

 **West Marine**®

Owner's Manual


25 Amp Battery Charger PORTABLE DOCKSIDE




SKU 20905022

SAFETY GUIDELINES / DEFINITIONS

 **HAZARD:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

RISK OF UNSAFE OPERATION. When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. The manufacturer strongly recommends that this product NOT be modified and/or used for any application other than for which it was designed. Read and understand all warnings and operating instructions before using any tool or equipment.

READ ALL INSTRUCTIONS

 **WARNING:** Read all instructions before operating product. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

IMPORTANT SAFETY INSTRUCTIONS

GENERAL SAFETY WARNINGS AND INSTRUCTIONS

- The unit was designed for household use only.
- Avoid dangerous environments. Don't use the battery charger in damp or wet locations. Do not expose the clamps or cords to rain or snow.
- Keep children away. Keep away from children. This is not a toy!
- Store indoors. When not in use, battery chargers should be stored indoors in dry, and high or locked-up places – out of reach of children.
- Unplug the battery charger when not in use.
- Check for damaged parts. Any part that is damaged should be properly repaired or replaced by manufacturer unless otherwise indicated elsewhere in this instruction manual before further use.
- **First aid – skin:** if battery acid comes in contact with skin, rinse immediately with water, then wash thoroughly with soap and water. If redness, pain, or irritation occurs, seek immediate medical attention.

Eyes: If battery acid comes in contact with eyes, flush eyes immediately, for a minimum of 15 minutes and seek immediate medical attention.

LCD liquid crystal display: If liquid crystal comes in contact with your skin: Wash area off completely with plenty of water. Remove contaminated clothing. If liquid crystal gets into your

eye: Flush the affected eye with clean water and then seek medical attention. If liquid crystal is swallowed: Flush your mouth thoroughly with water. Drink large quantities of water and induce vomiting. Then seek medical attention.

SPECIFIC SAFETY INSTRUCTIONS FOR POWER CORDS

- **Don't abuse cord.** Never carry appliance by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Pull by plug rather than cord when unplugging the unit.
- **Ground fault circuit interrupter (GFCI)** protection should be provided on the circuits or outlets to be used. Receptacles are available having built in GFCI protection and may be used for this measure of safety.

Extension Cords

- **An extension cord should not be used unless absolutely necessary.** Use of improper extension cord could result in a risk of fire and electric shock. If an extension cord is used, make sure that the pins of the extension cord are the same number, size and shape as those in the charge.
- **If an extension cord must be used, make sure your extension cord is in good condition.** When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Recommended Minimum AWG Size for Extension Cords for Battery Chargers					
AC Input Rating		American Wire Gage (AWG) Size of Cord			
Amperes		Length of Cord, feet (m)			
Equal to or greater than	But less than	25 (7.6)	50 (15.2)	100 (30.5)	150 (45.6)
0	2	18	18	18	16
2	3	18	18	16	14
3	4	18	18	16	14
4	5	18	18	14	12
5	6	18	16	14	12
6	8	18	16	12	10
8	10	18	14	12	10
10	12	16	14	10	8
12	14	16	12	10	8
14	16	16	12	10	8
16	18	14	12	8	8
18	20	14	12	8	6

Power Cord Safety

The unit has polarized plugs (one blade is wider than the other) as a safety feature. These plugs will fit into a polarized outlet only one way. If the plug does not fit fully into the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not attempt to defeat this safety feature.

SPECIFIC SAFETY INSTRUCTIONS FOR LEAD-ACID BATTERIES

- Use of accessories and attachments: The use of any accessory or attachment not recommended by manufacturer for use with this battery charger could be hazardous.
- Stay alert. Use common sense. Do not operate this unit when you are tired or impaired.
- Check for damaged parts. A part that is damaged should be properly repaired or replaced by manufacturer before further use unless otherwise indicated elsewhere in this instruction manual.
- Do not operate the battery charger near flammable liquids or in gaseous or explosive atmospheres. Motors may spark, and the sparks might ignite fumes.
- Do not operate the battery charger if it has received a sharp blow, been dropped, or has been otherwise damaged in any way. Return it to the manufacturer for repair.

⚠ WARNING – TO REDUCE THE RISK OF ELECTRIC SHOCK: Never immerse the battery charger in water or any other liquid, or use when wet.

⚠ WARNING – BURST HAZARD:

- Do not use the unit for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage property. Use the unit for charging/boosting a 12V LEAD-ACID battery only. It is not intended to supply power to a low-voltage electrical system other than in a starter-motor application.
- Never attempt to charge non-rechargeable batteries.

⚠ 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 the utmost importance that each time before using the battery charger you read this manual and follow instructions exactly.
- To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review cautionary markings on these products and on the engine.
- This equipment employs parts (switches, relays, etc.) that produce arcs or sparks. Therefore, if used in a garage or enclosed area, the unit **MUST** be placed not less than 18 inches above the floor.
- THIS UNIT IS NOT FOR USE BY CHILDREN AND SHOULD ONLY BE OPERATED BY ADULTS.

