**Project**:

# GPS Plus X

**Title:**

# Quick Setup Guide

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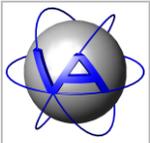
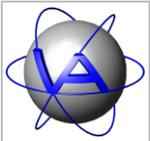| | Name | Date | Signature |
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VECTRONIC
Aerospace
GmbH

*GPS Plus X quick setup guide*

# 1   Introduction

GPS Plus X is a software package which allows users to manage and configure VECTRONIC Aerospace wildlife tracking collars and to download, process, and store collar-collected data.

This quick setup manual will guide you through the process of installing GPS Plus X on your computer and describes how to register your collars and how to configure GPS Plus X so that it automatically downloads collected collar data from VECTRONIC Aerospace's HTTP Data Service.

For technical details regarding the HTTP Data Service and how to access it refer to chapter 4  (p. 7).

# 2   Installation

## Starting the installation

Double left-click the installation file 'GPS Plus X V10.xx.xx setup.exe' to start the installation. You will be prompted with a welcome message (Figure 1). Click the Next button.

The following window presents the License Agreement. You need to agree to be able to use GPS Plus X. Press the I Agree button to continue, click Cancel if you do not agree with the license (Figure 2).
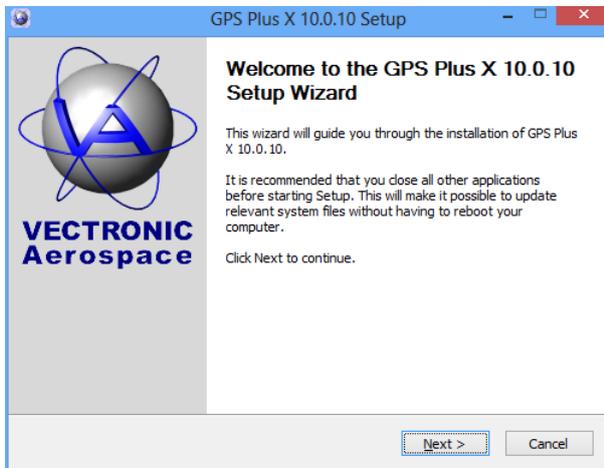


*Figure 1: Installation: Welcome Message*


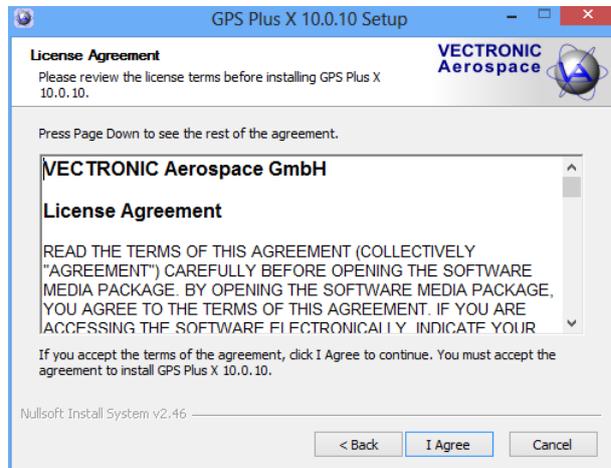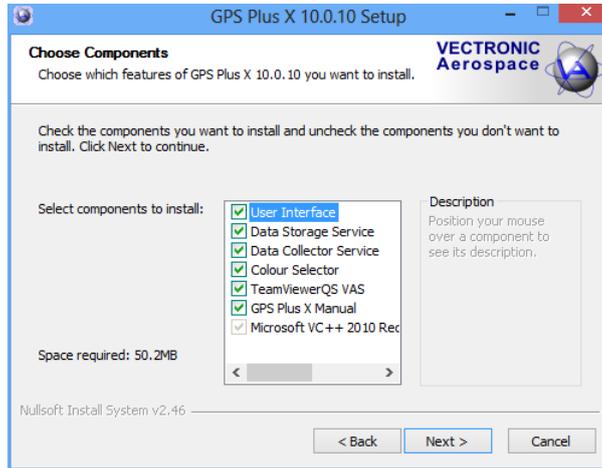
*Figure 2: Installation: License Agreement*

## Choose Components

In this window you can choose which components of GPS Plus X you wish to install (Figure 3). Simply accept the default selection and click Next.



