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- ProNauticP Series - Sailing and Cruising Marine Battery Chargers
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Design and Constructed to:  
Marine UL 1236 SB  
CSA C22.2 No. 107.2  
FCC Class A  
ABYC A-28

specifications subject to change without notice

10/12 A

# ProMariner™ HEAVY DUTY RECREATIONAL SERIES

## ProSport

### Marine Battery Charger

ProMar Digital Performance Charging Inside



2-Year Warranty

### Owner's Manual and Installation Guide

Model	Part No.	Volts	Amps	Banks	Cables	Size	AC In
ProSport6	43006	12	6	1	6'	7.125"x 7.25" x 2.75"	90-135
ProSport8	43008	12/24	8	2	6'/6'	8.375"x 7.25" x 2.75"	90-135
ProSport12	43012	12/24	12	2	6'/6'	9.875"x 7.25" x 2.75"	90-135
ProSport15 (OEM only)	43015	12/24/36	15	3	6'/6'/6'	10.825"x 7.25" x 2.75"	90-135
ProSport20	43020	12/24	20	2	6'/6'	12.125"x 7.25" x 2.75"	90-135
ProSport20 Plus	43021	12/24/36	20	3	6'/6'/6'	12.125"x 7.25" x 2.75"	90-135

#### IMPORTANT NOTICE

Please save and read all safety, operating and installation instructions before installing or applying AC power to your ProSport On-Board Marine Battery Charger.

#### Your Satisfaction is Important to Us!

**Do not return this product to a retailer or dealer for any service or warranty requirements. Please call our Customer Care Department at 800-824-0524 from 8:30 am to 5 pm Eastern Time for any warranty, service or installation assistance. Thank you - ProMariner Customer Care**

#### PLEASE RECORD YOUR:

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

For use with Flooded (Lead-Acid), AGM and Gel Batteries. Not for use with 4D or 8D large capacity batteries.

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### Important Charger Operation Note:

Once your new ProSport is installed and properly connected to batteries you will be ready to plug it in.

Please note the ProSport has a built-in self test feature that will also analyze all battery connections and batteries to determine your boats batteries are capable of being charged correctly. The self test is automatic and will take place everytime the unit is plugged into a 110VAC outlet. The self test may take up to 2 minutes to complete.

During the self test the red charge mode indicator will be flashing. When completed if everything is connected properly and the batteries are OK and above 2.0 volts DC then the charger will register and illuminate the green system check OK indicator followed by a solid (non flashing) red charge mode LED illuminating indicating all batteries are being charged.

If the charger does not go into the charge mode with a solid (non flashing) red charge mode indicator and the system check OK indicator is not illuminated with a solid green LED then a red battery bank fault LED will illuminate identifying the battery(s) that have either a wiring fault present i.e poor connection, a blown DC cable fuse, the DC cable is wired in reverse polarity, battery cable is wired across two batteries in series with a high DC overvoltage of 24V or the battery itself may be under 2.0 volts DC. In any of these cases refer to the troubleshooting section on page 21 of this manual.

## Introduction

Thank you from all of us at ProMariner and congratulations on your recent purchase of the ProSport On-Board Marine Battery Charger. Powered and designed by ProMariner, a leader in the marine charger industry for over 30 years. The Generation 3 ProSport has been taken to the next level of performance. Each model fully utilizes state of the art all digital microprocessor controlled charging technology, delivering industry leading features not seen in our previous generation of marine battery chargers. Features include: digital bank trouble indicators, once a month storage reconditioning mode and expanded digital LED display.

### ProMariner's Generation 3 ProSport Features Include:

#### ProMar Digital Technology

Microprocessor and software controlled pulse charging technology delivering a 40% lighter design, cooler charger operation and faster charging.

#### System Check OK and Battery Bank Trouble Status Indicators

Advanced technology eliminates time consuming troubleshooting by clearly indicating system and battery connections are OK or if a fault is present on a specific battery bank.

#### Digital Multi-Stage Performance Charging

Fully charge and extend the life of your batteries. Automatically charges, conditions and safely maintains all batteries on board for maximum time on the water.

#### Storage Recondition Mode

During short or long-term storage, ProSport automatically reconditions all batteries on board once a month for maximum battery life and performance.

#### Distributed On-Demand™ Technology

ProMariner's Distributed-On-Demand™ Technology automatically senses and distributes 100% of available charging amps to any one bank or combination of all banks. All unused charging amps are Distributed-On-Demand™ to batteries on board requiring additional charging amps.

#### Digital LED Display and Battery Type Selector

LED indicators for charging, conditioning and maintain modes in addition to AC power and selected battery type (2 charge profiles to choose from with a 3rd profile for AGM HP on the ProSport 20 Dual model only.)

#### Built-in Quality & Safety

Compact and rugged extruded aluminum design, dual in-line DC safety fuses for trolling motor battery banks. Built-in over-voltage, overload, over-temperature, reverse polarity and ignition protection.

#### Pre-wired for Easy Installation

#### 2-Year Warranty

## General Safety Instructions

Before connecting your batteries or applying AC power, read all instructions and cautionary markings on the battery charger, cables, and batteries.

**CAUTION** - To reduce the risk of injury, charge only lead-acid type rechargeable batteries; Flooded (lead-acid), Sealed (lead-acid), Gel (Gelled Electrolyte Lead-acid) and AGM (Absorbed Glass Mat). Other types of batteries may burst, causing personal injury. **The ProSport is factory set for standard Flooded (lead-acid) /AGM (Absorbed Glass Mat) batteries.**

Use of attachments not recommended or sold by Professional Mariner, LLC may result in a risk of fire, electrical shock or personal injury.

EXTERNAL CONNECTIONS TO CHARGER SHALL COMPLY WITH THE UNITED STATES COAST GUARD ELECTRICAL REGULATIONS (33CFR183, SUB PART 1).

Do not operate the charger if it has received a sharp blow, direct hit of force, been dropped or otherwise damaged in any way. Do not install if any protective AC and DC cable insulation, DC fuse holders and/or ring terminals have been damaged or compromised.

Call ProMariner for repair service to avoid risk of fire, short circuits or electrical shock.

Do not disassemble the battery charger. If service or repair is required please contact customer care at 1-800-824-0524. Incorrect reassembly or cable modifications may result in a risk of electrical shock, fire or explosion.

To reduce the risk of electrical shock, remove AC power from the charger prior to 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 EXTREME IMPORTANCE THAT EACH TIME BEFORE USING YOUR CHARGER YOU FOLLOW THESE SAFETY INSTRUCTIONS.

