

GEOTAGGER N3

User Manual (V1.0)

Solmeta Technology Co., Ltd

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Introduction

Thank you for your purchase of a Solmeta Geotagger N3 unit, a photo-GPS that records the latitude, longitude, altitude, heading and Coordinated Universal Time (UTC) with your photographs. With the supported cameras, this information is embedded directly within the images as they are taken.

This guide explains how to use the Geotagger N3 to geotag your photos. For further information please visit www.Solmeta.com

Features:

- The real time geographical information is recorded to the EXIF metadata of the image file.
- 3-axis electronic compass provides accurate heading data that is stored in the image file.
The compass can be calibrated.
- High sensitivity, capture the GPS signal quickly.
- Power from camera directly, very low power consumption. A special work mode applied for low power consumption and maximum latest GPS data using.
- "Indoor fixed", automatically re-use the last received GPS information when there is no GPS signal.
- Shutter release socket, allows you to use the remote trigger when the remote terminal is used by Geotagger N3. (A remote cord for remote shutter release is free provided in package)
- "Wake up" and "sleep" working mode, which make it is possible for "camera off and GPS stays on".
- Multi-model can be used with: Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200, D90, D5000, D7000, D3100 and D5100.
 - Geotagger N3-A can be used with Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200
 - Geotagger N3-B can be used with Nikon D90
 - Geotagger N3-C can be used with Nikon D5000, D7000, D3100, D5100

Note

The Geotagger N3 is not equipped with a battery or on/off switch: power is supplied from the camera. The Geotagger N3 turns off only when the cable connecting it to the camera is disconnected; even when the camera is off, the Geotagger continues to receive GPS data. For more information, see "Wake up" and "sleep" working mode" in page 6.

Packing list

Thank you for purchasing the Geotagger N3. Before you start, make sure that the following items are included in your package. If any of these items are missing, please contact us.

- Geotagger N3 unit (selected by the user at time to the purchase to support their camera models)
 - Geotagger N3-A can be used with Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200
 - Geotagger N3-B can be used with for connection to Nikon D90
 - Geotagger N3-C can be used with Nikon D5000, D7000, D3100, D5100
- Camera strap adapter (holds unit on camera strap when hot shoe is not available)
- Manual
- Protection sleeve
- Remote cord



The illustration shows the items of one package of Geotagger N3-A.

Product view



Connector

Shutter release socket



Status LED

Calibration button



Hot shoe connector

How to use the Geotagger N3 with Nikon camera?

1. Connect the Geotagger N3 to a Compatible DSLR Camera, check the connection

1. Turn the camera off.
2. Mount the Geotagger N3 on the camera by sliding its base into the flash hot shoe or by using the supplied strap adapter to attach it to the camera strap. Then insert the connector to the camera's GPS terminal.
3. Turn the camera on, a blinking GPS icon will be displayed in the camera's control panel and the LED on the Geotagger N3 will be red flashing. If there is no GPS icon or no red LED flashing, check the connection.


2. Obtain a GPS fix

1. With the camera on and the LED on the Geotagger N3 red flashing, go to an open outside space, holding the camera in one of your hand and stand still.
2. Within 1 minute, the red flashing LED will change to green flashing, then the green flashing will be steady. Meanwhile, the blinking GPS ICON in the camera's control panel will be steady. This means that the Geotagger N3 is GPS fixed and ready to provide the current GPS data to the camera. **(At the Initialize stage, the Geotagger N3 usually needs 1 minute to obtain a GPS fix, but once the GPS fixed, it will only takes a few seconds for re-acquisition even in a weak signal environment.)**



Icon illustration shows control panel for the D90 digital camera

3. Take photos and get the GPS data recorded in the photograph.

1. Take photos as normal, GPS and heading (direction) data will be recorded in the metadata of the photograph. **(If the heading data is not accurate, it is necessary to perform a compass calibration, please refer to the calibration instruction in page 9)**
2. To view the GPS data recorded with each photograph, press the  button and display the photographs full frame. The photo info display will contain a page listing GPS and heading data for the current photograph.

LATITUDE	: N
	: 22° 30' 961"
LONGITUDE	: E
	: 113° 55' 539"
ALTITUDE	: -1m
TIME (UTC)	: 2010/04/08
	: 07:25:06
HEADING	: 208.10°

4. Tips

Turning Geotagger N3 on and Off

The Geotagger N3 is not equipped with a battery or on/off switch: power is supplied from the camera. The Geotagger N3 totally turns off only when the cable connecting it to the camera is disconnected. Even when the camera or exposure meters are off, the Geotagger N3 periodically acquires GPS data for three hours. (See "wake up" and "sleep" working mode below)

"Wake up" and "sleep" work mode

In order to avoid drain out camera's battery very quickly and use the maximum latest GPS data, a "wake up" and "sleep" working mode applied on the GPS unit.

In your photographic day, if you turn the camera off but with the device connect. (or the exposure meters is off);

In the first 1 hour, the device wakes up every 5 minutes for 1 minute continuous working no matter the GPS signal captured or not. This helps to get more accurate data.

In the next two hours, the device wakes up every 5 minutes for 1 minute working. However, if the GPS signal captured with 3D fix, GPS module will be shut down immediately for saving battery power.

If the camera and the exposure meters continue off after three hours, the Geotagger N3 will go to "deep sleep" with no periodical working. Only when the camera is on, the Geotagger N3 goes to normal working.