*Figure 3: Installation: Components Selection*

## Automatic HTTP Data Download

The next window allows you to enable/disable automatic download of collar data from VECTRONIC's HTTP Data Service. To enable this feature please make sure the box Enable automatic data download via HTTP is checked (Figure 4).
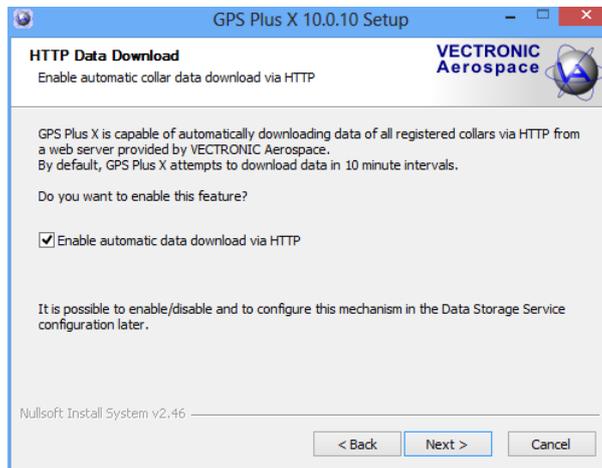


*Figure 4: Installation: Enable/Disable automatic data download*

Please click the Next button to continue to the next step.

## Choose Install Location

The next window allows you to choose the location at which GPS Plus X will be installed on your computer (Figure 5). Click the Browse button to navigate to the desired location or simply click the Install button to use the default path (recommended).
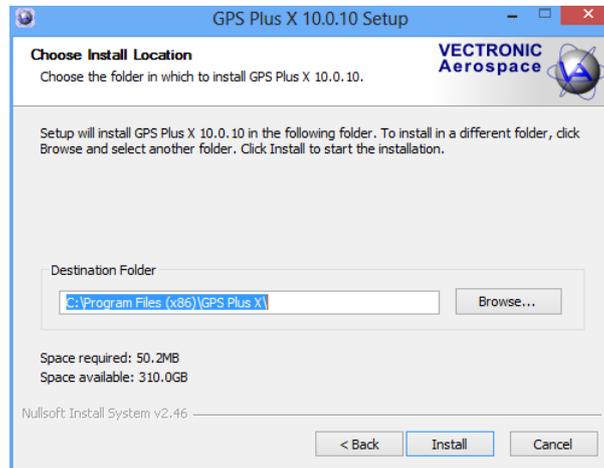


*Figure 5: Installation: Chose Install Location*

## Completing the Setup Wizard

After installation is complete the setup wizard presents a final window allowing you to run GPS Plus X by checking the Run GPS Plus X 10.xx.xx check box. If you do not wish to start GPS Plus X please uncheck the check box. Click the Finish button to complete the installation wizard.



*Figure 6: Installation: Final Step*

# 3   Collar Registration and Configuration

GPS Plus X requires collars to be registered with the system for it to allow communication with the devices

and to process and store their data. To register and configure your collars, please follow these steps:
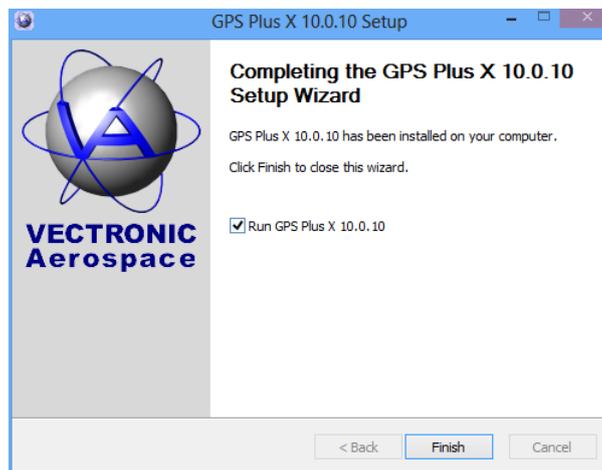
## 3.1    Register Collars

