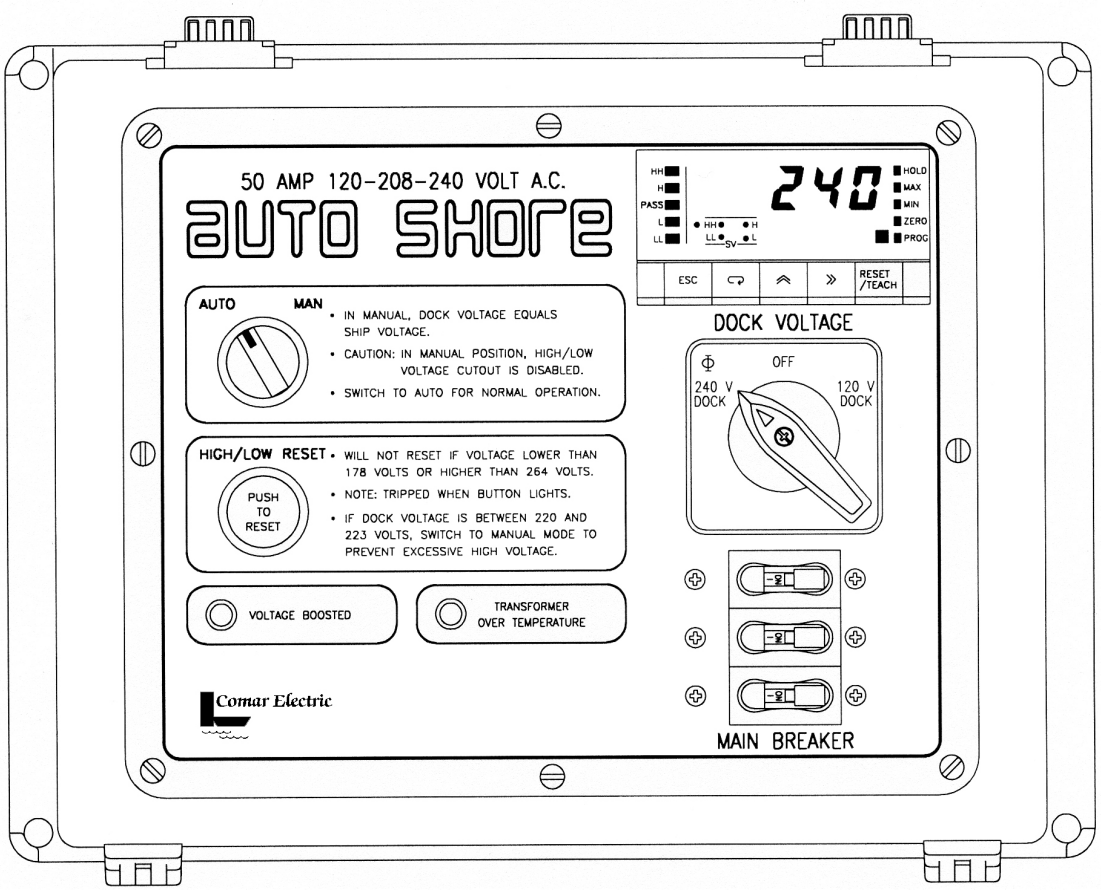
Owner's Manual

Revision 1.03W

Model No. 50-120-240 50/60Hz
50 Amp AutoShore



Comar Electric

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IMPORTANT

When connected to 220/230 VAC 50Hz (outside of North America), **DO NOT CONNECT WIRE TO NEUTRAL.**

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Important Safety Instructions

Save these instructions

General Precautions

1. Before using the AutoShore, read all instructions and cautionary markings on (1) AutoShore control box and (2) transformer.

2. Do not expose AutoShore to rain, snow or moisture of any type.

3. Do not disassemble the AutoShore; have only a qualified electrician perform service or repairs. Incorrect re-assembly may result in a risk of electric shock or fire.

4. To reduce risk of electric shock, disconnect all wiring before attempting any maintenance or cleaning. Turning off controls will not reduce this risk. Warning: Switching voltage selector switch to off does not completely isolate control wiring. To do so, disconnect shore cable at dock and switch main breaker off.

5. **Warning.** Install transformer in a well-ventilated location. Do not store materials (particularly flammable material) on or around transformer.