### WARNING AVOID SERIOUS INJURY OR DEATH FROM FIRE, EXPLOSION, OR ELECTRICAL SHOCK

- Make your AC power connection in an open atmosphere free of explosive fumes.
- Make your AC power connection in a secure manner that will avoid contact with water.

### Personal Safety Precautions

- a) Someone should be within the range of your voice or close enough to come to your aid when working near a lead-acid battery.
- b) Have plenty of soap and water nearby in case battery acid comes in contact with skin, clothes, or eyes.
- c) Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery(s).
- d) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
- e) NEVER smoke or allow a spark or flame in the vicinity of a battery or engine.
- f) Incorrect assembly or modification may result in risk of electrical shock, fire, or explosion.
- g) Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short-circuit a battery or other electrical hardware which may cause an explosion or fire.

## General Safety Instructions

h) Remove all personal metal items such as rings, bracelets, necklaces, watches, and jewelry when working near a battery. A battery can produce a short circuit current high enough to weld a ring or any other metal, causing serious burns.

**CAUTION** - To reduce the risk of injury, charge only lead-acid type rechargeable batteries; Flooded (lead-acid), Sealed (lead-acid), Gel (Gelled Electrolyte Lead-acid) and AGM (Absorbed Glass Mat). Other types of batteries may burst, causing personal injury. The ProSport is factory set for standard Flooded (lead-acid) /AGM (Absorbed Glass Mat) batteries.

Use your ProSport On-Board Marine Battery Charger to charge: Flooded (lead -acid)/AGM (Absorbed Glass Mat) Gel (Gelled Electrolyte Lead-acid) Batteries. It is not intended to supply low voltage electrical systems other than in a marine application. Do not use your marine battery charger to charge dry cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and property. Never charge a frozen battery

### Safety Precautions Prior to Charging Batteries

If necessary to remove a battery from a boat to charge, **always remove the grounded negative terminal from the battery first.** Make sure all accessories in the boat are off, as to not cause an arc. Be sure the area around the charger and batteries is well ventilated while the batteries are being charged. Gases can be forcefully blown away using a piece of cardboard or other nonmetallic material as a fan.

Clean battery terminals with full eye protection to prevent corrosive material from coming in contact with eyes.

Add distilled water in each cell until electrolyte reaches levels specified by the battery manufacturer. This helps purge excessive gases from cells. Do not overfill. For batteries without caps, carefully follow manufacturer's recharging instructions.

Study all manufacturer's specific precautions, such as removing or not removing cell caps while charging, in addition to battery type for proper rate of charge.

Extension cords should be industrial grade / heavy duty UL approved and grounded. Check extension cord before use for damage, bent prongs, and cuts. Replace if damaged. Always make your extension cord connection on the charger side first. After connecting the extension cord to the charger proceed to plug the extension cord to a nearby 120 VAC GFCI protected (Ground Fault Circuit Interrupt) outlet.

**Always remove the extension cord from the 120 VAC outlet first when charging is completed followed by unplugging the charger from the extension cord.**

### IMPORTANT NOTICE: FCC CLASS A PART 15 NOTIFICATION

Your ProSport On-Board Marine Battery Charger has been designed and tested to comply with FCC Class A part 15. These regulations are to provide adequate protection against harmful interference while operated in a commercial application. If in a residential setting, you are encountering interference with TV and radio reception, simply remove AC power from the ProSport to confirm if your battery charger is causing interference. End user can explore the following to minimize interference:

- 1) Chose a different AC circuit to power your On-Board Marine Battery Charger.
- 2) Make sure your outlet is properly grounded.
- 3) Re-position receiving antenna.
- 4) Purchase a separate AC line filter.
- 5) Relocate charger so that it is at the furthest point from home receiving equipment, TV, radio, etc.



### General Overview

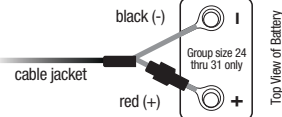
The ProSport Charger is an advanced electronic and fully automatic multi-stage on-board marine battery charger. ProSport is pre-wired for easy installation and is 100% waterproof for fresh and salt water applications. ProSport's multi-stage charging process delivers five modes of operation that include: start up diagnostics, charging, conditioning, auto maintain and storage reconditioning of each battery. This process is proven to extend the life of your batteries and will fully charge your batteries each time you connect to AC power. ProSport delivers increased power and performance while providing improved durability and heat transfer.

The ProSport Distributed-On-Demand™ Charging Technology will automatically sense and distribute 100% of the available charging output of 8, 12, 15 or 20 amps (model specific) to any one battery or combination of all batteries. Each battery charger output is fully isolated. ProSport's easy to view LED indicators will provide at a glance status of: AC power, battery type, charging, and ready status. The LED status center also includes an indication of a fault or failure detected at each battery that is connected to the charger and can be seen on the top of the unit when installed.

*Note: ProSport On-Board Marine Battery Chargers are designed for any combination of group 24, 27, 30 and 31 batteries. Each battery charger DC output cable must be connected to one (1) 12 Volt DC battery (even if batteries are configured for 24 Volt DC or 36Volt DC trolling motor or system applications).*

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

Each charger cable must be connected to 1 battery, just as shown. Observe black to (-) and red to (+). Do this for each battery.



When connecting to an engine start battery only connect the battery bank cable that is LABELED: "FOR ENGINE BATTERY, USE THIS BANK CABLE ONLY".

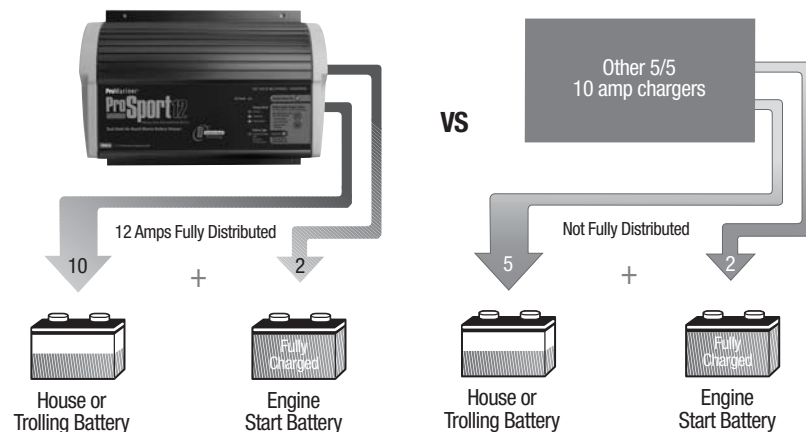
**Application Tip**  
If your application is for 4D or 8D large capacity batteries, please refer to ProMariner's website [www.promariner.com](http://www.promariner.com) and view our ProNauticP Hardwired Charger Assortment for a model that is correct for this group size of batteries.