Please start GPS Plus X. If you decided to let the installation wizard execute GPS Plus X for you, the program should have started automatically. Please click on the Collars item of the configuration tree in the Configuration section on the left-hand side of the main window. This will bring up the Collar List (Figure 8).
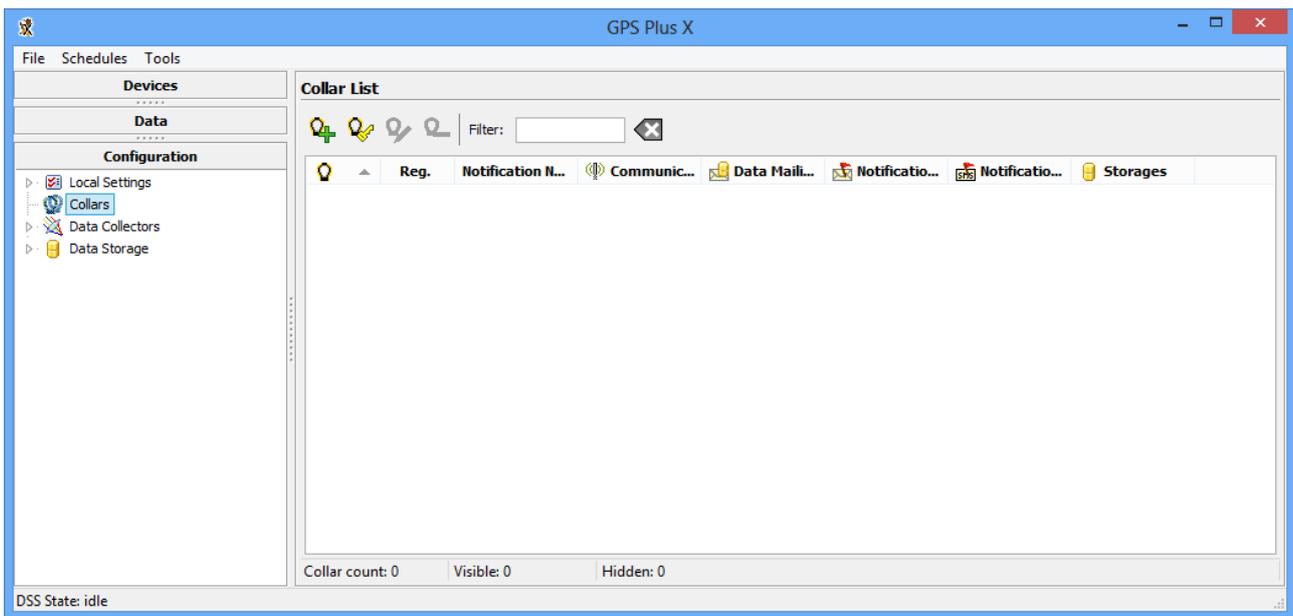


*Figure 7: GPS Plus X Collar List*

To register your collars please click the Add or update collars from key files [icon] button. Select your GPS Plus X Collar Key Files (*.keyx) of the collars you want to register and click the Open button. The collars are now added to the collar list.

Collars in your collar list need to be assigned to one of the defined Data Storage Modules. In a default installation there is only one Storage Module named 'Default Storage'. Please read the following chapter to learn how to assign collars to Data Storage Modules.

