

# **SURE POWER MARINE ISOLATOR INSTRUCTIONS**

## **FOR INBOARD APPLICATIONS**

*(This instruction sheet is to be used in conjunction with Isolator Instruction #180012)*

The installation of a Sure Power Battery Isolator in a marine inboard application is very similar to that of a typical automotive installation, with a few minor exceptions. The difference arises when the use of a battery selector switch is required or desired.

When installing a Battery Isolator in an application not requiring the use of battery selector switches, please follow the *Sure Power Multi-Battery Isolator Application and Installation Instructions (#180012)*, included in this package. When using more than one charging source, please refer to the group installation instructions for that particular alternator. Most marine installations will fall under Group 1 or Group 3 instructions. Typical marine wiring diagrams without selector switches are shown in figures 1, 2 and 3.

Battery Isolators may be used with selector switches. Isolators actually enhance battery switch applications because each battery can still be charged independently when the switch is connecting either battery. Typical Isolator with battery switch applications are shown in figures 4 and 5. These diagrams are only two of the possible connection alternatives.

**NOTE: Be sure that the alternator has remote sense capability.** Most single-wire Delco alternators do not have this provision. The voltage regulator must sense battery voltage. The sense line should be connected to the main battery terminal of the Isolator. Call the Sure Power customer-service department if a particular application arises which is not covered.

**NOTE:** If using a circuit breaker in the main battery line, Sure Power recommends connecting the voltage regulator sense line to the main battery terminal of the Isolator.

Please refer to ABYC and BIA rules and recommendations regarding proper marine wiring sizes and proper circuit breaker protection.

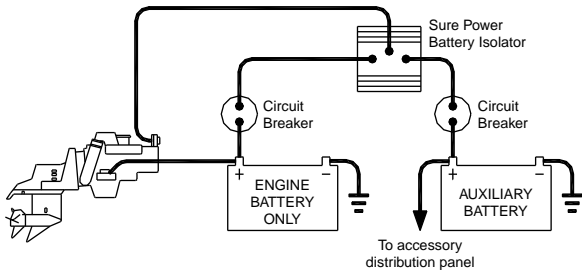
### ***Inboard Marine Isolator Application Chart***

Number of Charging Sources	Maximum Alternator Output	Number of Battery Banks	Sure Power Isolator Model Number
1	70 Amps	2	702
	70 Amps	3	703
	95 Amps	2	952
	95 Amps	3	1203
	120 Amps	2	1202
	120 Amps	3	1203
	160 Amps	2	1602
	160 Amps	3	1603
2	70 Amps	2	2702
	70 Amps	3	2703
	120 Amps	2	3202
	120 Amps	3	3203

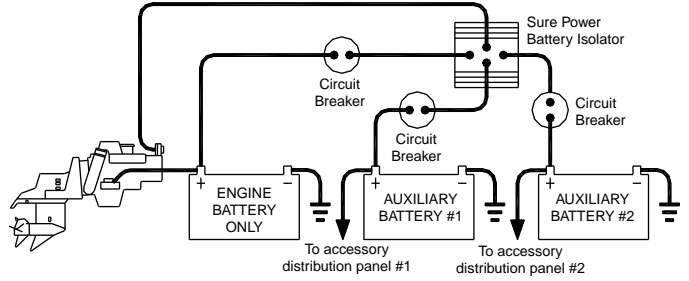
For Group 2 Applications, add a "3A" suffix to the model number.

For Group 3 Applications, add an "R" suffix to the model number.

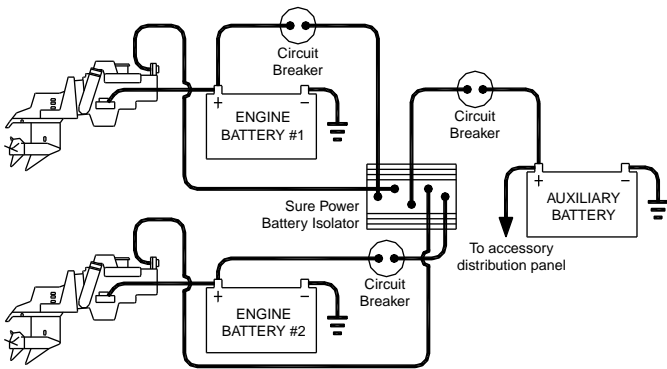




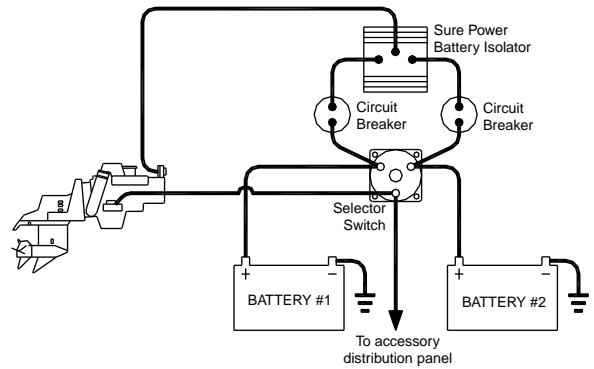
**Figure 1**  
 One alternator, two battery banks without selector switch  
 Applicable Isolator Models: 702, 952, 1202, 1602



