

TROLLBRIDGE24® COMBINER

CHARGE 24 VOLT TROLLING BATTERIES FROM 12 VOLTS

SUMMARY

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The Trollbridge24® Combiner allows you to charge your 24 volt trolling motor battery from the 12 volt alternator on your main engine, your trailer hookup or any single or multi-output 12 volt charger. It works automatically by putting two 12 volt batteries in series when you need to run the trolling motor and putting them in parallel for charging. It is bidirectional so when not trolling, the second trolling battery backs up your starting or house battery.

FEATURES

Fully automatic, no switches or connectors to change
Manual 12/24 volt switching available
Can use starting battery if desired, for a 2 battery setup
Both batteries operate in parallel when not trolling
Eliminates the need for multiple output chargers
Can be conveniently located with the batteries
Rated for 12 volt alternators up to **150 amps**
Rated for 24 volt trolling motors up to **85 amps**
Green LED indicates 24 volt output active
Optional remote indicator compatible **\$**
Nearly UNLIMITED warranty *
Waterproof - will operate submerged in salt water
Ignition rated for explosive atmospheres
No voltage drop so batteries reach full charge
No voltage drop so motor gets full power
No wasted power, no heat sink or cooling required
No modification to alternator or 12 volt wiring
Simple 5 wire basic installation
Comes with all cables for basic hookup
Draws no current when off
No diodes to burn out if accidentally shorted
Withstands ambient temperature to over 175 F (80 C)
for engine compartment mounting

DANGER: During installation voltages may be present on unattached cables. Make sure these do not short out to boat ground, battery positive, or to each other.

HOW IT WORKS

The Trollbridge24® uses two 12 volt batteries to make 24 volts. They are in parallel at 12 volts when not trolling.

One of these batteries can be either the normal starting battery (Schematic A), or a 12 volt "house" battery if your boat has one (Schematic B). If you use the house battery, it should be connected to the starting battery with a battery Combiner100 so both batteries will get a charge from the alternator when the main engine is running.

The other "trolling" or "booster" battery is used only for the trolling motor and **cannot be connected to anything else**.

The Starting battery (or House battery if used) can also be used for other 12 volt loads.

CAUTION If your trolling motor has a built in fish finder transducer some of these do not allow a common ground. Check with the manufacturer to see if it is compatible.

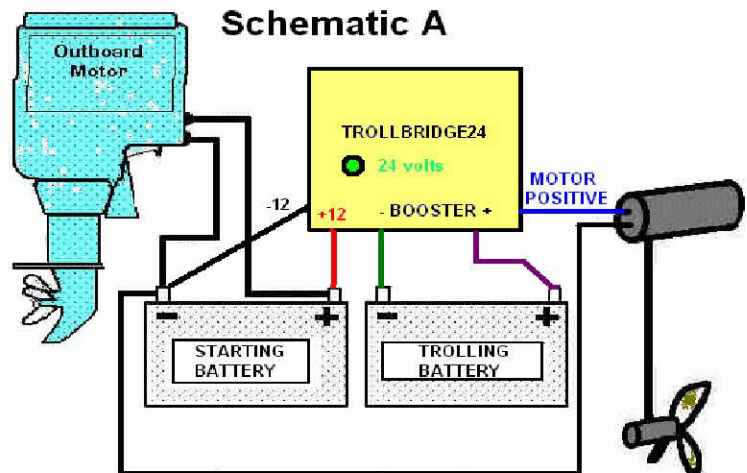
INSTALLATION

We recommend 6 gauge wire for the motor cables and for extending the supplied cables. The 10 gauge wire supplied is used for current limiting protection - see explanation under WARRANTY at end of these instructions.

DO NOT bundle the cables together inside a plastic conduit. The cables are rated for 60 amps in free air, in a conduit they may overheat and melt the insulation.

Connections must be clean and tight.

1. **IMPORTANT** Remove any existing jumper from battery



1 **positive** to battery 2 **negative**. Sometimes this jumper is inside the trolling motor plug.

- Any existing battery charger cables can be left as-is.
- Connect the **BLACK** Trollbridge24® ground wire to the common negative of your main 12 volt starting or house battery ground terminal. Lengthen with 8 or 6 gauge wire if needed.
- The **RED** cable is connect to the positive terminal of the main 12 volt starting or house battery. If you want a safety breaker in this circuit it should be rated at 100 amps maximum. **SHORTENING THIS CABLE WILL VOID THE WARRANTY ***. Extending is OK.

The connections do not have to be made right on the battery terminals but any wire or cables between the battery and the Trollbridge24® must be heavy enough to carry the trolling motor current in addition to any existing loads.

- Connect the **GREEN** cable to the trolling battery negative terminal. **No other connections should be made to this negative battery terminal. SHORTENING THIS CABLE WILL VOID THE WARRANTY ***. Extending with 8 or 6 gauge wire is OK.