*Most specifically you do not have to remove series or parallel jumper cables to use your ProSport charger. See typical wiring diagrams for these systems in the installation section of this manual.*

*Note: The ProSport must be connected to batteries to operate. It will not operate as a 12 volt power supply.*

### How Distributed-On-Demand™ Charging Technology Works

ProSport's Distributed-On-Demand™ Charging Technology ensures 100% of the available charging amps are fully utilized to meet the demand of each battery on-board. For example, if your engine start battery only needs 2 amps from your ProSport 12 (6/6 two bank charger) the unused 4 amps will be automatically Distributed-On-Demand™ to your house or trolling motor battery, providing a total of 10 amps for faster charging versus only 5 amps that the conventional 5/5 battery charger would provide. The competitive 5/5 charger has a 5 amp limit per bank.



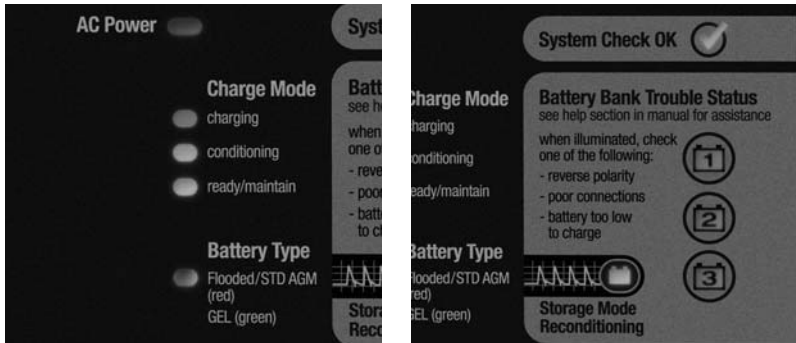
### General Operation

Install your ProSport On-Board Marine Battery Charger to the guidelines in this manual. Make sure your charger and batteries are properly vented. Connect your extension cord with no AC power present to the ProSport and proceed to plug your extension cord in at a nearby 120 VAC GFCI protected (Ground Fault Circuit Interrupt) outlet.

With your ProSport plugged in properly, it will automatically/ fully charge your batteries while it conditions and extends the life of your batteries. Always leave your charger plugged in to reduce sulfate build-up allowing your batteries to be fully charged and maintained for your next fishing trip.

The ProSport design incorporates a new storage recondition mode that stimulates and reconditions your onboard batteries for 3 hours once a month and when completed will resume its normal auto maintain mode. During the storage recondition mode the ready/maintain LED will remain green and the storage recondition mode LED will fade-in fade-out pulse, indicating your batteries are being reconditioned and are fully charged during this process.

## ProSport LED Status Center - Operation and Display



ProSport includes 7 LEDs for operation status and up to 3 battery bank trouble LEDs depending on the model.

### 1. The blue AC power LED

Illuminates when AC power is applied

### 2. The battery type LED

Will illuminate red for standard Flooded (lead-acid)/AGM and green for GEL.

*Note: The ProSport 20 Dual bank model includes an amber battery type LED for AGM HP (High Performance) battery type. Please read the battery manufacturer literature carefully and select the correct charge profile. Failure to do so may cause early battery failure.*

### 3. The system check OK LED

After applying AC power the ProSport will self test and analyze all battery connections and batteries. If all checks are OK the green LED will illuminate. This can take up to 2 minutes.

### 4. The charge mode LEDs

- Charging: Red LED will flash during the self test and battery test mode (approximately 1-2 minutes) and will be solid red during charging.
- Conditioning: Amber LED illuminates during conditioning mode.
- Ready / maintain: Green LED illuminates when batteries are fully charged and being automatically maintained until you are ready to use your boat.
- Storage recondition: Green LED fades in and out when performing a once a month storage recondition mode.

### 5. Battery bank trouble status LEDs

Red LEDs will illuminate indicating a wiring problem or fault at one of the batteries connected to the ProSport charger. See page 21 for further details.

## Operation after Applying AC Power to a ProSport Charger Connected to Discharged Batteries

*(The following example is for the factory setting of Flooded (lead-acid) batteries) When power is applied the ProSport performs a self test of the battery charger electronics and the batteries connected to the battery charger.*

During the startup test the battery type LED will be illuminated and the red charge mode LED will flash indicating that the unit is in a self test mode. When complete and if there are no faults, the charger's system check OK indicator will illuminate green and the ProSport's solid red charging LED will be ON indicating the charge process is initiated.

*Note: If there is a fault the appropriate bank LED will illuminate and the charge process may not start, depending on the location of the fault. See page 21 for further troubleshooting details.*

### If There are no Battery Faults, the Green System Check OK LED will Illuminate and the Following Sequences will Proceed:

The red battery type LED (factory set for standard Flooded (lead-acid)/AGM batteries) will illuminate. The red charge mode LED will illuminate indicating the charger has started its multi-stage charging process. When the charge process is approximately 80% complete the red charge mode indicator will turn off and the amber conditioning LED will turn on indicating the conditioning mode.

When the multi-stage charge process is completed you will observe the following:

Battery type red LED goes OFF.

The red charging LED and the amber conditioning LED will be off and the green ready/maintain LED will illuminate indicating your batteries are fully charged.

The only LEDs on after the multi-stage charge process is completed are the green system OK LED, blue AC power LED and the green ready/maintain LED.

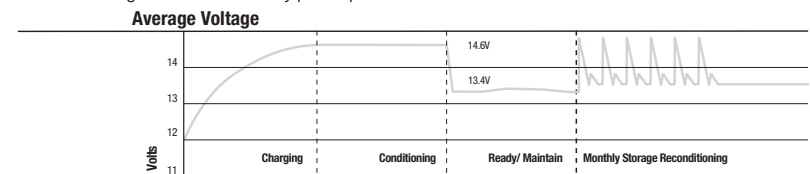
## Multi-Stage Charging Overview

**ProSport Charging:** During this mode the "Charging" indicator will be red. ProSport will use all of its available charging amps (as controlled by temperature) until the battery voltage is raised to 14.6VDC (Flooded lead-acid factory setting).