## 3.2    Configure Collars

GPS Plus X provides means to simultaneously edit properties of multiple collars. To do this, please select all your collars either by left-clicking into the Collar List and afterwards pressing the CTRL+a key combination or clicking and holding the left mouse button to "draw" a rectangle including the collars to edit. Then click the right mouse button on one of the selected collars to show the list of available group edit options (Figure 8). Select Group edit: Storage Destinations which will open a new window.
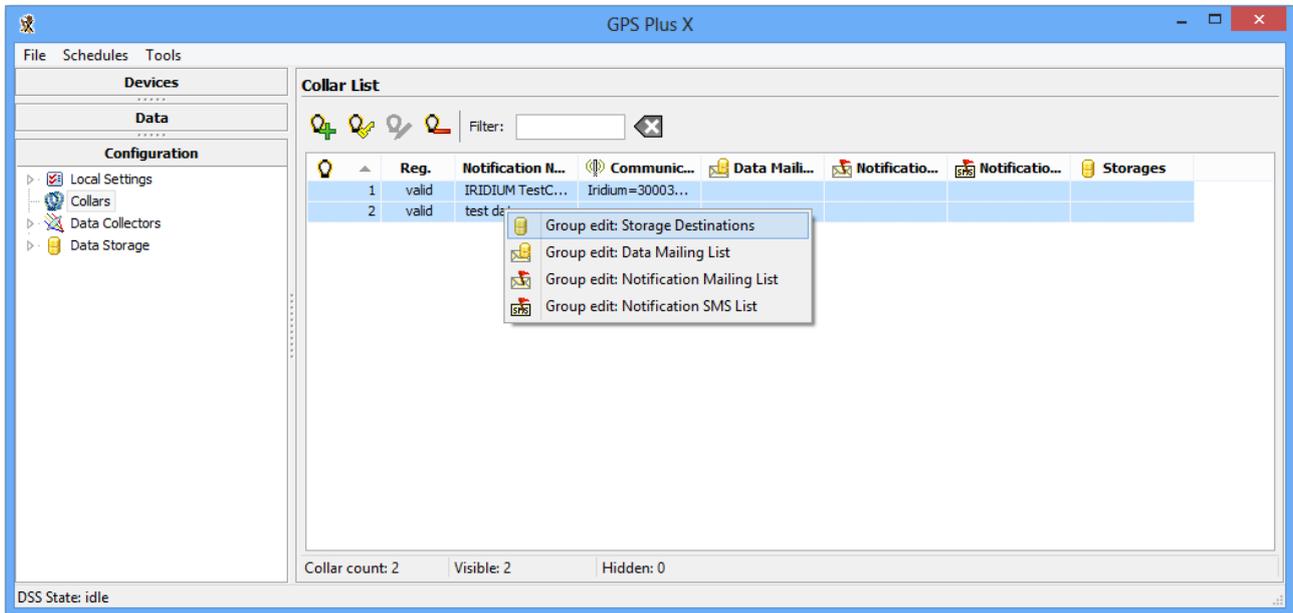
*Figure 8: GPS Plus X: Collar Group Edit*

