

To: Outback S3™, eDriveX™ and eDrive™ customers
From: Technical Support, Agriculture Business Unit
Date: July 23, 2012
Subject: S3 Software ver. 3.47.19, and ECU ver. 27940

Product Affected: Outback S3™, Outback eDriveX™ and Outback eDrive™

Scope:

This version of S3/ECU software has a number of additions and improvements for overall eDriveX functionality. In order to utilize the VSi steering interface with eDriveX, this S3/ECU software update is required.

In order to take full advantage of the S3/eDriveX Steering System, please visit www.outbackguidance.com, and navigate to the Support section for a free download of the S3 v. 3.47.19 and eDriveX ECU v. 27490 software. In order to take full advantage of improved RTK functionality with S3, an updated S3 Crescent firmware version (v. Qd) is also required. This is located in the above location on our website as well. For a successful update, please follow the instructions listed below.

Note: Ensure that the ECU is updated first, then the S3.

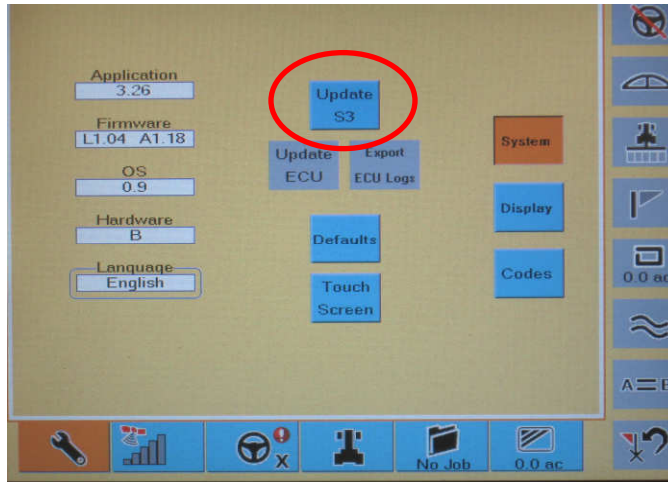
eDriveX ECU Instructions:

- Step 1.** Download and unzip the “UsbUpdate_27940” folder to your PC. Copy the “release” folder onto a USB thumb drive. Ensure that the folder is named “release”.
- Step 2.** Power up the eDriveX ECU and insert the USB thumb drive into one of the USB ports on the ECU.
- Step 3.** Directly under the “Update S3” button on the S3 is an “Update ECU” button that will become active, (blue) once the S3 and ECU are communicating, and the ECU has recognized the software on the USB drive. Once blue, press the “Update ECU” button to begin the update process.
- Step 4.** The S3 will then display an update window with a progress bar as the update takes place. This update can take up to 15 minutes, and shouldn’t be stopped or interrupted until the S3 screen supplies instructions to remove the USB stick, and reboot the ECU. (Follow these instructions exactly as they are displayed on the screen.) After rebooting, verify a successful load by checking the application version has changed to 27940. The reboot process will take several minutes.

S3 Software Instructions:

- Step 1.** Download and unzip the “s3update 3.47.19” folder to your PC. Copy the “s3update” folder onto a USB thumb drive. Ensure that the folder is named “s3update”.
- Step 2.** Power up the S3 and insert the USB thumb drive into the S3.

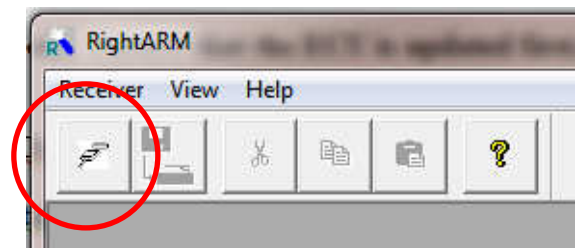
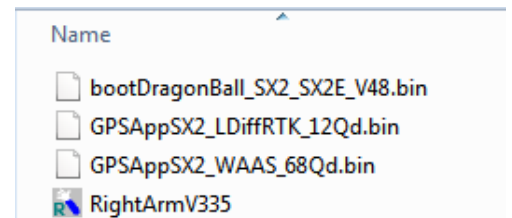
Step 3.



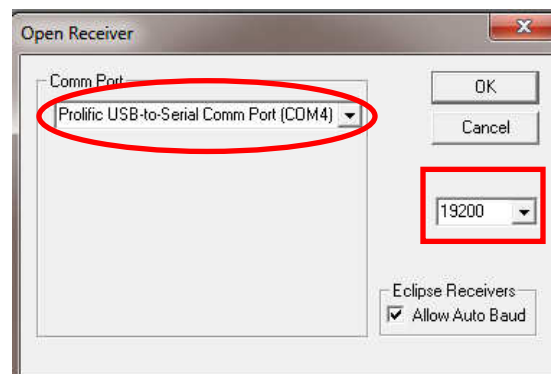
When the USB drive is recognized to have an S3 update available, the Update S3 button will activate (turn blue). Press the Update S3 button in the systems tab, and wait for the load to complete. (After loading, a manual reboot may be necessary if the S3 does not reboot automatically after 5 minutes.) Verify a successful load by checking the Application version has changed to 3.47.19.

