

10 AMP BATTERY CHARGER



This TRAVELLER® 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.

USER MANUAL



1714478

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IMPORTANT SAFETY INFORMATION

SAVE THESE INSTRUCTIONS

⚠ 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.
- 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.
- Use only in a well-ventilated area.
- Do not operate if cords or wires are frayed or defective, or if charger base is defective in any way. Do not attempt to open the charger as this could result in electric shock.
- This unit is comprised of switches which could produce sparks. Make sure you have adequate space to use this charger.
- Use only on lead-acid batteries. Do not use this charger 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.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- Do not operate charger with damaged cord/plug - replace the cord/plug immediately.
- Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman.
- 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.
- To reduce risk of electric shock, unplug charger from outlet before attempting any repairs or cleaning. Turning off controls will not reduce this risk.

PERSONAL PRECAUTIONS

- Remove metal items such as rings, bracelets and necklaces while working with this charger. Lead acid batteries can produce a short circuit high enough to cause burns.
- 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.

WARNING – RISK OF EXPLOSIVE GASES.

- a) Working in vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that you follow these instructions each time you use the charger.
- b) To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of battery. Review cautionary markings on these products and on engine.

IMPORTANT SAFETY INFORMATION



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.
- When charging a lead-acid battery that is not sealed, it may be necessary to add distilled water into battery so the battery acid solution reaches the level as specified by manufacturer. Careful do not overfill the battery.
- Read individual precautions and warnings outlined by the battery manufacturer relative to charging and maintaining. Ensure that charger clamp make a tight connection.
- NEVER smoke or allow a spark or flame in the vicinity of the battery or engine.
- Use charger for charging LEAD-ACID batteries only.
- NEVER charge or maintain a frozen battery.

CHARGER LOCATION

- Make sure you have adequate space to use this charger. Position the charger as far away from the battery as permitted by DC Cable.
- Never place the charger directly above the battery that is being charged; as this may cause the charger to be damaged by gases expelled from the battery.
- Never set a battery or any other object on the charger.
- Use only in a well-ventilated area.
- Never allow battery acid to drip on the charger when reading electrolyte specific gravity or filling battery.
- Do not operate charger in a closed-in area or restrict ventilation in any way.

BATTERY TYPES

Three basic types of batteries can be given a charge with this charger:

Conventional and Low Maintenance Batteries

These are lead-acid batteries. Conventional/ Low Maintenance batteries require periodic addition of distilled water to the acid solution (electrolyte). Additional water may be added by removing the filler caps located on the top of the battery.

Note: When lead is known to be one of the materials used in the battery's construction, that battery is a Low Maintenance/ Conventional type.

Maintenance Free Batteries/ AGM batteries

These are lead-calcium batteries and normally do not require water additions. Therefore, filler caps have been removed from the battery surface. These batteries will have a smooth or sealed appearance.

Deep Cycle Batteries

These heavy duty batteries are used in boats, construction equipment, sump pumps, etc. They are normally marked DEEP CYCLE on the outside of the case.

Other Batteries

Only 14.4V (+/- 0.5V) Lithium Iron Phosphate (LiFePO₄) Batteries can be charged with this unit. Do not select a charging rate above 2 amps so as to extend the life of your battery. If Lithium Iron Phosphate (LiFePO₄) Battery voltage is under 10 volts, it is not recommended that you use this charger as the battery may be damaged.

CONNECTING BATTERY

Note: It is important to determine the battery type (maintenance free or conventional) before use.

BATTERY INSTALLED IN VEHICLE

1. Stay clear of moving engine parts.
2. Position the AC/DC cables to reduce the risk of damage by the moving engine parts. Never allow the clamp to touch each other.
3. If it is necessary to close the engine hood, please ensure the hood will not damage the cable insulation or touch the battery clamp to the hood.
4. Check the polarity of the battery posts.

Note: The positive (+) post is usually larger in diameter than the negative (-) post.