⚠ WARNING – TO REDUCE THE RISK OF FIRE:

- Do not operate near flammable materials, fumes or gases.
- Do not expose to extreme heat or flames.

⚠ CAUTION – TO REDUCE THE RISK OF INJURY OR PROPERTY DAMAGE:

- This charger is not designed for use with every make, manufacture or model of engine. Use only with 12 volt systems.
- NEVER ATTEMPT TO CHARGE A FROZEN BATTERY.
- Do not charge the battery while the engine is operating.
- Vehicles that have on-board computerized systems may be damaged if vehicle battery is jump-started. Before jump-starting, read the vehicle's owner's manual to confirm that external-starting assistance is suitable.

- Never smoke or allow a spark or flame in vicinity of vehicle battery, engine or battery charger.
- Be extra cautious to avoid dropping a metal tool onto the battery. It might spark or short-circuit the battery or another electrical part, and that may cause an explosion.
- Never allow battery acid to come in contact with this unit.
- Do not operate this unit in a closed area or restrict ventilation in any way.
- Always turn the battery charger off by unplugging it when not in use.
- Do not open the battery charger — there are no user-serviceable parts inside. Opening the battery charger will void manufacturer's warranty.
- Operate battery charger only as described in this Instruction Manual.
- Check battery charger and components periodically for wear and tear. Do not use if damaged in any way.

SPECIFIC SAFETY INSTRUCTIONS FOR LITHIUM LiFePO4 BATTERIES

Lithium charge mode is designed for lithium LiFePO4 batteries only.

WARNING — Use this mode with extreme care. This mode should only be used with 12V lithium LiFePO4 batteries that have a built-in battery management system (BMS). Lithium LiFePO4 batteries are made and constructed in different ways and some may or may not contain a battery management system (BMS). Consult the lithium LiFePO4 battery manufacturer before charging and ask for recommended charging rates and voltages. Some lithium LiFePO4 batteries may be unstable and unsuitable for charging

WARNING — To reduce the risk of fire, electric shock, burst hazard, or injury to persons or property:

- Lithium LiFePO4 batteries must be used and charged properly. Improper use can result in serious injury, fire, or death.
- Lithium LiFePO4 batteries can explode in the presence of a source of ignition. Do not use lithium LiFePO4 battery in the presence of an open flame.
- Do not place this lithium LiFePO4 battery unit in fire or apply heat to it.
- Do not subject lithium LiFePO4 battery to strong impacts or shocks. Or it may cause the battery to generate heat, rupture or ignite.
- Do not expose lithium LiFePO4 battery to water or salt water, or allow the battery to get wet.
- Avoid storing lithium LiFePO4 battery in the basement, bathroom or other areas of the house that are or may become wet or humid or where moisture may concentrate.
- Do not leave lithium LiFePO4 battery in direct sunlight, or use or store it inside cars in hot weather. Doing so may cause the battery to generate heat, rupture, or ignite.
- Never charge lithium LiFePO4 battery near heat or flammable objects.

WARNING — NEVER THROW WATER ON A BURNING LITHIUM LiFePO4 BATTERY! If a lithium LiFePO4 battery does catch on fire, it will burn even more violently if it comes in contact with water or even moisture in the air. A fire extinguisher must be used.

PREPARING TO CHARGE A LEAD-ACID BATTERY

1. Be sure area around battery is well ventilated while battery is being charged.
2. Remove battery completely from boat/airplane or any confined area before charging.
3. If it is necessary to remove battery from vehicle to charge, or to clean terminals, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
4. Clean battery terminals, taking care to avoid getting corrosive material in eyes.
5. Add distilled water in each cell until battery acid reaches level specified by battery manufacturer. This helps purge excessive gas from cells. Do not overfill. For a battery without cell caps (maintenance free), carefully follow manufacturer's charging instructions.
6. Study all battery manufacturer's specific precautions, such as removing or not removing cell caps while charging, and recommended rates of charge.
7. Determine voltage of battery to be charged by referring to the vehicle manual. The unit is for charging a 12 volt battery only.

Charger Location

- Locate charger as far away from battery as cables permit.
- Never place charger directly above battery being charged; gases from battery will corrode and damage charger.
- Never allow battery acid to drip on charger when reading gravity or filling battery.
- Never operate charger in a closed-in area or restrict ventilation in any way.
- Marine batteries must be removed and charged on shore.
- Do not set a battery on top of charger.

Connection Precautions

- Never allow clamps to touch each other.
- Attach clamps to battery and chassis as indicated in the appropriate section ("Charging A Battery Installed In A Vehicle" or "Charging A Battery That Has Been Removed From A Vehicle").


