

714 Battery Distribution Cluster

IMPORTANT

Do not use any type of corrosion inhibiting spray such as CRC, INOX etc. on any part of this unit.

These units are hermetically sealed so do not require any other form of sealing.

The studs have been tinned to inhibit corrosion however a petroleum grease may be used (on metal parts only) if required.

Please note that this product is water resistant but is NOT designed to be submerged.

DUAL BATTERY CHARGING MADE EASY! The 714 battery distribution cluster is the optimum battery management system for your single engined boat.

The 714 combines 1 of BEP's 701S selector battery switches and a 710-125A Voltage sensitive relay (VSR).

The 701S Battery Master Switch is the most compact selector switch on the market and offers a number of unique features.

The highlight being the contour lock system, allowing it to be locked together with other switches and voltage sensitive relays.

The 701S also features a removable rear cover insulating the rear terminals against any short circuits and ensures the switch meets ABYC requirements.

701S specifications

Continuous rating:	200 Amps DC
Intermittent rating:	300 Amps DC
Cranking rating:	1000 Amps DC
Voltage rating:	48 Volts DC
Operation:	1-2-both-off
Mounting:	recessed or surface
Termination stud size:	3 x 5/16" (8mm)

BEP Marine Battery Switch Test Procedure (UL 1107)

Continuous (1 hour)

Intermittent (5 minutes)

Cranking (10 seconds)

The test is to determine the maximum current the switch can handle for the stated time, without the terminals exceeding 212°F (100°C) above the ambient temperature.

The continuous and intermittent ratings are tested 110% of specified ratings.

THE 714 SYSTEM INCLUDES a 701S battery selector switch and a 710-125A Dual Sensing voltage sensitive relay (VSR). The VSR allows for two batteries to be charged at the same time. When the engine is started, and the start battery reaches 13.7 Volts, the relay closes, Combining the battery banks (start and house) and allowing them to be charged simultaneously.

When the engine is stopped and the voltage drops to 12.8 Volts, the relay will open separating the batteries.

This system eliminates the possibility of draining the wrong battery and protects sensitive electrical equipment powered from the house battery from harmful engine start up spikes. The 714 cluster is designed for single outboard or inboard systems on power or sailboats with an alternator size up to 100A.

How to use

1. When boarding the boat switch both the START and HOUSE battery switches to ON. Only use the EMERGENCY PARALLEL battery switch if both batteries need to be combined for emergency starting.
2. Start the engine, when the start battery reaches 13.7 Volts the small red light on the VSR case will illuminate, indicating the VSR is engaged.
3. When the engine is stopped and the start battery voltage drops to 12.8 Volts the light will switch off, indicating the VSR is disengaged.

Special note:

After a long run the residual voltage of the battery may hold above 12.8 Volts for a period of time, this will hold the relay engaged. This is not a fault.
As soon as any load is applied the voltage will settle below 12.8 Volt, disengaging the VSR.

