

FEATURES

- Senses alternator charge voltage, connects main & auxiliary batteries together for a 75 Amp alternator
- Disconnects batteries from each other when not charging, preventing two dead batteries.
- Allows auxiliary battery in dual systems to power marine electronics avoiding motor ignition noises.
- No need for heat producing battery isolators, with associated voltage drop, allowing alternator to fully charge batteries, preserving battery life
- Switches separate charging contactor (solenoid) in 125 Amp or higher alternator systems
- Battery charge cables included for easy installation
- **Meets U.S. Coast Guard Title 33, Section 183.410 electrical requirements for recreational boats**



DESCRIPTION & OPERATION

The DBCM-75A connects both main and auxiliary 12 volt lead acid batteries together only when the alternator is producing charge current. When not charging, both batteries remain separated, preventing both from discharging when the ignition or a load is left on. The main battery is always connected to the alternator to absorb the charge current. The DBCM-75A module eliminates the need for a diode type battery isolator, with its associated .7 voltage drop. This allows the batteries to reach a full charge voltage over 14 volts which prevents early sulfation and shortened battery life. The contactor handles the current supplied to the second battery only.

The DBCM-75A is powered by the red main battery wire, (drawing less than 2mA continuous current). When the alternator output voltage exceeds 13.5 volts (6.1V), the DBCM-75A switches on the contactor lighting a LED, sharing the charge current between the two batteries. To prevent short cycling of the contactor, the DBCM-75A doesn't de-energize the contactor unless the combined battery voltage drops below 13.0V (the result of the motor turning off, the starter being energized, or the battery voltage settling back to a fully charged condition). If the main battery is almost fully discharged, the DBCM-75A waits until the main battery's charging voltage exceeds 13.5 volts before connecting the second battery.

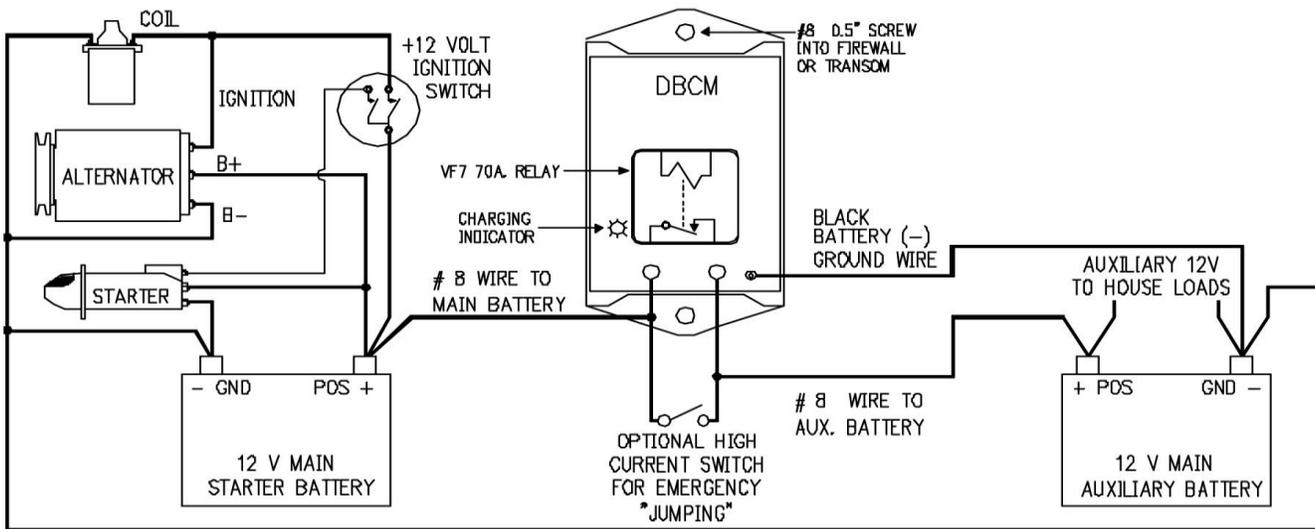
The DBCM-75A is thermally protected to disconnect in case of internal arcing or other high temperature conditions. The battery lead length serves as a current limit in case of a short circuit condition in the auxiliary battery. **DO NOT shorten battery charge wires as this will VOID warranty and reduce current limiting capability!**

SPECIFICATIONS

SIZE:	1.20"W x 3.20"L x 1.2"H
WEIGHT:	16 ounces with 80 Amp contactor and 10 feet of battery cable
ENCLOSURE:	Epoxy potted in PVC plastic to prevent ignition sparks
MOUNTING:	Two #8 x 1.5" screws
POWER:	9 to 15VDC from battery
CONNECTIONS:	One 4 ft. #8 AWG Main-Bat cable One 6 ft. #8 AWG Aux-Bat cable One 4 ft #18 AWG ground wire
CURRENT	Sleep mode ≤ 2mA
CONSUMPTION:	Charge mode ≤ 120mA
Threshold:	On @ 13.5VDC ≤ 0.1VDC Off @ 13.0VDC ≤ 0.1VDC
Indication:	LED indicates charge mode
CAPACITY:	Up to 75 Amps alternator systems DBCM uses a SPDT automotive relay current rating: 80AMP continuous, 160A inrush for 60 seconds, 245A for 2 seconds.
THERMAL PROTECTION:	In-operative above 85°C
TEMPATURE:	-30 to 75°C