Charging A Battery Installed In A Vehicle

 WARNING – A spark near the battery may cause an explosion. To reduce risk of a spark near the battery:

1. Do not charge the battery while the engine is operating.
2. Position AC and clamp cords to reduce risk of damage by hood, door, or moving engine part.
3. Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
4. Check polarity of battery posts. the positive (POS, P, +) battery post usually has larger diameter than the negative (NEG, N, -) post.
5. Determine which post of battery is grounded (connected) to the chassis. If negative post is grounded to chassis (as in most vehicles), see 6. If positive post is grounded to the chassis, see 7.

6. **For negative-grounded vehicle**, connect the Positive (RED) Clamp from battery charger to the positive (POS, P, +) ungrounded post of the battery. Connect the Negative (BLACK) Clamp to the vehicle chassis or engine block away from battery. Do not connect the clamp to the carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
7. **For positive-grounded vehicle**, connect the Negative (BLACK) Clamp from battery charger to the negative (NEG, N, -) ungrounded post of battery. Connect the Positive (RED) Clamp to the vehicle chassis or engine block away from the battery. Do not connect the clamp to the carburetor, fuel lines or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
8. When disconnecting charger, disconnect AC cord, remove clamp from vehicle chassis, and then remove clamp from battery terminal.
9. See operating instructions for length of charge information.

Charging A Battery That Has Been Removed From A Vehicle

 **WARNING – A spark near the battery may cause an explosion. To reduce risk of a spark near the battery:**

1. Check polarity of battery posts. The the positive post (marked POS,P, +) usually has a larger diameter than the Negative battery post (marked NEG, N, -).
2. Attach a 24-inch (minimum length) AWG #6 insulated battery cable to the Negative battery post (marked NEG, N, -).
3. Connect the Positive (RED) battery Clamp to the positive battery post (marked POS, P, + or red).
4. Stand as far back from the battery as possible, and do not face battery when making final connection.
5. Carefully connect the Negative (BLACK) charger Clamp to the free end of the battery cable connected to the negative terminal.
6. When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.

Note: A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specifically designed for marine use. This unit is NOT designed for such use.

Check the unit periodically for wear and tear. Return to manufacturer for replacement of worn or defective parts immediately.

PREPARING TO CHARGE A 12V LITHIUM LIFEPO4 BATTERY

1. Be sure the area around battery is well ventilated while the battery is being charged.
2. Charge 12V lithium LiFePO4 battery only. Any other uses may result in risk of fire, electric shock or electrocution.
3. Do not expose the charger to rain or snow.
4. Study all battery manufacturer's specific precautions, and recommended rates of charge.

CHARGER LOCATION

- Locate the charger as far away from the battery as cables permit.

- Never place the charger directly above the battery being charged; gases from the battery will corrode and damage the charger.
- Never operate the charger in a closed-in area or restrict ventilation in any way.

CONNECTING THE CHARGER:

CONNECTION PRECAUTIONS

- Connect and disconnect output clamps only after removing AC power cord from electric outlet.
- Never allow the clamps to touch each other.
- Attach the clamps to the lithium LiFePO4 battery respecting the polarity.

SAVE THESE INSTRUCTIONS

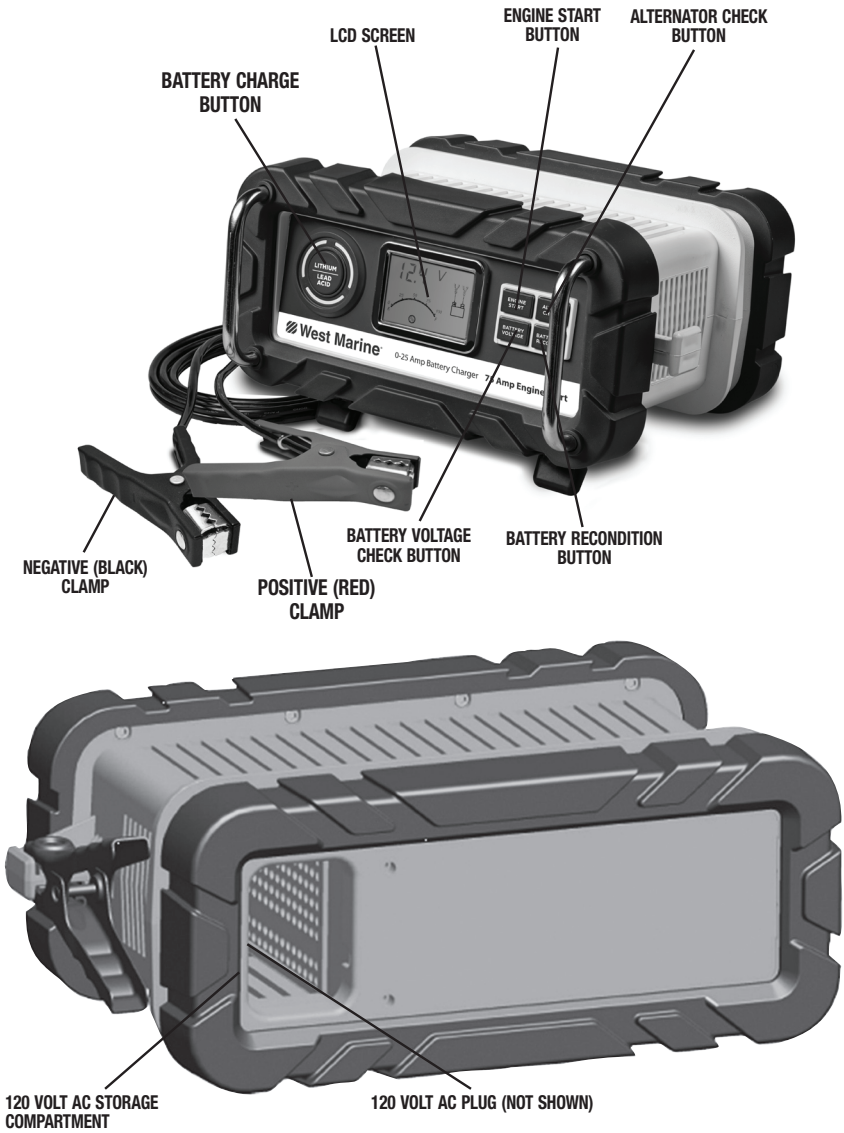
WARNING – TO REDUCE THE RISK OF INJURY:

Follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use with this unit. Review cautionary markings on this product and on engine.

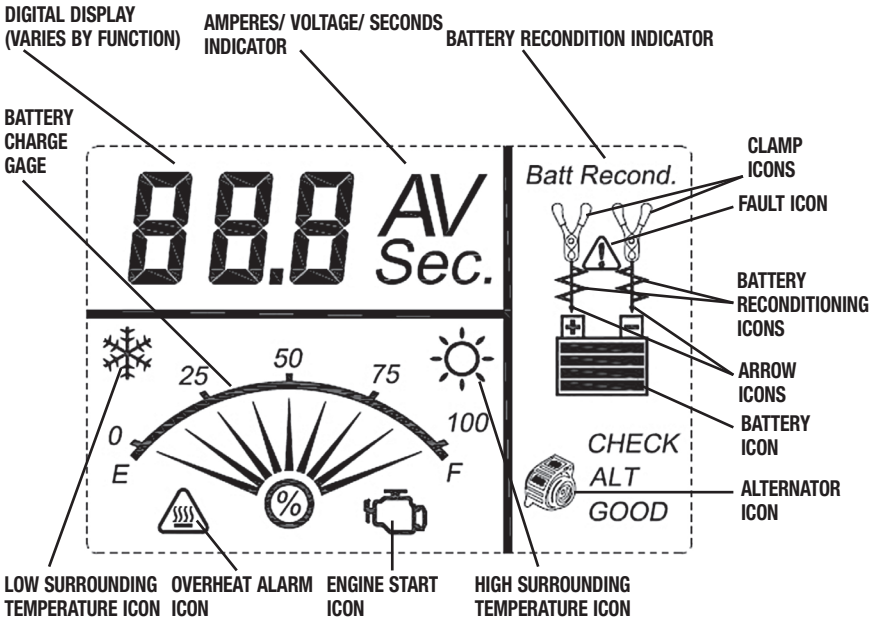
INTRODUCTION

Congratulations on purchasing your **West Marine® Battery Charger**. Read this **Instruction Manual** and follow the instructions carefully before using your new battery charger.

FEATURES



LCD DISPLAY DETAIL



OPERATING INSTRUCTIONS

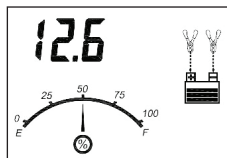
Charging A Lead Acid Battery

⚠ WARNING – TO REDUCE THE RISK OF INJURY OR PROPERTY DAMAGE:

- Always disconnect the AC plug from the AC outlet first before disconnecting the charger from the battery to be charged.
- Ensure that all installation, operating instructions and safety precautions are understood and always carefully followed by the steps outlined in the appropriate section ("Charging A Battery Installed In A Vehicle" or "Charging A Battery That Has Been Removed From A Vehicle").

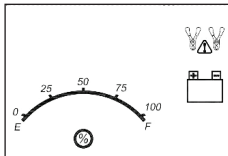
1. Plug the battery charger's power cord into an AC outlet.
2. The charger's battery clamps are color-coded. Red is positive; black is negative. Connect the battery clamps correctly to the corresponding connectors on the battery posts following the steps outlined in the "Important Safety Instruction" section at the front of this manual.

Notes: If the clamps are correctly connected with regard to polarity and the unit is properly connected to the AC outlet, press the "LITHIUM/LEAD ACID" button once to select LEAD ACID charge mode. The LCD screen will display the following (the clamp icons, arrow icons, the battery icon and the gauge as well as the battery voltage).



