CHARGER OFFERS THE FOLLOWING FUNCTIONALITY:

1. Charge and Maintain 12v Batteries in Lead/Acid formats such as Standard Lead/Acid (FLA), AGM, and Gel.
2. Charge and Maintain 6v and 12v Lithium Iron Phosphate (LiFePO4/LFP) Batteries.
3. Easy to read LCD DIGITAL SCREEN with real-time Voltage when charging. No more relying just on colored LED lights.
4. A Lead/Acid Battery Recondition feature.
(FOR USE ONLY WITH LEAD/ACID BATTERIES! DO NOT USE WITH LITHIUM BATTERIES!)
5. Automatic Winter Mode for better charging in colder temperatures.

For more information feel free to Contact us.

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antigravitybatteries.com
themicrostart.com
310 527 2330

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15622 Broadway Center St.
Gardena CA
90248



IMPORTANT! READ FIRST!



READ AND FULLY UNDERSTAND ALL SAFETY INFORMATION BEFORE USING THIS PRODUCT! Failure to follow these safety instructions may result in ELECTRICAL SHOCK, EXPLOSION, or FIRE, which may result in a SERIOUS INJURY, DEATH, or PROPERTY DAMAGE.



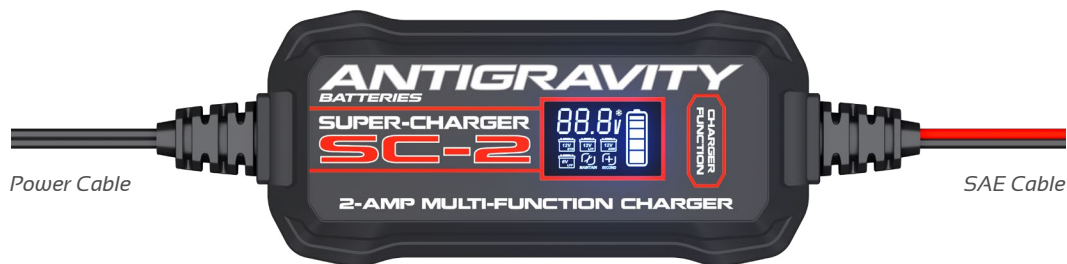
IMPORTANT SAFETY WARNINGS

1. Use ONLY for the designated batteries stated in this User's Manual. The battery charger cannot be used for non-rechargeable batteries or other Battery Chemistries not listed here.
2. This product must be recycled or disposed of separately from household waste, at an authorized place for recycling of electrical and electronic appliances. By collecting and recycling waste, you help save natural resources, and make sure the product is disposed of in an environmentally friendly and healthy way.
3. The SC-2 is designed to charge 6V and 12V (12.8V) LiFePO4/LFP Batteries, and 12V lead-acid batteries. **NEVER USE A 12v SETTING on a 6v Battery.** This charger cannot be used as a Charger or Power Source for other Battery Chemistries or purposes not described in this User Manual, in order to avoid accidents such as fire and personal injury, death or property damage.
4. This charger is only designed to be used with the correct power outlet receptical. If the power cable needs to be used with an extension cord, ensure the wire of the extension cord is of a sufficient size/gauge for the supply of voltage and current over the distance required.
5. If the charger is damaged by an accident, such as a fall/crush, overload from lightning strike, or other incident, stop the use and contact Antigravity Batteries for support or repair. Do not dismantle the charger. Only Antigravity Batteries, or its Authorized Agent, shall repair or replace the unit. Incorrect reassembly may result in a fire hazard and/or electric shock.
6. Disconnect the charger from any connected battery and the main power supply prior to cleaning the unit.
7. When finished charging, disconnect the battery charger from the main power supply, then remove the battery connection at the terminals.
8. **Warning: Explosive Gases.** Lead/Acid Batteries can release Hydrogen when charging; provide adequate ventilation during charging. Only use this Charger in places that are well-ventilated, dry, free from high dust, flammable vapors, flames and sparks.
9. Keep the Charger away from direct contact with the battery; mount in a solid and stable location away from other devices. Never place the charger directly on the battery or the battery on the charger. Keep out of direct sunlight.
10. Use your vehicle manufacturer's suggested connection method for a Charger. Connect the Positive Charger Clamp first, then the Negative Clamp to the Vehicle's specific charging post or ground. Do not connect Charger Clamps to fuel lines, electrical wiring other than main battery's Positive and specific Chassis Ground locations.
11. This charger is not intended for use by children or persons with reduced physical, reduced sensory/mental capabilities, or lack of experience and knowledge with use of a Charger.
12. Batteries store a large amount of energy. Be sure to avoid short-circuiting the battery or charger terminals. Do not wear jewelry when working around batteries or a Charger, it can result in fire or personal injury. Wear Eye Protection and Gloves when working with Batteries.
13. During charging, if the temperature of Charger exceeds 104°F (40°C), the Charger's current shall be reduced by the Charger. If temperature exceeds 113°F (45°C), charging will be stopped. Charging shall not be recommenced until the Charger temperature is reduced to safe limits. This is part of the Charger's built-in Safety Features.

