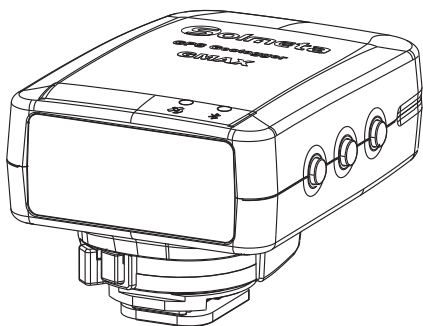# SolMeta®

Geotag your world

GMAX-EOS

GPS Geotagger

INSTRUCTION MANUAL
Version 1.0

Camera Geotagger
For Nikon or Canon
GPS plus Beidou
Barometric altimeter
Position Tracing Logger
Shutter Release Remoter
LCD display
Bluetooth technology
GPS 北斗定位接收器

Contents

Introduction

The GMAX-EOS is a GPS Geotagger that can be mounted on hotshoe for Canon DSLR Cameras, It append location information (Latitude, Longitude, Altitude and universal coordinated time (UTC)) and shooting direction as EXIF information to images when shooting.

LCD screen with size 38.5×16mm/1.52 x0.63 in.
With the LCD, user can check the information below
● GPS data
● Altitude (It is possible to detect altitude real time even indoor a room)
Time and data (UTC and local time both are available)
● Shooting direction (Digital compass)
● Speed
● Heading (very useful for sail and flight)
● Pitch and Roll

Dual positioning system, GPS plugs Beidou(BDS), user can choose preferred positioning system.
Fast signal acquisition and much more accurate positioning.

Build in Altimeter Barometer
The receiver provides two kinds altitude data, one is from GPS, the other is from barometric altimeter. User can select the altitude according to the actual environment.
The altitude from barometric altimeter can be calibrated, which ensure the altitude is much more accurate.
Compared with the altitude from GPS, the altimeter altitude is more accurate.

Indoor location
Re-use the last received GPS information (Latitude, Longitude) when there is no GPS signal but the Altitude, Direction and UTC time are real time running by built-in sensors.

Equipped a 1900mAh lithium battery so no energy is drained from the camera's battery
The receiver is equipped a 1900mAh lithium battery and a full charge supports more than 18 hours of continuous work. Users will no longer worry about the recharging in photographic day or on travel.

Auto working mode
The GMAX-EOS is designed with Auto working mode. When choosing Auto working mode, the receiver is on / off following the connected camera's on / off. This is very convenient for photographer to use camera and GMAX-EOS together. In auto working mode, the receiver is always on standby and this ensures the receiver drains the power less and acquires the signal quickly.

It also supports GPS logger function
The internal flash is 4GB and it supports more than 170 days continuous log record at the interval of 1 sec. User no longer worry about the storage space is enough or not.
Serving as a Digital compass, the direction, pith and roll data can be clearly viewed and recorded in log file.

When used with external Speedlite, GMAX-EOS can be connected to camera via USB cable
An special spiral cable is standard supplied with the package.

Accurate Clock
The GMAX-EOS can be used as a very accurate independent clock and the accuracy is 0.1sec. The time on the clock can be adjusted by GPS/BDS intermittently.

GPS Time Sync Function
The camera time can be synchronized to the UTC time provided by the satellite and [Auto update] can be enabled to acquire the accurate time information.

Packinglist

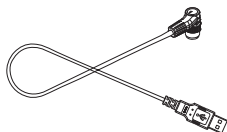Confirm that the package contains the following items
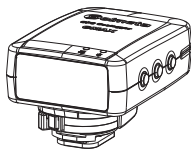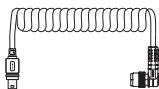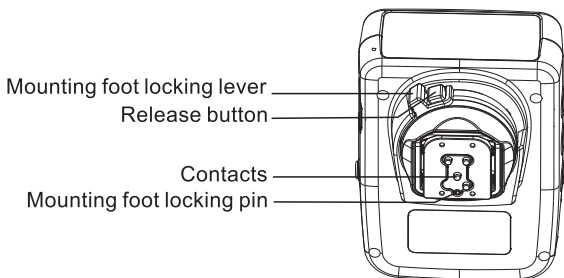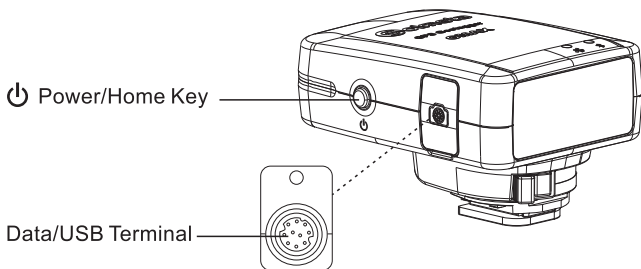
GMAX

Storage bag

Manual

USB cable for charging &
downloading logging data

Data cables (Connecting cables)

