

COMBINER 600 12 Volt Model C600 FOR ALTERNATORS UP TO 600 AMPS.

SUMMARY

The Combiner600 is a precision voltage-sensing relay (13 volts) which connects two batteries together when either is receiving a charge. When the charging ceases, it disconnects so that each battery operates independently and prevents accidental discharge of the starting battery. Supplemental battery banks can be added by using an additional Combiner for each bank. It eliminates manual switching every time you start the engine to parallel batteries for charging. Never again forget to switch it back. No diodes so no voltage drop, and batteries get a full charge.

FEATURES

Suitable for alternators up to 600 amps, up to 18 volts.
500 amps continuous rating,
750 amps intermittent current (5 minutes),
2500 amps cranking,
Nearly UNLIMITED warranty*
Waterproof
Ignition rated for explosive atmospheres
No voltage drop so batteries reach full charge
Electronic thermal monitoring with shutdown & restart
Minimal wasted power, no heat sink or cooling required
Can be used on alternators with internal regulators
Protects alternator against overload from low batteries
No special wiring for alternators with external sense
Simple basic installation, two battery cables and ground
Comes with mounting hardware and cable terminals
Green LED indicates when combined
Red LED indicates thermal overload or low voltage.
Draws no current when batteries are not being charged
Uses about 150 milliamps from the alternator when charging is in progress
No diodes to burn out if accidentally shorted
Optional external remote feature for **off, automatic, on**
Remote **"ON"** can be used for assisted engine starting
Withstands ambient temperature to over 175 F (80 C) for exposed or engine compartment mounting

SAFETY CONSIDERATIONS

When using a Combiner any alternator external sense should be connected directly to the alternator output terminal.

WARNING: Disconnecting the output from the alternator should be avoided when the engine is running.

Since the connections made in the battery circuits can

carry hundreds of amps, it is imperative that you have low resistance connections. This means having clean metal to metal contact, the right size ring terminals, properly crimped terminals (preferably soldered also), and secure mechanical fastenings.

Put your heaviest cable terminals on the bottom of the terminal for maximum contact area, with lighter ones above. The 2 red wires should be on top, above all other terminals and just under the nut and washers.

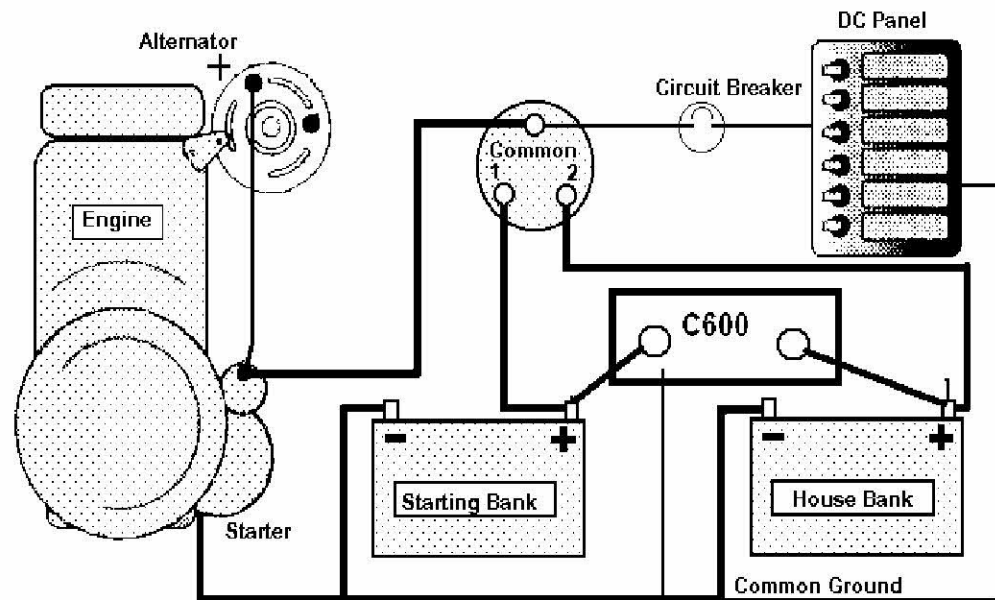
BASIC INSTALLATION

1. Connect the "12 Volt Negative" ground terminal to the common negative of your battery banks.
2. Connect the large terminals to the positive terminals of the batteries. **USE A CABLE GAUGE RATED AT LEAST 75% OF THE ALTERNATOR OUTPUT RATING.** The Combiner600 may close momentarily when initially connected causing a spark.
3. That completes the basic installation. The 2 remaining terminals are not normally used. See Appendix
4. The battery negative terminals must be connected together with a cable large enough to handle starter motor and alternator currents.

SAMPLE INSTALLATION EXAMPLES

1. Single engine powerboats:

With the Combiner600 you can use an (optional) **OFF-1-BOTH-2** switch to select the engine power source and leave the DC loads permanently on battery 2. Starting power is



normally supplied from the starting battery in position 1 but battery 2 or both can be selected in an emergency. In all

