

+ ROADCHARGER -

RoadCharger 20 Amp 7 Way Installation Manual



Safety First

This symbol is used to call attention to instructions concerning personal safety. Be sure to observe and follow these instructions. Take time to be careful!

 **WARNING** indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury and includes hazards that are exposed when guards are removed.

WARNING

BATTERIES

- To avoid injury, eye protection and acid-resistant gloves must be worn when working around batteries. Do not smoke, use open flame, make sparks or create other ignition sources around batteries. If a battery is giving off gases, it can explode and cause injury to personnel. Remove all jewelry such as rings, ID tags, watches, and bracelets. If jewelry or a tool contacts a battery terminal, a direct short will result in instant heating or electric shock, damage to equipment, and injury to personnel.

- Sulfuric acid contained in batteries can cause serious burns. If battery corrosion or electrolyte makes contact with skin, eyes or clothing, take immediate action to stop the corrosive burning effects. Failure to follow these procedures may result in injury or death.

a. Eyes. Flush with cold water for no less than 15 minutes and seek medical attention immediately.

b. Skin. Flush with large amounts of cold water until all acid is removed. Seek medical attention as required.

c. Internal. If corrosion or electrolyte is ingested, drink large amounts of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek medical attention immediately.

d. Clothing/Equipment. Wash area with large amounts of cold water. Neutralize acid with baking soda or household ammonia.

- To minimize risk of fire or explosion, follow these battery servicing safety precautions:

- Never check battery charge by placing a metal object across the battery posts. A spark will occur and cause possible explosion. Use a voltmeter or hydrometer.

Introduction: Congratulations on your new RoaDCharger! This device is going to help keep your trailer battery within its peak performance parameters, which will allow you greater productivity and lower cost of ownership. In this manual, we will cover the basic installation procedure, as well as some key tips for before and after your installation. Lets Get Started!

Pre Installation Checklist: With this checklist, we are creating a baseline for functionality of the electrical circuits on the trailer. If any of these functions do not work, please stop work immediately and address the problem before moving forward with installation.

NOTE: If you have no 12 volt accessory power at 7-way please reference vehicle manual for more information.

- **Electrical System Functions**

- **Brake Lights** **Yes**___ **No**___
- **Left Turn Signal** **Yes**___ **No**___
- **Right Turn Signal** **Yes**___ **No**___
- **Tail / Running Lights** **Yes**___ **No**___
- **Electric Brakes** **Yes**___ **No**___
- **Breakaway System** **Yes**___ **No**___
- **12 Volts At 7-Way** **Yes**___ **No**___

RoaDCharger Installation:

Please follow the steps below and the diagrams / notes on the next few pages to ensure the RoaDCharger is installed properly.

- 1) First, remove the unit from the packaging and inspect for any damage during shipping (report immediately if there is damage).
- 2) Next, find a suitable place to mount the unit using the four 5/16” holes for mounting. It is rated for exterior mounting so feel free to install on outside wall of toolbox, front, sides, or rear wall if there is room. Ensure nothing will impact the units during normal operation of the trailer (dump bed, tow vehicle, jack handle, etc).
 - **NOTE:** Be sure to consider length of charging wires (Blue, Yellow, and Black) when deciding on mounting location. These wires are NOT to be cut and extended.
- 3) Drill four holes in box and install using bolts supplied by you, the installer.
- 4) Once unit is mounted firmly to toolbox, locate area in bottom of toolbox to drill 5/8” hole to pass charging wires through. In some toolboxes there are holes suitable to pass wires through already in existence. If this is the case then utilize.
- 5) Pass charging wires through hole in box (see previous step) and attach to battery.
 - **NOTE:** BLUE and YELLOW attach to the POSITIVE terminal. BLACK attaches to NEGATIVE terminal.
- 6) At this point unit should be mounted, and charging wires connected to trailer battery.

- 7) Now take the male 7-way from the trailer and insert it into the 7-way female provided on the RoadCharger.
- 8) Take the male 7-way that is provided with the RoadCharger and route it through the tongue of the trailer to near the hitch. This will plug into vehicle 7-way.
- 9) Perform Post Installation Checks.
- 10) Sit Back, Relax, and let the RoadCharger do its job!