Cable-GEOS

▽ Down Key
↩ Enter Key
△ Up Key
LOG Log indicator
🛰 GPS/BDS acquisition indicator

⏻ Power/Home Key

Data/USB Terminal

Mounting foot locking lever
Release button
Contacts
Mounting foot locking pin
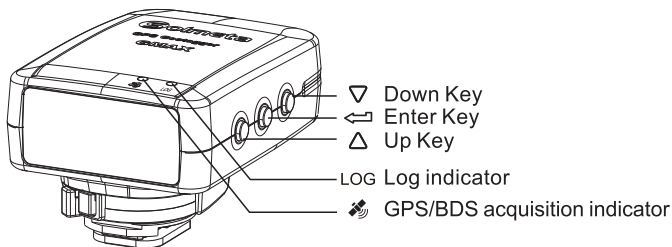
Charging

The receiver is equipped a high-capacity lithium rechargeable battery, a full charge supports more than 18 hours of continuous work. The receiver can be charged by using any USB port that provides standard 5 volts.

Note

- 3-4 hours for a full charge. The battery icon ▓ in the LCD shows the battery level.
- The current voltage of battery can be checked anytime in custom setting.
- When the power close to run out, the battery icon ▯ will flash. After about 10 minutes, the receiver will automatically switch to use the camera's power and the battery icon will not be displayed in the LCD.

Turning the Receiver On

To turn on the receiver, press ⏻ for more than 3 seconds until the LCD shows

The firmware version will be displayed first, and then the latitude and longitude will be displayed in the LCD.

Turning the receiver off

1.Short press ⏻ ,the LCD shows a flashing *ON ?*
2.Short press △ or ▽ until the LCD shows a flashing *OFF ?* , and then short press ⇐ to turn off the receiver.
3.In some special situations, such as the receiver is software frozen and it cannot be turned off via upon procedure. In this case, the receiver can be forced off by pressing ⏻ and △ together.

Acquiring GPS/BDS signals

To acquire GPS/BDS signals, bring the receiver outdoors where the sky is unobstructed and aim it up. Turn on the receiver to start automatic GPS/BDS signal acquisition. To check the acquisition status, watch the GPS/BDS indicator.
Fast red blinking: Signal not acquired
Slow green blinking: Signal acquired, 2D positioning fixed
Stable green: Signal acquired, 3D positioning fixed
When the receiver is searching the signal, a flashing 🛰 is displayed in the LCD. Once the signal acquired, the 🛰 will be stable and the latitude, longitude will be displayed in the LCD accordingly. The number in the top left indicates how many satellites are used.

Communication

Getting the GMAX-EOS mounted or connected to a camera

Most of the EOS DSLR cameras support two communication connections with the receiver, hot shoe mounted or USB connection.
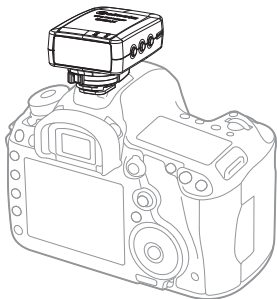
Hot shoe Mounted Communication
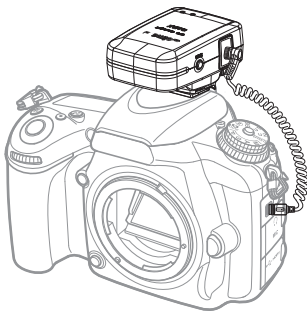
USB Communication Connection

For camera EOS 7D, EOS 1300D / Rebel T6, EOS 1200D / Rebel T5, they only support USB connection.

Geotagging Image as you shoot

Checking camera < GPS> Icon
When the receiver is mounted or connected to a camera, it can enable the menu item **[GPS device settings]**, GPS signal status is also shown on the camera LCD panel or LCD monitor.

Blinking < GPS>: Signal not acquired yet
Constant <GPS>: Signal acquired

The <GPS> icon is only displayed when the receiver is communicating with the camera.
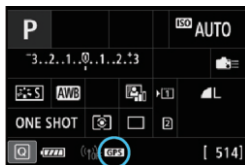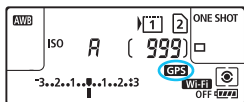
Geotagging image
When the receiver is mounted or connected to a camera and the GPS icon is constant, simply shoot and the image EXIF will be geotagged.

The image can also be tagged with the shooting direction using the receiver's digital compass. (Except with the EOS 7D and EOS 1300D / Rebel T6, EOS 1200D / Rebel T5)

Latitude
Longitude
Elevation

UTC (Coordinated Universal Time)
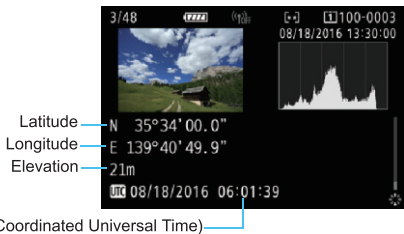
Viewing GPS Information

Select [GPS device settings]
On the EOS-1DX and other models that display the following screen, set [GPS device] to [Enable], and then select [GPS evice settings].