CALIFORNIA RESIDENTS PROPOSITION 65: Related accessories may contain materials that are known to the State of California to cause cancer and birth defects and other reproductive harm.



In the Box



SC-2 SUPER-CHARGER



CLAMPS

For typical clamp connection to battery



PIGTAIL ADAPTER

To connect to vehicle's battery for easy charging without the clamps



USER MANUAL

Specifications

	SC-2
MAINS VOLTAGE	110-120V, 50-60 Hz
POWER RATING MAX	40 W
NOMINAL OUTPUT VOLTAGE	6V DC / 12V DC
MAX. OUTPUT CURRENT AT 6V	2A
MAX. OUTPUT CURRENT AT 12V STD/AGM/LFP	2A
BATTERY CAPACITY "12V STD/AGM/LFP"	3Ah ~ 60 Ah
BATTERY CAPACITY "6V LFP"	3Ah ~ 60 Ah
BATTERY CAPACITY "12V MAINTENANCE" (1A)	3Ah ~ 32 Ah
"RECOND" CHARGING PROGRAM	16.5V DC / 1.5A (not for Lithium)
PROTECTION CLASS	II
PROTECTION TYPE	IP65
OPERATION TEMPERATURE	-4°F-104°F (-20°C-40°C)

NOTE: deviation current is $\pm 10\%$, voltage is $\pm 0.3 V$



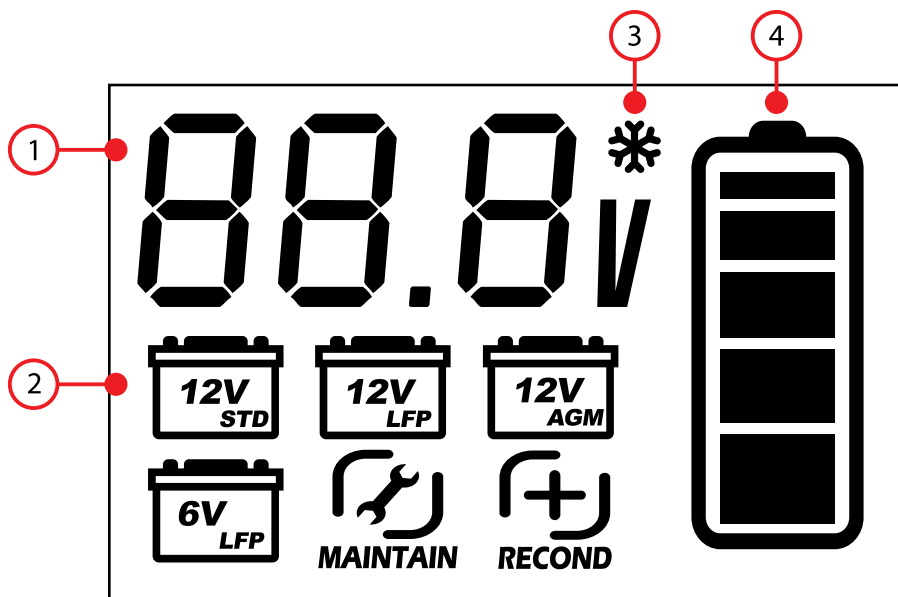
The LCD Display



LCD DISPLAY OVERVIEW

ICONS DO NOT SHOW UNLESS ACTIVE.

