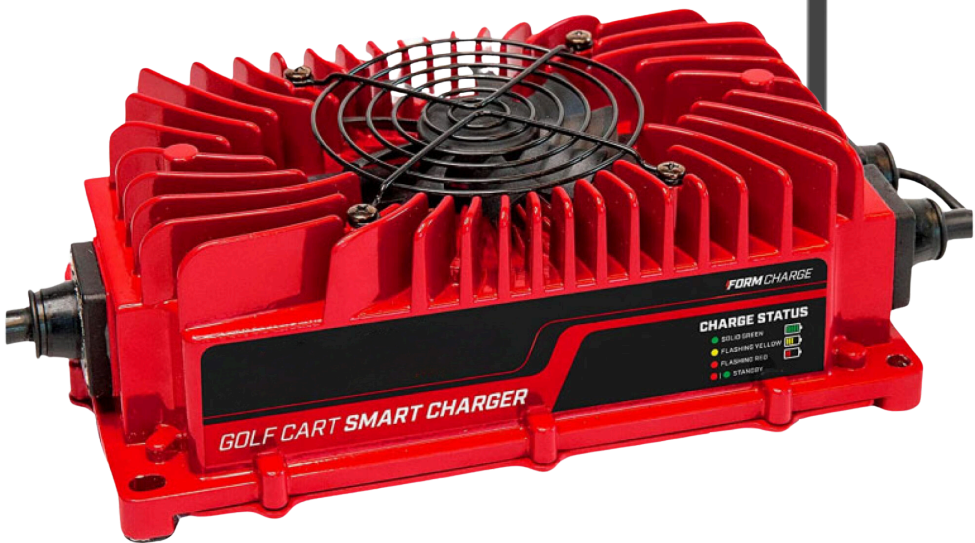




# OWNERS MANUAL



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# EXTERNAL MOUNTED QUICK START INSTRUCTIONS

## MOUNTING INSTRUCTIONS

### Option A: Freestanding Instructions

Our golf cart chargers offer versatile storage options: they can stand freely or be mounted on the wall. While we offer mounting hardware for these external chargers, it's not required to mount them.

### Option B: Wall Mount Instructions

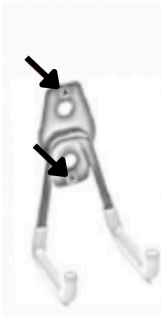
If you choose to do so, the charger and plug holder may be mounted to the wall. Below you will find the steps to complete the installation.

**Step 1:** Remove rubber feet from the bottom of the charger.

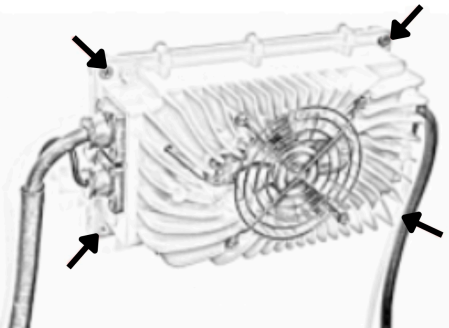
**Step 2:** Choose a solid surface & correct hardware to ensure the charger is mounted properly. Wall anchors are required if mounting to drywall.

**Step 3:** Using your charger as a template, hold the charger against the wall & mark the holes. The mounting locations on the charger & plug are shown below.

