



# Smart Battery Separator/Isolator

## Addendum/Install Guide for Aux Battery Kit

Installation of the Smart Battery Separator is very straightforward. This addendum is targeted at installing the Separator into a Black Rhino Auxiliary Battery Tray. However, the concepts are the same.

When using the Smart Battery Separator, you will not need the small black wire or the small pink wire that are included in the Aux Battery Kit. The switch handles connection and isolation automatically.

The Smart Separator has a black wire lead coming from the back. This is a ground wire. Attach this ground wire to the bolt when bolting the Separator into the battery tray.

There is a schematic on the back of the Separator that indicates which post on the separator should be used for the main battery connection, and which post to use for the auxiliary battery.

Connect the large negative (black) battery lead to the negative on the factory battery and to the negative auxiliary battery. Connect the long large positive (red) wire to the Main Battery post on the Battery Separator and then to the positive on the factory battery. Connect the short large positive (red) wire to the Auxiliary Battery post on the Battery Separator and then to the positive on the auxiliary battery.

There are two extra wires coming from the back of the Battery Separator. The purple wire can be hooded to an on/off switch (preferably a momentary on/off switch). Applying power to the purple wire will override the automatic separation of the two batteries, and connect them together. This can be helpful if the auxiliary battery has a higher charge than the starter battery, and your machine needs some additional current to start.

The white wire can be hooked into a lamp. Connect the white wire to the negative side of the lamp. Connect the positive side of the lamp to a power source. When the Smart Separator has both batteries connected, indicating normal operation of the charging system, and the main battery is fully charged, the Separator will automatically connect the two batteries, enabling the charging system to charge the auxiliary battery. When the Separator connects the two batteries, the white wire will be grounded, thus completing the lamps circuit. There is also an onboard LED light on the Separator that will light whenever both batteries are connected.

As always, if you have any questions, concerns, or suggestions please call us at 619-561-5000 or drop us an email at [CustomerServices@BlackRhinoPerformance.com](mailto:CustomerServices@BlackRhinoPerformance.com).

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## Standalone Install Guide

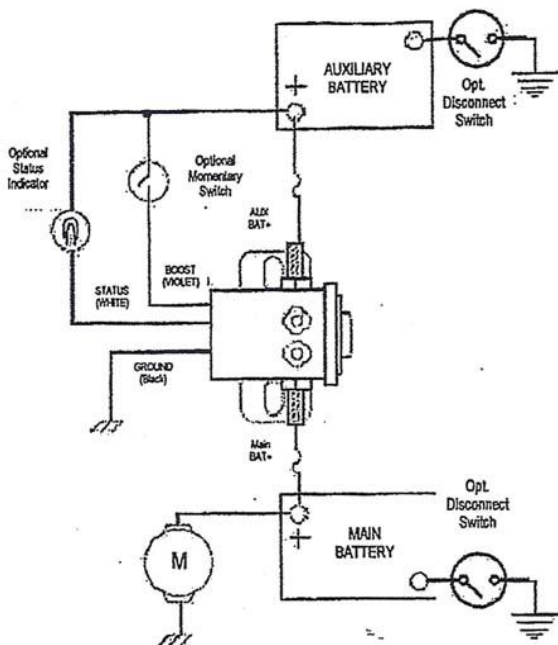
Installation of the Smart Battery Separator is very straightforward. This guide is targeted at installing the Separator in a generic multi-battery environment. Refer to the included diagram for additional information.

### Connections:

- Disconnect the battery.
- Connect the Separator MAIN BAT+ stud to the positive terminal of the main (starting) battery.
- Connect the Separator AUXILIARY BAT+ stud to the positive terminal of the auxiliary battery. Use appropriate heavy gauge cable and proper fusing.
- Connect black "Ground" wire to a good ground.
- Optional circuit connections:
  - Connect violet "Boost" wire to a normally open momentary switch. Connect the other side of the switch to +12V.
  - Connect white "Status" wire to a indicator light. Connect the other side of the light to +12V.
  - Unused wires should be capped or otherwise insulated from active circuitry.

### Operation:

- The 2 batteries are electrically connected together when either battery voltage is above 13.2V for 2 minutes (i.e. during charging).
- The 2 batteries are isolated when both battery voltages are below 12.7V for 1 minute.
- The BOOST function connects the two batteries to provide more starting energy.
- The STATIS indicator and the on board LED are turned on when the 2 batteries are connected together.



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