Select [GPS information display].
Detailed GPS information is displayed

The icon 🛰❚❙ indicates signal conditions. When **<3D>** is displayed, elevation can also be recorded.
However, elevation cannot be recorded when **<2D>** is displayed

Set time from GPS on the Camera

You can synchronize the camera time to the UTC time provided by the satellite and [Auto update] can be enabled to acquire the accurate time information (except on the EOS 7D). The EOS-1DX performs high-precision adjustment with a margin of error of approx. ±0.02 second relative to UTC time. With other cameras, the margin is approx.± 1second.
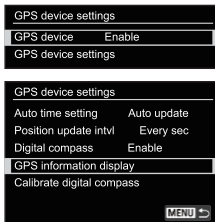
Select [GPS device settings]
On the EOS-1DX and other models that display the following screen, set [GPS device] to [Enable], and then select [GPS evice settings].

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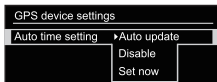
Select [Auto time setting]
Select an option and press < (SET) >.
[Auto update] updates the time after the camera and the receiver are turned on and a GPS signal is received

● If signals from at least five GPS satellites cannot be acquired, the time cannot be auto update. [Set now] will be grayed out and not selectable.
● Even if [Set now] can be selected, updating the time may not be possible due to an unfavorable timing of the GPS signal acquisition.

Setting the Positioning Interval

You can specify the positioning interval when the receiver mounted or connected to a camera that displays the **[GPS device settings]** menu item. Shorter positioning interval yield more accurate location information for your images.

Select [GPS device settings]
On the EOS-1DX and other models that display the following screen, set [GPS device] to [Enable], and then select [GPS evice settings].
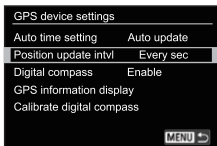
Select [position update intvl]
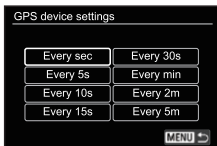
Set the desired update interval

Using the Digital compass

When the GPS is mounted or connected to a camera that displays the **[GPS device settings]** in the menu, images are tagged with the direction the receiver is facing (except on the EOS 7D or EOS 1300D / Rebel T6, EOS 1200D / Rebel T5).
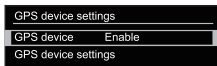
Select [GPS device settings]
On the EOS-1DX and other models that display the following screen, set [GPS device] to [Enable], and then select [GPS evice settings].
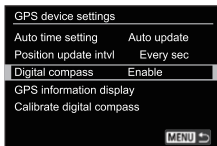
Enable the digital compass
Select [digital compass] and press< (SET) >.
Select <Enable>and press < (SET) >
You can also enable or disable via GMAX-EOS's custom setting. See page26
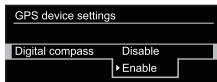
Calibrating the digital compass

Calibrate the digital compass at the shooting location. Also calibrate the compass if the direction shown as your shoot seems incorrect.
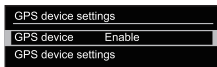
Select [GPS device settings]
On the EOS-1DX and other models that display the following screen, set [GPS device] to [Enable], and then select [GPS evice settings].
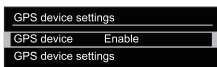
Select <Calibrating digital compass>

Calibrate digital compass

Hold the camera securely and
rotate it in an arc of at least
180du, as shown

Cancel
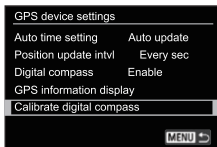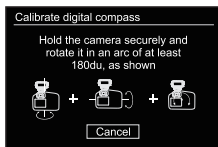
● Select press< (SET) > to prepare for calibration.

● Move the camera as shown below

Around X-axis   Around Y-axis   Around Z-axis
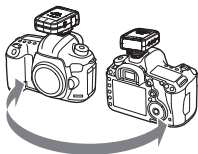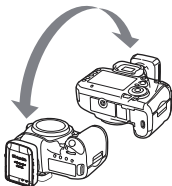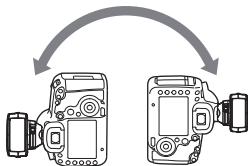
Hold the receiver, and rotate it slowly around the X-axis, Y-axis, and
Z-axis, each axis done twice. Please do try to keep a constant speed of
rotation, and each rotation takes almost 10 seconds.