Plug Holder



Charger



↙ = Mounting Location

**Step 4:** Set charger & hook aside. Pre-drill holes on marked locations.

**Step 5:** For those mounting to drywall, insert the drywall anchors into the holes.

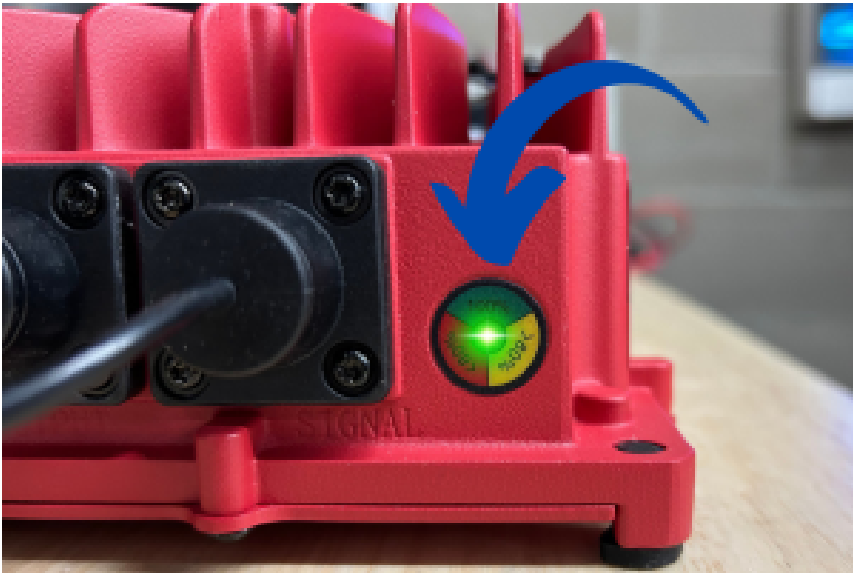
**Step 6:** Line up the charger with the predrilled holes. Secure with screws.

## OPERATING INSTRUCTIONS





**Step 1:** Plug the 3-prong connector of the input power cord into a compatible electrical outlet. The CHARGE STATUS light will start flashing Red / Green.

**Step 2:** Insert the output plug into the battery charging receptacle located on your golf cart. If the light continues to flash Green/Red, your cart is not being detected. Please refer to the FAQ section.

**Step 3:** When the output plug has made a successful connection, the CHARGE STATUS light will illuminate based on the battery charging needs.



**NOTE:** When connected, the light may turn Solid red for up to 1 minute while it is diagnosing the battery state. If the LEDs do not change when the cart is plugged in, the charger is not sensing enough voltage, or your receptacle has a bad connection. Please refer to the troubleshooting section of this manual if this occurs.

Color	Description	Battery Level
	Flashing Red	Deep Charge
	Flashing Yellow	Absorption Charge
	Solid Green	Charged
	Flashing Red / Green	Charger Not Detected

**Step 4:** Keep your battery charging until the CHARGE STATUS light turns green, indicating that your cart is fully charged.

**Step 5:** Store your FORM Golf Cart Battery Charger in a dry environment.

**NOTE:** It is important to check the water level of lead-acid batteries approximately every 30 days. Batteries should be filled after charging, the water level should be even in all cells and below the fill well in each cell. If the battery plates are exposed before charging, add just enough water to cover the plates. If the battery is overfilled before charging, it may overflow during charging. Use only distilled water to fill batteries.

# ONBOARD MOUNTED QUICK START INSTRUCTIONS

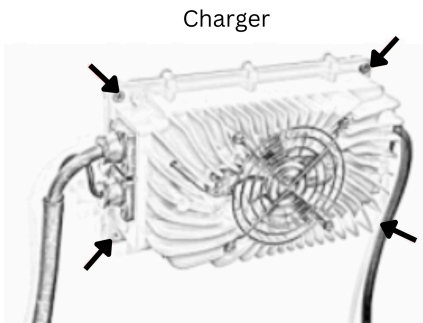
## MOUNTING INSTRUCTIONS

**Step 1:** Turn the ignition key to the OFF position.

**Step 2:** Locate the TOW/RUN Toggle Switch on your golf cart and turn it to TOW mode (TOW/RUN switch is located under the seat in the battery compartment).

**Step 3:** Choose a solid surface & correct hardware to ensure the charger is mounted properly. (Example Locations: baggage well, battery compartment, the bottom of the seat) Provide a minimum of 3 inches of space between the fan and any other object for the charger to properly cool itself.

**Step 4:** Using your charger as a template, hold the charger against the mounting location & mark the holes. The mounting locations on the charger are shown below.



**Step 5:** Set the charger aside. Predrill holes on marked locations.

**Step 6:** Line up the charger with the predrilled holes. Secure with bolts or screws.

**Step 7:** Locate the battery with the main POSITIVE (+) terminal in the electrical series on your cart batteries. This can be identified by a POSITIVE (+) terminal that has a large gauge wire connecting the battery pack to the cart.

**Step 8** Attach the red lead of the charger (marked with red heat shrink) to the main battery Positive (+). Applying Dielectric grease around the connections will help prevent corrosion.