**ProSport Conditioning:** During this mode the "Conditioning" status indicator will be amber. Batteries will hold at 14.6VDC (factory set for Flooded lead-acid batteries) to complete charging while conditioning each battery connected. Upon completion the ProSport will go into its maintain mode.

**ProSport Ready / Maintain:** During this mode the "Ready/Maintain" status indicator will be green and remain on with the blue "power" LED indicating that your batteries are fully charged while being maintained at a precision 13.4 volts (factory set for Flooded lead-acid batteries) and are ready to go when you are.

**ProSport Storage Recondition Mode:** During this mode the ProSport "Recondition Mode" green indicator will illuminate with a slow fade in and out pulse indicating that while your batteries/boat are in storage the ProSport will automatically recondition all batteries for up to 3 hours once a month extending battery life and maximizing on the water battery power performance.



(Factory installed black programming cap charge profile illustration).

### Selecting a Charging Profile & Understanding Battery Types

Your battery charger is equipped with a user programmable battery type selector that is factory set for standard Flooded (lead-acid) / AGM (Absorbed Glass Mat) batteries.

To set your charger for Gel batteries simply remove the black programming cap and replace it with the Gel programming gray cap. If you own a ProSport 20 Dual Bank Charger you also have the option to use the High Performance AGM profile recommended for OPTIMA BlueTop Deep Cycle and Odyssey AGM marine batteries by installing the blue AGM HP programming cap. Any time you reprogram or change the cap, apply marine silicone to the threads of the cap being installed.

*NOTE: AGM (Absorbed Glass Mat) batteries are not Gel (Gelled Electrolyte Lead-acid) batteries and require a completely different charge profile that must be selected versus the out of the box factory setting. AGM batteries can accept the same charging profile as Flooded (lead-acid) batteries.*

### Understanding Battery Types & Charger Settings

There are three primary types of batteries in the marketplace today; standard Flooded (lead-acid), AGM (Absorbed Glass Mat), high performance AGM and Gel cell (Gelled Electrolyte Lead-acid). Traditionally, the most common type of batteries used are Flooded (lead-acid) batteries. Almost all Gel cell batteries will state that they are Gel cell on the battery case or labels. Shown below are typical battery voltages at absorption and float levels.

LED color	Battery Type	Charging Profile	Cap
Red	Standard Flooded (lead-acid) - with or without fill caps AGM (Absorbed Glass Mat) - Sealed	14.6 VDC Absorption, 13.4 VDC Float	Black
Green	Gel Cell - Sealed Gray Cap	14.1 VDC Absorption, 13.8 VDC Float	Gray
Amber*	AGM High Performance (Absorbed Glass Mat) - Sealed (OPTIMA, Odyssey, West Marine Brands)	14.7 VDC Absorption 13.6 VDC Float	Blue*

*NOTE: AGM (Absorbed Glass Mat) batteries are not Gel (Gelled Electrolyte Lead-acid) batteries and require a completely different charge profile that must be selected versus the out of the box factory setting. AGM batteries can accept the same charging profile as Flooded (Lead-acid) batteries.*

\* Only available on ProSport 20 Two Bank model only.

**Note:** If you are still unsure what kind of battery(s) you have, we recommend that you contact the manufacturer of the battery(s).

### Installation

All ProSport Battery Chargers are designed to be permanently mounted on-board, and should be mounted with extruded fins placed horizontally.

Always mount your ProSport in a compartment area that can be properly ventilated during use.

Do NOT mix battery types on-board. All batteries should be of the same age and in good operating condition.

Do NOT make any electrical connections to the ProSport or batteries until the following steps are completed:

#### 10 Easy to follow installation steps:

1. Select a mounting location that allows for free air ventilation with a minimum of 8 inches of clear unobstructed space around and in front of the ProSport On-Board Marine Battery Charger. Open all battery and engine compartments and ventilate for at least 15 minutes before starting the installation of the ProSport charger. Confirm all battery cables can reach each of the batteries.

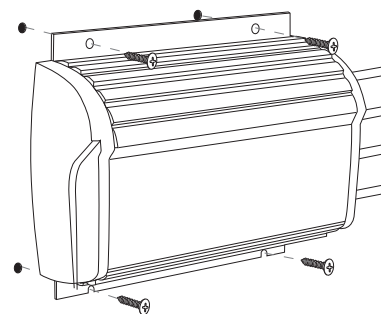
**Do not install charger on carpeted, upholstered, vinyl, or varnished areas. Be sure to place the ProSport in an accessible area where all indicators are viewable. Install this unit on a hard surface.**

*Note: For installations requiring an extension of the DC battery charger cables, please call or visit your retailer or dealer to purchase ProMariner's 5 foot or 15 foot battery charger DC cable extenders. Our innovative cable extenders are properly fused and do not require any cutting or stripping of wires. If you have any problems locating this accessory call ProMariner at 1-800-824-0524.*

2. Using the ProSport charger as a template or the enclosed paper template, mark the position of each mounting hole. Insure the mounting screws will not puncture or protrude into a live well, a fuel or oil tank or the bottom of the boat.

3. Using a 1/8" drill bit, drill pilot holes in the (4) marked locations as described in step 3. Apply a silicon sealer in each of the mounting locations to waterproof the screw holes.

4. Position the ProSport over the mounting holes and secure with a power screwdriver by installing 4 stainless steel # 10 screws. (mounting screws not included).



1/8" pilot hole with silicon sealer

#### IMPORTANT NOTICE

Confirm the surface you will be mounting the charger to is adequate in strength and thickness to hold the ProSport in place with the mounting screws you have selected.

Maintain an obstruction free area of 8 inches around the ProSport On-Board Marine Battery Charger

For aluminum boat installation we recommend installing your ProSport Charger on a wood or fiberglass panel and not directly on the aluminum hull.

## Installation

5. Prepare each battery in advance by cleaning each terminal post with a wire brush until a shiny surface is obtained.
6. Run cables free from sharp objects and hold each in place with cable ties. Coil excess cable, do not cut or shorten the length of the cables, as in-line fuses are located 4 inches from the end of each red (positive) cable. In addition, there are fuses in all but one of the black (negative) leads. These fuses protect the charger and output cables in the event of a wiring short. We recommend the use of wire ties or cable clamps to provide strain relief for the cables and to reduce the risk of damage to the cables or connections.
7. Connect the DC output cables as illustrated on pages 11-18. Make sure the (black) wires are connected as illustrated to the negative side of the battery and the (red) wires are connected to the positive side of the battery.

