

DELAIR AFTER FLIGHT 6.3.0

RELEASE NOTES

January 16, 2020

1 Scope

These Release Notes contain information about the **Delair After Flight** software, version 6.3.0.

2 Objectives

Delair After Flight 6.3.0 is a new minor version. This release contains a number of improvements and exciting features, bringing UX11 and UX11 Ag users a better customer experience. The DT26 aircraft is now also supported.

3 New features

- DT26 aircraft support.
- Improved PPK algorithms for the UX11 / UX11 Ag.

The PPK processing component has been updated to a newer version.

The improved algorithms result in more reliable positions, with consistent precisions whether the data are processed in "backward" or "forward" mode.

For information, in forward mode, the observation data is filtered in the forward direction, from the beginning of the data to the end. In backward mode, the observation data is processed starting with the end and continuing to the start. Whenever there is an anomaly in the received GNSS data, one of the processing modes can result in a float position while the other would converge to a fixed solution.

- This version improves how the best results corresponding to the actual images in flight are picked or combined.
- The updated algorithms are also expected to better estimate the relative precisions in corrected positions (horizontal accuracy and vertical accuracy).
- Improved export speed.

The data set export now makes a better use of all the available CPU cores in your system and parallelizes its tasks in several execution threads. It usually results in substantially improved performances and a much faster export.

Would you need to reserve CPU resources for other applications, the "number of image processing threads" can be tuned in "Help" > "Options" > "Advanced", from one up to the maximum number of CPU cores detected on your system. Default is to try using all available CPU cores.

- Configurable workflow.

In "Help" > "Options" > "Advanced", you are now able to configure the tasks performed when a flight is opened:

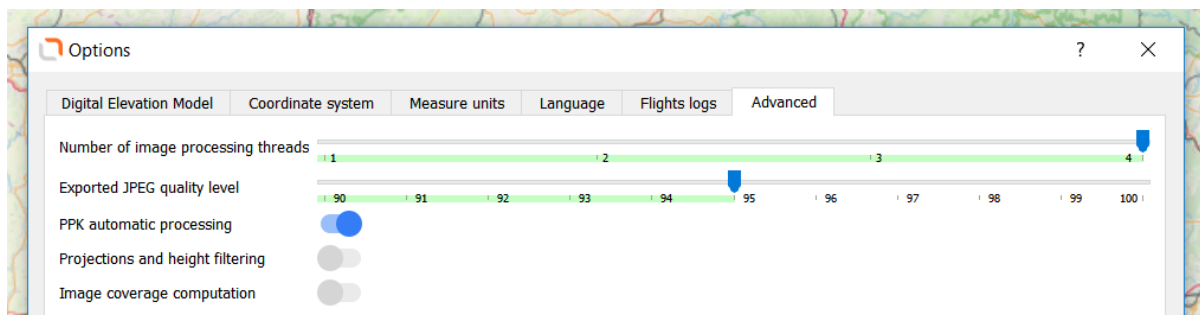
- PPK automatic processing: when set and the aircraft has a valid PPK license, PPK processing is automatically launched when the flight is opened (prompting for base station information).

- Projections and height filtering: when set, image projections on the surface terrain are computed using the DEM. This is required in order to show image approximate projections, to compute coverage information and also to enable height filtering.
- Image coverage computation: when set and the previous option is also enabled, the coverage map is computed.

By default, all options are enabled and the application behaves as in previous versions. For huge data sets, these tasks can be time consuming. You may now disable the features you do not need.

- Exported JPEG quality level.

The exported JPEG quality level can now also be globally configured in "Help" > "Options" > "Advanced". It defaults to 95%.



4 Resolved issues

- Several performance improvements.
- Fixed an issue when importing RINEX files without timestamp in EPOCH special records.
- Several other RINEX and PPK processing fixes and improvements.
- Exif metadata, JXL and Inpho projects for images exported with the "fast and accurate" export option still had the values applicable to the full-resolution images.
- Abnormal software termination during dataset export when the user selected UX11 images without matching PPK event to also be exported. (By default, such images are filtered out.)

5 Other changes

The antenna information database has been updated with the NGS calibration data as of July 12, 2019, supporting new base station antenna types. PPK-corrected positions are more accurate when the base station antenna calibration and phase center variations are known.

6 Known issues

There is a known issue when using the EGM2008 or NAVD88 geoids as vertical coordinate system (EPSG:3855, EPSG:5703 and EPSG:6360). Elevations may not be accurate and the application may fail to operate as expected when reading a flight or exporting a dataset. It is strongly recommended to always use either ellipsoid height or EGM96 geoid height. Versions affected: 6.1.0 and upper.

7 Documentation

Please refer to the *UX11 User Manual*, chapter 9 or to the “in-application” documentation.

8 Installation information

Prerequisite:

- Windows 10, 64-bit desktop computer
- Minimum:
 - Any CPU
 - RAM: 4 GB
 - Storage: HDD, 30 GB free space (approx. 2000 images in JPEG 100% quality)
- Recommended:
 - Quad-core Intel CPU
 - GPU: Intel HD Graphics
 - RAM: 8 GB
 - Storage: SSD, 100 GB free space (approx. 3000 images in TIFF)
- The computer must be connected to the Internet during the installation process.

1. Go to <https://download.mydelair.com>
2. Download the **Delair After Flight** installer **delairafterflight-windows-x86_64-version.exe** (where version stands for the latest available version).
3. Launch the installer and follow the instructions.
4. During the installation, you will also be prompted to download Digital Elevation Model (DEM) files locally. Select a subset of the DEM according to your needs.

CAUTION: To ensure that **Delair After Flight** works properly when computing photo projections and performing quality checks, the Digital Elevation Model (DEM) must be available for the geographical areas of interest. It is therefore strongly recommended to install the DEM. In the application’s “Help > Options” menu, you may alternately point to the online Delair SRTM90 web service, but in that case an Internet connection is required during the entire work session. Moreover, Delair does not guarantee the service to always remain available.

8.1 Obtaining PPK licenses

For high accuracy photogrammetry (PPK, Post-Processed Kinematics) with the UX11 aircraft series, a commercial license is required.

1. Contact your Delair distributor or sales representative.
2. Select the appropriate license package among those proposed.
3. You can view and check the status of your PPK licenses on MyDelair (mydelair.com), the Delair community platform.