

driveBAY Utility Operation



Note:

The driveBAY configuration Utility supports both the 3DGuidance driveBAY and 3Dguidance trakSTAR systems.

This Guide describes the steps required to run the 3DGuidance driveBAY Utility so that you can upgrade your tracker's firmware with the most recent version(s).

The firmware for the tracker (see note at left) is stored in a flash memory device that can be accessed using the BayDRIVE Configuration Utility. Both the Utility and the appropriate loader files required to upgrade the firmware are included in the .Zip file that you've been provided for the upgrade.

Note: The most recent version of the ATC3DG.DLL (formerly PCIBird3.DLL) for USB communication via the Windows API is also contained in the .Zip file. If you want to begin using this latest version, copy it to the \System32 directory following this procedure (it will not be copied automatically).

Setup



Note:

The USB driver must already be installed on the host PC to use this utility. If you have not installed the USB driver, see the Installation section of the tracker manual.

Before beginning the upgrade, setup the tracker with the USB interface.

1. Connect the USB cable and the Power cable to the rear panel of the tracker.
2. Connect the other end of the USB cable to an open USB port on the host PC (PC that will run the utility)
3. Power on the Tracker.

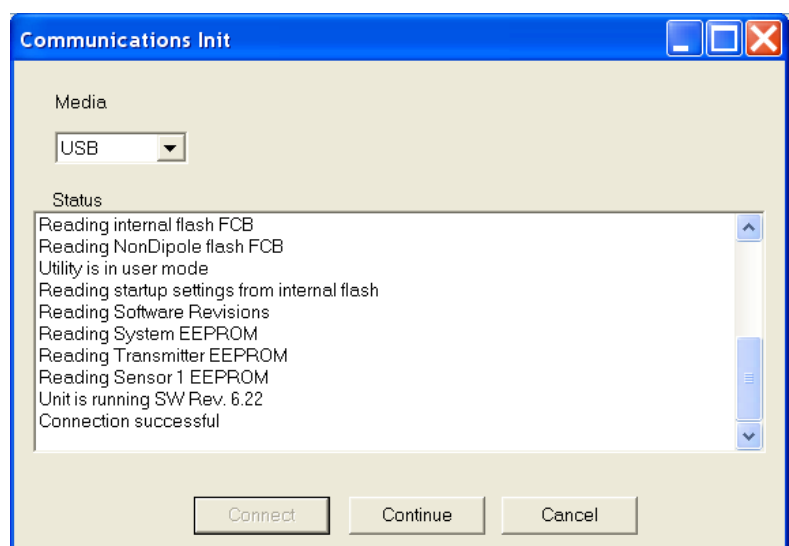
Run the Utility

1. Start the utility by running the 'DriveBay Utility.exe' file.

This will open the interface configuration window of the Utility.


2. Select USB from the 'Media' pull down menu, and click 'Connect'.

This will establish communication with the tracker, and initiate a reading of the current configuration. Progression of the



reading is shown in the Status window.

- 3.** When the reading has completed, select 'Continue'. This will open the Utility to the main display and the 'Settings' tab:


DriveBay Utility (Rev. 3.0)

Settings

Flash maintenance

Product info

Data

Diagnostics

System Settings

IP Address

192.168.200.51

Mask

255.255.0.0

Port

6000

Baud Rate

115200

Measurement Rate

68.3

Sensor Offsets(inches)

X

Y

Z

0

0

0

Hemisphere

FRONT

Az

El

Rl

Scale

36.0

Angle Align(degrees)

0

0

0

Data Format

POS/ANGL

Reference Frame(degrees)

0

0

0

Report Rate

1

☒ Sleep on reset

Line Freq

60

Filters

☒ AC Wide ON

Alpha Min

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

0.02

☐ AC Narrow ON

Alpha Max

0.9

0.9

0.9

0.9

0.9

0.9

0.9

0.9

0.9

0.9

☒ Adaptive filter

VM

2

4

4

4

4

4

4

8

16

32

☐ Noise Reduction

Kalman Filters

Position Process Noise Velocity Model

0

Orientation Process Noise Velocity Model

0

Position Process Noise Static

0

Orientation Process Noise Static

0

Noise Filter Parameter

0

Set To Defaults

Cancel

Apply

Reset



Note:

For a full description of the configurable parameters, see Chapter 3 of the driveBAY or trakSTAR Installation and Operation Guide

- 4.** If you want to change any of the power-up default settings, enter them here, and click ‘Apply’ to send them to the Flash memory.

