leisurewize

SWTBC

12V 1.5Amp Car & Motorcycle
Automatic Trickle Charger

Information for use

IMPORTANT SAFETY INSTRUCTIONS

1. SAVE THESE INSTRUCTIONS – The SWTBC offers a wide range of features to accommodate the needs for home use. This manual will show you how to use your charger safely and effectively. Please read, understand and follow these instructions and precautions carefully, as this manual contains important safety and operating instructions.
2. Do not expose charger directly to rain or snow.
3. Use only recommended attachments. Use of an attachment not recommended by Streetwize may result in a risk of fire, electric shock or injury to persons or damage to property.
4. To reduce the risk of damage to electric plug or cord, pull by the plug rather than the cord when disconnecting the charger.
5. Use of an improper extension cord could result in a risk of fire and electric shock. Make sure:
   - That the pins on the plug of the extension cord are the same number, size and shape as those of the plug on the charger.
   - That the extension cord is properly wired and in good electrical condition.
   - That the wire size is large enough for the AC ampere rating of the charger.
8. Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way.
9. Do not disassemble the charger at any time as this will invalidate the limited warranty.
10. To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.

WARNING – Risk of explosive gases. Working in the 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 the instructions each time you use the charger.

To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of the battery. Review the cautionary markings on these products and on the engine.

PERSONAL PRECAUTIONS

1. Consider having someone close enough by to come to your aid when you work near a lead-acid battery.
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
3. Wear complete eye protection and clothing protection. Avoid touching eyes while working near the battery.
4. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with cold running water for at least 10 minutes and get medical attention immediately.
5. NEVER smoke or allow a spark or flame in vicinity of the battery or engine.
6. Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It might spark or short-circuit the battery or other electrical part that may cause an explosion.
7. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
8. Use this charger for charging a LEAD-ACID battery only. It is not intended to supply power to a low voltage electrical system. Do not use this battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.
9. NEVER charge a frozen battery.

PREPARING TO CHARGE

1. If it is necessary to remove the battery from the vehicle to charge it, always remove the grounded terminal first. Make sure all of the accessories in the vehicle are off, to prevent arcing.
2. Be sure area around the battery is well ventilated while the battery is being charged.
3. Clean the battery terminals before attaching the charger to the battery. During cleaning, keep airborne corrosion from coming into contact with your eyes, nose and mouth. Use baking soda and water to neutralize battery acid and help eliminate airborne corrosion. Do not touch your eyes, nose or mouth.
4. Add distilled water to each cell until the battery acid reaches the level specified by the battery manufacturer. Do not overfill. For a battery without removable cell caps, such as valve regulated lead-acid (VRLA) batteries, carefully follow the manufacturer's recharging instructions.
5. Read, understand and follow all instructions for the charger, battery, vehicle and any equipment used near the battery and charger. Study all of the battery manufacturer's specific precautions while charging and recommended rates of charge.
6. Determine the voltage of the battery by referring to the vehicle owner's manual and make sure that the battery voltage matches the charger output voltage (12V).
7. Make sure that the charger cable connections are attached to the battery and ground securely.

CHARGER LOCATION

1. Never place charger directly above the battery being charged; gases from the battery will corrode and damage the charger.
2. Never allow the battery acid to drip onto the charger when reading the electrolyte specific gravity or filling the battery.
3. Do not operate the charger in a closed-in area or restrict ventilation in any way.

DC CONNECTION PRECAUTIONS

1. Connect and disconnect the DC output cable connections only after removing the AC plug from electric outlet.

FOLLOW THESE STEPS WHEN BATTERY IS INSTALLED IN VEHICLE

A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

1. Position the AC and DC cable to reduce the risk of damage by the bonnet, door, and moving or hot engine parts.
2. Stay clear of fan blades, belts, pulleys, and other parts that can cause injury.
3. Check the polarity of the battery posts. The POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N,–) post.
4. Determine which post of the battery is grounded (connected) to the chassis. If the negative post is grounded to the chassis (as in most vehicles), see step 5. If the positive post is grounded to the chassis, see step 6.

