



INSTALLATION & OPERATION MANUAL

RACE ENERGY

TrailerCharge-12-5 Battery Charger



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IMPORTANT SAFETY INSTRUCTIONS

■ **SAVE THESE INSTRUCTIONS** — The manual contains important safety and operating instructions for the trailer battery charger.

■ **GENERAL**

- 1) CAUTION — To reduce risk of injury, charge only lead acid or sealed gel cell type rechargeable batteries. Other types of batteries may burst causing personal injury and damage.
- 2) Do not expose the trailer charger to rain or snow
- 3) Use of an attachment not recommended or sold by the charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- 4) Do not disassemble charger; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
- 5) To reduce risk of electric shock, disconnect charger from batteries or other DC supply before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

■ **CHARGER LOCATION**

- i) Never place charger directly above a battery as gases from a battery will corrode and damage charger.
- ii) Never allow battery acid to drip on charger when reading gravity or filling battery.

■ **CHARGER CONNECTION PRECAUTIONS**

Connect and disconnect DC input & output connections only after setting charger switch to **OFF** position.



INTRODUCTION

The TrailerCharge-12-5 Charger is a single stage lead acid battery charger. It will keep the battery at 13.8 volts by float charging. It is configured to run from a 12 VDC supply, specifically the tow vehicle system.

Trailercharge-12-5 Specifications

■ Input/Output

Input Volts (DC)	11 – 15
Input Amps (max)	7.5
Input Fuse	AGC-10
Output Volts (DC)	13.8
Output Amps	5 Continuous
Isolation Input-Output	Common negative

■ Protection

Input Reverse Polarity	Replace Input Fuse
Output Reverse Polarity	Automatic
Output Protection	Current limit and short circuit protected

■ General

Isolation Case to Input or Output	> 500 VDC
Length	7.9 in / 20.1 cm
Temp. Range	-25 to +40° C @ maximum output
Width	6.0 in / 15.2 cm
Height	2.4 in / 6.1 cm
Clearance	1 Inch (2.5 cm) all around
Material	Marine Grade Aluminium
Finish	Black Anodize / Black Powder Epoxy
Fastenings	18-8 Stainless
Weight	2.4 lb / 1.1kg

Designed and manufactured by:

RACE ENERGY 

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Specifications subject to change without notice.

INSTALLATION

Note :

**The ON/OFF switch must be in the OFF position
before installing the unit!**

The installation of the TrailerCharge will be slightly different in every case, but will generally follow these basic steps.

- 1) In most trailers, there is a fuse block mounted to the wall of the trailer, maybe inside a cabinet. The main lead of the block will connect directly to the positive terminal of the battery. Each 12V circuit will be connected to the block through a fuse. AS WELL, the 12 volts DC from the tow vehicle will also connect to the block through a fuse. This is the wire that will be removed from the fuse block and replaced with the output positive wire from the TrailerCharge.
- 2) The original input wire will be connected to the Input Positive Wire from the TrailerCharge.
- 3) The Black or Ground wire from the TrailerCharge must be electrically connected to the negative terminal of the battery. This can be the negative terminal of the battery directly, or possibly the frame of the trailer if the battery is connected to it. Confirm with a voltmeter that the point you choose for the ground connection is directly connected to Battery Negative.
- 4) Screw the TrailerCharge to the wall of the trailer in a convenient location that keeps the wiring short and neat.



