



Geogagger N2

User Manual (V2.0)

Solmeta Technology Co., Ltd

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Safety Information

To prevent damage to the GPS unit or injury to you or to others, please read the following safety instructions before using this equipment.

Do not disassemble

Touching the product's internal parts could result in injury. In the event of malfunction, the products should be repaired only by a qualified technician. Any unauthorized disassembly or modification may void the unit's warranty.

Keep the GPS unit dry

Do not immerse in or expose to water or handle with wet hands. Exposing the GPS unit to water could result fire or electric shock.

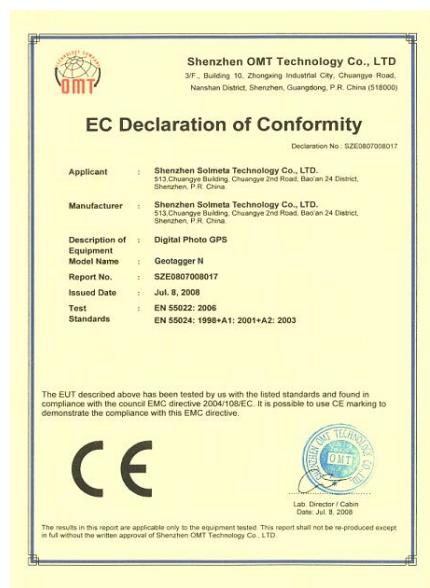
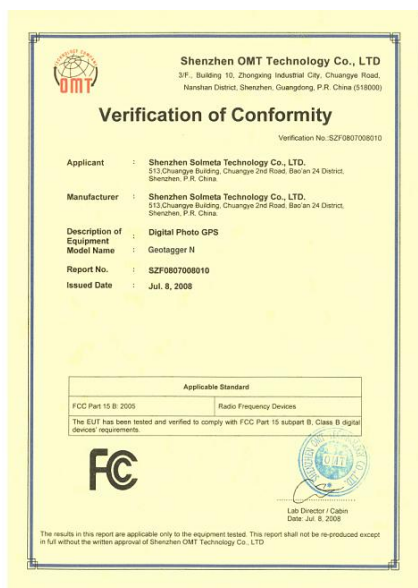
Do not subject to high temperatures

The GPS unit can be damaged by exposure to fire or high temperatures. Do not leave the unit in areas subject to extremely high temperatures. Failure to observe this precaution could result in damage to the casing or internal circuitry, and could potentially cause a fire.

Keep out of reach of children

Failure to observe this precaution could result in injury.

FCC/CE Compliance





Overview

Thank you for purchasing Solmeta **Geotagger N1/N2** unit, a photo-GPS that records the latitude, longitude, altitude, and UTC (Coordinated Universal Time) with your photographs. With the supported cameras, this information is embedded directly within the images as they are taken.

The Geotagger N2 equipped with electronic compass, which can provides heading data stored in the image file.

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

Features

- Embed the real time geographical information to the EXIF metadata of the image file.
- High sensitivity, capture the GPS signal quickly.
- 2-axis electronic compass which can provide heading information to the digital photo files. The compass can be calibrated. (only apply to Geotagger N2)
- Built-in rechargeable battery, doesn't consume the power of the camera, lasting up to 20 hours. Automatically switch to Nikon camera for power source when the device is in low power.
- "Auto" function, allow the Geotagger unit will turn on when the camera is turned on and will turn off when the camera is turned off.
- Detachable data cable allows different cables to support Nikon camera model.
 - Cable-A for connection to Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200
 - Cable-B for connection to Nikon D90
 - Cable-C for connection to Nikon D5000, D7000, D3100, D5100
- "Indoors fixed", automatically tags the photo with the last location information when indoors or loss of GPS signal.
- Supports Flickr, panoramio, Locr, Picasa, etc.