1. Voltage Value
2. Battery Type/Function Button
(12V STD, 12V LFP,
12V AGM, 6V LFP,
Maintain, Recondition)
3. Winter Mode (Automatic)
4. Charging Level Indicator
(20%, 40%, 60%,
80%, 100%)



LCD DISPLAY

Mode	Icon	Max Charging Current	Max Charging Voltage	Explanation
Voltage	88.8V	NOT APPLICABLE	NOT APPLICABLE	Indicates the Charging Voltage during charging
12V STD <i>Never charge 6v Batteries with a 12v Setting!</i>		2A	14.4V	Charge 12V Standard (FLA) Lead/Acid batteries
12V LFP <i>Never charge 6v Batteries with a 12v Setting!</i>		2A	14.6V	Charge 12V LiFePO4/LFP batteries
12V AGM <i>Never charge 6v Batteries with a 12v Setting!</i>		2A	14.8V	Charge 12V AGM/Gel batteries
6V LFP		2A	7.3V	Charge 6V LiFePO4/LFP batteries

NOTE: deviation current is $\pm 10\%$, voltage is $\pm 0.3V$



The LCD Display



LCD DISPLAY

Mode	Icon	Max Charging Current	Max Charging Voltage	Explanation
12V Maintain FOR LEAD/ACID ONLY! <i>Never charge 6v Batteries with a 12v Setting!</i>	 MAINTAIN	1A	14.4V	Maintains 10Ah or less 12V Lead/Acid batteries with a low charging current <i>Please note: Automatic Maintenance occurs in all Battery Charging modes. This is a separate mode only for small batteries</i>
Recondition FOR LEAD/ACID ONLY! <i>Never charge 6v Batteries with a 12v Setting!</i>	 RECOND	1.5A	16.5V	Recondition mode for old damaged batteries. Not all batteries can be recovered
Winter Mode (Automatic)		Charging current depends on the selected mode	Max Voltage depends on the selected mode	Special charging mode for Winter, activated automatically when ambient temperature is lower than 40°F (5°C). Allows a 0.2v higher charging voltage
Battery Capacity Charging Indicator		NOT APPLICABLE	NOT APPLICABLE	Displays the approximate battery capacity (1 increment = 20%). When fully charged, the voltage number symbol will display "FUL"

NOTE: deviation current is $\pm 10\%$, voltage is $\pm 0.3 V$

Using the Super-Charger

The Antigravity Batteries SC-2 Super-Charger is simple to use with only 1 button to access its features.

0

THE CHARGER FUNCTION BUTTON

Used to select the battery chemistry and/or the type of charging.

Press the button to scroll to desired ICON/Option before connecting clamps to battery.

- **12v STD** (Standard Wet Lead/Acid Batteries)
- **12v LFP** (12V LiFePO4/LFP Automotive, Motorcycle or Powersports Batteries)
- **12v AGM** (Absorbed Glass Mat and Gel formats of Lead/Acid Batteries)
- **6v LFP** (6V LiFePO4/LFP Automotive, Motorcycle or Powersports Batteries)
- **MAINTAIN:** Low current mode maintains smaller Ah Lead/Acid battery over longer-term storage periods.
- **RECOND** (Recondition): Used to recondition older or damaged Lead/Acid Batteries. (Not all batteries can be recovered.) **NOT FOR USE ON ANY LITHIUM BATTERY.**