*Important Note: Your ProSport charger will not operate properly if it is not connected properly to each battery. Reminder, The ProSport and each DC jacketed bank cable must be properly connected to "individual 12V batteries". Number of DC jacketed bank cables equals the number of batteries that must be individually connected. Example: a 3 bank ProSport 20 Three Bank charger must be connected to 3 individual 12V batteries, as illustrated on pages 11-18. Simply choose the illustration that has the same number of charger output bank cables as your ProSport Battery Charger in hand and wire exactly as shown (choose the illustration that matches your application) for proper charger operation.*

8. Make sure all DC connections are correct, tight, and free from corrosion.
9. Locate the AC power cord in an open-air area of your boat at least 21 inches from the charger, batteries, and fuel fill lines.
10. Connect a heavy duty UL approved extension cord to the ProSport charger first. After connecting the extension cord to the charger, proceed to plug the extension cord to a nearby 120 VAC GFCI protected (Ground Fault Circuit Interrupt) outlet. Always remove the extension cord from the 120VAC outlet first when charging is completed, followed by unplugging the charger. You are now connected and charging your batteries. View the LED indicators.

## 4 Steps to Wire your ProSport Charger Correctly

- STEP 1: Simply choose the illustration that has the same number of charger output bank cables as your ProSport Battery Charger in hand and wire exactly as shown (choose the illustration that matches your application) for proper charger operation.
- STEP 2: Do not remove your batteries series or parallel jumper cables that interconnect batteries to each other. ProSport Chargers are designed with isolated outputs and series or parallel jumper cables do not have to be removed.
- STEP 3: Your ProSport charger will not operate properly if it is not connected properly to each battery. Reminder, the ProSport and each DC jacketed bank cable must be properly connected to "individual 12V batteries". Number of DC jacketed bank cables equals the number of batteries that must be individually connected. Example: a three bank ProSport 20 3 Bank must be connected to 3 individual 12V batteries. As Illustrated on Pages 11-18. Select your battery / trolling motor configuration for the specific wiring illustration need for your charger.

## Installation

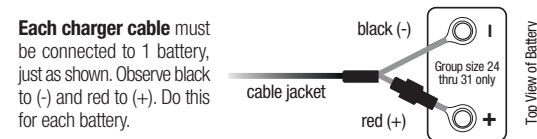
STEP 4: Incorrect wiring will result in reverse polarity or high reverse voltage, in the event this happens, the ProSport Charger has been designed to not fail as a result, however it will cause the charger to "internally disconnect" and provide "no output" until the (reverse polarity caused by putting the "red" + lead on a - negative battery terminal) and or the (high reverse DC voltage caused by taking one bank cable and spreading it across two batteries) is corrected, using the wiring diagrams as shown on pages 11-18. In the event of a reverse polarity connection or an improper battery connection or if an output is not connected to a battery the appropriate red battery bank trouble LED will illuminate identifying the battery and wiring connections where a fault is present. See page 21 for further details.

### Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**



When connecting to an engine start battery only connect the battery bank cable that is LABELED: "FOR ENGINE BATTERY USE THIS BANK CABLE ONLY".

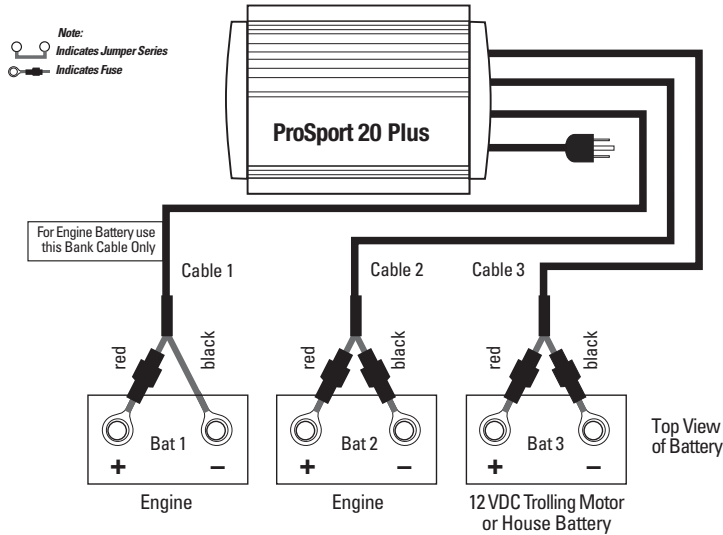
### Application Tip

If your application is for 4D or 8D large capacity batteries, please refer to ProMariner's website [www.promariner.com](http://www.promariner.com) and view our ProNauticP Hardwired Charger Assortment for a model that is correct for this group size of batteries.

Typical Wiring

Fig. 1 ProSport 15 (OEM only) and 20 Three Bank Charger for 3 12V Batteries

Dedicated 12 VDC Trolling/House Bank and 2 Engine Crank Batteries Typical Configuration



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

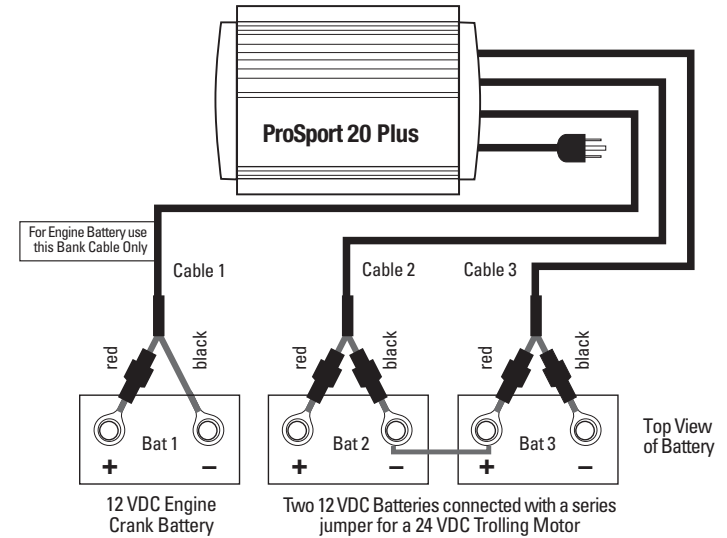
Note 1: One bank cable connects to no more than one battery

Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

Typical Wiring

Fig. 2 ProSport 15 (OEM only) and 20 Three Bank Charger for 3 12V Batteries

24 VDC Trolling Motor Battery Configuration with (2) 12 VDC Batteries Connected with a Series Jumper Plus Dedicated 12 VDC Engine Start Battery