The new window (Figure 9) allows you to define a Data Storage Modules in which data of the selected collars shall be stored. Clicking the Add new to all button will show a new entry in the list containing a drop-down list. The drop-down list contains all Data Storage Modules currently defined in the system. Select Default Storage and press the Return/Enter key. Then click OK. The Collar List will now show the assigned Data Storage Modules in the corresponding column for all selected collars (Figure 10).
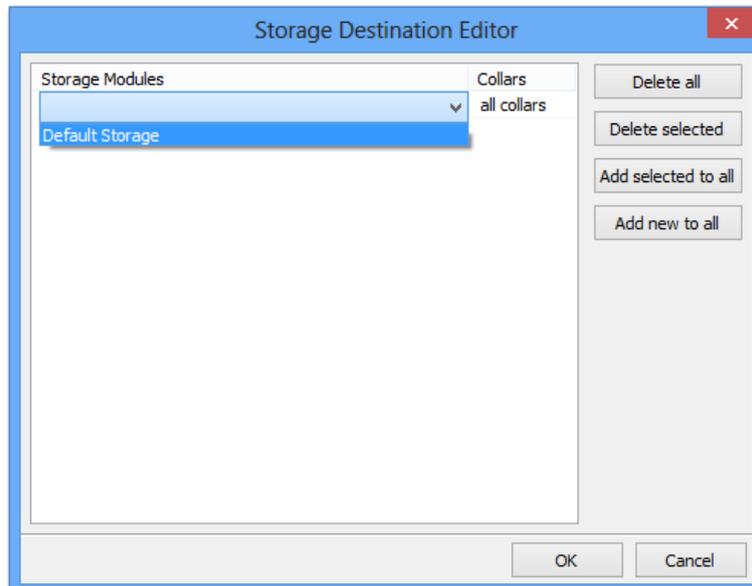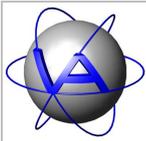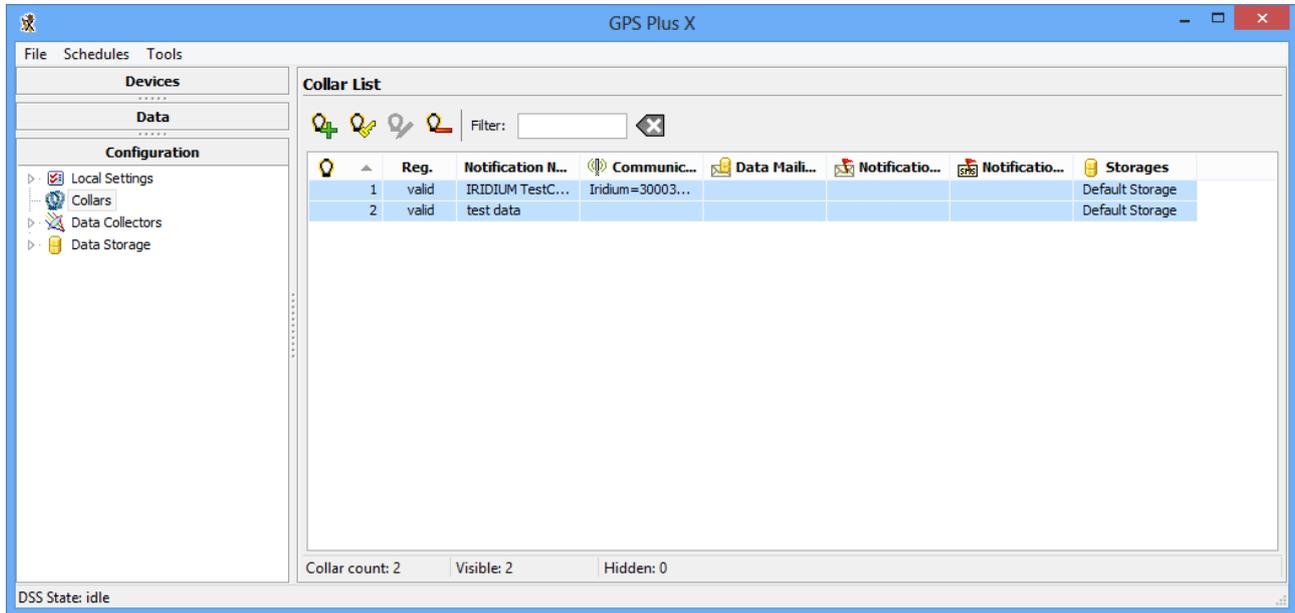


*Figure 9: GPS Plus X: Collar Storage Destination Group Editor*

*Figure 10: GPS Plus X: Collars with assigned Data Storage Modules*

# 4   HTTP Data Collector

The HTTP Data Collector provides simple means to download data of all registered collars from an HTTP service provided by VECTRONIC Aerospace. Using the Hypertext Transfer Protocol (HTTP) allows users to download their collar's data through most firewalls. The service accepts connections on TCP ports 80 (standard HTTP port) and 443 (standard HTTPS, SSL/TLS encrypted HTTP).

The first time the collector attempts to download data it will fetch all data available on the HTTP service for the registered collars. Any subsequent attempt will only read the data that was received by the service after the most recent data record of the previous connection.

Depending on the amount of available data the initial download may take up to several minutes or even hours to complete.