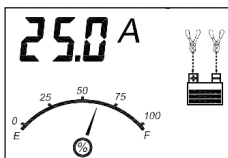
CAUTION: Please make sure you select the proper charge mode to charge a 12V lithium LiFePO4 battery or a 12V lead acid.

If the clamps are INCORRECTLY connected with regard to polarity, the LCD screen will display the following (the “+” and “-” inside the battery icon and the fault icon will flash and the clamp icons, the battery icon and the gauge without the pointer will light) and a warning will sound until the clamps are disconnected:



Unplug the charger; then remove the clamps. Reconnect the clamps properly.

3. After 10 seconds, the unit will automatically begin to charge the battery. The LCD screen will display the following:



The digital display shows the output current that is charging the battery. The gauge indicates the charge status of the battery. The clamp icons and the battery icon light solid, the bars on the battery icon will change from empty to solid (bottom to top) repeatedly and the arrow icons will gradually and repeatedly move downward to the battery icon.

Notes: The “☀” icon will appear at the top right of the gauge section if the surrounding ambient temperature is higher than approximate 40°C. The “❄” icon will appear at the top left of the gauge section if the surrounding ambient temperature is lower than 0°C. This is not a fault code, but indicates that the unit’s temperature compensation feature is operating.

IMPORTANT: If the unit is overheated, the overheat alarm icon and fault icon will flash. Disconnect the charger and allow the charger to cool for several minutes. Make sure there is adequate ventilation around the unit before attempting to charge again.

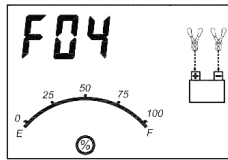
IMPORTANT: The charger will automatically detect the battery condition. If it detects a problem with the battery, the LCD screen will display the following (the fault icon and the battery icon will flash; and the clamp icons, arrow icons and the gauge without the pointer will light):



Disconnect the charger. Have the battery checked by a qualified technician.

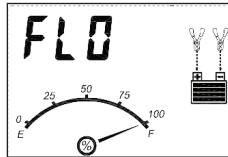
IMPORTANT: If the battery is not fully charged (the battery charge gauge does not reach 100%) after 18 hours of continuous charging, the battery may have internal damage and will not accept a charge. After 18 hours, the charging process will automatically cut-off, the LCD

screen will display the following (the digital readout shows “F04”, the clamp icons, arrow icons, battery icon and the gage without the pointer will light solid):



Disconnect the charger. Have the battery checked by a qualified technician.

4. When the battery is completely charged, the unit automatically goes into float charge mode and the LCD screen displays the following:



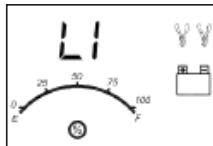
5. The digital display shows “FLO” to indicate that the unit is in float charge mode. The battery charge gauge points to 100%, indicating a full charge. The clamp icon and battery icon with four bars light solid, and the arrow icons will gradually and repeatedly move downward to the battery icon. In this mode, the unit monitors the battery voltage and charges as necessary to assure the battery maintains full capacity. The unit remains in float charge mode as long as the charger is connected to the battery and plugged into a functioning AC outlet.

When disconnecting the charger, disconnect the AC cord, remove the clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

Charging a 12V Lithium LifePO4 Battery

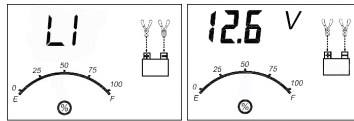
⚠ WARNING – TO REDUCE THE RISK OF INJURY OR PROPERTY DAMAGE:

- **Always disconnect the AC plug from the AC outlet first before disconnecting the charger from the battery to be charged.**
 - **Ensure that all installation, operating instructions and safety precautions are understood and always carefully followed by the steps outlined in the appropriate section**
1. Plug the battery charger’s power cord into an AC outlet. The charger now is in lithium LiFePO4 charge mode. The LCD screen will display the following (the clamp icon will flash, the LI, the empty battery icon and the gauge without the pointer will light):

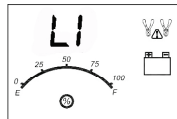


2. The charger’s battery clamps are color-coded. Red is positive; black is negative. Connect the battery clamps correctly to the corresponding connectors on the battery posts following the steps outlined in the “Important Safety Instruction” section at the front of this manual.

Notes: If the clamps are correctly connected with regard to polarity and the unit is properly connected to the AC outlet, the unit will be in lithium charge mode and the LCD screen will display the following (the clamp icons, arrow icons, the battery icon and the gauge without the pointer light solid); the LI and battery voltage will display alternatively.



If the clamps are INCORRECTLY connected with regard to polarity, the LCD screen will display the following (the “+” and “-” inside the battery icon and the fault icon will flash and the clamp icons, the battery icon and the gauge without the pointer will light, as well as the LI), and a warning will sound until the clamps are disconnected:

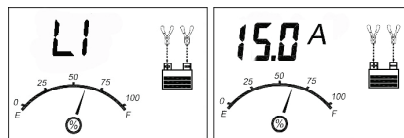


Unplug the charger, then remove the clamps. Reconnect the clamps properly.