DriveBay Utility (Rev. 3.0)

Settings | Flash maintenance | Product info | Data | Diagnostics

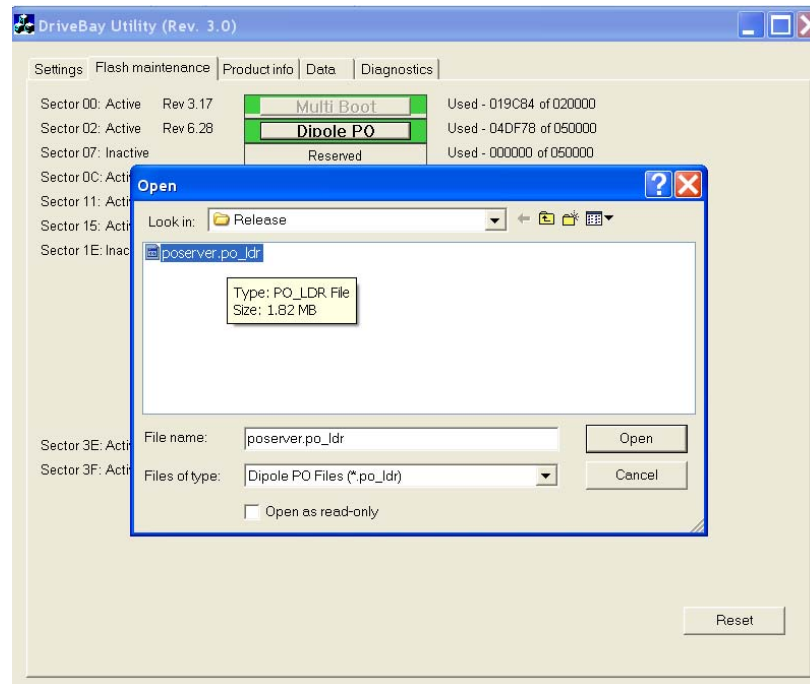
Sector	Status	Revision	Module	Usage
Sector 00:	Active	Rev 3.17	Multi Boot	Used - 019C84 of 020000
Sector 02:	Active	Rev 6.28	Dipole PQ	Used - 04DF78 of 050000
Sector 07:	Inactive		Reserved	Used - 000000 of 050000
Sector 0C:	Active	Rev 7.27	Aquisition DSP	Used - 013D48 of 050000
Sector 11:	Active	Rev 8.27	Diag Strings	Used - 0006CC of 040000
Sector 15:	Active	Rev 9.27	Error Strings	Used - 007410 of 090000
Sector 1E:	Inactive		Reserved	Used - 000000 of 200000
Sector 3E:	Active		Startup Config	Used - 0002CD of 010000
Sector 3F:	Active		FCB	Used - 000100 of 010000

Reset

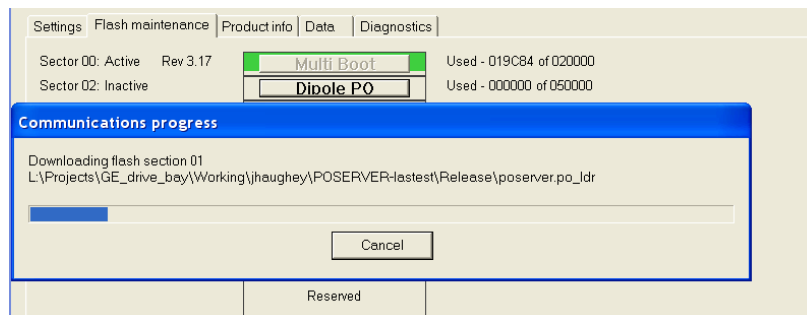
5. Click the 'Flash Maintenance' tab to show the firmware revisions currently loaded in the flash memory device.