Packing List

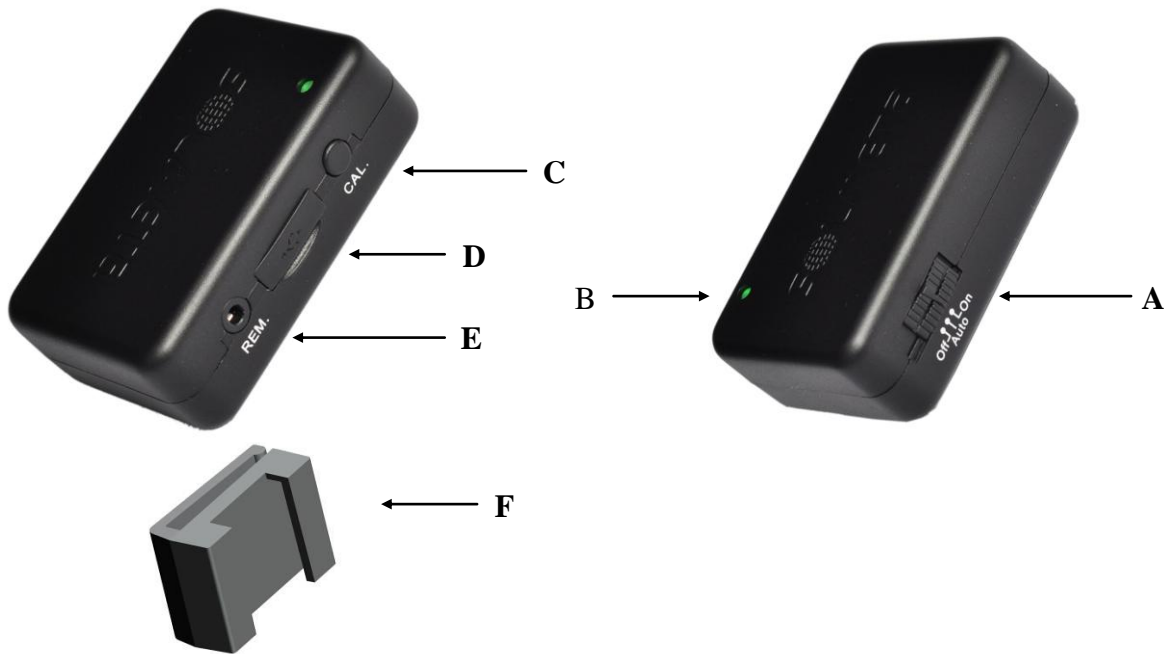
Thank you for purchasing Solmeta **Geotagger** unit. Before you start, make sure that the following items are included in your package. If any of these items are missing, please contact us.

- GPS receiver
- Data cables (selected by the user at time to the purchase to support their camera models)
 - Cable-A for connection to Nikon D3-series, D700, D300-series, D2X, D2XS, D2HS, D200
 - Cable-B for connection to Nikon D90
 - Cable-C for connection to Nikon D5000, D7000, D3100, D5100
- USB charging cable
- Wired shutter release
- Camera strap fastener
- User manual
- Protection sleeve



The illustration shows the items of one package of Geotagger N1/N2 with Cable-A data cable.

Product view



- A Power switch**
- B Status LED**
- C Calibration button**
- D USB Port**
- E Remote socket**
- F Camera strap adapter**

Charging

1. Power off the Geotagger unit, then connect the device with a computer or an AC adaptor by the USB charging cable. (The Geotagger unit can be charged using any 5V standard USB charger)
2. It takes around three hours to fully charge the Geotagger unit .
3. The LED on the unit will be red blinking during the charging, and will be red steady when the device is in full power.

Note

- The built-in rechargeable battery cannot be replaced by users; it needs to be replaced by our professional technician if it needs servicing.
- **Auto Meter off**
Nikon added a new function to the D3x, D3s, D3, D700, D300s, D300 and D90, D5000, D3100, D5100, D7000. The new function resolved a battery drain issue by allowing the user to select the metering system to stay On or auto Off when GPS signals are received to reduce power consumption.

To access this function on your Nikon camera, please follow the step below :

Menu→ Custom Settings Menu→ (C) Timers/ AE Lock→ c2 Auto meter- off delay

How to use the Geotagger unit with Nikon camera?

1. Connect the Geotagger unit to a compatible DSLR camera, check the connection

1. Turn the camera and the Geotagger unit off.
2. Mount the Geotagger unit onto the flash shoe or attach the unit on the camera strap with the supplied strap adapter. Connect the Geotagger unit to the camera by the appropriate data cable. (Please refer to the illustration in page)
3. Turn the camera and the Geotagger unit on, a blinking GPS icon will be displayed in the camera's control panel and the LED on the Geotagger unit will green flash. If there is no GPS icon or no green LED flashing, check the connection.

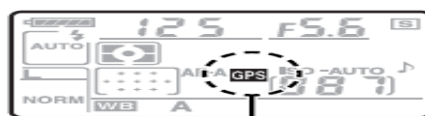
2. Fix the Geotagger unit with GPS satellites signal


1. To get a quick fix, please take the unit and your camera to an open outside space. Holding the unit and the camera in one of your hand and stand still.
2. Keep the unit on, then wait for the GPS signal to be fixed.


The LED on the unit first will green flashes quickly, a green flashing LED indicates that the GPS device is searching for a satellite signal. And after a while, the LED flashing will slow down and at last green steady, this means that the GPS signal on the unit is now fixed and ready to provide the current GPS data to the camera. **(At the initialize stage, the Geotagger unit usually needs 1 minute to obtain a GPS fix, but once the GPS fixed, it will only takes a few seconds for reacquisition even in a weak signal environment.)**

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

1. Once the GPS signal on the Geotagger unit is fixed, you can see a steady GPS icon displayed in the camera's control panel..



 icon (illustration shows control panel for the D90 digital camera)

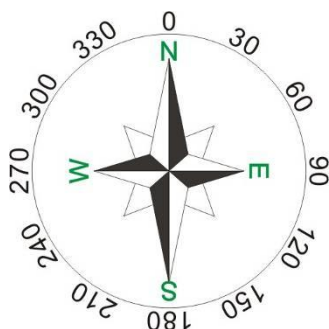
2. Take photos as normal, the GPS data will be recorded in the metadata of the photograph. **(The Geotagger N2 can also supply the compass heading which can also be recorded in the metadata of the photograph. If the heading data is not accurate, it is necessary to perform a compass calibration, please refer to the compass calibration instruction in page)**
3. 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