● **After doing the rotation in each axis, press ⬅ to complete the
calibration.**

Calibrate digital compass

Digital compass calibration
complete

OK

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
Auto working mode

You can choose Auto working mode in your photography day.
When choosing Auto working mode, the receiver is on or off following the connected camera's on or off. This ensures the receiver drains the power less and acquires the GPS signal quickly.
The receiver is always on standby in Auto working mode. You can set the GPS working frequency and the working time of each time in Auto working mode. (See page 32)

How to start the Auto working mode?
1. While the receiver is on, press ⏻ and the LCD shows a flashing $-ON\ ?-$
2. Press △ or ▽ until a flashing $-AUTO\ ?-$ shown, and then

press ⏎, a stable $STANdb$ will be displayed. The Auto working mode is activated.

Note

● Since each camera's GPS application is different, the user must refer to the camera's manual to know the detail of how to use the GPS receiver.

● 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 receiver's "indoor location" function, which is enabled by default, will reuse the last known position for subsequent image.

● Following with each shutter release, the image's GPS information also is recorded in the log file and the data is marked a "*Flash*" to indicate.

● EOS 5D Mark lll and EOS 7D User
If [GPS device settings] is not displayed on your EOS 5D Mark lll or EOS 7D camera, update the camera firmware to a version compatible with the receiver. The menu item will be displayed after you update the firmware.
For details, contact a canon service center.

The GMAX-EOS can be used as a data logger. When the GMAX-EOS is GPS/BDS signal fixed, location information can be automatically recorded on the receiver itself along the route traveled. (There is no need to connect the receiver to the camera.)

The recorded location information can be viewed on a virtual map. Logs can also be used to geotag images at a later time.

Location information is recorded at regular intervals with the receiver. You can specify the positioning interval via the custom setting. The default is every 10 seconds. For how to set the interval see page 34. The GMAX-EOS supports more than 170 days continuous log record at the interval of 1 sec.

To check the logging record status, watch the logging indicator and the MEM icon on the LCD.

Red blinking: The logging indicator will blink once while the location information recorded.
MEM icon also will blink once while the location information recorded.

The flash memory can be easily read by the computer via USB connection. Just like a "U flash driver", no software needed. Log file can be saved or deleted on the computer.

The file system supports FAT32 format.

The main menu display

When the receiver is GPS/BDS signal fixed, you can check the GPS/BDS information, compass data and other information in the LCD. Press △ or ▽, the following 6 different displays will be shown in the LCD, one by one.

LCD	Description
N 22° 31.0786′ E 113° 55.1056′	The char in the up indicate the latitude. The char on the bottom represent the longitude.
260° W MIN ‥00° ‥00°	The char in the up indicate the direction. The char on the bottom represent the pitch and roll.
70 MILE 66 FT	The char in the up indicate the current speed. The char on the bottom represent the altitude.
70 MILE 85° HEAd	The char in the up indicate the current speed. The char on the bottom represent the course over ground.
U 09:33:28.1 10. 06. 2015	The char in the up indicate the time (UTC or Local time). The char on the bottom represent the date. Note: Once the TIM displayed, it means the time is accurate as 1/10 seconds and the signal is 3D fixed.
93.5 °F 30.032 inH9	The char in the up indicate the internal temperature inside the receiver. The char on the bottom represent the air pressure.
─SET 2─	This is the custom setting.

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You can customize the following features to suit your preference.

1. Which positioning system to be used, GPS, Beidou, or GPS+Beidou. The default is GPS+Beidou double positioning.

2. The display format of latitude and longitude

　　　　.. .. .. ° .. ..′ 　or　 .. .. .. ° .. ..′ .. .. ..″
　　　　　　　　　　.　　　　　　　　　　　　.

3. Enable the "Indoor fixing" or disable it. Indoor fixing means when you are into a place where is no a GPS signal, the receiver is able to provide the last GPS information.

4. The backlight of the LCD is on or off.

5. Signal acquisition indicator and Bluetoot/Log indicator are on or off.

6. The "beep" voice is on or off while pressing the button.

7. The Positioning Interval parameter synchronize with Camera

8. Enable the compass function or disable it.

9. Compass calibration.

10. Which direction data to be displayed, the data is based on true north or magnetic north.

11. Level calibration.

12. Select the speed unit, Mile, Kilometer or Knots.

13. Select the altitude unit, meter or feet.
    Select which altitude data displayed, the data is from GPS or atmospheric pressure.

14. What kind of time to be shown on the LCD, UTC or Local time. The local time can be set.

15. The date display format , DD.MM.YYYY, MM.DD.YYYY, or YYYY.MM.DD

16. The temperature unit, Fahrenheit or Centigrade. The temperature is the temperature inside of the receiver.

17. The air pressure unit, inHg, HPA, or bAR.

18. GPS/BDS working frequency and the working time of each time in Auto mode.

19. GPS/BDS working frequency and the working time of each time in Clock mode. (The time can be adjusted by GPS/BDS, which make the time accurate).