CHARGER
FUNCTION



Charging Your Battery

IMPORTANT: DO NOT operate the charger until you confirm the correct charging mode for your battery. Verify the voltage and chemistry of the battery by consulting the manufacturer's manual, or by reading the label on the battery. Do not use Lead/Acid Settings for Charging Lithium Batteries or vice-versa. **Never charge 6v Batteries with 12v Settings; risk of fire, personal injury, death or property damage.**



HOW TO CHARGE YOUR BATTERY

1. Plug in the Antigravity Super-Charger to a suitable 110v-120v electrical outlet.
2. Select the Proper Battery Chemistry and Voltage using the "CHARGER FUNCTION" Button before Charging; your selection will depend on your particular battery type.
***NOTE:** The Charger will save your last used Charge Mode for the next time you use it. You will not have to re-set the Charge Mode if you charge the same battery type again.*
3. Connect the Super-Charger's Clamps to the Correct Polarity of your Battery. Red Clamp to Positive (POS) Terminal of the battery first, and the Black Clamp to the Negative Terminal (NEG) of Battery, or specified Ground/Negative point per the vehicle's manufacturer. Do not make any connections to fuel lines, carburetors, sheet metal or electronics.

When the clamps are connected to the Battery, the Super-Charger will begin charging, then maintain your battery after it has been fully charged. The LCD Screen will display the Voltage and Amps during charging, and the Battery Capacity Indicator will give an estimate of the battery's state of charge. When the Charge Cycle is completed the Screen will read "FUL". The Charger at times will display a flashing "V" symbol when it is maintaining the battery after a charge. *Charging may take 30 minutes to over 24 Hours depending on the Amp Hours and State of Charge of your Battery.*

PLEASE NOTE: The 6v and 12v options must be selected BEFORE the Charger is connected to the battery.

Using the Maintain Mode

The Antigravity Batteries Super-Chargers offer a useful MAINTAIN FEATURE; this is mainly for Lead/Acid Batteries less than 10 Amp Hours. It charges at a lower rate of Amps and is best for long-term connections on smaller vehicles such as Motorcycles, Lawn Tractors, and similar Vehicles.

PLEASE NOTE: ALL CHARGING PROFILES IN THE SUPER-CHARGER AUTOMATICALLY MAINTAIN YOUR BATTERIES. THERE IS NO NEED TO SELECT THIS MODE TO MAINTAIN YOUR BATTERY. THIS IS A SPECIAL MAINTENANCE MODE SPECIFICALLY FOR "SMALL BATTERIES".



USE OF THE MAINTAINER **FOR 12V LEAD/ACID ONLY!** NOT FOR USE WITH 6V BATTERIES

1. Plug in the Antigravity Super-Charger to a suitable 110v-120v electrical outlet.
2. Press the "CHARGER FUNCTION" Button to scroll to the "MAINTAIN" Icon.
3. Connect the Super-Charger's Clamps to the Correct Polarity of your Battery. Red Clamp to Positive (POS) Terminal of battery, and Black Clamp to Negative Terminal (NEG) of battery.
4. When the clamps are connected to battery, Maintaining will begin.

MAINTAIN ICON



Using the Recondition Mode

The Antigravity Batteries Super-Chargers offer a 12V Recondition mode **FOR 12v LEAD/ACID BATTERIES ONLY!** This is an advanced battery recovery mode for repairing old, damaged, sulfated or stratified batteries. Lead/Acid Batteries may become damaged if kept at a low charge or never fully charged. The most common battery problems are sulfation and stratification; both will artificially raise the open circuit voltage, causing the battery to appear charged, yet the battery will have low capacity. You can use the Recondition Mode in an attempt to reverse these problems. Not all batteries can be recovered. For best results, take the 12-volt Lead/Acid battery through a full charge cycle before using the RECONDITION mode. **CAUTION: USE THIS MODE WITH CARE. THIS MODE IS FOR 12-VOLT LEAD-ACID BATTERIES ONLY. THIS MODE USES A HIGHER VOLTAGE CHARGING AND MAY CAUSE SOME WATER LOSS IN WET LEAD/ACID BATTERIES. DO NOT USE WITH LITHIUM BATTERIES AS IT CAN CREATE RISK OF SPARKS, FIRE, EXPLOSION, PROPERTY DAMAGE, INJURY, AND DEATH.**