6. No terminals or lugs are required for hook-up of the AC wiring. AC wiring should be no less than No. 6 (AWG) copper wire rated at least 90 degrees C.

7. Over current protection for the AC output wiring is provided as an integral part of this unit. Over current protection of the AC input wiring may be also required adjacent to shore inlet. Consult local regulations.

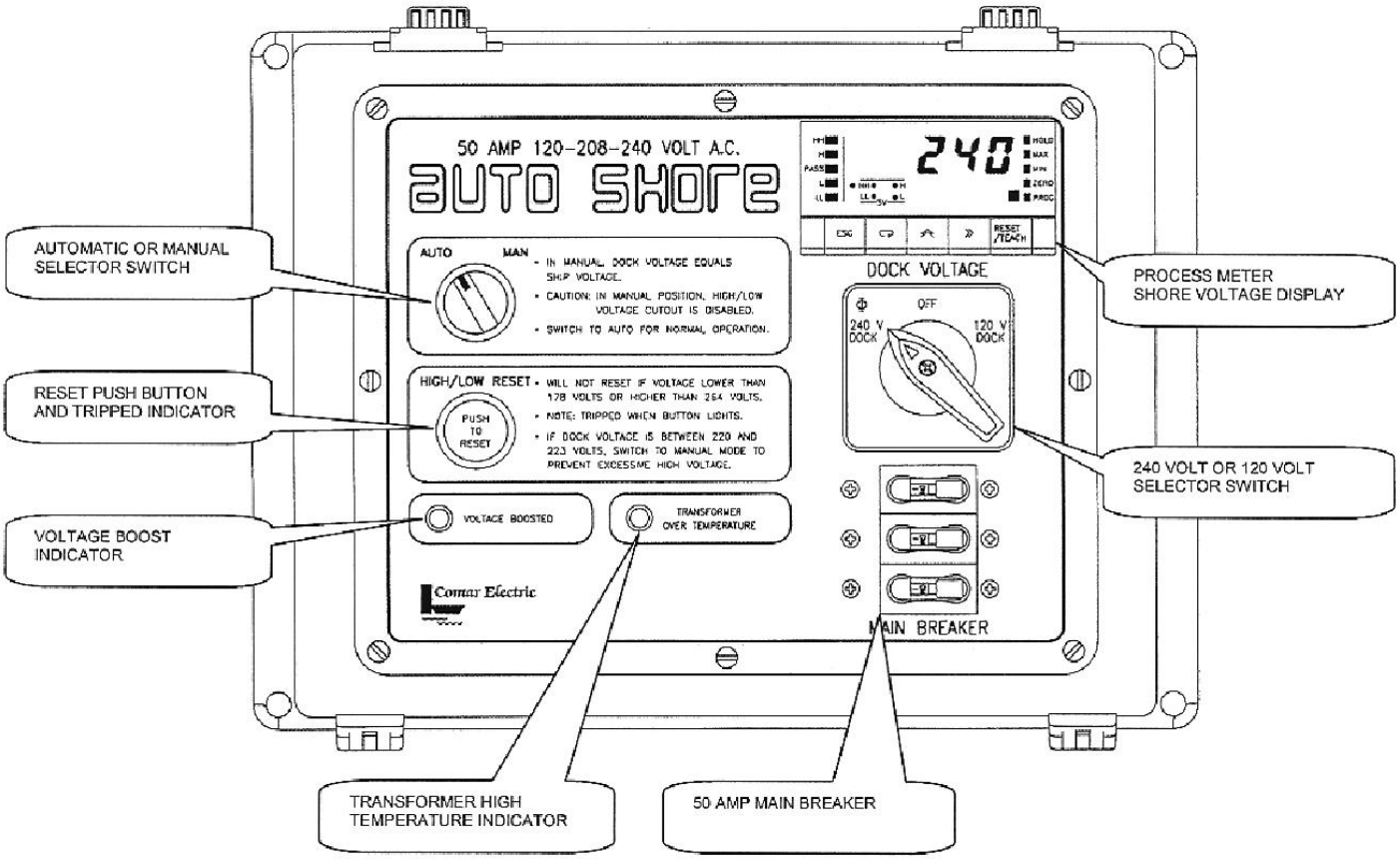
GROUNDING INSTRUCTIONS – Remove jumper between neutral and boat ground only if neutral is grounded at a common point in ship's wiring.