APPLICATION 1

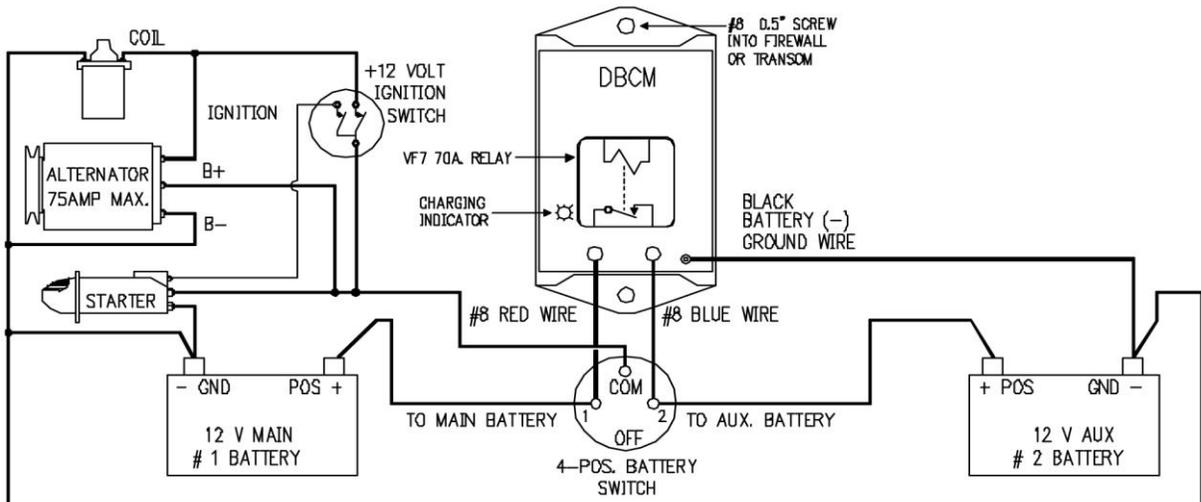
SEPARATE BATTERIES FOR STARTING & HOUSE LOADS ETC.



The start or crank battery should be continuously connected to the alternator output. The auxiliary battery and crank battery are connected in parallel through the DBCM-75A charger only when the alternator is charging. Both batteries charge to the full alternator output voltage which avoids sulfating problems.

APPLICATION 2

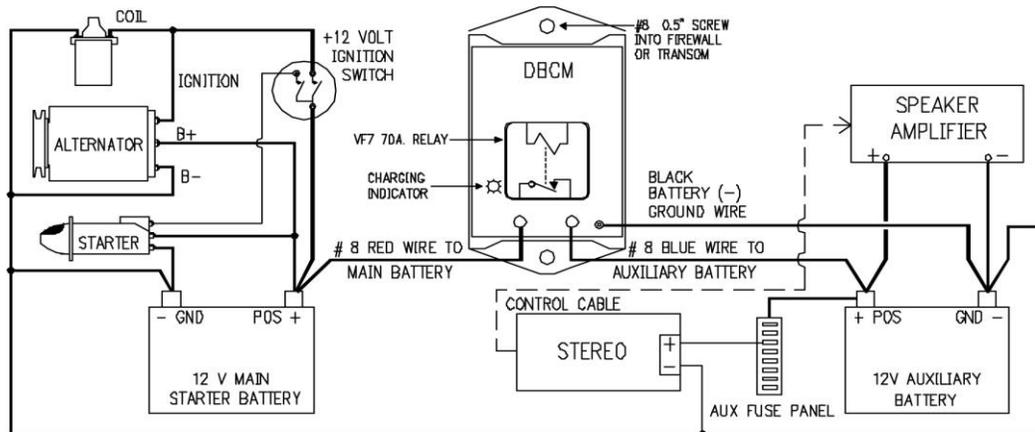
DUAL BATTERIES WITH PERKO SWITCH – NO SEPARATE LOADS



Operate Perko switch in 1st or 2nd position, **NOT BOTH**. Both batteries connect in parallel through the DBCM-75A module to receive charging current only when the alternator is charging. Batteries disconnect from each other when not charging.

APPLICATION 3

SECOND BATTERY FOR HIGH AMP LOADS (STEREO AMPLIFIERS)



The stereo and amplifier are typically wired to the auxiliary fuse panel connected to the auxiliary battery. The second battery will automatically charge through the DBCM-75A whenever the alternator is charging. **Running the second battery dead will still preserve the main battery to allowing you to get off the lake.**

NOTE: The DBCM-75A's long term battery discharge rate is about 1 Amp-hour per month. If this is a problem for long term storage, disconnect the DBCM-75A black ground wire from the negative battery terminal.

DO NOT shorten battery charge wires as this will VOID warranty and reduce current limiting capability!