- When the unit is properly connected, the unit defaults to LI charge mode. The LCD screen will show LI and the current voltage of the connected battery alternatively.

Note: Press the “LITHIUM/LEAD ACID” button to toggle lithium charge mode and lead acid charge mode.

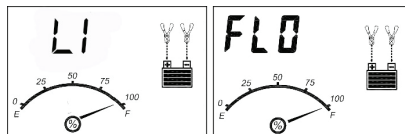
After 10 seconds, the unit will automatically begin to charge the battery. The LCD screen will show LI and the charging current alternatively. The gauge indicates the charge status of the battery. The clamp icons and the battery icon light solid, the bars on the battery icon will change from empty to solid (bottom to top) repeatedly and the arrow icons will gradually and repeatedly move downward to the battery icon.



IMPORTANT: If the unit is overheated, the overheat alarm icon and fault icon will flash.

Disconnect the charger and allow the charger to cool for several minutes. Make sure there is adequate ventilation around the unit before attempting to charge again.

- When the battery is completely charged, the LCD screen displays the following:



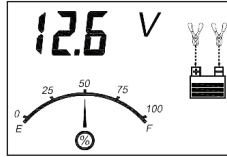
The digital display shows FLO and LI alternatively. The battery charge gauge points to 100%, indicating a full charge. The clamp icon, battery icon with four bars and the arrow icons light solid.

When disconnecting the charger, disconnect the AC cord, remove clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

Checking the Battery Voltage

TO CHECK THE BATTERY VOLTAGE IN CHARGING MODE:

Press the battery voltage check button and the LCD screen will display the following:



The digital display shows the current voltage of the connected battery and LI alternatively for 10 seconds in lithium charging mode. The digital display shows the current voltage of the connected battery for 10 seconds in lead acid charging mode. The unit will automatically return to charging mode after 10 seconds.

When disconnecting the charger, disconnect the AC cord, remove the clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

Using the Alternator Check Function

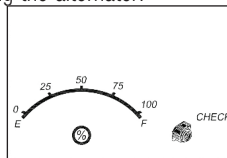
IMPORTANT: Alternator Check function is only to be used with lead acid batteries.

Set up the battery charger, and connect to the battery following steps 1 through 2 in the “Charging a Lead Acid Battery” section.

PART 1

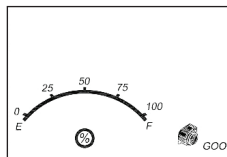
No Load (turn OFF all vehicle's accessories): The battery must be fully charged before testing the alternator. Run the engine long enough to achieve normal idle speed and verify there is a no-load voltage.

1. Press the alternator check button to start the check. The LCD screen will display the following to indicate the unit is analyzing the alternator:



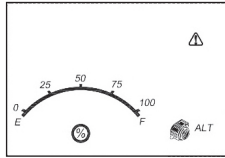
“CHECK” and the alternator icon will flash, and the gauge without the pointer will light solid.

2. If the unit detects that the alternator is good, the LCD screen will display the following:



“Good”, the alternator icon and the gauge without the pointer will light solid.

- If the unit detects that the alternator is out of typical voltage range, the LCD screen will display the following:



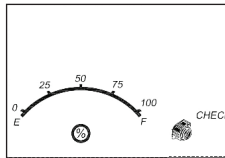
The fault icon will flash, and the alternator icon, "ALT" and the gauge without the pointer will light solid.

- Press the alternator check button again to stop the test.

PART 2

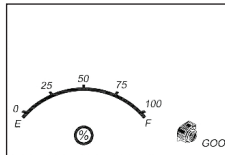
Under Load (accessories ON): Next, load the alternator by turning on as many accessories as possible (except for A/C and Defrost).

- Press the alternator check button to start the check. The LCD screen will display the following to indicate the unit is analyzing the alternator:



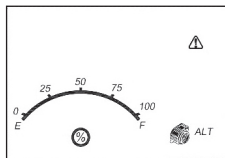
"CHECK" and the alternator icon will flash and the gauge without the pointer will light solid.

- If the unit detects that the alternator is good, the LCD screen will display the following:



"Good", the alternator icon and the gauge without the pointer will light solid.

- If the unit detects that the alternator is out of typical voltage range, the LCD screen will display the following:



The fault icon will flash, and the alternator icon, "ALT" and the gauge without the pointer will light solid.

- Press the alternator check button again to stop the test.

Notes: The unit may detect that the alternator is out of typical voltage range because someone has added a number of accessory loads on the charging system, thereby increasing current demand from the alternator. MAKE SURE THAT THE ALTERNATOR IS RATED TO SUPPORT THE APPLICATION.