Testing

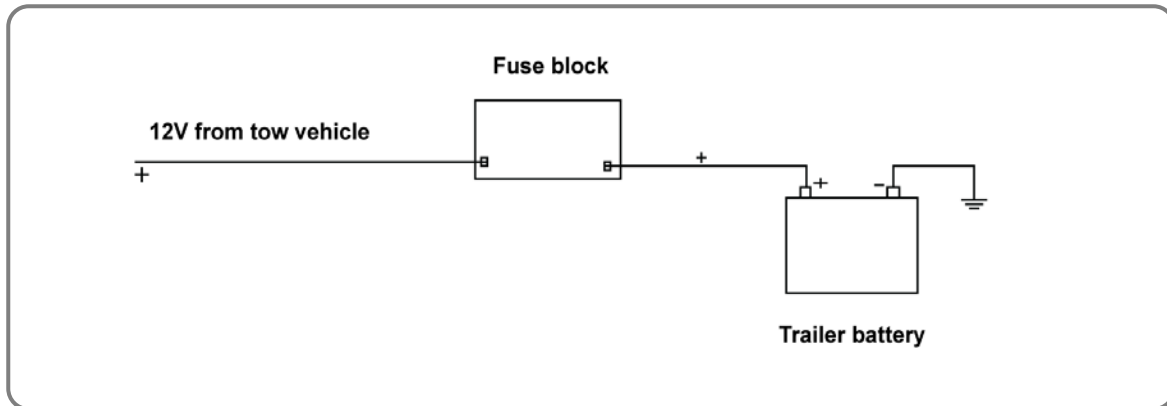
- 1) Plug the trailer into the tow vehicle. If you do not actually hitch the trailer to the tow vehicle, run a jumper cable from the frame of the tow vehicle to the frame of the trailer to be sure that the ground circuit is complete.
- 2) Start the engine on the tow vehicle.
- 3) Inside the trailer, flip the ON/OFF switch on the TrailerCharge to the ON position. The Input Power LED should turn on immediately.
- 4) The output LED will be OFF if the battery voltage is less than 11 volts. As the charger brings the battery voltage up to 11 volts, the output LED will begin to glow faintly. The output LED will increase in brightness as the battery voltage increases, until at full brightness when the battery voltage reaches 13.8 volts.