**Step 9:** Locate the battery with the main NEGATIVE (-) terminal in the electrical series on your cart batteries. This can be identified by a NEGATIVE (-) terminal that has a large gauge wire connecting the battery pack to the cart.

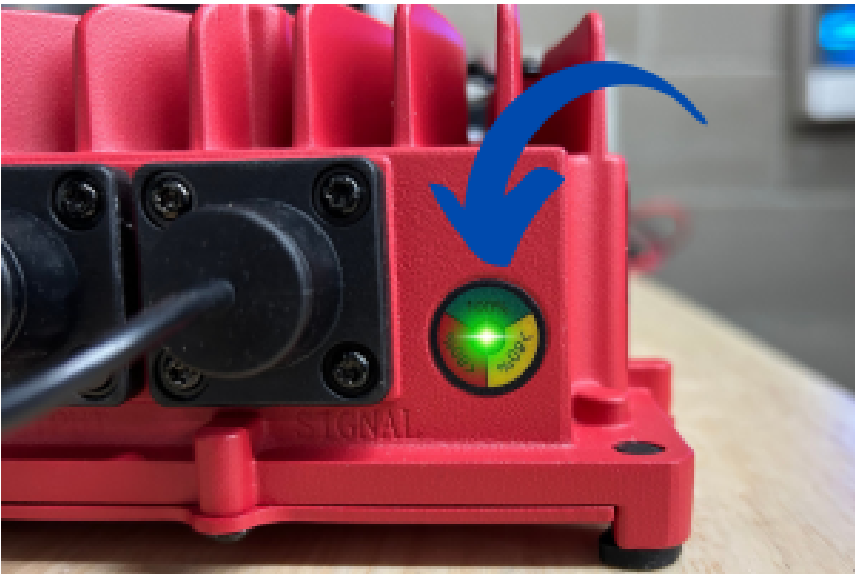
**Step 10:** Attach the black lead (marked with black heat shrink) to the main battery NEGATIVE (-). Applying Dielectric grease around the connections will help prevent corrosion.





**Step 11:** Switch the golf cart to RUN Mode.

## OPERATING INSTRUCTIONS

**Step 1:** Plug the 3-prong connector of the input power cord into a compatible electrical outlet.

**Step 2:** The CHARGE STATUS light will illuminate based on the battery charging needs.



Color	Description	Battery Level
	Flashing Red	Deep Charge
	Flashing Yellow	Absorption Charge
	Solid Green	Charged
	Flashing Red / Green	Charger Not Detected













**Step 4:** Keep your battery charging until the CHARGE STATUS light turns green, indicating that your cart is fully charged.

**Step 5:** Remove the input power plug from the wall.

**NOTE:** It is important to check the water level of lead-acid batteries approximately every 30 days. Batteries should be filled after charging, the water level should be even in all cells and below the fill well in each cell. If the battery plates are exposed before charging, add just enough water to cover the plates. If the battery is overfilled before charging, it may overflow during charging. Use only distilled water to fill batteries.

# CHARGER OPERATIONS

## Charger LED Codes

Number Codes	Description	Status Light
1	Alternate  /  Repeatedly	Cart Not Detected
2	Flashes  Repeatedly	Deep Charge
3	Flashes  Repeatedly	Finishing Charge
4	Solid 	Charge Complete
5	(Alternates  /  x1) / Off 4 Seconds / Repeat	High Internal Temp
6	(Alternates  /  x14) / Fan On / (Flashes  x4) / (Flashes  x2) /  / Fan Off / Repeat	Club Car failed OBC (Circle Plug)