Introduction

Congratulations

With the installation of the **Comar Electrical Services AUTO SHORE** unit you have the ability to automatically boost low dock voltage insuring the supply of usable voltage from virtually any dock.

The unit also provides protection from excessively high and excessively low dock voltage and provides isolation to combat electrolysis and reduce personal shock hazard.



Control Box

Description of Operation

The AutoShore 50-120-240 is designed to monitor incoming shore voltage and boost the voltage if appropriate. Safety cutouts are also provided to protect the boat's electrical system from excessively high shore voltage and, equally as destructive, low dock voltage (brown outs). The output transformer also provides isolation between the dock shore power and the boats electrical system. The unit is designed with a selector switch so that power can still be provided to the boat when only 120 volts is available.

1. For the unit to go into boost mode, the input (shore) voltage must be equal to or lower than 219 volts for about 0.5 second. The indicator lamp (voltage boosted) on the front of the control panel will light at this time.

2. For the unit to go into direct mode, the input (shore) voltage must be greater than or equal to 223 volts for about 0.5 second. The unit will lock into direct mode for approximately 30 minutes after switching from boost mode into direct mode.

3. For the unit to trip due to over-voltage, the input (shore) voltage must be higher than or equal to 264 volts for about 0.5 second. The input (shore) voltage has to drop to at least 262 volts before the unit can be reset by pushing the lit reset button on the front of the panel.

4. For the unit to trip due to low voltage, input (shore) voltage must be lower than 178 volts for 3 seconds. The input (shore) voltage has to raise to at least 180 volts before the unit can be reset by pushing the lit reset button on the front of the control panel. The unit will also trip due to "Transformer high temperature".

5. Removal of "O.T. Jumper" will disable transformer high temperature shutdown. CAUTION: With O.T. Jumper removed, transformer over temperature light will come on, but system will not shutdown.

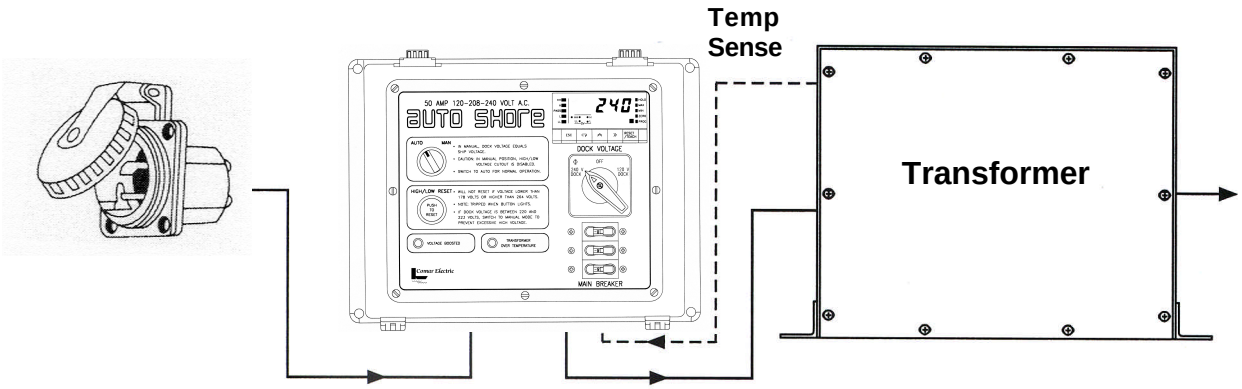
6. All the automatic features can be bypassed by placing the selector switch in the "Manual" position. No over/under voltage and transformer high temp. protection will occur and dock voltage will not be boosted with low input (shore) voltage.

7. When 120 volt input (shore) voltage is only available, the unit can still provide power to the boat by putting the selector switch in the "120 volt" position. As in manual mode, no over/under voltage and transformer high temp. protection will occur and the voltage will not be boosted with low input (shore) voltage. The meter on the front of the control panel will still light and indicate the input (shore) voltage.