S3 Crescent Firmware Instructions:

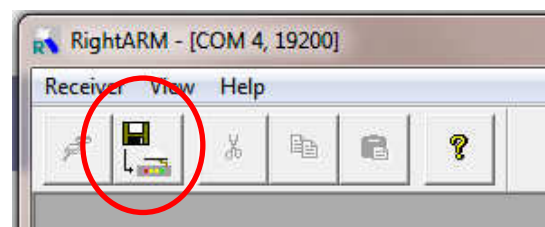
- Step 1.** Copy “RightArm”, both GNSS firmware versions and the bootDragonBall file to your computer.
- Step 2.** Power up the S3, and connect it to your computer with a serial to USB cable. (Ensure that the BAUD Rate is set to 19200 in the S3 under the “NMEA” tab)
- Step 3.** Start the Right Arm Program by double clicking the RightArm icon.
- Step 4.** Press the connect button in the “RightArm” program.



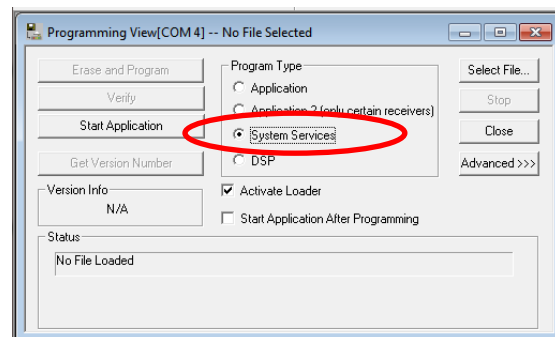
Step 5. Select the “Comm Port” the receiver is connected to, (circle) and then select the correct baud rate of the terminal (rectangle) and press “OK”.



Step 6. Next, select the “Erase and Program” button.

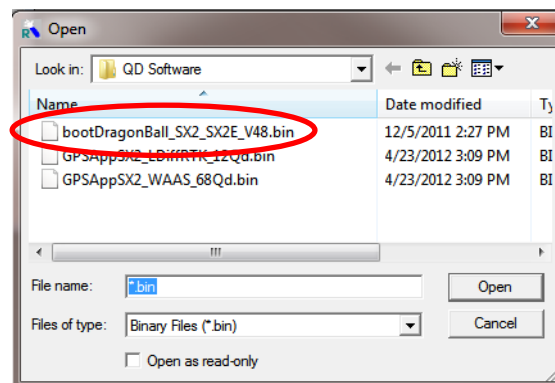


Step 7. Choose “System Services” and then press “Select File.”

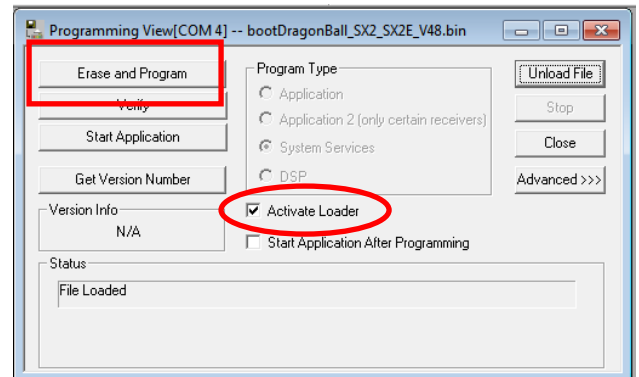


Step 8. Choose the “bootDragonBall_SX2_SX2E_V48.bin” file from the list and press “Open”.

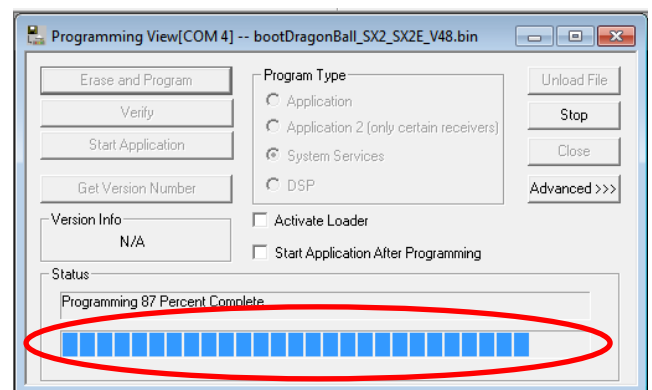
NOTE: This has to be loaded before the other GNSS firmware versions.