5. Determine which battery post is grounded.

Note: In most vehicles, the negative battery post is grounded to the chassis.

- For negative grounded vehicles, connect the red positive (+) clamp from the battery charger to positive (+) battery post. Connect the black negative (-) clamp to the vehicle chassis or engine block. NEVER connect the clamp to areas such as the carburetor, fuel lines or other metal body parts.
 - For positive grounded vehicles, connect the black negative (-) clamp from the battery charger to the negative (-) battery post. Connect the red positive (+) clamp to the vehicle chassis or engine block. NEVER connect the clamp to areas such as the carburetor, fuel lines or other metal body parts.
6. Plug the AC power cord/plug into a properly grounded outlet.
 7. When disconnecting the charger, first unplug the AC power cord from the outlet, remove the clamp from the vehicle chassis or engine block and then remove the clamp from the battery terminal.

BATTERY OUTSIDE OF VEHICLE

Note: If using this battery charger for a marine battery, the battery must be removed and charged on shore unless you have purchased special equipment designed for marine use to allow for onboard charging.

1. Check the polarity of the battery posts.

Note: The positive (+) post is usually larger in diameter than the negative (-) post.

2. Attach at least a 24 inch 6-gauge insulated battery cable to the negative (-) battery post.



3. Connect the red positive (+) charger clamp to the positive (+) battery post.
4. Place the free end of the battery cable as far away from the battery to be charged as the cables permit and then connect the black negative (-) charger clamp to the free end of the cable. NEVER face the battery when making the connection.
5. Plug the AC power cord/plug into a properly grounded outlet.
6. When disconnecting the charger, always use the reverse order from the connection process, staying as far away as possible from the battery.

AC POWER CORD/PLUG CONNECTIONS AND PROPER GROUNDING

- This battery charger is designed for use on a 120V circuit. Always plug the AC power cord/plug 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 be used, it should follow the listed recommendations:
 - 100 ft (30.5m) or less – 16 gauge
 - 100 ft (30.5m) or more – 14 gauge

FEATURES



- | | |
|----------------------------|----------------------------------|
| 1. LED Display | 6. Display Mode Selection Button |
| 2. 6' AC Cord | 7. Charge Rate Selection Button |
| 3. Charge Status LED | 8. Clamps |
| 4. Battery Recondition LED | 9. Charge Rate LEDs |
| 5. Reverse Polarity LED | 10. Display Mode LEDs |

OPERATING INSTRUCTIONS

SELECTING CHARGING RATE

This smart charger has an Optimal function. The optimal function automatically selects the charge rate best fit for your type of battery depending on feedback pulse the battery gives off. If you do not want to use the optimal function, you can choose your charging rate manually. This Smart Charger has three charging rate options. Press the Charging rate selection button for desired charging rate and voltage.

- **6V 2A – Can be used for 6V batteries such as motorcycles.**
- **12V 2A – Can be used for small size automobile batteries.**
- **12V 10A – Can be used for medium to large automobile batteries.**

Note: If you want your battery to sustain its life longer, slow charge it. Slow charge will take longer but will charge your battery more thoroughly. If your battery needs to charge in a short amount of time, use the Fast charge.



BATTERY RECONDITIONING

When your battery has been unused for long periods of time, the battery will be in a deep discharged state. The battery reconditioning function is to recover the battery from deep discharge and help the battery last longer.

When the battery is fully charged, the charger will automatically determine if the battery needs to be reconditioned. If the battery needs to be reconditioned, the Battery recondition LED will light up. When the light is off, that means battery reconditioning is completed. The charger will automatically return to charge mode.

CHARGING TIME

Charging time may vary depending on some factors listed below.

Battery State – Depending on the voltage of your battery, it may take up to 10 hours to charge. Batteries with higher voltage can usually be charged in a few hours.

