

BRx5 Battery Use Tips

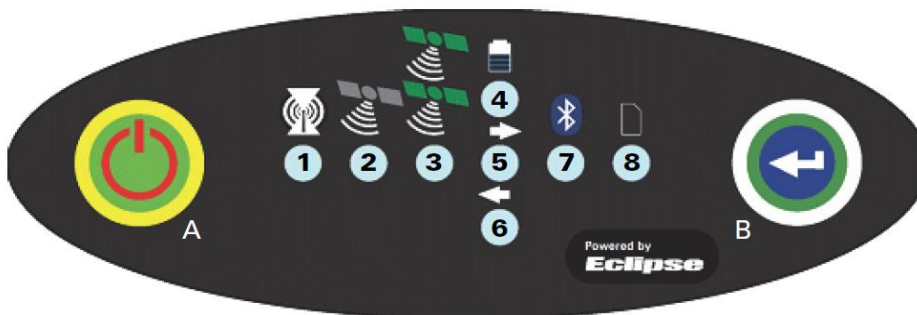
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Overview

The BRx5 GNSS receiver is powered by two 5.4 amp-hour lithium ion batteries that provide up to 10 hours of operation. This article describes the battery status LED indicators, discusses battery life, and recommends a procedure for determining when to hot swap the batteries

Battery Status

Battery status is displayed on the BRx5 control panel shown below:



LED indicators 4, 5, and 6 display battery or power status on the BRx5.

LED	Purpose	Description
4	External power status LED	<ul style="list-style-type: none"> Off – external power not present On (red) – external power present and in use
5	Battery Status, right side battery	<ul style="list-style-type: none"> OFF – battery not present ON (green) – battery charge > 50% ON (red) – battery charge < 50% Slow Blink (1/sec) – battery being used Rapid Blink (2-3/sec) – less than 10% battery life remaining
6	Battery status, left side battery	<ul style="list-style-type: none"> OFF – battery not present ON (green) – battery charge > 50% ON (red) – battery charge < 50% Slow Blink (1/sec) – battery being used Rapid Blink (2-3/sec) – less than 10% battery life remaining Blink

Battery Life

Each battery will typically power the BRx5 from 4 to 6 hours, depending on the BRx5 operating mode. When the battery currently being used is depleted, the BRx5 will automatically switch to

other battery. With two fully charged batteries installed, the BRx5 will typically have an operating life of 8 -10+ hours depending on the following factors:

- Temperature – colder temperatures reduce battery life, especially when the outside temperature is below freezing.
- Internal GSM cell modem – using the internal GSM cell modem, consumes more power than just using Bluetooth connection to the data collector.
- Internal UHF radio – using the internal UHF radio consumes the most power (gives the shortest battery life) especially at higher UHF radio power outputs (500 milliwatts or 1 watt output).

Battery Usage Tips

When using the BRx5 as a base, especially when operating for more than 6-7 hours, it is strongly recommended that you power the BRx5 with an external battery. Use the power cable included in the BRx5 Base/Rover kit. Connect the power cable to a 12 volt power source.

Hot Swap BRx5 batteries – if you are using the BRx5 for more the 6-8 hours straight, you can hot swap the batteries. Here are the steps to hot swap a battery:

- Look at the control panel to determine which battery to swap. This will be the battery with the status LED show red and not blinking.
- Remove the battery tray and replace the depleted battery with a freshly charged battery.
- The battery LED should now be green and should not be blinking. When the other battery (the battery with the blinking LED) is depleted, the BRx5 will automatically start using the fully charged battery just installed.
- When the battery is use is blinking rapidly (2-3 times/sec), there is less than 15 minutes battery life remaining. The batteries should be hot-swapped.

When the battery status LED first starts blinking red, approximately one-half that battery capacity has been used. There is still 2-3 hours of battery life remaining.

Additional Notes

When using external power, the internal batteries are not being charged. The batteries must be charged externally using the battery charger provided with the BRx5.

If you have any questions, or problems, please contact the Carlson Technical Support Team:

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