20. The available memory for logging. Set the logging interval, or turn off logging. The interval can be set as 1s, 5s, 10s, 15s,30s, 1min., 2min., 5min., 10min., 20min., or 30min. 10 seconds is the default.
21. Restore the GMAX-EOS setting to factory.

The following information can be checked in the custom setting
22.The battery's current voltage.
23.The GPS/BDS chip's firmware version.

1. When the receiver is on, press △ or ▽ until the LCD shows

2. To access the custom setting, press ⇐ and the first setting of choosing the positioning system will be activated simultaneously

3. To access other setting, press △ or ▽. To exit the custom setting and back to the main menu display, press ⏻

Custom setting introduction

Menu Item	Option Item	Description
SAT	GPS bdS GPS bdS	Which positioning system to be used, GPS+Beidou, GPS or Beidou, GPS BDS: GPS plus Beidou, double position system GPS: Global Postion System BDS: Beidou Position System
GEO dISP	---°-----' ---°--'---"	The display format of latitude and longitude.
INdOOR	LOCK UNLOCK	Enable the "Indoor fixing" or disable it. LOCK means Indoor fixing. When you are into a place where is no a GPS signal, the receiver is able to provide the last GPS information. UNLOCK means does not use the GPS information.

bRCK LEd	ON → HIGH LIGHT MId LIGHT LOW LIGHT dELRY → 1 MIN 2 MIN 3 MIN 4 MIN 5 MIN OFF	The LCD backlight is on, off or delay off. ON means the backlight is always on. OFF means the backlight is always off. Delay means the backlight will be automatically off a few minutes later. When choosing on, 3 kind of different brightness can be selected, low light, middle light or high light. When choosing delay off, the time can be set as 1min. 2min. 3min. 4min or 5min.
STRTE LEd	ON OFF	The indicators of the GPS/BDS signal acquisition and the Blue tooth/Log are on or off.
bEEP	ON OFF	The "beep" voice is on or off while pressing the button.
dRTR INTVL.	00:00:01	The time is the positioning interval of updating the geotag information. The interval can also be set via camera setting.
dIR	ON OFF	Enable the compass function or disable it. This setting can also be set via camera setting.

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MAGNET CAL.	[_____]	Compass calibration This setting can also be set via camera setting.
Direction data	MN TN	Direction is based on the data of true north or magnetic north. MN means the direction is based on magnetic north. TN means the direction is based on true north.
GPA CAL.	--00 --00	Level calibration
SPEEd	MILE KNOT KM	The speed unit. Mile, Kilometer or Knots.
ALT	GPS-ALT AIR-ALT FT m	The altitude unit, meter or feet. Which altitude data to be shown, the data from GPS/BDS or atmospheric pressure. The altitude data can be calibrated when choosing the atmospheric pressure data.
U or L	U L	What kind of time to be shown in the LCD, UTC or Local time. L means Local time, U means UTC.
MM dd. YYYY	MM dd. YYYY dd MM. YYYY YYYY.MM.dd	The date display format.

℉ or ℃	℉ ℃	The temperature unit. F means Fahrenheit. C means Centigrade.
inHg bAP HPA	inHg bAP HPA → CAL.	The air pressure unit. inHg means Inch of Mercury 1bar=1000HPA The pressure value can be calibrated when choosing HPA.
AUTO SET	FRE CON	GPS/BDS working frequency and the working time of each time in Auto mode. FRE is the frequency. 10min, 15min, 30min, 60min, or 90min can be selected. CON is the working time. 1min, 3min, or 5min can be selected.
CLOCK SET	FRE CON	GPS/BDS working frequency and the working time of each time in Clock mode. FRE is the frequency. 1H, 2H, 4H, 8H, 24H, 48H, or 96H can be selected. CON is the working time. 1min, 3min, or 5min can be selected.

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FAT3773Mb	00:00:01 00:00:05 00:00:10 00:00:15 00:30:00 dISAbLE	The number following the FAT is the available memory for logging. Set the logging interval, or turn off logging. The interval can be set as 1sec, 5sec, 10sec, 15sec, 30sec, 1min., 2min, 5min, 10min, 20min and 30min. Disable means turn off the logging. 10 sec. is the default.
bAT	bAT 4.15 V	The number following the bAT is the current voltage of the battery.
SAT	SAT V01	The number following the SAT is the firmware version of the GPS/BDS chip.
SET RESTORE ?	FINISH SHUT dOWN	Restore the receiver to factory settings.

How to do the custom setting?

When the receiver is custom setting accessed, press △ or ▽ is to access next setting or change the option. Press ⬅ is to activate current setting or complete the setting.

Note
To exit the current setting and return to the main menu display, press ⏻ .

Set the positioning system

1.While the LCD shows ⬜⬜⬜ press ⬅ and the option menu will flash.
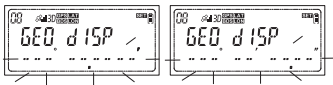
2.Press △ or ▽ to change the option

3.While your preferred positioning system appears, press ⬅ to confirm your selection.