Battery Rating – A higher rated battery will take longer to charge than a lower rated battery under the same conditions. A battery is rated in ampere-hours (Ah), reserve capacity (RC) and cold-cranking amps (CCA).

Charge Rate – The charge rate is measured in amps. A battery charged at a lower rate will take longer than a battery charged at a higher rate. However, smaller batteries can be easily damaged by charging at a rate which is too high for the capacity of the battery.

Temperature – Cold temperature will affect a battery's ability to accept a charge. Charging in cold temperatures will increase the amount of time required to charge a battery.

CHARGING DISPLAY

The digital display has three modes of content. By pressing the button, you can toggle the modes.

Current – the charging current (A) will be displayed.

Voltage – the charging voltage (V) will be displayed.

Note: The voltage displayed is the charging voltage and usually will be higher than the battery's resting voltage.

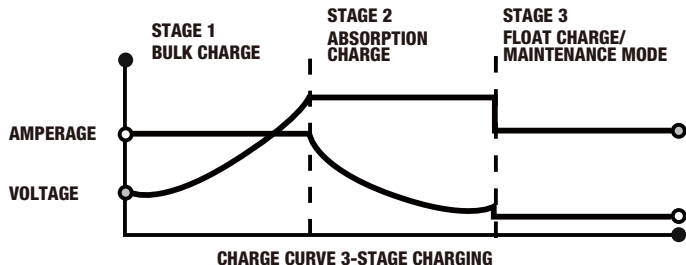
Battery Capacity % – the real-time battery capacity will be displayed.

1. Displays "LO" when battery capacity less than 60%
2. Displays "60%-70%-80%-90%" when battery voltage goes up gradually
3. Displays "FUL" when charger goes into float charge mode

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.

MULTI - STAGE CHARGING PROCESS



First Stage - Bulk Charge: Bulk Charge delivers maximum charging amperage to "wake up" any serviceable 6 or 12 volt battery. When battery reaches a maximum safe predetermined voltage, the charger will automatically move into Stage 2 of the charging process.

Second Stage - Absorption Charge: Absorption Charge maintains the maximum possible charge at a constant, safe, predetermined voltage. During this phase, the charging voltage remains constant, while the actual charging current is reduced to allow for the maximum proper internal chemical energy transfer. At the end of Stage 2, the charger will automatically move into Stage 3 charge mode.

Third Stage - Float Charge: Voltage is automatically maintained and reduced to a predetermined level while current is adjusted for a safe, effective battery charge. The Automatic Float Charge feature is ideal for maintaining a battery. It automatically tops off battery as needed, to keep battery fully charged all the time.

PRODUCT MAINTENANCE

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

FAULT CODES

Fault Codes	Cause	Solution
F01	Dead battery	Ask technician's help to check the battery
	An appliance is drawing power from the battery being charged.	Disconnect the appliance and try to charge again
	Charging rate is too small relative to size of the battery.	Choose a higher charging rate or use a higher current charger
F02	Charger voltage is too high relative to battery.	Verify the battery voltage and select the correct charging voltage.
F03	Charger error	Disconnect the battery and the AC power; attempt to charge again.
	A load may be connected to the battery.	Disconnect the load and attempt to charge again.
F04	The charger is overheating.	Make sure the vents are clear. The charger will resume charging when cooled.
F05	Fail to enter the float stage after 24 hours or the battery is defective	Disconnect the charger with battery and recharge again. Do not use the battery for other purposes when it is charging. Check the battery conditions.

SPECIFICATIONS

Input	120V AC, 60Hz, 4A
Output	6V DC, 2A / 12V DC, 2A / 12V DC, 10A
Compatible Battery Types	All lead-acid batteries
Compatible Battery Voltage	12 V (nominal)
Dimensions (L x W x H)	7.76" x 5.98" x 4.17" (19.71 x 15.20 x 10.60 cm)
Weight	2.07 lb (0.94 kg)



FCC STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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