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

Note 1: One bank cable connects to no more than one battery

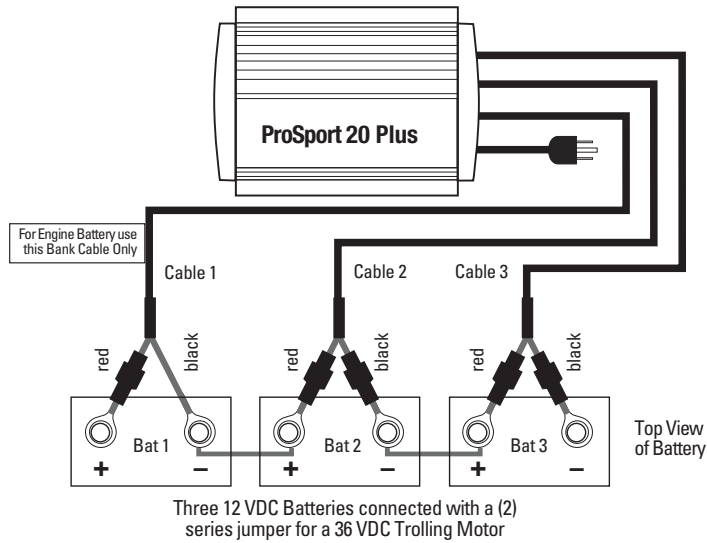
Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries



Typical Wiring

Fig. 3 ProSport 15 (OEM only) and 20 Three Bank Charger for 3 12V Batteries

Dedicated 36 VDC Trolling Motor Battery Configuration with (3) 12 VDC Batteries Connected with (2) Series Jumpers



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

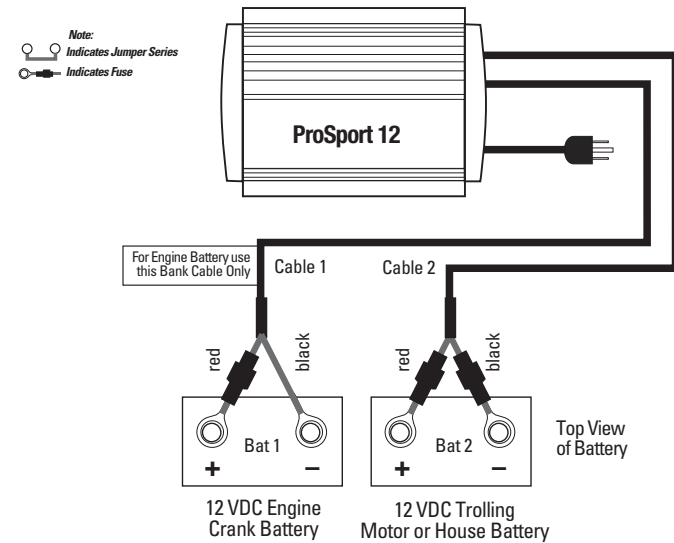
Note 1: One bank cable connects to no more than one battery

Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

Typical Wiring

Fig. 4 ProSport 20, 12 and 8 Dual Output Charger for 2 12V Batteries

12 VDC Engine Start and a 12 Volt Trolling Motor or House Battery Configuration with (2) 12 VDC Batteries



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

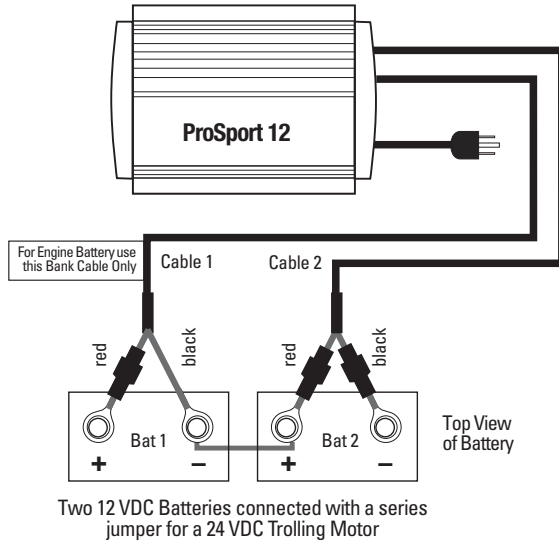
Note 1: One bank cable connects to no more than one battery

Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

Typical Wiring

Fig. 5 ProSport 20, 12 and 8 Two Bank Charger for 2 12V Batteries

Dedicated 24 VDC Trolling Motor Battery Configuration with (2) 12 VDC Batteries Connected with a Series Jumper



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

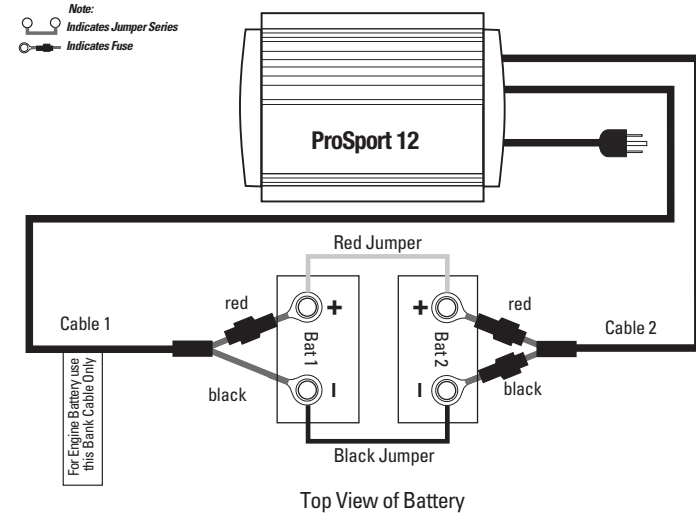
**Important:** The pair of red and black wires in 1 cable jacket **MUST GO TO THE SAME 12VDC battery.**

- Note 1: One bank cable connects to no more than one battery
- Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

Typical Wiring

Fig. 6 ProSport 20, 12 and 8 Two Bank Charger for 2 12V Batteries in Parallel

Dedicated 12 VDC Parallel Trolling Motor or House Configuration



Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

- Red Wire = + (Positive) Battery connection
- Black Wire = - (Negative) Battery connection
- The black wire can never be connected to a terminal with red wires. Only black.