Set the display format of latitude and longitude

1.While the LCD shows ⬜⬜⬜ press and the option menu will flash.
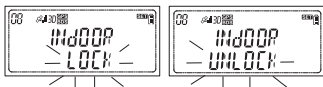
2.Press △ or ▽ to change the option

3.While your preferred display format appears, press ⬅ to confirm your selection.

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Enable the "Indoor fixing" or disable it

1. While the LCD shows [≈ INdOOR LOCK] press ⇐ and the option
   menu will flash.

2. Press △ or ▽ to change the option [≈ INdOOR LOCK] [≈ INdOOR UNLOCK]

3. While your preferred option appears, press ⇐ to confirm your selection.

Set the LCD backlight on, off or delay off

1. While the LCD shows [≈ bACK LEd ON] press ⇐ and the option
   menu will flash.

2. Press △ or ▽ to change the option

   [≈ bACK LEd ON] [≈ bACK LEd dELAY] [≈ bACK LEd OFF]

3.1 If you prefer ON, press ⇐ while a flashing ON displayed, and the
    secondary option will flash.
    Press △ or ▽ to change the option

    [≈ bACK LEd HIGH LIGHT] [≈ bACK LEd MId LIGHT] [≈ bACK LEd LOW LIGHT]

    While your preferred brightness appears, press ⇐ to confirm your
    selection.

3.2 If you prefer Delay Off, press ⇐ while a flashing dELAY displayed,
   and the secondary option will flash.
    Press △ or ▽ to change the option, 1min, 2min, 3min, 4min or 5 min.
    While your preferred time appears, press ⇐ to confirm your
    selection.

3.3 If you prefer OFF, press ⬅ while a flashing *OFF* displayed and the
backlight will be always off.

**Set the indicators of the GPS signal acquisition, logging and the
Bluetooth are on or off**

1.While the LCD shows [STATE LED ON] press ⬅ and the option
menu will flash.

2.Press △ or ▽ to change the option [STATE LED - ON] [STATE LED - OFF]
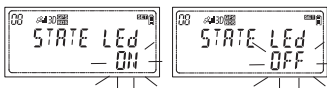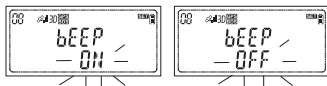
3.While your preferred option appears, press ⬅ to confirm your
selection.

Set the "beep" voice on or off while pressing the button.

1.While the LCD shows [bEEP ON] press ⬅ and the option
menu will flash.

2.Press △ or ▽ to change the option [bEEP - ON] [bEEP - OFF]

3.While your preferred option appears, press ⬅ to confirm your selection.

Setting the positioning interval of updating the geotag information.
(The interval can also be set via camera setting)

1.While the LCD shows [dATA INTVL. 00:00:01] press ⬅ and the option menu
will flash.

[dATA INTVL. - 00:00:01]

2.Press △ or ▽ to change the option, the option is the interval 1sec., 5sec., 10sec., 15sec., 30sec., 1min., 2min., 5min. can be selected.

3.While your preferred option appears, press ⇐ to confirm your selection.

Enable the compass function or disable it.

1.While the LCD shows [display] press⇐ and the option menu will flash.

2.Press △ or ▽ to change the option [display] [display]
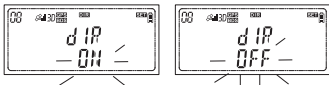
3.While your preferred option appears, press ⇐ to confirm your selection.

Doing the compass calibration

Why calibrate?
The compass in the receiver 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)
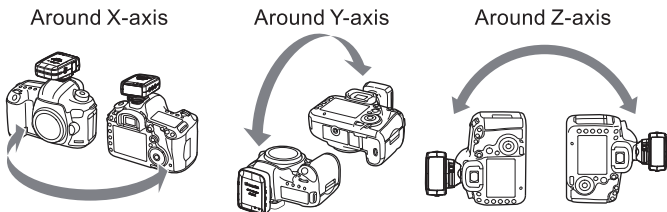
How to calibrate?

1.While the LCD shows [display]

Press ⇐ and the LCD shows [display]

2.Perform the follow operation

Around X-axis   Around Y-axis   Around Z-axis

Hold the receiver, and rotate it slowly around the X-axis, Y-axis, and Z-axis, each axis done twice. Please do try to keep a constant speed of rotation, and each rotation takes almost 10 seconds.

3.After doing the rotation in each axis, press ⬅ to complete the calibration.

Select your preferred direction data, the data is based on true north or magnetic north.

1.While the LCD shows   press ⬅ and the option menu will flash.
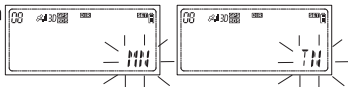
2.Press △ or ▽ to change the option

3.1 If you prefer MN press ⬅ while the LCD shows a flashing MN

and the LCD will show   It means the calibration mode is activated.

