

Aviatrix technical note

Writing GPS data to Nikon D800 series cameras

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Background

The latest version of the Aviatrix trigger box has the ability to write GPS data (latitude, longitude, height) to the EXIF header of images acquired by some Nikon cameras. In order for this to function correctly, the correct settings have to be selected on the Nikon camera. Unfortunately, this process is not intuitive, hence the reason for this technical note.

Nikon D800 / D810 “Auto meter off delay”

The procedure outlined in this document has been tested with the Nikon D800 / D800E and D810. It may also be applicable to other Nikon cameras, but it hasn't been tested. This is what happens with the D800/D810:

- When you half press the shutter release button, the metering data (exposure, shutter speed etc.) appears on the LCD screen.
- About half a second later the GPS icon appears.
- The metering data will remain on the LCD screen for the amount of time set by the “Auto meter off delay” setting.
- If the “Auto meter off delay” value is low (1 sec for example) the metering turns off after one second.
- When the shutter is pressed again, it again takes half a second for the GPS icon to appear.

Now, this is the problem: when we fly flight lines, we send the focus and trigger commands to the camera at the same time, so if the metering display is off, the shutter is released before the GPS icon appears; the result: no GPS in the EXIF. However, if the metering display is always on, then the GPS icon is always present, meaning GPS data will be written to the EXIF.

So, by changing the “Auto meter off delay” value, we can force the GPS data to not be written to the EXIF. Therefore it is important to make sure the “Auto meter off delay” value is correct. It has to be set to a high value, such as unlimited. Basically the metering mustn't be turned off. By setting “Auto meter off delay” to a high value, the GPS icon is always there, so whenever the camera is fired the GPS is written to the EXIF.

How to change the “Auto meter off delay”

Go to “CUSTOM SETTING MENU” and go to Section C: “Timers/AE Lock”



Scroll down to C2: “Auto meter off delay”



Scroll through the list of options, and select “No limit”.



This now means that the metering data will always be displayed on the LCD display. To complicate the situation, the “Auto meter off delay” can also be accessed under the SETUP menu. Scroll through the SETUP menu and select the GPS item:



Under the GPS menu you can choose to enable or disable the “Auto meter off” function.



You must select “Disable”, which means that the “Auto meter off” function is disabled, so therefore the metering display stays visible on the LCD screen.



It’s not clear whether the setting under the GPS menu overrides the setting under the Timers/AE Lock menu, so we suggest that changes are made in both of these places.



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A final note of caution

When the metering display is always on, the camera battery will drain much more quickly. A bench test will determine exactly how long the battery will last, so it is well worth carrying out such a test to see.