## 4.1   Configuration

To change the HTTP Data Collector configuration, please click on the HTTP Collector node in the configuration tree in the Configuration section on the left-hand side of the GPS Plus X main window (Data Storage → HTTP Collector). This will open the configuration window for the HTTP Data Collector (Figure 11).
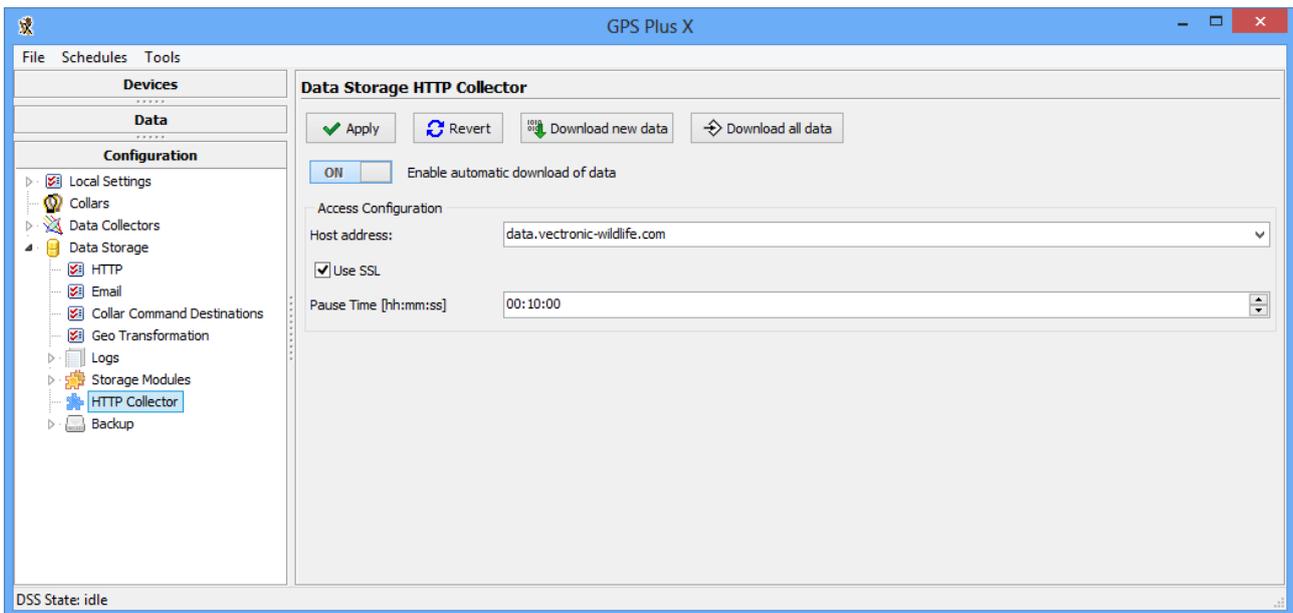


*Figure 11: HTTP Data Collector Configuration*

The following list describes the available parameters:

- **Enable automatic download of data**

Click this slider to enable or disable the automatic data download

- **Host address**

Address of the HTTP Data Service (Default: data.vectronic-wildlife.com)

- **Use SSL**

Defines whether SSL (TLS) encrypted communication channels shall be used to download the data (Default: ON, recommended)

- **Pause Time**

This parameter defines the time interval between two consecutive attempts to download data from the HTTP Data Service (Format: hh:mm:ss, Default: 00:10:00)

To apply your changes press the Apply button. To revert the changes made in this form to the currently active configuration press the Revert button.

Please do NOT change the 'Host address' and 'Use SSL' parameters unless told to do so by VECTRONIC Aerospace.

## 4.2 Downloading Collar Data

If the HTTP Data Collector is configured to automatically download collar data, no further action is required by the user. As soon as the GPS Plus X Data Storage Service is running data will be downloaded in intervals defined in the collector's configuration.

The first time the collector attempts to download data it will fetch all data available on the HTTP service for the registered collars. Any subsequent attempt will only read the data that was received by the service after the most recent data record of the previous connection.

It is also possible to manually download data which might be needed in cases where automatic download is not desirable. To only download new data that arrived after the previous connection, press the Download new data button. To download ALL available data of all registered collars (again), press the Download all data button.