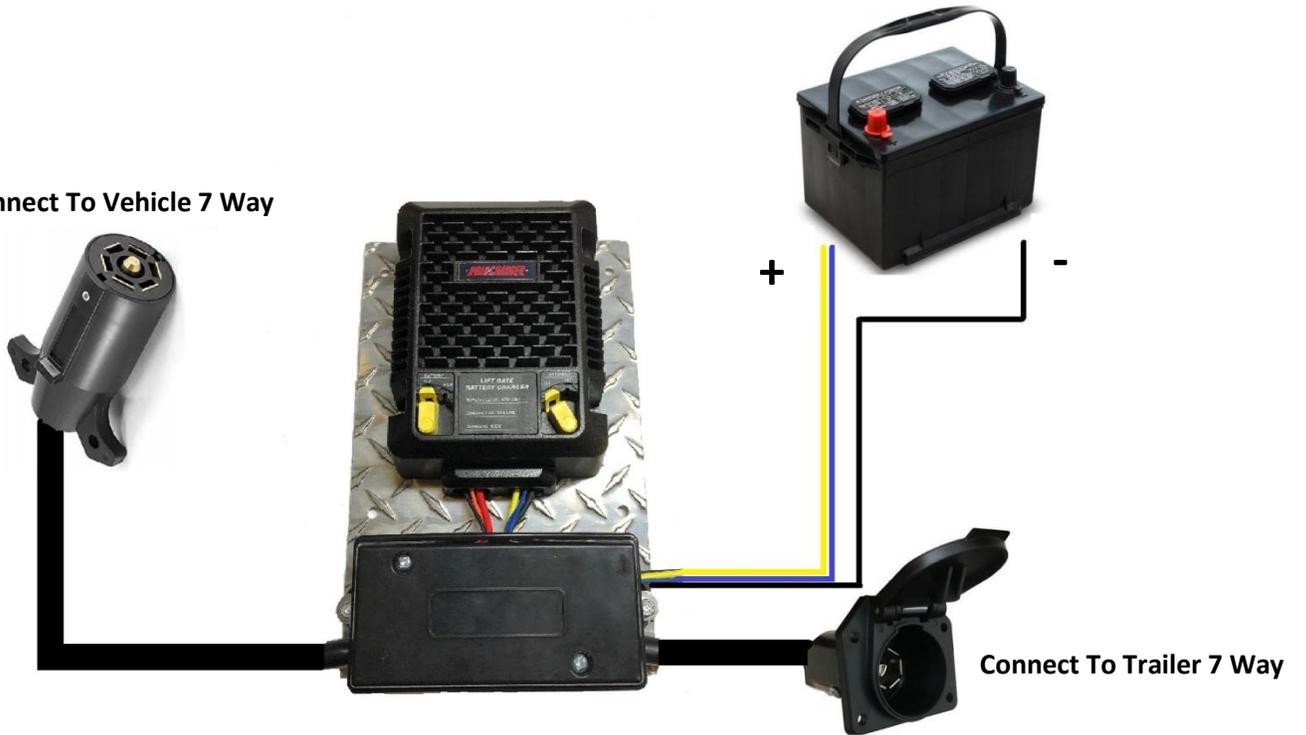
Post Installation Checklist: This checklist ensures functionality of the electrical circuits on the trailer have not been affected during the installation. If any of these functions do not work, please stop work immediately and address the problem before moving forward with installation.

- **Electrical System Functions**

- **Brake Lights** Yes___ No___
- **Left Turn Signal** Yes___ No___
- **Right Turn Signal** Yes___ No___
- **Tail / Running Lights** Yes___ No___
- **Electric Brakes** Yes___ No___
- **Breakaway System** Yes___ No___

RoadCharger Wiring Diagram:

Connect To Vehicle 7 Way



Post Installation Notes:

Wire Color	Function	Connect to
Black	Ground	Vehicle ground
Yellow	Charger Output	Charging Batteries
Blue to battery lug	Battery Temp Sensor	Positive trailer battery terminal

Local LED indicators:

Power status/Standby Indicator (Blue LED): Solid ON while charging, OFF when the input voltage is too low either because of too much draw on the battery or the truck has been turned off. It will also flash 100ms ON, 3 seconds off when it is Extended charging mode and the input voltage is between 12.5v and 12.7v during input voltage inspection periods.

Diagnostic/Failure Indicator (Red/Green LED): This LED will blink based on failures below. Should be reported as an error code then 10s delay, then error code again.

Blink Code	Indication
1 Red Blink	Internal temperature is too high, will reduce output current until it has cooled down
2 Red Blink	Input voltage is too low, output will shut off
3 Red Blink	Input or output voltage is too high
4 Red Blink	Output over current/output shorted to ground
5 Red Blink	External temperature sensor has failed
6 Red Blink	Internal temperature sensor has failed
1 Amber Blink	Input voltage is getting low and causing less than maximum output current

Charging Mode (Blue LED):

- a. Solid ON: Bulk Charging Stage
- b. Rapid Flash: Absorption stage
- c. Slow Flash: Float Stage

Front Panel Selector Switches:

Battery Type: Selector switch on the unit ensures optimal charge profile for AGM or flooded lead acid batteries. Make selection of type of battery you are charging.

Extender: Selector switch on the unit enables battery charging after the engine is off, while maintaining starting capability. Choose “On”, to use this option or “Off” to shut down unit when vehicle is turned off.

WARRANTY - 1-year warranty for defects in material and workmanship