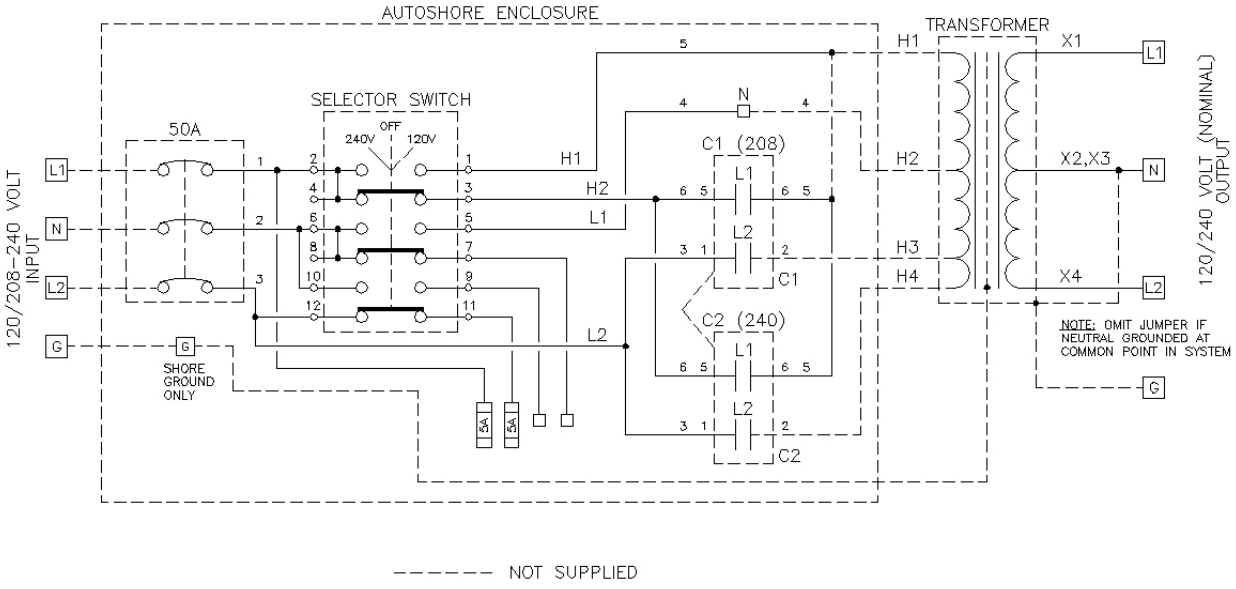
8. To utilize 120 volt dock power, use Marineco adapter # MAR.117A

Installation

Refer to the following diagram for proper installation:



Note: A Circuit Breaker may be required between the Shore Receptacle and Control Box. Consults local codes and regulations.



Field Wiring

Specifications

Model No. 50-120-240

Input Current:	50 Amp
Input Voltage:	178 – 264 volt, 60 Hz or 50 Hz
Output Voltage:	205 – 264 volt, 60 Hz or 50 Hz
Main Circuit Breaker:	50 Amp
Auto or Manual Selector:	Prevents nuisance switching when there is a wide variance in Input shore power; Overrides all cutouts.
High/Low voltage protection:	High disconnects at 264 volts. Low disconnects at 178 volts.
Omron Digital Process Meter:	Programmable from front (locked out to prevent adjustment of factory settings). Splash proof.
Enclosure:	Fiberglass with gasket (designed for wet locations).
Transformer:	Epoxy Potted Complies with ABYC 8.20.1 (see below).

Dimensions:

Autoshore Control Box:	14-1/4” x 11-1/4” x 9” (W x D x H)
12 kW Transformer:	18” x 12” x 18” (W x D x H)
Transformer weight:	267 pounds

ABYC: ISOLATION OF GALVANIC CURRENTS

8.20.1

A metallic shield shall be located between the primary and secondary windings and be electrically insulated from all other portions of the transformer. It shall be designed to withstand, without leakage, a high potential test of 4000 volts, 60 Hz for one minute applied between the shield and all other components such as windings, core and outside enclosure.

8.20.1.2

A separate insulated wire lead or terminal identified as the shield connection is to be solidly connected only to the shield and brought out for external connection.

8.20.1.3

The shield and its connection are to be of sufficient ampacity to provide a fault current path for either the primary or the secondary windings.

8.20.1.4

The transformer case is to be metallic with a grounding terminal provided.