## 4.3 Validation

To check whether all collars and the HTTP Data Collector are configured correctly users may take a look at the HTTP collector log which can be found in the Logs section of the Data Storage service configuration node in the configuration tree. See (Figure 12) for details. The log contains information about number of messages downloaded per collar and error messages in case of connection problems.
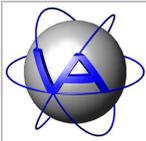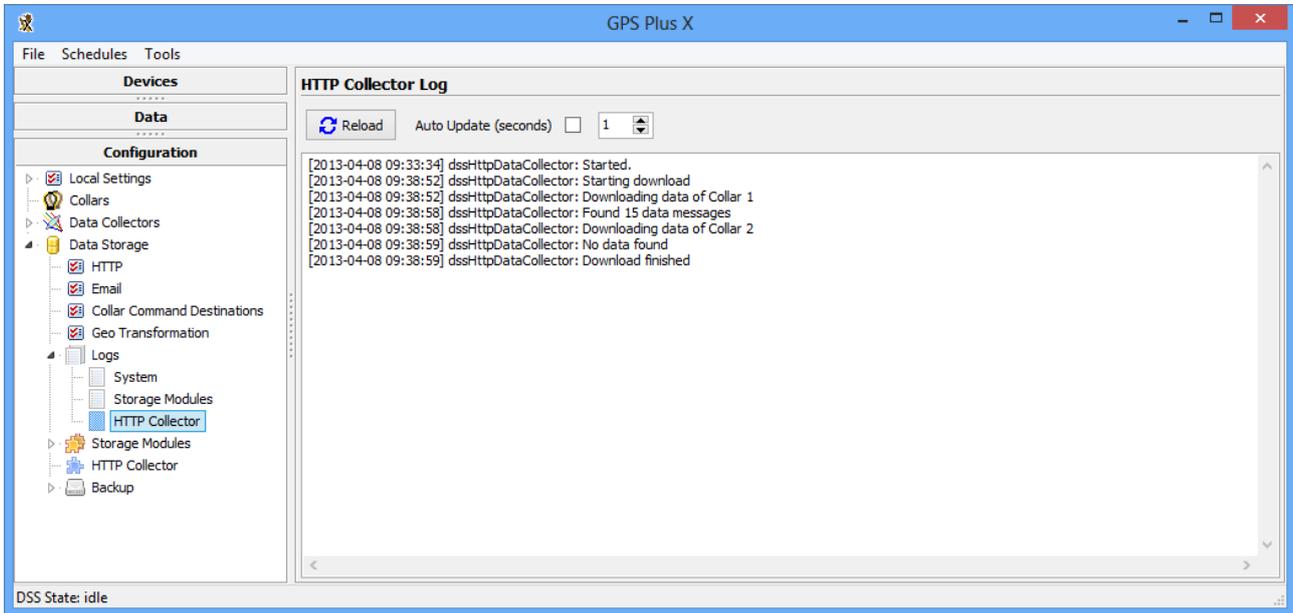
*Figure 12: HTTP Data Collector Log*