This check may not be accurate for every make, manufacturer and model of vehicle. Check only 12 volt systems.

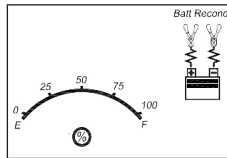
When disconnecting the charger, disconnect the AC cord, remove the clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

Reconditioning the Battery

IMPORTANT: Reconditioning is only to be used with lead acid batteries.

Periodic reconditioning is recommended to maintain a battery's optimum performance. Battery recondition sends a series of electrical pulses to break up the crystalline form of lead sulfate and turn these chemicals into useful battery electrolytes. The process will stop automatically after 24 hours. To stop the process sooner, press the battery recondition button a second time. More than 24 hours may be needed to restore performance on some batteries. If so, repeat the process.

1. Set up the battery charger and connect to the battery following steps 1 through 2 in the "Charging a Lead Acid Battery" section.
2. Press the battery recondition button. The LCD screen will display the following:



The battery recondition indicator, the clamp icons, the battery icon and the gauge without the pointer will light solid, the bars on the battery icon will change from solid to empty (top to bottom) repeatedly and the battery recondition icon will flash.

3. To stop the reconditioning process, press the battery recondition button again.

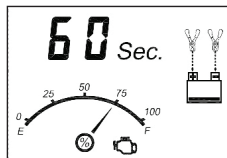
IMPORTANT: If 5 cycles of reconditioning does not improve battery performance, discontinue and recycle the battery. The battery charger will go into charging mode after 24 hours automatically.

When disconnecting the charger, disconnect the AC cord, remove the clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

Using the Engine Start Function

IMPORTANT: Engine Start is only to be used with lead acid batteries.

1. Set up the battery charger and connect to the battery following steps 1 through 2 in the "Charging a Lead Acid Battery" section.
2. Press the engine start button. The LCD screen will display the following*:



The digital display shows the countdown.* The battery charge gauge will indicate the battery's current charge status. The engine start icon, clamp icons and battery icon light solid, and the bars on the battery icon will change from empty to solid (bottom to top) repeatedly and the arrow icons will gradually and repeatedly move downward to the battery icon.

**The countdown will commence from "60" to "0".*

3. When "00" is reached, a beep will sound, engine start icon (🔌) will begin flashing. The vehicle is ready to start.
4. Crank the engine using manufacturer's guidelines, typically in 3 to 5 second bursts. The digital display shows "5 sec." indicating a 5-second countdown.
5. After cranking, the unit will automatically adjust the charging current to about 2A for 5 minutes and then revert to charging mode. To stop charging, press the charge button.

IMPORTANT: The function requires a resting/cooling period between attempts. Wait 4 to 5 minutes before a second attempt at starting the engine, if needed.

When disconnecting the charger, disconnect the AC cord, remove the clamp from the vehicle chassis, and then remove the clamp from the battery terminal.

CARE AND MAINTENANCE

Cleaning and Storage

To reduce the risk of electric shock, unplug the battery charger from the outlet before attempting any maintenance or cleaning. Turning off the controls will not reduce this risk.

- Store the unit in a clean, dry, cool place when not in use.
- Clean the unit casing and cords (as necessary) with a dry cloth. Ensure that unit is completely disconnected from battery and power source before cleaning.
- To maintain the operating condition and maximize the life of the charger cords, always coil them loosely for storage. Do not wrap them around the unit or crimp them with a tight band.

ACCESSORIES

Recommended accessories for use with this unit may be available from the manufacturer. If you need assistance regarding accessories, please contact Customer Service at 1-877-571-2391.

WARNING: The use of any accessory not recommended for use with this appliance could be hazardous.

TECHNICAL ASSISTANCE

For Customer Service or Technical Assistance, contact the manufacturer at 1-877-571-2391.

ONE-YEAR LIMITED MANUFACTURER'S WARRANTY

The manufacturer, Baccus Global LLC, warrants this product against defects in materials and workmanship for a period of ONE (1) YEAR commencing from the date of retail purchase by the original end-user purchaser or from the date of delivery of the good, whichever occurs later ("Warranty Period").

If there is a defect and a valid claim is received by the manufacturer within the Warranty Period, the defective product can be replaced in the following ways: (1) Return the product to the manufacturer for replacement. Proof of purchase may be required by manufacturer. (2) Return the product to the retailer where product was purchased for an exchange (provided that the store is a participating retailer). Returns to retailer should be made within the time period of the retailer's return policy for exchanges only. Proof of purchase may be required. Please check with the retailer for their specific return policy regarding returns that are beyond the time set for exchanges.

This manufacturer's warranty does not apply to accessories, bulbs, fuses and batteries; defects resulting from normal wear and tear, accidents; damages sustained during shipping; alterations; unauthorized use; neglect, misuse, abuse; and failure to follow instructions for care and maintenance for the product.