"Indoor fixed" function

If you wish to take geotagged photos in situations where the GPS signal is lost after it was acquired, such as when going indoors to continue shooting, the "Indoor fixed" function, will automatically reuse the last known position for subsequent images. Under the circumstances, the GPS icon in the camera's control panel is steady but the LED on the Geotagger N3 is traffic lights flashing. Once the new fixed available, the Geotagger N3 will immediately report the updated GPS data to the camera.

Status LED

The Geotagger N3 has a single multi-colored LED that changes color to signify different operating conditions.

LED color	LED mode	Description
Red	Flashing	The N3 is searching for GPS signals.
Green	Slowly flashing	The N3 is searching for GPS signals and has obtained 2D fixed.
	Solid	The N3 has obtained a signal lock and is ready to provide GPS data to camera.
	Slowly flashing when the camera is off	Wake up for searching GPS signals
Green and red	Alternate flashing	“Indoor fixed” status
Orange	Flashing	Compass calibration mode

Warranty

- Solmeta Technology Co., Limited guarantees its product from manufacturing defects and workmanship for a period of two-year from the date of original purchase. During the two-year warranty, Solmeta Technology will repair or replace the product free of charge. Please keep your original invoice as proof of purchase.
- Customers who have products covered under the warranty are required to contact Solmeta Technology by e-mail (service@solmeta.com) for troubleshooting issues before returning the product.
- Customers are responsible for shipping and insurance charges for returning the product to Solmeta Technology.
- Charges will be imposed for repairing product, which is out of warranty coverage or invalid warranty.
- The guarantee is not valid if defect is due to damage caused by incorrect use, poor maintenance or if persons not authorized by Solmeta Technology have carried out alterations or repairs.
- For the device to be used correctly, the user should strictly adhere to all instructions included in the user guide and should abstain from any actions or uses that are described as undesired or which are warned against in the user guide.

Precautions for use

Do not drop: The product may malfunction if subjected to strong shocks or vibration.

Keep dry: This product is not waterproof, and may malfunction if immersed in or exposed to water.

Avoid sudden changes in temperature: Sudden changes in temperature, such as occur when entering or leaving a heated building on a cold day, can cause condensation inside the device. To prevent condensation, place the device in a carrying case or plastic bag before exposing it to sudden changes in temperature.

Keep away from strong magnetic fields: Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Strong static charges or the magnetic fields produced by equipment such as radio transmitters could affect the product's internal circuitry.

A note on electronic devices: In extremely rare instances, a strong external static charge may cause the device to stop functioning. Turn the camera off and disconnect and reconnect the Geotagger Pro. In the event of continued malfunction, contact your retailer or Solmeta-authorized service representative.

Information in this document is subject to change without notice. Solmeta Technology reserves the right to change or improve their products and to make changes in the content without obligation to notify any person or organization of such changes or improvements.

Specification

Supported cameras	Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200 Nikon D90, Nikon D5000, D7000, D3100, D5100
GPS chipset	MTK MT3329 66parallel searching, 22tracking channels. Tracking sensitivity: -165dBm
Acquisition times	Cold start: <35sec., Hot start: <1sec. (Under open sky)
GPS accuracy	3.0meters, 2D RMS (Horizontal)
Update rate	Once per second
3 axis electronic compass	Azimuth Range: 0°-359° Accuracy: ±2° (Horizontal), Accuracy: ±5° (Tilt, or roll +/- 60°)
Data format	NMEA 0138
Geodesics	WGS84
Operating current	< 60mA (normal working mode) <8mA ("sleep" working mode)
Operating temperature	-10°C-50°C(-2°F ~ 122°F)
Dimensions (L x W x H)	Approx. 56 mm x 36mm x 19mm
Weight	Approx. 50g (1.8 oz.)

Compass calibration

IMPORTANT: Before using the Geotagger N3, you must do the calibration. Repeat these procedures each time you move the device and camera more than 100 miles or you are using the different cameras.

Why calibrate?

The compass in the device is sensitive to nearby magnetic objects that could cause measuring error. To compensate for this error it is sometime necessary to perform a calibration. (If the compass is accurate, there is no need to perform the calibration)

How to calibrate?

1. With the Geotagger N3 mounted on the camera's hot shoe and connected with the camera, turn the camera on, the LED on the Geotagger N3 will red flashing.
2. Short press the calibration button, the LED turns orange flashing.
3. Hold the camera and the N3 in your hand, rotate the device at X, Y, and Z axes direction. On each direction, do the rotation clockwise and do the rotation twice. Please try to keep the rotation as a constant speed as you can, and try to keep the device horizontally (leveled) at that direction you are busy with!
4. Each rotation takes 5-10 seconds.
5. After the rotation is completed, short press the calibration button again to end the calibration. The LED will start red flashing.

Note

- Magnetic sensors are very sensitive to nearby magnetic objects, which can cause calibration errors and misreading. Please keep the device away from magnetic source when perform a calibration.
- If the compass is not accurate after the calibration, please repeat above operations.

Mounting illustration



The Geotagger N3 connected to Nikon D200



The Geotagger N3 connected to Nikon D5100

Contact/Service

If you have any questions on or need help with our products please do not hesitate to get in touch with our Technical Service. You can reach our service people by phone under the telephone number indicated below from Monday through Friday from 9:00 am to 5:00 pm. Independently of these service times you can also get in touch by e-mail;

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