Another possibility to verify whether the system is working correctly is to open the Data Storage Service Status Frame by clicking on the Storage node of the tree structure in the Data section of the main window (Figure 13). If data is currently being processed, the Currently processing tab page shows the number of remaining messages to be processed per collar.
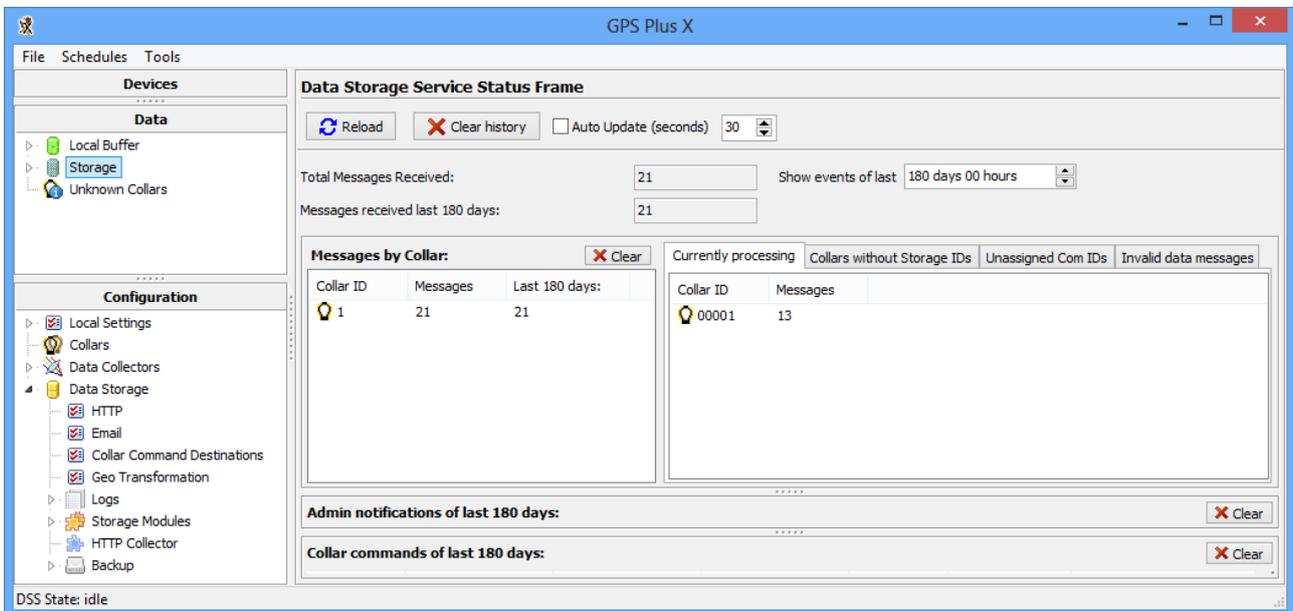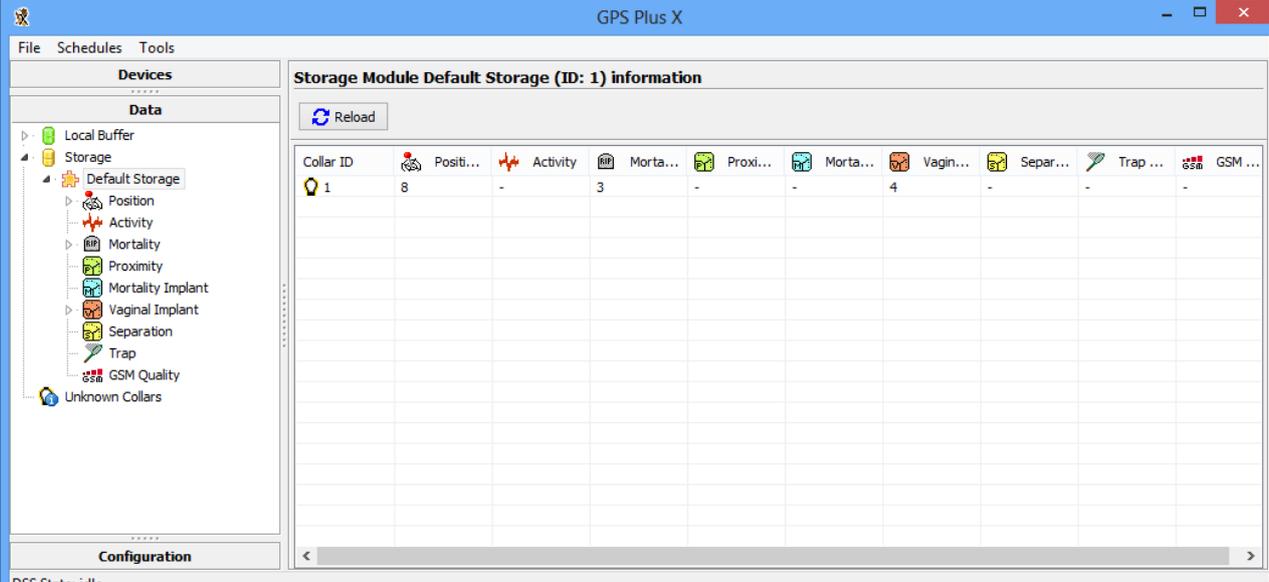


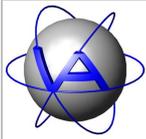*Figure 13: Data Storage Service Status Frame*

# 5   Access Collar Data

Collected collar data can be accessed easily in GPS Plus X. Expand the Storage node of the data tree in the Data section of the main window (by clicking the black triangle in front of the node) and click on the Default Storage node. This will present an overview of collar data stored in this Data Storage Module, showing the number of data records per data type per collar (Figure 14).



*Figure 14: Storage Module information*

Clicking in any of the non-empty table cells will open a data frame for that type of data of the collar represented by the table row. It is also possible to access collar data by expanding the Default Storage and then one of the data type nodes (e.g. Position, Activity, …) and then selecting a collar (Figure 15).

*Figure 15: Stored GPS Data frame*