To do the calibration, press ⇐ while pointing the receiver to the magnetic north. (You should find the magnetic north in your location with help of other accurate compass.)

3.2 If you prefer TN press ⇐ while the LCD shows a flashing TN

and the LCD will show It means the calibration mode is activated.

VARIAT CAL.
005° E TN

To do the calibration, press ⇐ while pointing the receiver to the true north. (You should find the true north in your location with help of map or others)

Level calibration

1.While the LCD shows press ⇐ the pitch and the roll on the bottom will flash.

GPA CAL.
--00 --00

2.To do the level calibration, let the receiver in a horizontal position and then press ⇐ the flashing pith and roll will be stable. The calibration is completed.

Set the speed unit

1.While the LCD shows press ⇐ and the option menu will flash.

SPEEd
0 MILE

2.Press △ or ▽ to change the option

SPEEd
0 MILE

SPEEd
0 KNOT

SPEEd
0 — KM

3.While your preferred unit appears, press ⇐ to confirm your selection.

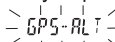**Select your preferred altitude unit, and select the altitude data is from GPS or atmospheric pressure**

1. While the LCD shows ⟨AIR-ALT 258 FT⟩ press ⟸ and the option menu will flash.

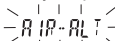2. Press △ or ▽ to change the option ⟨AIR-ALT 258 — FT⟩ ⟨AIR-ALT 79 — m⟩

3. While your preferred unit appears, press ⟸ to confirm your selection and the secondary option will flash. The secondary option is to select which altitude to be shown.

4. Press △ or ▽ to change the option GPS-ALT or AIR-ALT

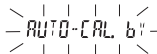4.1 If you prefer the altitude from GPS, press ⟸ while a flashing GPS-ALT displayed and the LCD will show ⟨GPS-ALT OK⟩ press ⟸ again to complete the setting.
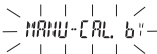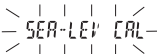
4.2 If you prefer the altitude from atmospheric pressure, while a flashing AIR-ALT displayed, press ⟸ and the LCD will show ⟨AIR-ALT OK⟩

Press ⟸ again and the third option will flash, the third option is to do the altitude calibration in different way.

Press △ or ▽ to change the option

AUTO-CAL. b" — MANU-CAL. b" — SEA-LEV CAL

4.2.1 If you prefer using the GPS data as the reference to do the calibration, while the LCD shows ⟨AUTO-CAL. b" GPS-ALT⟩ press ⟸ and the LCD will show ⟨AUTO-CAL. OK⟩ press ⟸ again to complete the calibration.

4.2.2 If you prefer using the sea level pressure as the reference to do the calibration, while the LCD shows ⬚ SEA-LEV CAL / 101986 PA ⬚ press ⟸ and

the value on the bottom will flash. Press △ or ▽ and ⟸ to adjust the value.While the value is adjusted to the sea-level pressure issued by the local observatory, press ⟸ and the LCD will show

⬚ SEA-LEV OK ⬚ press ⟸ again to complete the calibration.

4.2.3 If you prefer using the altitude as the reference to do the calibration, while the LCD shows ⬚ MANU-CAL b / +00 103FT ⬚ press ⟸ and the value on

the bottom will flash. Press △ or ▽ and ⟸ to adjust the value. While the value adjusted to the altitude of your location which is known in advance, press ⟸ to complete the calibration.

Set what kind of time to be shown on the LCD, UTC or Local time

1.While the LCD shows ⬚ U 09:58:39.3 ⬚ press ⟸ and the option menu will flash.

2.Press △ or ▽ to change the option ⬚ U 09:58:39.3 ⬚ ↔ ⬚ L 10:08:35.2 / L + 8 10 ⬚
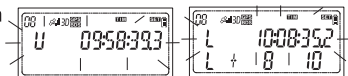
3.1 If you prefer the UTC, while a flashing ⬚ U 09:58:39.3 ⬚ displayed, press ⟸ to confirm your selection.

3.2 If you prefer the local time, press ⟸ while a flashing ⬚ L 10:08:35.2 / L + 8 10 ⬚

30

displayed, and the secondary setting option on the bottom will flash The secondary setting is to set the local time.