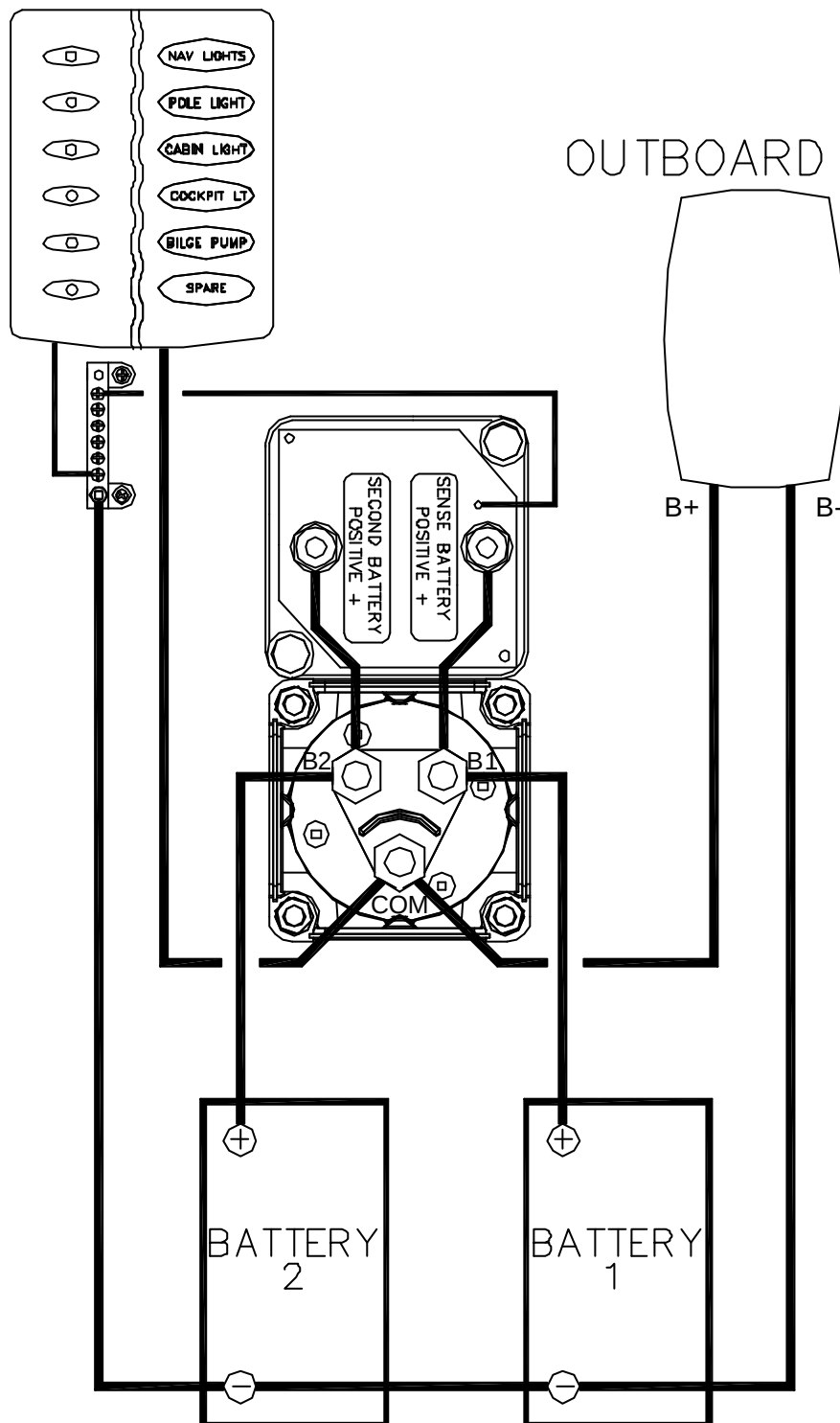
4. On leaving the boat switch both the START and HOUSE battery switches to off.

Trouble shooting

Fault	Possible solution
Engine wont start	-Ensure start battery switch is switched on
House battery is flat	-Ensure engine charging system is working. -Ensure the light on VSR case is on when engine is running and start battery voltage is above 13.7 Volts. If light is not on and voltage is over 13.7V on the start battery then there is possibly a fault with the VSR
House loads not working	-Ensure house battery switch is switched on
Start battery is flat	-Switch the Emergency parallel switch to on. Turn off once engine is started. <u>Note:</u> When starting the engine with the emergency parallel, the house loads will not be protected from engine spikes.
VSR chatters	-Increase RPM's of engine to increase alternator output. -Ensure alternator is not too small for the battery bank. Check with the table below

Alternator Vs Battery capacity

<u>Alternator Size</u>	<u>Second battery size</u>
10 Amp	60 Amp hours
16 Amp	85 Amp hours
25-35 Amp	85-105 Amp hours
50-60 Amp	130-210 Amp hours
80-90 Amp	130-220 Amp hours



NOTE: THIS DIAGRAM IS NOT
INTENDED TO BE A FULL
SYSTEMS WIRING DIAGRAM.
IT'S SOLE PURPOSE IS TO
SHOW 714 CONNECTIONS

DATE	21/06/04	DWG No.	INST-714 OVERVIEW	
DRAWN	S PLAYER			
REV.	DATE	DESCRIPTION	DRAWN	APPRVD

TITLE:

INSTALLATION DIAGRAM
FOR 714

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