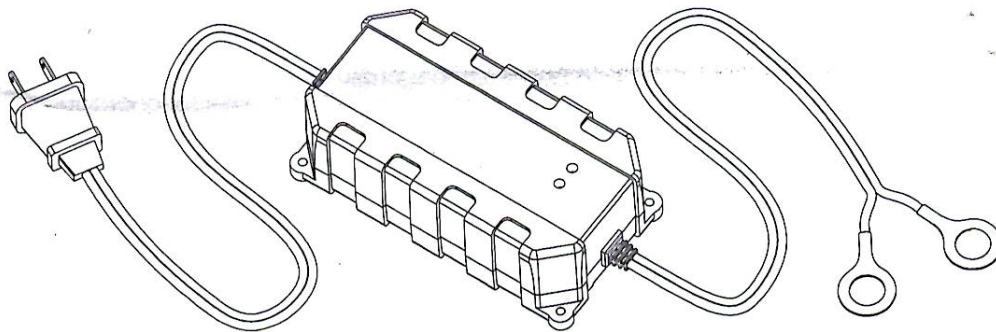


# **AUTOCRAFT™**

## **1.5 AMP**

# **MOUNTED BATTERY CHARGER/ MAINTAINER**



This Autocraft product has been carefully manufactured to give you dependable operation. Please read this manual thoroughly before operating your new product, as it contains the information you will need to become familiar with its features and obtain optimal performance. Please keep this manual on file for future reference.

**If you have questions regarding your Autocraft product,  
please call 877-238-2623.**

## IMPORTANT SAFETY INFORMATION



**WARNING:** Risk of Explosive Gases, Electric Shock or Fire.

- Keep out of reach of children.
- To reduce the risk of personal or property damage, read and understand all directions and warnings prior to use of this battery charger/maintainer.
- Do not use in wet conditions or near combustible materials. Keep away from flames, smoke or sparks while charging. Never smoke in the area of the battery or engine.
- To reduce the risk of electric shock, connect to only properly grounded outlets. Use of an extension cord is not recommended and could result in fire.
- Remove metal items such as rings, bracelets and necklaces while working with this charger/maintainer. Lead acid batteries can produce a short circuit high enough to cause burns.
- Working with lead acid batteries may be dangerous. During normal operation, batteries may generate explosive gases, so use extreme caution with using this battery charger/maintainer.
- Use only in a well-ventilated area.
- Do not operate if cords or wires are frayed or defective, or if charger/maintainer base is defective in any way. Do not attempt to open the charger/maintainer as this could result in electric shock.
- This unit is compromised of switches and circuit breakers which could produce sparks. Make sure you have adequate space to use this charger/maintainer.
- Use only on lead acid batteries. Do not use this charger/maintainer for charging dry cell batteries, as this could result in personal injury or property damage due to battery explosion.
- Do not charge a frozen battery.
- Do not overcharge a battery.
- Always wear protective eyewear and gloves when working with batteries. If battery acid comes in contact with your skin or clothing, immediately wash the area with soap and water and get medical attention right away.

## PREPARATION FOR CHARGING/MAINTAINING



### SHIELD EYES:

Explosive gases can cause eye injury or blindness.



### CONTAINS SULFURIC ACID:

May cause severe burns and blindness.

- If it is necessary to remove the battery prior to charging, always remove the grounded terminal first. Ensure all electrical accessories are off prior to charging.
- It is best to clean the battery terminals prior to charging. Using a battery terminal brush is a good way to remove corrosion.
- On Lead Acid Batteries, add distilled water to each cell to maintain the proper battery acid levels as specified by the battery manufacturer. Be careful not to overfill.

- Read individual precautions and warnings outlined by the battery manufacturer relative to charging. Ensure that charger clips make a tight connection.

## CHARGER MOUNTING INSTRUCTIONS

This charger is designed to be permanently mounted in close proximity to a 12V battery. The unit can be mounted using one of three different mounting options: hook mount, magnet mount or permanent fixture mount using the holes in the corner of the unit.

**⚠ WARNING:** Never use the hook or magnet mount on mobile equipment; such as cars, trucks, farm and construction vehicles. For these types of vehicles, you must use the permanent fixture mount option using the holes in the corners of the unit.

### MOBILE EQUIPMENT

The charger/maintainer can be mounted on the fender well or any other rigid area of your vehicle. See Fig. 1. Use the mounting holes at the corners of the unit as a template to drill 4 holes for mounting the unit. Machine screws with lock washers and nuts are the preferred fastener. You may also use sheet metal screws if clearance is limited in your chosen mounting location.

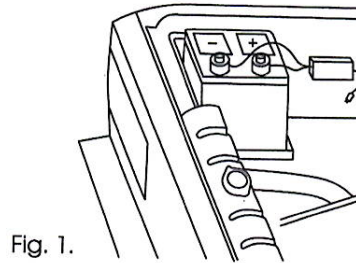


Fig. 1.

### STATIONARY EQUIPMENT

The charger/maintainer can be mounted on stationary equipment such as generators, using the hook or magnet mounting features.

**NOTE:** It is important to make sure that when the stationary equipment is in operation that the charger/maintainer will stay put in its mounting location.

## CHARGING/MAINTAINING BATTERY

### ELECTRICAL INSTALLATION

1. The output leads of the charger/maintainer are terminated with 3/8" diameter ring terminals. Route and secure the AC cord and the output wiring with wire ties, keeping these away from hot, sharp or moving parts.
2. Check the polarity of the battery posts.
 