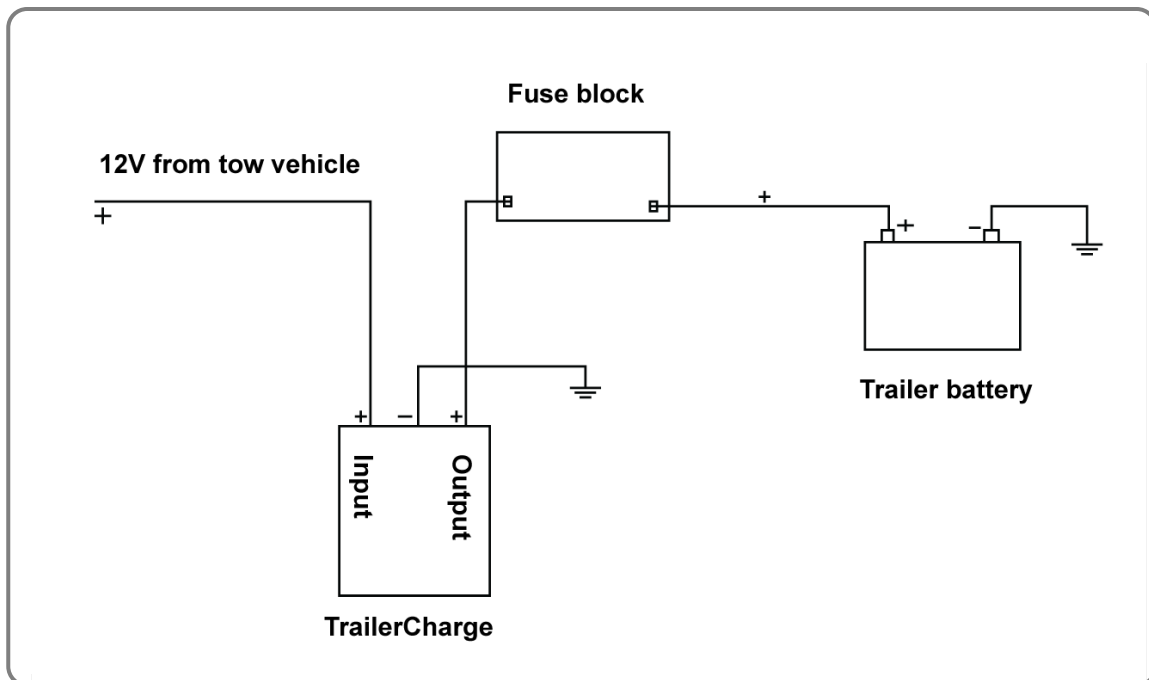


WIRING DIAGRAM

Trailer Wiring before TrailerCharge Installation



Trailer Wiring after TrailerCharge Installation





OPERATION

Under most circumstances, leave the TrailerCharge turned ON. If there is no input power, it will not drain any power from the trailer battery, so there is no need to disconnect it or turn it off. Whenever the tow vehicle is connected to the trailer, the trailer battery will charge. There is no concern about overcharging as 13.8 volts is a safe voltage that will not cause the battery to heat up or lose water. We would suggest you check that the TrailerCharge LED's are on normally at some point during each trip to be sure that the TrailerCharge is working correctly.

TROUBLESHOOTING

If the fuse blows whenever it is turned on, check that the power leads are connected to the battery with the correct polarity; if they are then the unit is damaged and must be returned for repair.



LIMITED WARRANTY

1. The equipment manufactured by Race Energy. (the "Warrantor") is warranted to be free from defects in workmanship and materials under normal use and service.
2. This warranty is in effect for:
 - a. 3 Years from **date of purchase** by the end user for standard products offered in our catalog.
 - b. 2 Years from **date of manufacture** for non-standard or OEM products
 - c. 1 Year from **date of manufacture** for encapsulated products.
3. Race Energy will determine eligibility for warranty from the date of purchase shown on the warranty card when returned within 30 days, or
 - a. The date of shipment by Race Energy, or
 - b. The date of manufacture coded in the serial number, or
 - c. From a copy of the original purchase receipt showing the date of purchase by the user.
4. In case any part of the equipment proves to be defective, the Purchaser should do the following:
 - a. Prepare a written statement of the nature of the defect to the best of the Purchasers knowledge, and include the date of purchase, the place of purchase, and the Purchasers name, address and telephone number.
 - b. Call Race Energy at 800-668-3884 and request a return material authorization number (RMA).
 - c. Return the defective part or unit along with the statement at the Purchasers expense to the Warrantor; Race Energy, 8128 River Way, Delta, B.C., V4G 1K5, Canada.
5. If upon the Warrantor's examination the defect proves to be the result of defective material or workmanship, the equipment will be repaired or replaced at the Warrantor's option without charge, and returned to the Purchaser at the Warrantor's expense by the most economical means. Requests for a different method of return or special handling will incur additional charges and are the responsibility of the Purchaser.
6. Race Energy reserves the right to void the warranty if:
 - a. Labels, identification marks or serial numbers are removed or altered in any way.
 - b. Our invoice is unpaid.
 - c. The defect is the result of misuse, neglect, improper installation, environmental conditions, non-authorized repair, alteration or accident.
7. No refund of the purchase price will be granted to the Purchaser, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so.
8. Only the Warrantor shall perform warranty service. Any attempt to remedy the defect by anyone else shall render this warranty void.
9. There shall be no warranty for defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion except for equipment specifically stated to be waterproof.
10. No other express warranty is hereby given and there are no warranties that extend beyond those described herein. This warranty is expressly in lieu of any other expressed or implied warranties, including any implied warranty of merchantability, fitness for the ordinary purposes for which such goods are used, or fitness for a particular purpose, or any other obligations on the part of the Warrantor or its employees and representatives.
11. There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives for injury to any person or persons, or damage to property, or loss of income or profit, or any other consequential or resulting damage which may be claimed to have been incurred through the use or sale of the equipment, including any possible failure of malfunction of the equipment, or part thereof.
12. The Warrantor assumes no liability for incidental or consequential damages of any kind.



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