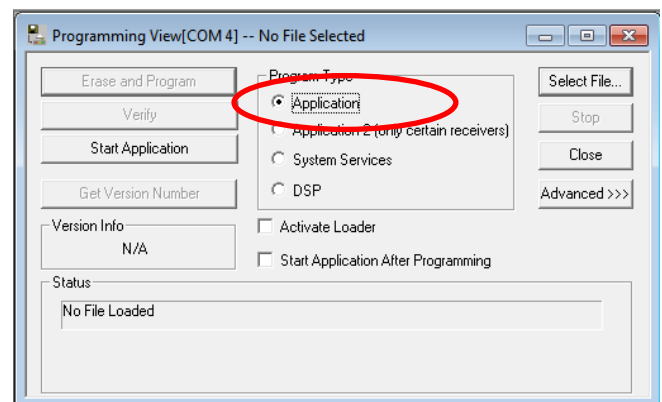
Step 9. Ensure that “Activate Loader” is checked (circle) and press “Erase and Program” (rectangle).



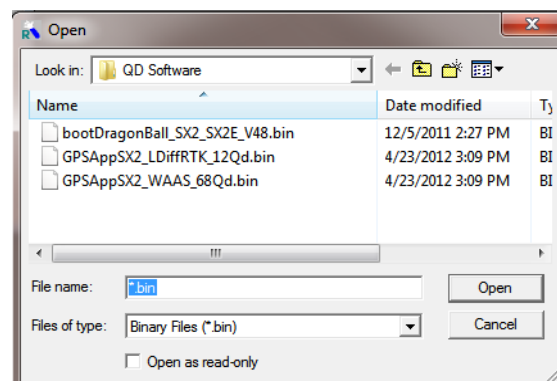
Step 10. Now the load will begin, and the Status bar will show the load progress until complete.



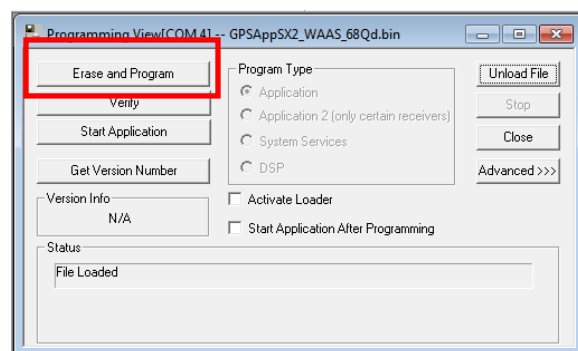
Step 11. Once finished, select “Unload File”, check the Application slot, and press Select File.



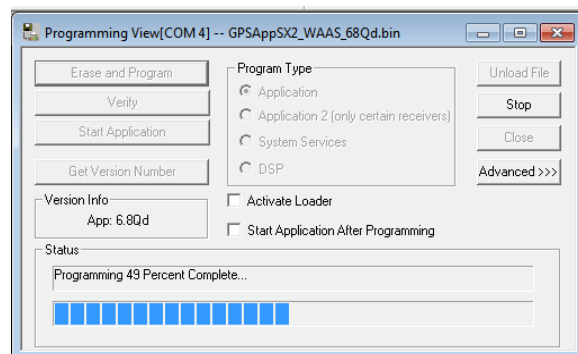
Step 12. Select the GNSS application you would like in Application slot 1 and press “Open”.



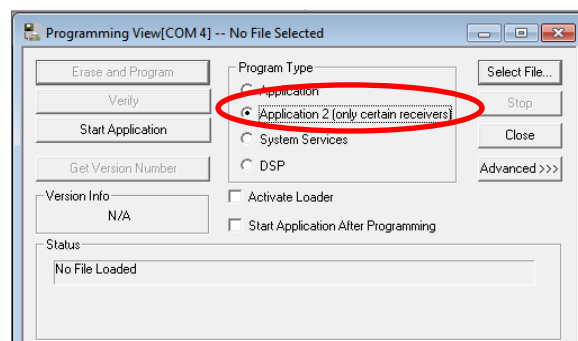
Step 13. Press “Erase and Program”.



Step 14. Now the load will begin, and the Status bar will show the load progress until complete.



Step 15. Once finished, repeat steps 11 to 14 for Application 2.



- Step 16.** Once the load completes for Application 2, close the RightArm program, disconnect the serial to USB cable and reboot the S3.
- Step 17.** To ensure the updates were successful, load Application 1 in the GPS Setup menu and check the version in the GPS Details menu. Repeat this process for Application 2.

Product Improvements:

- **eDrive X**
 - Added support for VSi electric steering interface.
 - New Pre-engage function.
 - Added AB contour guidance with identical and adaptive modes.
 - There is now an automatic calibration for the Plus1 steering loop gains for better steering performance for voltage based valve systems.
 - Enhanced heading filter to allow improved control performance and line acquisition.
- **eDrive**
 - Separated Vehicle type and Steering type with eDrive to accommodate additional VSi installation kits.
 - Added functionality to allow VSi steering interface on Articulated machine types.
- **S3**
 - Added ROX corrector compatibility to internal GPS.
 - Improved RTK convergence time.
 - Enhanced detection and awareness of when RTK has been lost.
 - Improvements to speed up re-acquisition when loss of GNSS data has occurred.
 - RTK improvements to better handle scintillations due to unstable ionospheric conditions.

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