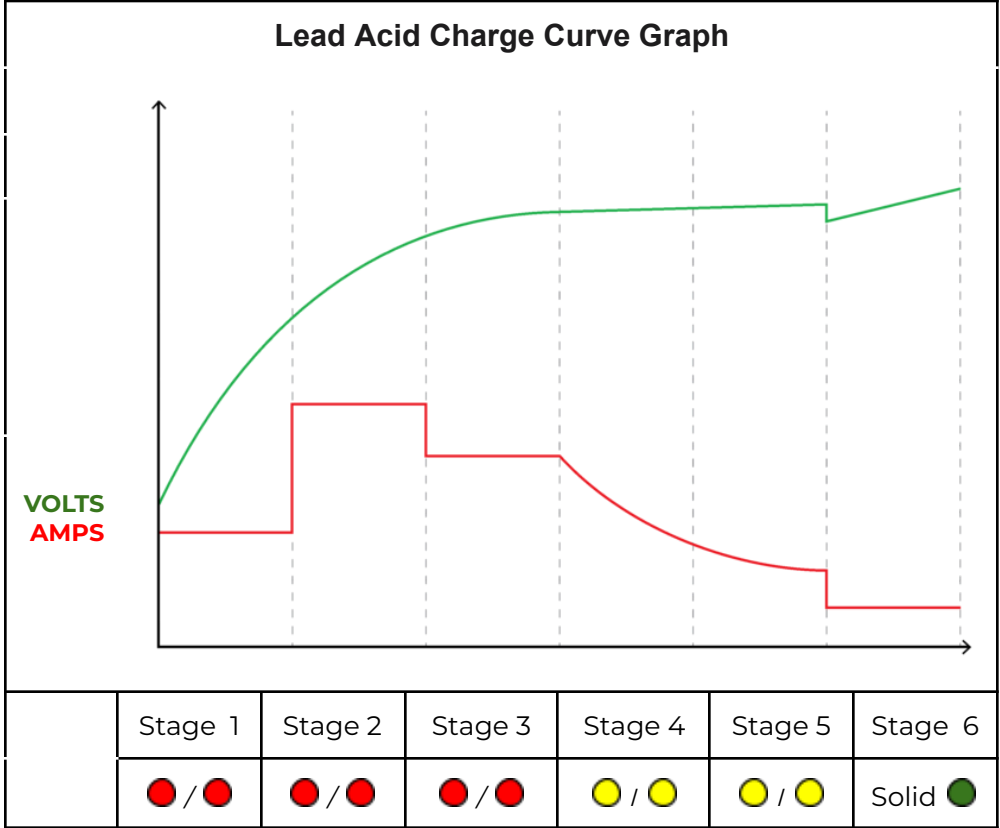
If you have additional questions about the LED Codes, please contact the FORM Charge Product Specialist at [www.FORMCharge.com/help](http://www.FORMCharge.com/help)

## Product Specifications

Specification	36 Volt Charger	48 Volt Charger
Power Output	900W	900W
Input Voltage	110Vac	110Vac
Max Output Voltage	44.1Vdc	58.8 Vdc
Output Current	18 Amp	15 Amp
Power Efficiency	≥85%	≥85%
IP Rating	IP67	IP67
Working Temperature	-31°F to 170°F	-31°F to 170°F
Storage Temperature	-40°F to 176°F	-40°F to 176°F

# Charging Algorithm

Designed to protect and preserve your batteries automatically. The 6-stage smart charging algorithm is designed around optimal conditions for charging lead acid golf cart batteries.



# Troubleshooting And FAQs

## 1. The charge status light continues to flash Red/Green when plugged into the golf cart.

- A. Check if the output plug is fully inserted into the golf cart.
- B. Check if there are any loose or corroded connections on your battery terminals.
- C. Are your batteries completely dead? The charger must detect a minimum voltage of 18V from your batteries to begin charging. This is a safety feature to protect the health of your batteries. You may use a multimeter to check the voltage of your batteries. This can be solved by using an Automotive Trickle Charger and charging each battery individually to bring them up to the minimum voltage. (Detailed instructions video, "How To Charge Dead Golf Cart Batteries," is available on our Amazon Listing.

## 2. Your cart has been charging for multiple hours, but CHARGE STATUS hasn't turned green.

- A. 36V or 48V cart with depleted batteries at 50% will typically take between 7-10 hours to fully charge. This charging time can vary widely depending on the type, age, and health of your batteries.

**NOTE:** Most battery manufacturers recommend you do not deplete your batteries below a 50% charge in order to prevent damage to your batteries.

## 3. The battery meter on your cart reads full, but the charger is still running.

- A. Many aftermarket battery meters are calibrated to read the resting voltage. The resting voltage cannot be accurately measured until the cart has been taken off the charger for 12-24 hours. Let the charger continue to run until the charge cycle has been fully completed.