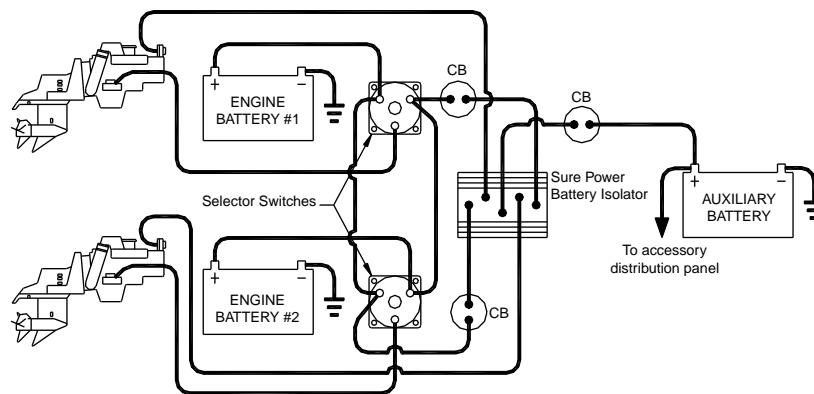
**Figure 2**  
 One alternator, three battery banks without selector switch  
 Applicable Isolator Models: 703, 1203, 1603



**Figure 3**  
 Two alternator, two or three battery banks without selector switch  
 Applicable Isolator Models: 2702, 3202 (two battery banks)  
 2703, 3203 (three battery banks)



**Figure 4**  
 One alternator, two battery banks with selector switch  
 Applicable Isolator Models: 702, 952, 1202, 1602



**Figure 5**  
 Two alternator, two or three battery banks with selector switch  
 Applicable Isolator Models: 2702, 3202 (two battery banks)  
 2703, 3203 (three battery banks)

# RECTIFIER TYPE ISOLATORS FOR MARINE OUTBOARD ENGINES

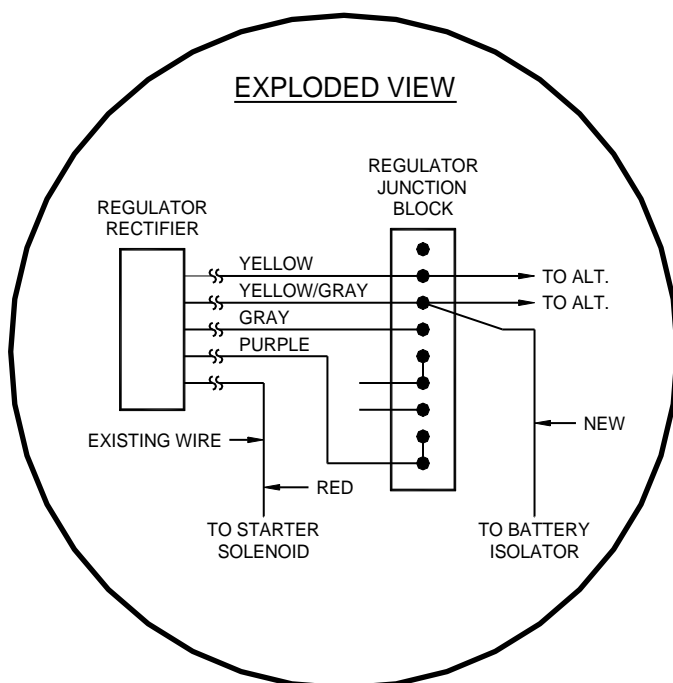
Sure Power Rectifier Type Isolators are specifically designed for the latest outboard engines with regulator/rectifier type alternators. The system allows for the convenience of running one, two or three auxiliary batteries to power all types of accessories and safety equipment from a single or twin charging source. These special Isolators are designed to withstand high peak inverse voltages.

## ISOLATOR INSTALLATION / NO SELECTOR SWITCH

1. Mount Isolator in a convenient location near the auxiliary battery.
2. Connect a new #10 wire from the "A" terminal of the Isolator to the existing yellow-gray wire junction on the regulator terminal block. Do not remove any existing wires.
3. Connect a new #10 gauge wire from the #1 terminal of the Isolator to the positive terminal of the auxiliary battery.
4. Connect auxiliary loads to the positive terminal of the auxiliary battery or to the #1 terminal of the Isolator.
5. Connect the negative terminal of the auxiliary battery to a good common negative ground.
6. For two or three battery Isolators, repeat step 3, 4 and 5 for each auxiliary battery.
7. Follow ABYC and BIA recommendations for circuit breaker protection and wire sizes.

