

## Intro guide on how to geotag photos

This is just a quick overview tutorial on how to geotag photos with exiftool. User are not bound to using exact same software for geotagging and are free to utilize whatever method of geotagging the photos. We do not support direct questions on how to use geotagging software therefore any of the questions should be directed towards the software support/forum that you are using and not Seagull UAV.

## Photo geotagging

Follow the steps as below:

1. Download the geotagging software from: <http://www.sno.phy.queensu.ca/~phil/exiftool/>  
Install guide can be followed here: <http://www.sno.phy.queensu.ca/~phil/exiftool/install.html>
2. After you have installed the software, locate the GPS.txt file from the #MAP-X microSD card. When opening the file you will notice sentences beginning with \$GNGGA. We have to replace all of the GNGGA into GPGGA. You can use Microsoft Word for replacing the lines, simply copy and paste the GPS.txt content into Microsoft Word, then by clicking CTRL+F find the GNGGA and replace it with GPGGA.
3. Open up command prompt by click on Windows START button and then type into search "CMD". Now we have to match the time of GPS.txt and the photos taken in order for the geotagging to work. Next we will try and geotag photos by executing the following command.

```
exiftool -v2 -geotag C:\Images\GPS.txt -geosync=-00:00:00 C:\Images
```



If the photo time and GPS.txt time matches then the process of stamping geo data will begin and the progress can be followed in the command prompt. If the geotagging was successful you can skip the rest of this tutorial and proceed onto stitching the photos.

If the times of photos and GPS.txt do not match you will get the following error saying “Time is too far beyond track in File:Geotime” follow the step below to fix the issue.

```
C:\>exiftool -v2 -geotag C:\Images\GPS.txt -geosync=-00:00:00 C:\Images
Argument "-Geotime<DateTimeOriginal" is assumed
Writing File:Geosync
Warning = Some fixes are date-less -- may use time-only interpolation
Loaded 180 points from NMEA-format GPS track log file 'C:\Images\GPS.txt'
  GPS track start: 1970:01:01 13:09:59.300 UTC ← Start time from the GPS.txt file
  GPS track end:   1970:01:01 13:20:04.400 UTC
Writing File:Geotag
===== C:/Images/DSC00058.JPG ← Time of the first picture taken that is being read
Setting new values from C:/Images/DSC00058.JPG
  Geotime value:   1970:01:01 14:09:07.000 UTC (incl. Geosync offset of +0.000 sec) (local timezone is +25:00)
Warning: Time is too far beyond track in File:Geotime (ValueConvInv) - C:/Images/DSC00058.JPG
Warning: No writable tags set from C:/Images/DSC00058.JPG
Nothing changed in C:/Images/DSC00058.JPG
```

As we can see from the error the starting time of GPS.txt is 13:09:59 and the Geotime value is 14:09:07 . Now we have to simply match Geotime value with GPS.txt value, meaning that we need to subtract 1 hour from Geotime value, it is done via the following command.

```
exiftool -v2 -geotag C:\Images\GPS.txt -geosync=-01:00:00 C:\Images
```

In case you need to add time to the Geotime value simply use “+” instead of the “-” which will end up looking like the command below.

```
exiftool -v2 -geotag C:\Images\GPS.txt -geosync+=00:00:00 C:\Images
```

For further guidance refer to: <http://www.sno.phy.queensu.ca/~phil/exiftool/faq.html>

## Using the MAP.kml

To utilize the MAP.kml file simply download “Google Earth”

<https://www.google.com/earth/download/ge/agree.html>

Drag & drop the MAP.kml directly into “Google Earth” and it will display the triggered photo coordinates and failed photo coordinates on the location that your flight plan was set.