#### **4. The batteries sound like they are “boiling”**

A. Do not worry, the batteries are not boiling. The sound you hear is the release of hydrogen gas bubbles during the bulk recharge phase. The release of hydrogen bubbles stirs up the sediment in the bottom of the batteries and helps to main a healthy environment.

**NOTE:** If fluid is bubbling out of the battery during charging, immediately disconnect the charger. This can be a sign that too much fluid has been added to the batteries.

#### **5. How loud should the charger be?**

The noticeable sound of rushing air from the fan is a normal part of the cooling process on your FORM rapid charger.

#### **6. How warm do FORM chargers get?**

The FORM battery chargers can reach 140° F. They may get warm in an enclosed area. The maximum recommended air temperature for charging batteries is 105° F. When the charger is hot, the output current will drop to protect the charger and the battery.

#### **7. Will I damage my batteries if I leave the charger plugged in over long periods of non-use (like storage)?**

We do not recommend leaving your cart charging for more than 30 days. There are many things that could go wrong. The most common would be batteries drying out or a battery cell going bad. Both of these could damage or completely ruin the battery.

Our recommendation:

- Fill up your batteries before you go
- Turn the cart into tow mode (switch under the seat)
- Disconnect the main positive and main negative from the cart to the battery pack. This will minimize any drain on the batteries when you're gone.

Our charger does have safeguards in place, but keeping a charger on during long-term storage has too many variables that could lead to damaged batteries.

## **8. Why does the LED on my FORM charger stay illuminated for a period of time after unplugged from AC power?**

This is normal and does not affect your batteries. It is simply a function of the precision charging, ensuring the charger is disconnected prior to terminating the charge cycle.

## **9. What is the warranty?**

The manufacturer's warranty is 24 months. You may return the charger for up to 30 days after the date of delivery.

## **10. Can this be used at an input voltage of 240Vac?**

Yes, the input voltage can be used for 100-240Vac

**NOTE:** When the golf cart programming is at 5% battery, it will reduce the speed to 5pmh, which has been tested to be around 3 miles of travel.

## **Important Safety Instructions**

Before using your battery charger, read all safety.

1. Always use the charger in well-ventilated environments.
2. Due to the high current, sparking is normal when connecting the charger to the battery.
3. Avoid charging the wrong type of battery.
4. DO NOT cover the aluminum case. This can cause your charger to overheat while charging.
5. DO NOT disassemble the charger.
6. Batteries produce hydrogen gas, which can explode if ignited, never smoke, use an open flame, or create sparks near the battery. Proper ventilation is required when charging

7. Risk of electrical shock. DO NOT touch the uninsulated portion of AC or DC connectors or the uninsulated battery terminal
8. To prevent electrical shock, ensure all electrical connectors are in good working condition. DO NOT use connectors that are cracked, corroded, or do not make adequate electrical contact. Use of a damaged or defective connector may result in a risk of overheating or electrical shock.
9. DANGER – Never alter the AC cord or plug provided if it will not fit the outlet installed by a qualified electrician. Improper connection can result in the risk of an electric shock.
10. DANGER – Do not attempt to repair or service the charger yourself. Opening the charger may expose you to high voltages, the risk of electric shock, and other hazards.
11. DANGER – Do not splice the AC power cord.
12. DANGER – Damaged cords and plugs can cause electric shock or electrocution.
13. CAUTION – When using an extension cord, make the AC connection to the charger outside of the battery compartment as far away as practical to reduce the risk of spark igniting gasses in the compartment.
14. CAUTION – Even though the FORM charger is capable of operating in a high ambient temperature environment, a minimum of six inches of unobstructed area should be allowed on all sides of the unit for proper air circulation and cooling. Proper cooling and circulation will allow the charger to operate at peak efficiency.



FEDERAL COMMUNICATIONS COMMISSION (FCC)  
STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

***WE ARE HERE TO HELP!***

[www.formcharge.com/help](http://www.formcharge.com/help)



- Frequently Asked Questions
- Helpful Videos
- Troubleshooting Guides
- Product Support Appointments