5. **For a negative-grounded vehicle:** Connect the POSITIVE (RED) cable clamp from the battery charger to the POSITIVE (POS, P, +) ungrounded post of the battery. Connect the NEGATIVE (BLACK) cable clamp to the vehicle chassis or engine block away from the battery. **Do not connect the cable clamps to the carburetor, fuel lines, or sheet-metal body parts.** Connect to a heavy gauge metal part of the frame or engine block.

6. **For positive-grounded vehicle:** Connect the NEGATIVE (BLACK) cable clamp from the battery charger to the NEGATIVE (NEG, N, –) ungrounded post of the battery. Connect the POSITIVE (RED) cable clamp to the vehicle chassis or engine block away from the battery. Do not connect the cable clamps to the carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
7. When disconnecting the charger, disconnect the AC cord, remove the cable connection from the vehicle chassis, and then remove the cable connection from the battery terminal.

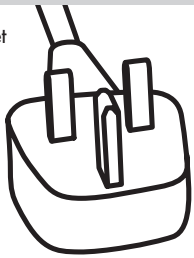
FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE

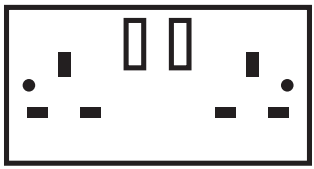
A SPARK NEAR THE BATTERY MAY CAUSE A BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

1. Check the polarity of the battery posts. The POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, –) post.
2. Connect the POSITIVE (RED) charger cable clamp to the POSITIVE (POS, P, +) battery post.
3. Position yourself as far away from the battery as possible – then connect the NEGATIVE (BLACK) charger cable clamp to the NEGATIVE (NEG, N, –) battery post.
4. Do not face the battery when making the final connection.
5. When disconnecting the charger, always do so in the reverse order of the connecting procedure and break the first connection while as far away from the battery as practical.
6. A marine (boat) battery must be removed and charged on shore. To charge it onboard requires equipment specially designed for marine use.

BATTERY CHARGING - AC CONNECTIONS

The plug must be plugged into a 230V power outlet that has been properly installed.





OPERATING INSTRUCTIONS

CHARGING

This charger is intended for use with 12 Volt battery systems only. The charger contains an electronic control circuit which safeguards against overcharging the battery.

1. Connect the battery and AC power following the previous steps.
2. The POWER ON (red) LED will light when the AC cord is connected to a 230V power outlet, then the CHARGING (amber) LED will light as the unit charges. This unit offers reverse polarity protection, if this happens the CHARGING (amber) LED will NOT light, unplug the unit and reverse the crocodile clips on the battery. When the battery is charged the CHARGED (green) LED will light.
3. The charger will then automatically switch between charged mode and maintain mode with the (amber) LED lit as necessary. The CHARGED (green) LED will cycle 'ON' when the battery is at full charge and when the voltage drops below a preset level the charger will go into charge mode the CHARGING (amber) LED will light. This cycle will continue, with the CHARGED (green) LED staying on for longer periods of time as the battery becomes more fully charged.

CHARGING TIPS

Read this entire manual before using your battery charger. The following tips serve only as a guide for specific situations.

- Your charger has been designed NOT to spark if the cable clamps accidentally touch one another, or if the leads are connected in reverse.
- The battery must measure at least 1 volt to start the charging of the battery. The POWER ON (red) LED will be on even if the charging is not taking place. You can verify charging by measuring the battery voltage and noting an increase in volts.
- This charger is ideally suited for maintaining the battery charge level for the following applications:
  - Storage of a battery during non-seasonal use.
  - For vehicles seldom used or placed in storage.
  - For improved battery performance during cold weather.
- For large automotive or marine batteries which are deeply discharged, it is recommended to recharge it first with a larger charger (such as a 10 amp) to maintain the charge level of the battery.

MAINTENANCE/CLEANING INSTRUCTIONS

1. Before performing maintenance, unplug and disconnect battery charger.
2. After use, unplug charger and use a dry cloth to wipe all battery corrosion and other dirt or oil from terminals, cords, and the charger case.
3. Servicing does not require opening unit, as there are no user-serviceable parts.

HOW TO CALCULATE CHARGING TIMES

You will need to determine the AH (Amp Hour) of the battery to be charged, then use the equation below to work out the charging time required to re-charge a battery (the battery can be left connected at this point if required).