**NOTE:** The positive (+) post is usually larger in diameter than the negative (-) post.
3. Determine which battery post is grounded.
 

**NOTE:** In most vehicles, the negative battery post is grounded to the chassis.
4. Refer to the Charging Time Calculation Table in Fig 1.

### PERMANENT RING CONNECTORS

1. Loosen and remove the nuts from the battery terminals.
2. Connect the red positive (+) ring connector to the positive (+) battery terminal.
3. Connect the black negative (-) ring connector to the negative (-) battery terminal.

4. Replace and tighten the nuts on the battery terminals.
5. Connect the ring connector cable to the charger/maintainer and position to reduce the risk of damage by moving engine parts.
6. Plug the AC power cord into a properly grounded outlet.

#### **AC POWER CORD CONNECTIONS AND PROPER GROUNDING**

- This battery charger/maintainer is designed for use on a 120V circuit. Always plug the AC power cord into a properly grounded outlet that follows all local ordinances. The plug pins must properly fit the grounded outlet. An improper connection can result in electric shock.
- NEVER change or alter the AC power cord or plug pins.
- If an extension cord is used it should follow the listed recommendations:
  - 100 ft (30.5m) or less – 18 gauge
  - 100 ft (30.5m) or more – 16 gauge

#### **OPERATING INSTRUCTIONS**

##### **Charging**

1. Properly assemble the battery charger/maintainer ensuring that all components are in good working order and free of damage.
2. Connect the battery charger/maintainer following the connections outlined previously based on the battery in or outside of the vehicle.
3. Plug the AC power cord into a properly grounded outlet.
4. If you have successfully connected everything properly, the red *Power* light will illuminate to show that the charger/maintainer is working.  
**NOTE:** If the red *Power* light does not illuminate, check all connections or have the battery tested.
5. As a reminder, the battery charger/maintainer is equipped with an auto-start feature and no current is supplied to the ring terminals until the battery is properly connected.

##### **Automatic Charging Mode**

The unit will switch automatically from Charging to Maintain mode when the battery is fully charged. (solid green charged light indicator)

##### **Desulfation**

If the battery is left discharged for an extended period, the battery could become sulfated. A sulfated battery will not accept a normal charge.

##### **Completed Charge**

When the unit has completed the charging process, the green *Charged* light will turn on. When this green light is illuminated, the charger/maintainer has stopped charging mode and switched to maintain mode.

### Maintain Mode (Float-Mode Monitoring)

The green *Charged* light indicates that the charger/maintainer has started maintain mode. In this mode, the charger will start recharging automatically when voltage drop to 13.2V.

**NOTE:** If the battery charger/maintainer has to provide the maximum charge for a continuous 12 hour period then the unit will revert to abort mode, which may indicate a problem with the battery. You should have the battery tested.

### Maintaining the Battery

The battery charger/maintainer has been designed to work 12V batteries. The unit is designed to maintain charge on both large and small batteries. It is not recommended to use this charger/maintainer to solely charge a large battery, as it can adversely affect the battery's capability to hold a charge. The maintain mode does allow you to maintain battery charge for extended periods of time, but remember that improper connections, vehicle electrical problems and other conditions can cause unexpected current draw. Always monitor the battery and the charging/ maintaining process.

### Fig. 1 Charge Time Calculation Table

Find your battery's CCA rating in the table below and note the charging time. The time reflects a battery with at least 50% charge. You may need to add time depending on the severity of discharge.

	BATTERY RATING	CHARGE TIME
Small Batteries (ATV, Lawn Tractor, Motorcycle, etc.)	6 - 12 AH	2 ½ - 4 hours
	12 - 32 AH	5 - 13 ½ hours
Cars/Trucks 200-315 CCA 315-500 CCA 550-1000 CCA	40 - 60 RC	Maintain only
	60 - 85 RC	
	80 - 190 RC	
Marine Deep Cycle	80 RC	Maintain only
	140 RC	
	160 RC	
	180 RC	

AH=Amp Hour

CCA=Cold Cranking Amps

RC=Reserve Capacity

## MAINTENANCE INSTRUCTIONS

Always unplug and disconnect the charger/maintainer before performing maintenance on the unit. After each use, use a dry, lint-free cloth to clean battery corrosion and other dirt from the clips, cords and charger/maintainer. Ensure that all components are in good working order. Never open the charger/maintainer as there are no serviceable parts inside the unit. The charger/maintainer should be stored in an upright position when not in use. Store in a cool, dry location.

## TROUBLESHOOTING

PROBLEM/ CONCERN	CAUSE	SOLUTION
Charger/ Maintainer will not turn on when properly connected	AC outlet is dead	Check the circuit breaker.
	Poor electrical connection	Check the power cord and/or extension cord for a loose fitting plug pin.
	Severely discharged battery	Battery may not accept a charge due to the battery state. The battery may need to be pre-charged to recover the battery enough to accept a charge. If after 20 minutes, battery is still not responding have the battery checked.
	Battery is defective	Have the battery checked.
Reverse connections		Unplug the charger/maintainer and correct the reverse connections at the battery.
Charger/ Maintainer makes a loud hum or buzzing sound	Unit vibrations can cause humming / buzzing	This is a normal effect of vibrations.
Battery clips do not spark when touched together	Auto-start feature working properly	This is a normal effect as current is not supplied to the battery clips until battery is properly connected.