6. Click the **'Dipole PO'** button to upgrade the second sector (Sector 02).
Select the *'poserver.po_ldr'* loader file and click 'Open'.

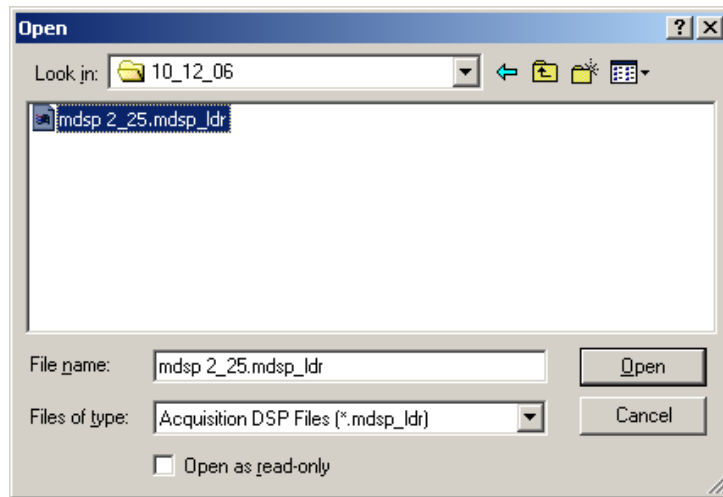
Note:
First sector (Sector 00) should contain Rev 3.1 or greater of the Boot loader. If not, contact Tech Support.



This will begin the upgrade of the Dipole PO sector. A progress bar will indicate status.

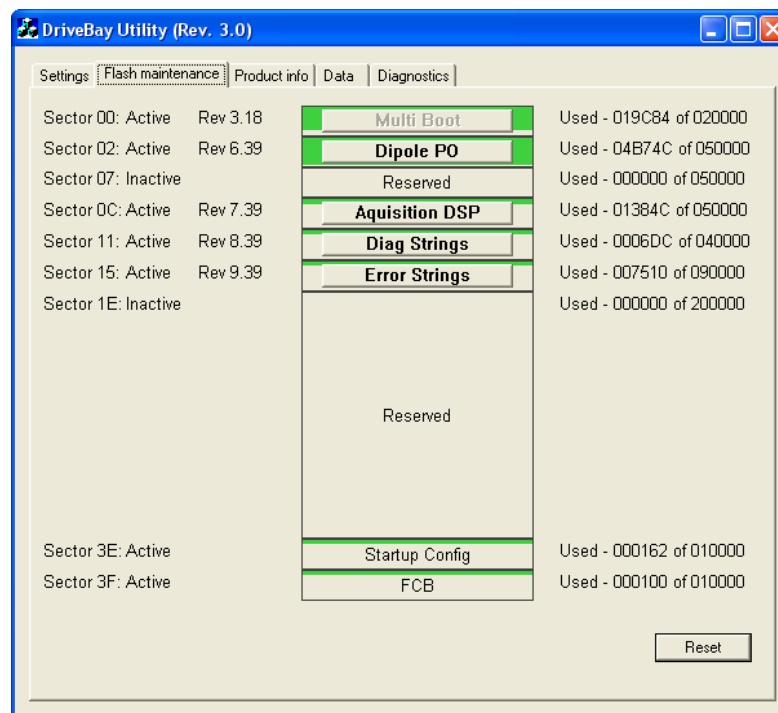


7. Continue with the upgrade by jumping to the next active sector (Sector 0C), and clicking the **'Acquisition DSP'** button to select the corresponding loader file (i.e. *'mdsp.mdsp_ldr'*). Click 'Open' to start loading this sector.



8. Repeat the loading sequence for the next 2 Sectors (Sector 11 and Sector 15).
 - a. First click the **'Diag Strings'** button and select the *'DiagStr.diag_bin'* to load Sector 11.
 - b. Then click the **'Error Strings'** button and select the *'ErrStr.err_bin'* to load Sector 15.

When the upgrade of the sector is complete, the new contents of the Flash will be displayed in the 'Rev' field next to each sector.



9. Close the Utility ('X' in title bar) and cycle the power on the tracker.
This completes the upgrade.