This manufacturer's warranty gives you, the original retail purchaser, specific legal rights and you may have other rights which vary from state to state or province to province. This product is not intended for commercial use. To register your product with the manufacturer, please visit www.BaccusGlobal.com.

The photos in this manual may differ from the actual unit.

TROUBLESHOOTING

Problem	Cause	Action
Unit not charging	Loose connections	Make sure all connections are secure
	No power to unit	Check that the charger is properly connected to a live 120 volt AC outlet
	Battery will not accept a charge	If the battery to be charged has fallen below 2 volts, it cannot be charged with these chargers


SPECIFICATIONS

Input	120VAC, 60Hz, 410W
Output	12VDC, 25A 75A engine start (ON: 5 seconds, OFF: 5 minutes)

FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

 **Warning:** 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.

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.

West Marine Limited Warranty

What Does This Limited Warranty Cover?

West Marine warrants to the original retail purchaser of the West Marine product, where the purchase is made in the United States, that the product will be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

How Long Does This Limited Warranty Last?

This limited warranty is valid for one (1) year from the date of the original retail purchase from West Marine within the United States (the "Limited Warranty Term").

The warranty period is not extended if we repair or replace a warranted product or any parts. West Marine reserves the right to change the availability of limited warranties, at its discretion, but any changes will not be retroactive and will only apply to subsequent purchases.

What Does This Limited Warranty Not Cover?

This limited warranty does not cover:

- Software.
- Commercial or industrial use or operation.
- Normal maintenance items or normal wear and tear.
- If the product was damaged, modified or altered by you.
- If the product was used as part of any conversion kits, subassemblies, or any configurations not appropriate or contemplated for this product or its use.
- If damage or loss occurring during return shipment of the product to West Marine or its authorized service representative.
- If the product was subject to improper service, repair, installation, storage, maintenance, alteration or application.
- Problems that result from accident, neglect, abuse, misuse or issues with electrical power.
- Problems caused by accessories, parts or components added to the product that are not appropriate for this product or its use.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). WEST MARINE'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR OR REPLACEMENT AS SET FORTH IN THIS WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE LIMITED WARRANTY TERM (AS SPECIFIED ABOVE). NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY TERM HAS EXPIRED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

WE DO NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS LIMITED WARRANTY OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES, FOR PRODUCTS NOT BEING AVAILABLE FOR USE, FOR PERSONAL INJURY AND/OR FOR LOST PROPERTY, DATA OR SOFTWARE. OUR LIABILITY AND THE MAXIMUM AMOUNT FOR WHICH WE ARE RESPONSIBLE WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF A CLAIM. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

What Must I Do To Keep the Warranty in Effect?

- You must keep your receipt or other appropriate documentation as proof of the date of sale and purchase.
- You must keep your serial number or order number for the product. This is found on the product itself or on your receipt.
- You must not do any of the things that will make the warranty invalid as provided for in this warranty statement.
- You must use, install, maintain and operate the product in accordance with published specifications and the user's manual.

What Do I Do If I Need Warranty Service?

- Before the warranty expires, please call us at 1-800-BOATING. Please also have your West Marine serial number or order number available.
- When you contact us, we will issue a Return Material Authorization Number for you to include with your return. We will also provide you the address of where to ship the product.
- You must return the product to us in its original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk if the product is lost or damaged in shipment.

What Will West Marine Do?

During the Limited Warranty Term, if the product you return to us proves to be defective in materials or workmanship and not for the reasons which would otherwise disqualify it (as explained above), we will:

- Repair the product or, if we are unable to repair it, replace it with a comparable product that is new or refurbished;
- Or, as an alternative, at West Marine's option, we will refund you the original purchase price;

- If we repair or replace the product, we will return the repaired or replacement product to you; and
- Pay to ship the repaired or replacement product to you if you use an address in the United States (excluding Puerto Rico and U.S. possessions and territories). Otherwise, we will ship the product to you freight collect.

If we determine that the problem is not covered under this warranty, we will notify you of this when we return your product to you to the address you provide us in the United States (excluding Puerto Rico and U.S. possessions and territories).

We use new and refurbished parts made by various manufacturers in performing warranty repairs and in building replacement parts and systems. Refurbished parts and systems are parts or systems that have been returned to West Marine, some of which were never used by a customer. Replacement parts and systems are covered for the remaining time left in the Limited Warranty Term for the product you bought. West Marine owns all parts removed from repaired products.

Maintenance is the Owner's Responsibility

Cleaning, polishing, lubricating, replacing filters, tuning, replacing worn parts, using your purchased product according to the user's manual, and regularly maintaining your purchased product is your responsibility.

What if I purchased a Plus Protection Plan?

Service will be provided to you under the terms of the Plus Protection Plan contract. Please refer to that contract for details on how to obtain service.

How State Law Relates to the Warranty

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

westmarine.com

 **West Marine**[®]

1 East Broward Blvd., Suite 200
Fort Lauderdale, FL 33301