## Battery Management Wiring Schematics for Typical Applications

Batteries are at the heart of the electrical system found on any boat or vehicle. Proper battery management, including switching and charging, is essential for safe and reliable operation. The following wiring diagrams show how batteries, battery switches, and Automatic Charging Relays are wired together from a simple 1 battery - 1 engine configuration to a 4 battery - 2 engine - 1 generator system. For more detailed wiring guidelines please consult a qualified marine electrician or one of the many books available on the subject.

Note: The ACRs pictured are representative of any ACR. The battery switches are representative of any Battery Switch of the same model.

## 1 Battery - 1 Engine

Switches a single battery to a single load group.





Saves battery power for starting.

1 ON-OFF Battery Switch



## 2 Battery - 1 Engine

Switches isolated battery banks to all loads or combines battery banks to all loads.

1 Selector Battery Switch



Note: Uses same style batteries

# Simultaneously switches two isolated battery banks or combines battery banks to all loads.

1 Dual Circuit Plus™ Battery Switch 1 Automatic Charging Relay



## Can isolate a failed battery.

- 3 ON-OFF Battery Switches
- 1 Automatic Charging Relay



## 2 Battery - 2 Engine

House battery is shared with one engine. One engine battery is in reserve.

2 Selector Battery Switches 1 Automatic Charging Relay



Normal - Set all switches to position 1 Parallel - Set all switches to position 1+2 Isolate - Set Load switch to position 2 and Source Switch to position 1+2

#### Engines share one battery. House battery is in reserve.

1 Dual Circuit Plus™ Battery Switch 1 Automatic Charging Relay



## Can isolate a failed battery.



The diagrams above are intended for reference only. Consult an ABYC certified marine electrical professional for system design and circuit protection.

## 3 Battery - 2 Engine

Can isolate any battery source from any batteries.

- 3 Selector Battery Switches
- 2 Automatic Charging Relays



Normal - Set all switches to position 1 Parallel - Set all switches to position 1+2 Isolate - Set Load switch to position 2 and Source Switch to position 1+2

## Can parallel batteries for extra starting power.

2 Dual Circuit Plus™ Battery Switches 2 Automatic Charging Relays



#### LEGEND DC Positive \_\_\_\_\_ DC Ground ------

# 4 Battery - 2 Engine - 1 Generator

Can isolate any battery source from any batteries.



Normal - Set all switches to position 1

- Parallel Set all switches to position 1+2
- Isolate Set Load switch to position 2 and
  - Source Switch to position 1+2

#### Can parallel batteries for extra starting power.

3 Dual Circuit Plus™ Battery Switches