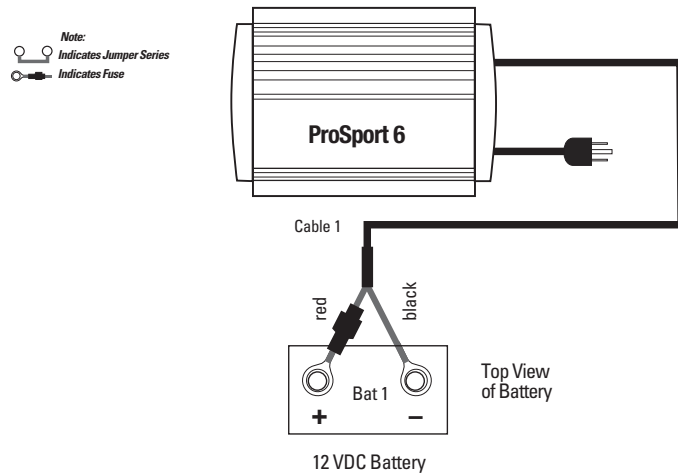
**Important:** The pair of red and black wires in 1 cable jacket **MUST GO TO THE SAME 12VDC battery.**

- Note 1: One bank cable connects to no more than one battery
- Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

## Typical Wiring

Fig. 7 ProSport 6 One Bank Charger for 1 12V Battery

Dedicated 12 VDC Trolling Motor, House or Engine Battery Configuration



### Installation

When connecting each jacketed battery charger cable, make sure it is connected to only **one 12 VDC battery** and observe the polarity and color of all connections:

Red Wire = + (Positive) Battery connection

Black Wire = - (Negative) Battery connection

The black wire can never be connected to a terminal with red wires. Only black.

**Important: The pair of red and black wires in 1 cable jacket MUST GO TO THE SAME 12VDC battery.**

Note 1: One bank cable connects to no more than one battery

Note 2: ProSport is designed to be used with group 24, 27, 30 and 31 batteries

## Charging your Batteries

The ProSport Charger is designed to charge, condition, maintain and recondition your batteries. Please follow these steps each time you use your ProSport charger:

1. Open all battery compartments and ventilate for at least 15 minutes before applying AC power to your charger. While charging your batteries make sure to keep your battery compartment open allowing for free air ventilation.

2. Make sure all DC battery connections are tight and clean. Follow battery manufacturer's recommendations for battery cell caps. (loosen caps if applicable).

Once your new ProSport is installed and properly connected to batteries you will be ready to plug it in.

3. Connect a heavy duty UL approved extension cord to the ProSport charger first. After connecting the extension cord to the charger, proceed to plug the extension cord to a nearby 120 VAC GFCI protected (Ground Fault Circuit Interrupt) outlet.

4. Assuming your batteries are discharged, and your ProSport is factory set (black programming cap installed) for standard Flooded (lead-acid) batteries, you should observe ProSport's self test mode (flashing red charge mode LED), blue AC power LED turn on, followed by the red battery type LED turning on (red is the factory setting of standard Flooded (lead-acid)/AGM type batteries) and once the green system check OK LED turns on you will notice a solid red charge mode indicator identifying the charging process has started.

*Note: The ProSport has built in self testing to insure all batteries are connected correctly. The self test is automatic and will take place everytime the unit is plugged into a 110 VAC outlet. The self test may take 2 minutes to complete. During the self test the LED will flash indicating it is in self test mode. If everything is connected properly and the batteries are OK the charger's system check OK indicator will illuminate green and the ProSport will then go into its charge mode indicated by a solid red LED.*

If the charger does not go into the charge mode and a red "fault" LED is illuminated then make sure your batteries have a voltage greater than 2 volts DC present and refer to the trouble shooting section on page 21.

5. The multi-stage charging process is complete when only the green LED for the ready/maintain mode is illuminated and the blue AC power LED remain on indicating that your batteries are fully charged and are being maintained with a precision 13.4 volts DC finishing voltage (Factory set charge profile for standard Flooded (lead-acid / AGM batteries).

6. When you are ready to use your boat, unplug your extension cord at the GFCI outlet first, followed by unplugging the charger.

### Optional Battery Bank Status Monitor

See your local dealer or retailer for the ProMariner Remote Battery Bank Status Monitor. The remote monitor is easy to install and connects directly to your boat's batteries. Once installed, simply hold down the "push-to-test" button and observe the charge level indicator for each battery (up to 3 batteries can be monitored).

*Note: AC power to the battery charger and the boat's engine must be off when using the Remote Battery Bank Status Monitor.*

## Maintenance

<b>Item:</b>	<b>Battery Connections</b>
<b>Process:</b>	Clean and tighten all battery connections. Follow battery manufacturer's instructions for cleaning a battery. Clean all battery terminals with a wire brush where required and tighten all battery connections.
<b>When:</b>	Monthly

<b>Item:</b>	<b>Battery Electrolyte</b>
<b>Process:</b>	Per battery manufacturer's instructions, monitor, and maintain proper levels of distilled water in each battery.
<b>When:</b>	Monthly

<b>Item:</b>	<b>ProSport DC Output Wiring</b>
<b>Process:</b>	Visually inspect all wiring for cuts and abrasions. Contact ProMariner if your charger needs to be serviced.
<b>When:</b>	Monthly

<b>Item:</b>	<b>AC Power Cord and Mounting Hardware Inspection</b>
<b>Process:</b>	Visually inspect the AC power cord. Confirm ground blade is present and all plug blades are in good condition and not bent out of place.  Check all mounting hardware to ensure there is no loose hardware. Tighten where required.
<b>When:</b>	Monthly

## Troubleshooting

**No Blue AC Power LED or Charge Mode Indicator or Battery Type LED**

Check for loss of AC power at the 120 VAC outlet. Confirm GFCI (Ground Fault Circuit Interrupter) has not tripped. Check with a meter or 120 VAC test light that AC power is present at the end or your extension cord. Reset AC power if it was not present. Confirm all charger cables are installed with the correct polarity connections at each battery and that all connections are clean and tight. Wait 2 minutes while unit performs self test. If AC power is present and all connections are correct and LEDs do not illuminate, contact ProMariner at 1-800-824-0524 from 8:30 am to 5pm Eastern Time. If your ProSport is within the warranty period of 2 years from the date of purchase, you can go to [www.promariner.com](http://www.promariner.com) where you will find our customer care return form and instructions.