- With the Geotagger unit on “Auto” switch position, the Geotagger unit will turn on when the camera is turned on and will turn off when the camera is turned off. Use -friendly, power saved.
- **“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.
Once the new fixed available, the unit will immediately report the updated GPS data to the camera. Note, only when your Geotagger N1/N2 is keeping on and you are into a place where is no GPS signal, the unit is able to provide the last GPS information. As soon as you turn off the unit, the GPS data stored is invalid.
- To maximize the accuracy of the GPS data, hold the camera steady for a few seconds while the Geotagger unit is receiving the GPS signal. This is especially important for the accuracy of the altitude value.
- For proper heading data , the Geotagger N2 should be mounted on the flash shoe of the camera. It points to the same direction as the lens which is mounted on the camera. The Geotagger N2 needs to stay in a horizontal position when measuring, otherwise there will be some deviation. Heading data will not be valid with strap mounting.
- Some of the Nikon camera has an “auto meter off” option that is also a power saving method. We suggest adjusting it to 30 seconds or more to avoid missing the GPS data, or half press the shutter to activate the GPS when taking a photo.
- **Heading/Compass for Nikon**



0°	-	North
90°	-	East
180°	-	South
270°	-	West

• **LED status**

LED COLOR	LED MODE	DESCRIPTION
Green	Flashing twice a second	The Geotaggerunit is searching for GPS satellite signals.
	Steady	The Geotagger unit has obtained a signal lock and is ready to provide GPS data to camera
Red	Flashing	The Geotagger unit is charging. Low battery warning. Note: When in low battery and connected to camera, the camera will power the unit automatically.
	Steady	The Geotagger unit is in full charge.)
Orange	Flashing quickly	Compass calibration mode (only apply to Geotagger N2)

Camera GPS icon status

No GPS icon	Not connected to the camera
GPS icon blinking	Not fixed, GPS signal searching
GPS icon displayed	GPS fixed

• **Remote Trigger / Shutter Release Pass-through**

In order to make sure that Nikon DSLRs can work properly when the remote terminal is occupied by Solmeta geotagger, the Geotagger unit is designed with a 2.5mm remote pass-through. We also provide a remote cord which enables you to use the remote trigger when the solmeta geotagger is working .



Warranty

- Solmeta Technology Co., Limited guarantees its product from manufacturing defects and workmanship for a period of one-year from the date of original purchase. During the one-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 N2. 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.

Specifications

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
2 axis electronic compass (only apply to Geotagger N2)	Azimuth Range: 0-359° Accuracy: ±2° (Horizontal).
Data format	NMEA 0138
Geodesics	WGS84
Battery	600mAh Li-ion Operation Current < 60mA Charging Current 300mA
Operating temperature	-10°C –50°C (-2°F ~ 122°F)
Dimensions (L x W x H)	Approx. 55mm x 33m x 19mm
Weight	Approx. 50g (1.8 oz.)

Compass Calibration

The GeotaggerN2 is equipped with an electronic compass which provides heading information to the camera.

IMPORTANT: When using the Geotagger N2 for the first time, a calibration is required. Repeat these procedures each time you move the N2 and camera more than 100 miles or you are using the different cameras.

Why calibrate?

The compass in the N2 is sensitive to nearby magnetic objects that could cause measuring error. To compensate for this error it is sometime necessary to perform an calibration. (If the compass is accurate, there is no need to perform the calibration)

How to calibrate?

1. With the Geotagger N2 mounted on the hot shoe and the data cable connected with the camera, turn the Geotagger N2 and the camera on.
2. Long press the calibration button for about 5 seconds until the LED turns orange, 2 seconds later the LED orange will be off, then release the calibration button, the LED starts blinking orange. (The LED orange is green and red alternately)
3. Rotate the camera clockwise slowly for two complete 360 circles/rotations. Keep it as horizontal as you can. Each rotation takes 5-10 seconds.



4. After both rotations are complete, short press the calibration button again to stop the calibration. The LED will start blinking green.

Note

- Magnetic sensors are very sensitive to nearby magnetic objects , that can cause calibration errors and misreading. Please keep the Geotagger N2 away from magnetic sources when perform a calibration.
- If the compass is not accurate after the calibration, it should be reset. The procedure is as below. Long press the calibration button for about eight seconds to restore factory default . During this process you will see after two seconds the orange light turns on and after four seconds the orange light turns off and after eighth second the orange light turns on again. You can then release the button to reset the factory default.
- For precise measurement headings, use professional devices.

Mounting illustration



Slide the unit onto the hot shoe



The unit connected to Nikon D300



The unit connected to Nikon D90



The unit connected to Nikon D5000

Attach the device on the camera strap with the supplied strap adapter



With 10-Pin remote terminal camera



With D90



With D5000