

## ADVANCED BATTERY CHARGER

SERIES: GX2, GX5, GX10, GX15

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CHARGE - MAINTAIN - TEST - SUPPLY - RESTORE

## INTRODUCTION

The GX Series Advanced Battery Chargers are designed for use with all types of 12V batteries. Compatible with WET, AGM, EFB, VRLA as well as 12.8V LiFePO<sub>4</sub> Lithium batteries. The chargers are not intended to charge any other batteries other than those mentioned above and up to a maximum of 200Ah (GX15). Charging other types of cells other than those mentioned above may cause explosions, injuries or damage to property. The charging process is controlled by a microprocessor which ensures the correct charging of the battery and automatically switches into a maintenance mode once the battery is fully charged. In this mode this battery will be maintained and will not be overcharged or damaged.

## FEATURES

### Power Supply

In this mode the charger will supply power as a 12V power supply (up to 13.7V). It can also be used as a float charge mode to maintain and keep larger capacity batteries at 100% charge in normal conditions without time or voltage limitations.

### Recondition

Using a pulse charging program to break up sulfate this mode restores batteries into good condition.

### Test

This mode allows users to Test the Battery of a vehicle as well as Testing the Alternator.

## TECHNICAL SPECIFICATIONS

Model	GX2	GX5	GX10	GX15
Input Voltage	110-240 VAC, 50/60Hz		230 VAC, 50Hz	
Rated Power Input (MAX)	29W	72W	145W	220W
Rated output voltage	DC12V			DC12V/24V
Rated output current	2A	5A	10A	15A/7.5A

## WARNING

- Read and understand the operating instructions carefully before use.
- Never attempt charge batteries that are not compatible with the charger.
- Do not attempt to use the charger to recharge dry or primary cells or batteries that are not intended for recharging. Doing so could result in fire or explosions that may cause personal injury or property damage.
- Always ensure that the output voltage and current specifications match the appropriate battery type.
- Never use the charger under reverse polarity conditions.
- Suitable for indoor use only.
- The manufacturer assumes no liability for damage resulting from unauthorized or incorrect use.
- Do not attempt to charge more than one battery at a time.
- Do not attempt to charge frozen batteries, doing so can be extremely dangerous.
- Do not attempt to charge batteries that show signs of damage as this may cause fires or explosions.
- Do not attempt to use the charger in damp conditions, submerge or expose the device to running water or rain.
- Only use the charger in a well-ventilated environment, do not attempt to charge batteries in sealed or pressurized areas.
- Never attempt to use the charger near volatile or flammable substances or while it is placed on a battery as gasses released during charging may cause explosions or damage to the charger.
- Do not place the charger on warm surfaces or cover the charger or battery during charging and ensure that all ventilation slots are clear during operation.
- Do not attempt to start a vehicle while the charger is connected.
- Before carrying out maintenance or work when you are not using the charger ensure that it is disconnected.
- Prevent short circuits and make sure not to bridge terminal connections while connecting the charger to the battery.
- Connect the charger to the battery terminals only in accordance with the instructions. Never connect the charger in a different or reverse order and make sure to use appropriate tools when loosening or removing terminal connectors.
- Do not touch the battery terminals, clamps, or ring terminals when the charger is connected to a power source.
- Before connecting the charger to a vehicle ensure that the battery has been disconnected. Removing the battery during charging is recommended.
- Do not attempt to use the charger if it has suffered a hard knock or fall, if it appears to be damaged or malfunctioning in any way. Contact your distributor for further assistance.
- Do not under any circumstances attempt to disassemble or repair the charger yourself and contact your distributor if any assistance is required. Do not insert foreign objects into the charger
- Before using the charger ensure that it is in good condition and has not been damaged in any way.

## WARNING

- Do not lift or carry the device by pulling on the power cables and keep the power cables away from sources of heat, oil or sharp edges during charging and storage.
- If a power cable is damaged, do not use the charger and contact your distributor for further assistance.
- When using or storing the charger, keep the charger out of reach of children or pets. The charger must not be used by children or unskilled individuals.
- Store the charger in a dry, clean, well-ventilated environment and ensure cables are stored safely and correctly.
- If possible do not use extension cables. Improper use of extension cables can result in fire or electrical shocks. If use of an extension cable is absolutely necessary ensure that the connectors are of the same shape, size and number of pins as the charger. Ensure that the cable is in good condition, is not frayed or has exposed wiring and is of good quality. For extension cable lengths up to 15m a 0.75mm<sup>2</sup> diameter cable is required, up to 30m - 1mm<sup>2</sup> and up to 60m - 1.5mm<sup>2</sup>.
- Batteries contain lead and acid that can be dangerous in contact with skin or eyes causing burns or blindness. Lead is dangerous during pregnancy.
- In case of contact with skin rinse the area immediately with water and neutralize the acid with a mild alkaline solution such as milk. If exposed to electrolyte, rinse the area with a strong stream of water. In all circumstances seek the assistance of a medical professional.
- In case of contact with the eyes, rinse with clean water for at least 10 minutes while waiting for the assistance of a medical professional.
- To prevent electrostatic discharges do not use the charger while wearing clothing made of synthetic materials.