## ISOLATOR INSTALLATION / NO SELECTOR SWITCH

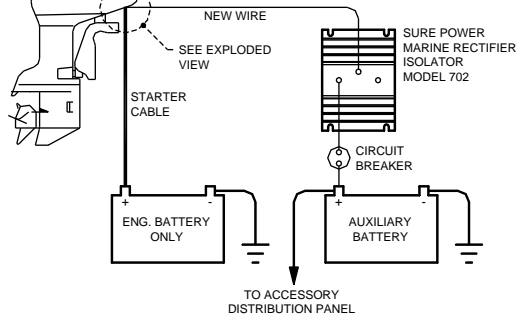
1. Mount Isolator in a convenient location near outboard motors.
2. Connect a new #10 gauge wire from the "A1" terminal of the Isolator to the existing yellow-gray wire junction on the #1 motor regulator terminal block. DO NOT REMOVE ANY EXISTING WIRES.
3. Connect a new #10 gauge wire from the "A2" terminal of the Isolator to the existing yellow-gray wire junction on the #2 motor regulator terminal block. DO NOT REMOVE ANY EXISTING WIRES.
4. Connect a new #10 gauge wire from the "B1" terminal of the Isolator to the existing #1 main battery positive post.
5. Connect a new #10 gauge wire from the "B2" terminal of the Isolator to the existing #2 main battery positive post.
6. Connect a new #10 gauge wire from the "B3" terminal of the Isolator to the new auxiliary battery positive post.
7. Connect the negative posts of all three batteries to a good common negative or ground point.
8. Connect auxiliary loads between ground and the positive post of auxiliary battery.
9. Follow ABYC and BIA recommendations for circuit breaker protection and wire sizes.



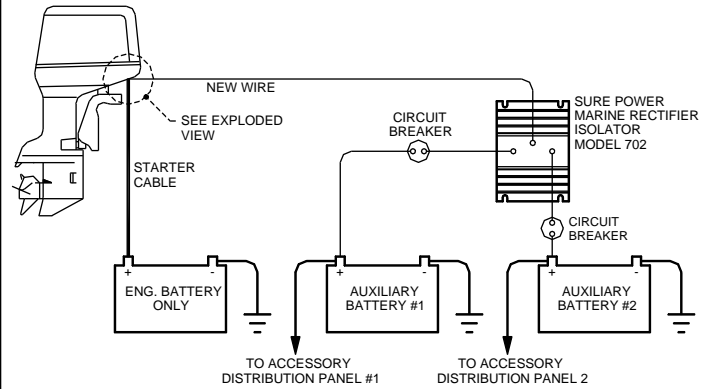
## ISOLATOR INSTALLATION / WITH SELECTOR SWITCH

1. Follow standard Isolator instructions, steps 1 and 2.
2. Step 3 - Connect outputs of Isolator to battery terminals on selector switch. Example: Isolator output terminal #1 to selector switch battery terminal #1. Repeat as required.
3. Follow ABYC and BIA recommendations for circuit breaker protection and wire sizes.

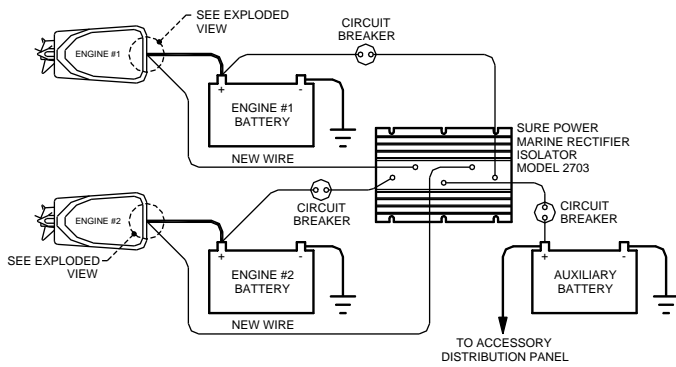
**SURE POWER MODEL 702**  
Application: 1 Engine, 2 Battery  
No Selector Switch



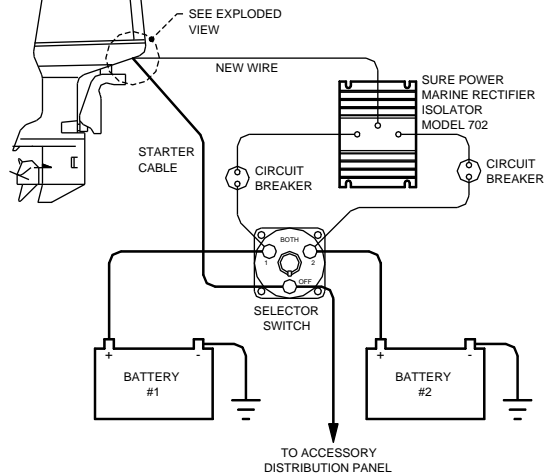
**SURE POWER MODEL 702**  
Application: 1 Engine, 3 Battery  
No Selector Switch



**SURE POWER MODEL 2703**  
Application: 2 Engines, 3 Battery  
No Selector Switch



**SURE POWER MODEL 702**  
Application: 1 Engine, 2 Battery  
with Selector Switch



**SURE POWER MODEL 2703**  
Application: 2 Engines, 3 Battery  
with Selector Switch