AH of Battery ÷ 1.5 (Amps of trickle charger) = Hours of charge (approx).

e.g. 15Ah ÷ 1.5 = 10 hours (charging time approx).

Allow 15% variance for inefficient/internal battery resistance.

On average, most car batteries are 50AH in capacity. In the table below, we list different battery capacities along with its estimated charge time for reference.

Battery Capacity	Charge time on fully depleted battery (hours)
50AH	33.33
75AH	50
100AH	66.66
120AH	80
150AH	100

STORAGE INSTRUCTIONS

1. Store charger unplugged. Cable will still conduct electricity until it is unplugged from outlet, ALWAYS UNPLUG THE CHARGER.
2. Store inside, in a dry, cool place.
3. Do not store cable connectors on or around metal or clipped together.

DISPOSAL INSTRUCTIONS

The WEEE symbol  on this product means that this product should be ethically dismantled or recycled to minimise environmental impact. Please check with your local authority for more information.

IMPORTANT: ADDITIONAL SAFETY INFORMATION

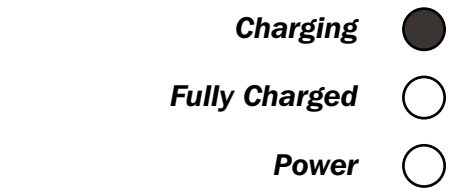
This Battery Charger is NOT intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or have been given instruction concerning use of the Battery Charger by a person responsible for their safety.

FOR INDOOR USE ONLY

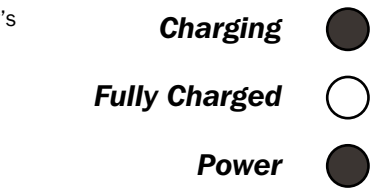
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The charger is making an audible clicking sound. This battery charger is equipped with a self-resetting circuit breaker. This device protects the charger from temporary overloads. In the event of an overload, the breaker will trip open and after a short cooling off period will reset automatically. This process is known as cycling and can be recognized by an audible clicking sound.	Battery is defective. Shorted battery cables or cable clamps. Severely discharged battery, but otherwise it is a good battery. Reverse connections at battery.	Have the battery checked. Circuit breaker cycles when current draw is too high. Check for shorted cables or cable clamps and replace if necessary. The battery may not want to accept a charge due to a run-down state. Allow charging to continue until battery has a chance to recover sufficiently to take a charge. If more than 20 minutes, stop charging and have the battery checked. Shut the charger off and correct the lead connections.
Charger makes a loud buzz or hum.	Transformer laminations vibrate (buzz). Shorted Diode Assembly or Output Rectifier Assembly (hum).	No problem, this is a normal condition. Have charger checked by a qualified technician.
POWER ON (red) LED is not lit. Charger will not turn on when properly connected.	No power at the receptacle. Charger is not plugged in. Poor electrical connection.	Check for open fuse or circuit breaker supplying AC outlet. Plug the charger into an AC outlet. Check power cord and extension cord for loose fitting plug.
The battery is connected and the charger is on, but is not charging.	Cable clamps are not making a good connection to the battery. Connections are reversed. Battery is defective (will not accept a charge). Severely discharged battery, but otherwise it is a good battery.	Check for poor connection to battery and frame. Make sure connection points are clean. Unplug the charger and reverse the battery connections. Have battery checked. The battery must measure at least 1 volt to start the charging process. If it is under 1 volt you must charge it using a separate charger to get the voltage up to at least 1 volt before you can use the SWTBC.
When you start the battery charger without an electric load or battery connected and you input 230V AC into the charger, the output port will show no voltage if tested with a meter.	This is an advantage design to avoid sudden short circuit through two clamps. It is normal.	Once you connect the battery charger with a driving voltage to the output port (the driving voltage must be equal or higher than 1.2V DC), you will see on the output port that the output voltage rises from 0 V DC to about 13.15 V DC immediately.

PLEASE NOTE: when you connect this charger's battery clamps to your battery's corresponding terminals AND you have NOT switched on the mains power, the Charging LED indicator will ILLUMINATE but WILL NOT charge.



PLEASE NOTE: when you have FINISHED charging your battery and this charger is STILL connected to your mains power, the Charging LED & the Power LED will still be ILLUMINATED, even after you have removed the charger's battery clamps from your battery's terminals.



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