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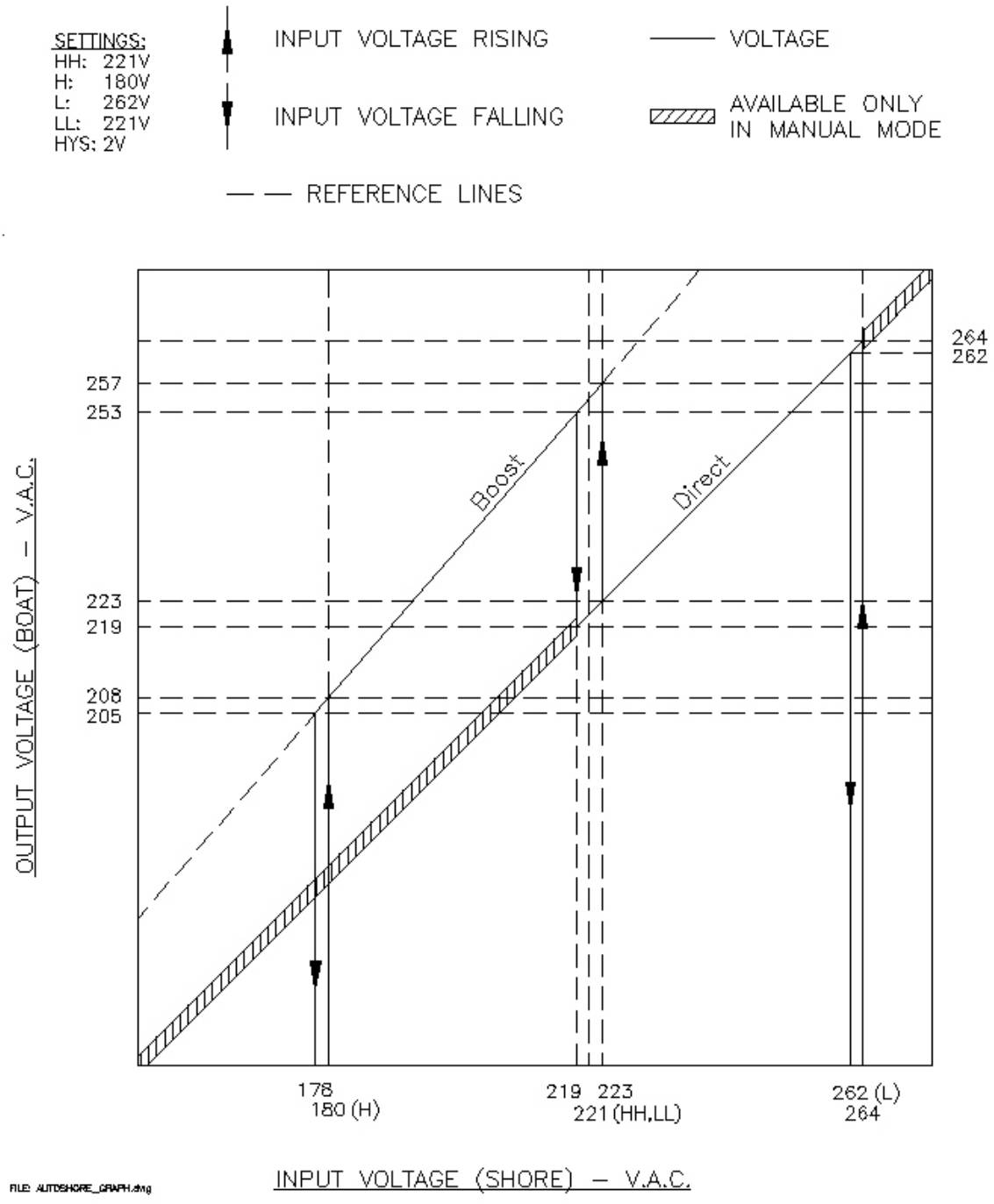
Performance Graph



Limited Warranty

Comar Electrical Services Ltd. warrants its power products against defects in material and workmanship for a period of one (1) year from date of purchase and extends this warranty to all purchasers or owners of the product during the warranty period. Comar Electrical Services does not warrant its products against any and all defects: (1) Arising out of material or workmanship not provided or furnished by Comar Electrical Services Ltd. or (2) resulting from abnormal use of the product or use in violation of the instructions, or (3) in products repaired or serviced by other than Comar Electrical Services repair facilities, or (4) in components, parts or products expressly warranted by another manufacturer. Comar Electrical Services agrees to supply all parts and labour or repair or replace defects covered by this warranty with parts or products of original or improved design at its option, if the defective product is returned to any Comar Electrical Services authorized warranty repair facility or to the Comar Electrical Services factory in the original packaging, with all transportation costs and full insurance paid by the purchaser or owner.

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