USE OF THE RECONDITION MODE **12V LEAD/ACID ONLY!**

1. Plug in the Antigravity Super-Charger to a suitable 110v-120v electrical outlet.
2. Press the "CHARGER FUNCTION" Button to scroll to the "RECOND" Icon.
3. Connect the Super-Charger's Clamps to the correct Polarity of your Battery. Red Clamp to Positive (POS) Terminal of the battery, and the Black Clamp to Negative Terminal (NEG) of the battery.
4. When the clamps are connected to the battery, Recondition Mode will begin.

RECONDITION MODE IS NOT FOR USE WITH LITHIUM BATTERIES!

RECONDITION ICON



Using the Winter Mode

The Antigravity Batteries Super-Chargers offer a useful AUTOMATIC WINTER MODE; this allows for better charging of batteries in colder temperatures below 40 degrees F (5°C). It is automatic depending on the ambient temperature.



USE OF THE AUTOMATIC WINTER MODE

1. The Winter Mode Feature is an AUTOMATIC ACTIVATION mode. It will activate if the Charger senses the temperature to be below approximately 37 degrees F.
2. The SNOWFLAKE Icon will light if Winter Mode is in progress.
3. No interaction between the User and the Charger is necessary.

WINTER CHARGING ICON



Troubleshooting the Charger



TROUBLESHOOTING

1. If the Charger reads "ERR" check the following:

- A. Check polarity connection is correct.
- B. Check that Clamps are not connected together.
- C. Check if there is voltage at the battery; the Charger needs to see voltage from the battery or it will not start charging battery.
- D. If any battery is over 17v, the Charger will read "Err".

2. If the Charger reads "BAD"

The Super Charger may read "BAD" when attempts at charging have been unsuccessful, or battery does not hold a charge. This does not mean the battery is actually faulty or not useable; this reading could occur due to a loose connection or interruption in the charging. It is best to ensure a good connection and try again. If you get another "BAD" reading the battery may be faulty, but should be tested by a professional for a final determination.

Protections

The Antigravity Super-Charger has multiple built-in protections:

- SHORT-CIRCUIT PROTECTION
- OVER-LOAD PROTECTION
- LOW-VOLTAGE PROTECTION
- HIGH-VOLTAGE PROTECTION
- OVER-DISCHARGE PROTECTION
- OVER-TEMPERATURE PROTECTION
- OVER-CHARGE PROTECTION
- REVERSE CONNECTION PROTECTION - If connected incorrectly Charger will show "Err"

THE PRODUCT HAS THE FOLLOWING CERTIFICATIONS:

USA Certifications: ETL, FCC, DOE, CEC

EU Certifications: GS, EMC, ROHS



Limited Warranty

1 WARRANTY PERIOD

For full Warranty terms and information visit our Warranty page: <https://antigravitybatteries.com/warranty/>

Antigravity Batteries LLC warrants to the original purchaser that our Chargers are free of defects in material and workmanship for the term of 3 years. Visit our website to see the full Warranty terms and to Register your Antigravity Super-Charger. Warranty is not Transferable.

2 YOUR WARRANTY INCLUDES

- **Lifetime Support**

Contact us via phone, email or live-chat for product support after your purchase.

- **30 Days Money Back Guarantee**

You can return the product within the first 30 days for a full refund.

3 WARRANTY ELIGIBILITY

The Warranty is made to the original purchaser from ANTIGRAVITY BATTERIES and "Authorized Resellers" and does NOT extend to any other persons or entities. The warranty is NOT assignable; a Warranty Claim is the obligation of the original purchaser.

1. The Product must be purchased from an Authorized Dealer.
2. The Product must be registered within 30 days of purchase.

Customer Service



3 Years Limited Warranty Service



Lifetime Technical Support



info@antigravitybatteries.com



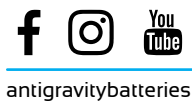
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