

## Upgrading the BRx5 Firmware from a SD card

Updated: August 17th, 2015

### OVERVIEW:

The BRx5's internal control software and application firmware can be automatically upgraded using the receiver's SD card. The following steps describe the process to un-compress the contents of the .zip file containing the new firmware, copy the files to the BRx5 SD card and upgrade the receiver's firmware. Before upgrading the receiver firmware, ensure both Li-ion batteries are fully charged, or use an external power supply.

The new BRx5 firmware files will be contained in a file named *BRx5\_Firmware\_5.1Aa7.zip*

### PROCEDURE:

1. Download the *BRx5\_Firmware\_5.1Aa7.zip* file to a folder on your local computer. This zip file can be downloaded from the link below:

[http://www.carlsonsw.com/support/knowledge-base/?action=display\\_topic&topic\\_id=926](http://www.carlsonsw.com/support/knowledge-base/?action=display_topic&topic_id=926)

2. Unzip the file. Using Windows Explorer, you can right click on the file, then chose "Extract All". This will create an folder titled: *BRx5\_Firmware\_5.1Aa7* which contains a folder named upgrade and 4 files within it:  
    \Upgrade  
        Eclipse2\_MFA\_51Aa7.bin  
        NANO920A\_v4631.bin  
        NanoL400\_v5182-PC.bin  
        S320app.h86
3. Power OFF the BRx5 GNSS receiver. Open and remove the left-side battery tray labeled "SD", remove the SD card from the BRx5 GNSS receiver. If there isn't an SD card in the receiver, use the SD card that came with your BRx5 or use an SD card you have.
4. Insert the SD card into a SD card reader slot on your PC. An external USB/SD card reader can also be used.
5. Using Windows Explorer, copy the \Upgrade folder and its contents from the PC folder to the SD card.
6. Eject the SD card from the PC.
7. Use two fully charged batteries to power the BRx5 during the upgrade. Failure to use fully charged batteries may cause the upgrade to fail.
8. Insert the SD card back into the BRx5 receiver, replace the battery tray, and power ON the BRx5. If the Firmware versions on the SD card\Upgrade folder are NEWER than what is currently installed on the BRx5, the firmware upgrade process will start automatically. If the Firmware versions installed on the BRx5 is the same or newer the version on SD card, the automatic upgrade process will not execute.

9. The BRx5 Control Software, (s320app.h86) gets upgraded first; this typically takes about 30-seconds.

The BRx5 LEDs flash and cycle from left to right, indicating firmware upgrade in progress. After the BRx5 Control SW upgrade completes, the BRx5 will reset itself automatically.

(All BRx5 LEDs flash red for a few seconds).

**<Leave the BRx5 powered ON>**

Next, the currently loaded BRx5 Application automatically upgrades to the new version (this takes about 2-3 minutes depending on which Application is being upgraded). The BRx5 LEDs flash and cycle left to right again, indicating the Application firmware upgrade is in progress. After the BRx5/Eclipse2 upgrade completes, the BRx5 resets itself again, (All LEDs flash red for a few seconds).

After the firmware upgrade process is completed, The LED's will cycle, then the battery LED's illuminates green and the SD card LED illuminates yellow. The BRx5 GNSS receiver returns to a normal state.

**Note:** Only the currently loaded Application gets upgraded automatically.

**<Leave the BRx5 powered ON>**

10. The BRx5 firmware upgrade is now complete.

## Additional Notes:

The Firmware files do NOT get deleted from the SD card after the upgrade process completes. The same SD card can be used to upgrade additional BRx5 receivers as needed.

The \upgrade folder and the contents can be left on the SD card if wanted or you can delete the \upgrade folder and its contents from the SD card if you prefer.

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

[support@carlsonsw.com](mailto:support@carlsonsw.com)  
Phone: (606) 564-5028  
Fax: (606) 564-6422

## FURTHER INFORMATION:

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