## INSTRUCTIONS

### Before using the charger

1. Disconnect the battery from the vehicles electrical system. Ideally remove the battery completely.
2. Ensure that the charger is disconnected from the mains.
3. Ensure that the acid level of the battery is correct according to the battery's specifications, the plates should be approximately 1cm below the acid level. If necessary, fill the battery with the required amount of distilled water. For sealed batteries ensure that the manufacturers specified charging instructions are followed.

### Charging mode (GX2, GX5, GX10, GX15)

1. Connect the charger to the mains supply and press:
  - a. The 'Charge' button until the correct battery type is selected (GX10, GX15)
  - b. The 'Select' button until the correct battery type is selected (GX2, GX5)
2. Connect the positive (red) clamp to the positive (+) terminal of the battery then connect the negative (black) clamp to the negative (-) terminal of the battery.

# INSTRUCTIONS

3. Press the power button to start charging. Please note that charging time will depend on the state of the battery and the degree to which it has been discharged.
4. When the battery is fully charged the charger will automatically switch into a maintenance mode ensuring that the battery remains fully charged. This mode will not overcharge or damage a battery.
5. Once charging or maintenance is complete, disconnect the charger from the power supply, then disconnect the clamps from the battery in the correct order. First disconnect the negative (black) clamp from the negative (-) terminal of the battery then disconnect positive (red) clamp from the positive (+) terminal of the battery.

## Recondition mode (GX5, GX10, GX15)

1. Connect the charger to the mains supply and press:
  - a. The 'Recondition Mode' Button. (GX10, GX15)
  - b. The 'Select' Button until 'Recondition' is illuminated. (GX5)
2. Connect the positive (red) clamp to the positive (+) terminal of the battery then connect the negative (black) clamp to the negative (-) terminal of the battery.
3. Press the power button to start charging. Please note that reconditioning time will depend on the state of the battery. The reconditioning voltage and status of the battery will appear on the LCD.
4. Once reconditioning is complete, disconnect the charger from the power supply, then disconnect the clamps from the battery in the correct order. First disconnect the negative (black) clamp from the negative (-) terminal of the battery then disconnect positive (red) clamp from the positive (+) terminal of the battery

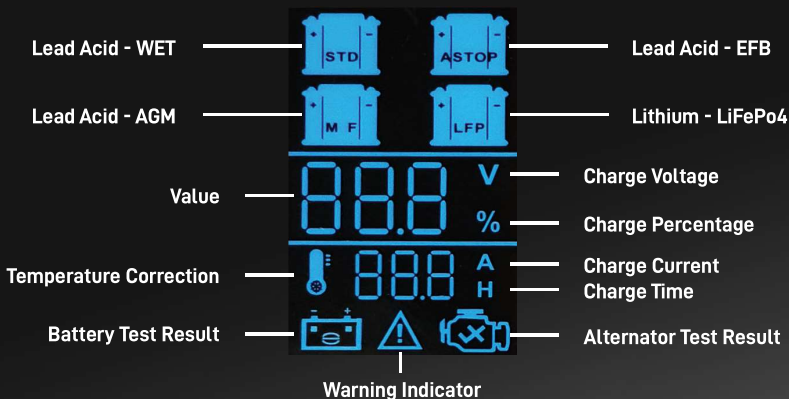
## Supply mode (GX5, GX10, GX15)

1. Connect the charger to the mains supply and press the 'Supply' button.
  - a. The 'Supply Mode' Button. (GX10, GX15)
  - b. The 'Select' Button until 'Supply' is illuminated. (GX5)
2. Connect the positive (red) clamp to the positive (+) terminal then connect the negative (black) clamp to the negative (-) terminal.
3. Disconnect the battery from the vehicle and remove it.
4. Vehicle systems are now powered by the charger and there is no risk of loss of settings due to the removal of the battery.
5. Caution: Never attempt to start a vehicle with the charger connected in this mode.

## Battery Test mode

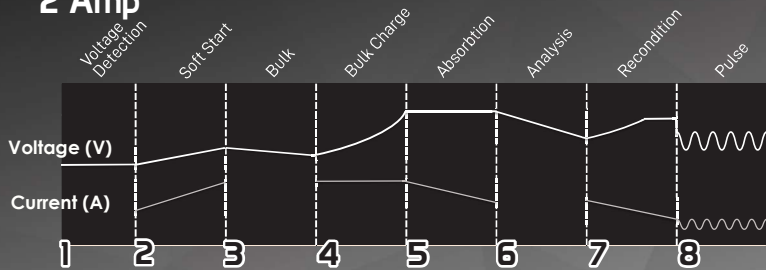
1. The Test mode is performed with the charger disconnected from the mains supply.
2. Connect the positive (red) clamp to the positive (+) terminal of the battery then connect the negative (black) clamp to the negative (-) terminal of the battery.
3. The current Voltage and Status of the battery are displayed on the LCD.
4. To Test the functioning of the Alternator, with the charger correctly connected, start the vehicle and raise the engine speed to 2000 Rmp.
5. The current Voltage and Status of the Alternator are displayed on the LCD.

# DISPLAY



# CHARGING CURVES

## 2 Amp



## 5/10/15 Amp