**Green System Check OK Indicator is OFF & a Red Battery Bank Trouble Status LED is ON.**

Identify the battery bank LED that is lit, remove AC power and check the battery bank indicated i.e 1, 2, 3 (model specific). The LED indicates there is a fault present. Listed below are typical faults and what can be done to clear the red battery bank trouble status indicator (reapply AC power after making any corrections):

**Poor battery connections** - Make sure all connections are tight and clean

**Blown DC cable fuse** - Make sure all fuses are good with a digital ohm meter or continuity tester and visually inspect the ProSport's DC battery cables to insure they have not been compromised or shorted in any way.

**Reverse polarity** - Make sure all wiring connections are color coded and connected properly and that each bank cable goes to one 12V battery where (+) = red (-) = black.

**Battery too low to charge** - with a digital voltmeter make sure the battery is over 2.0 volts DC (if not have your battery charged out of the boat and have it load tested by your local battery dealer to insure optimum performance on the water.

**High battery voltage input** - Check to make sure one bank lead was not spread across 2 batteries connected in series for 24 volts DC. If so correct by wiring to the diagrams on pages 11- 18.

**Battery(s) not charging, Blue AC Power LED, RED Charging & Battery Type LEDs are ON**

Confirm all charger cables are installed with the correct polarity connections at each battery, and that all connections are clean and tight. Confirm that there are no bank trouble status LED indicators on. With the charger on, read DC voltage at each battery. If any of the readings are less than 13 volts DC proceed with the following:

- A. Disconnect AC power at the 120 VAC outlet.
- B. Go to pages 11-18 of this manual and confirm your ProSport model charger is connected correctly as illustrated in the installation drawings.
- C. Upon completing B above; plug your charger into AC power and observe the LED center. Charger should be in the charging mode (charge status indicator should be red). If after completing a full charge cycle, 10-12 hours or more for deeply discharged or completely dead batteries, the charge mode indicator should be green as well as the blue AC power LED.

*Note: If a Digital Volt Meter (DVM) is available to you, instead of waiting to complete a full charge cycle, you can simply use a DVM and take DC voltage measurements across each 12 volt battery. As long as the voltage continues to increase while the red charging LED is on, this will serve as a confirmation that the charger is properly connected and is properly charging.*

**Specifications**

model	part no.	voltage	amps	max. no. batteries	cable size	size L x W x H	weight	AC in
ProSport 6	43006	12	6	1	6'	7.125" x 7.25" x 2.75"	2 lbs	90-135
ProSport 8	43008	12/24	8	2	6'/6'	8.375" x 7.25" x 2.75"	3 lbs	90-135
ProSport 12	43012	12/24	12	2	6'/6'	9.875" x 7.25" x 2.75"	4 lbs	90-135
ProSport 15 (OEM only)	43015	12/24/36	15	3	6'/6'/6'	10.825" x 7.25" x 2.75"	6 lbs	90-135
ProSport 20	43020	12/24	20	2	6'/6'	12.125" x 7.25" x 2.75"	5 lbs	90-135
ProSport 20Plus	43021	12/24/36	20	3	6'/6'/6'	12.125" x 7.25" x 2.75"	6 lbs	90-135

**Accessories**

**ProSport 1.5 Battery Maintainers**

Fully automatic, with built-in safety. LED status indicator, 1-year warranty



**ProMariner & Universal Plug Holders**

Secure your AC plug with an easy to mount plug holder. No cutting or stripping of wires required. Safe and easy to use. Choose from two colors, black or white.



**Remote Battery Bank Status Monitor**

Remote "Push to Test" status indicators for up to 3 batteries with easy to read LED indicators. Universal flush or surface mount capable.



**Battery Bank Cable Extenders**

No cutting, stripping, or splicing wires! 2 convenient sizes to choose from: 5' or 15'. Gold plated terminals, in line fuses and hardware included.



**Hand Held Digital Multi-Meter**

Test and measure AC and DC voltage and amperage, continuity, resistance fuses outlets and more. Large digital LCD display with back light and hold feature. Test leads included.



Model	Part No.
Handheld DC System Tester	87710
Remote Battery Bank Status Monitor for up to 3 Batteries	51060
ProMariner's AC Plug Holder (white)	51200
ProMariner's AC Plug Holder (black)	51201
Universal AC Plug Holder (black)	51202
Universal AC Plug Holder (white)	51203
15' Battery Bank Cable Extender	51070
5' Battery Bank Cable Extender	51071
Hand Held Digital Multi-Meter	87730

To place an order contact your local retailer, dealer or ProMariner at: 603-433-4440 / Fax: 603-433-4442 / www.promariner.com

**Warranty**

We are committed to customer satisfaction and value your business. If at any time during the warranty period you experience a problem with your new ProSport On-Board Marine Battery Charger, simply call us at 1-800-824-0524 for technical support or email info@promariner.com.

WARRANTY CARD CAN BE REGISTERED AT WWW.PROMARINER.COM or the warranty card included in this manual can be completed and sent to ProMariner by mail.

**PROSPORT LIMITED TWO-YEAR FACTORY WARRANTY**

Each ProSport model is guaranteed against defects in material and workmanship to the original consumer in normal use for 2 years from the date of purchase. Professional Mariner, LLC will at it's discretion repair or replace free of charge any defects in material or workmanship.

The following conditions apply:

- Warranty and repair adjustment calculated from manufacture date if not registered or proof of purchase within two weeks of sale.
- Warranty void if unauthorized repairs attempted.
- Deep water damage not covered under warranty
- Customer is responsible for shipping to ProMariner.
- Cosmetic repairs are done at the owner's request and expense.

Purchase or other acceptance of the product shall be on the condition and agreement that Professional Mariner, LLC SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.) This warranty is made in lieu of all other obligations or liabilities on the part of Professional Mariner. Professional Mariner neither assumes nor authorizes any person for any obligation or liability in connection with the sale of this product.

To make a claim under warranty, go to www.promariner.com and click on the support tab and follow the instructions making sure to identify the product and the problem. If you can not use our online warranty claim registration, please feel free to call ProMariner at the toll free number listed below. Professional Mariner will make its best effort to repair or replace the product, if found defective within the terms of the warranty, within 30 days after return of the product to the company. Professional Mariner will ship the repaired or replaced product back to the purchaser. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty is in lieu of all others expressed or implied.

Factory Service Center & Technical Support  
Professional Mariner, LLC  
200 International Drive, STE 195  
Portsmouth, NH 03801.  
Tel: 1-800-824-0524

Professional Mariner, LLC  
Tel: (603) 433-4440 / Fax: (603) 433-4442

**Notes**

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