Press △ or ▽ to add or reduce the time zone and the time will be changed accordingly. While the local time is adjusted to the current local time, press ⇐ again to complete the setting and the LCD will show the local time.
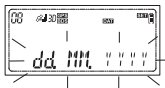
Set the date display format

1. While the LCD shows   press ⇐ and the option menu will flash.

2. Press △ or ▽ to change the option

3. While your preferred display format appears, press ⇐ to confirm your selection.

Set the temperature unit

1. While the LCD shows   press ⇐ and the option menu will flash.

2. Press △ or ▽ to change the option

3. While your preferred unit appears, press ⇐ to confirm your selection.

Set the air pressure unit

1. While the LCD shows [display] press ⇐ and the option menu will flash.

2. Press △ or ▽ to change the option

[display images showing 30.032 inHg, 1.0170 bAR, 1.0170 HPA]

3.1 If you prefer the unit as inHg, press ⇐ while a blinking *inHg* displayed and the flashing char will be stable.

3.2 If you prefer the unit as bar, press ⇐ while a flashing *bAR* displayed and the flashing char will be stable.

3.3 If you prefer the unit as HPA, press ⇐ while a flashing *HPA* displayed and the LCD will show [display] it means the calibration mode is activated.

To do the calibration, press △ or ▽ to adjust the value. While the value is adjusted to the reference value of your location, press ⇐ to complete the calibration.

Note
The calibration value is default by factory. You can only do the calibration when the reference value of your local observatory issued is available. The factory default cannot be changed even perform the restore setting.

Set GPS/BDS working frequency and the working time of each time in Auto mode

1. While the LCD shows [display] press ⇐ and the LCD

will show [display]

Press ⇐ again and the option will flash

```
[88 📶30🔋      AUTO🔋]
    AUTO SET
    FRE-10 MIN
```

2. Press △ or ▽ to change the option, the option is the GPS working frequency. 10min, 15min, 30min, 60min, or 90min can be selected.

3. While your preferred frequency appears, press ⇐ and the LCD will show as

```
[88 📶30🔋      AUTO🔋]
    AUTO SET
    CON  1 MIN
```

4. Press ⇐ again and the option will flash

```
[88 📶30🔋      AUTO🔋]
    AUTO SET
    CON-1 MIN
```

5. Press △ or ▽ to change the option, the option is the GPS working time of each time. 1min, 3min, or 5min can be selected.

6. While your preferred working time appears, press ⇐ to confirm your selection.

Set GPS/BDS working frequency and the working time of each time in Clock mode

1. While the LCD shows

```
[88 📶30🔋      🔋]
    CLOCK SET
```

press ⇐ and the LCD

will show as

```
[88 📶30🔋      🔋]
    CLOCK SET
    FRE  1 H
```

2. Press ⇐ again and the option will flash

```
[88 📶30🔋      🔋]
    CLOCK SET
    FRE-1 H
```

3. Press △ or ▽ to change the option, the option is the GPS working frequency. 1hr, 2hr, 4hr, 8hr, 24hr, 48hr, or 96hr can be selected.

4. Press ⇐ while your preferred frequency, and the LCD will show

```
[88 📶30🔋      🔋]
    CLOCK SET
    CON  1 MIN
```

5.Press ⇐ again and the option will flash

```
CLOCK SET
COH  1 MIN
```

6.Press △ or ▽ to change the option, the option is the GPS working
  time of each time. 1min, 3min, or 5min can be selected.
7.While your preferred working time appears, press ⇐ to confirm
  vselection.

Set the regular interval of logging the travel routes

1.While the LCD shows

```
FAT3773Mb
```

press ⇐ and the LCD will

show

```
000001
```

2. Press ⇐ again and the option menu will flash

```
-000001
```

3. Press △ or ▽ to change the option, the option is the interval.
   1sec, 5sec, 10sec, 15sec, 30sec, 1min, 2min, 5min, 10min, 20min.
   30min or disable can be selected. Disable means turn off the logging.
4.While your preferred interval appears, press ⇐ to confirm your
  selection.

Restore the receiver

1.While the LCD shows

```
SET
RESTORE ?
```
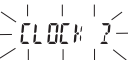
press ⇐ and the LCD

will show

```
SET
-RESTORE ?
```

2.Press ⇐ again and the receiver will automatically turn off. The
  receiver is restored.

Other applications

An accuracy clock
The receiver can be used as an accuracy clock. The time can be adjusted by GPS/BDS. You can set the GPS working frequency in custom setting. See page 33

How to run the clock mode?
1.While the receiver is on, press ⏻ and the LCD shows a flashing ⎯ *ON 7* ⎯

2.Press △ or ▽ until a flashing ⎯ *CLOCK 7* ⎯ Shown, and then press ⇐

   The clock mode is activated and the LCD only shows the time information.

3.To exit the clock mode, press ⏻

Note
● The last char in the LCD is fast running

   U   09:33:28⏏
   10. 06. 2015
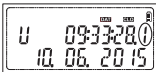
   press ⇐ can get the char stable.
● If you prefer the local time shown in the clock, you can do the setting in custom setting. See page 30

Specifications

Compatible cameras	EOS DIGITAL cameras
	Cameras with [GPS device settings] menu item: All features available
	Cameras without [GPS device settings] menu item: LOG mode available
Geotagging Images	Latitude, longitude, elevation, direction, time (UTC) and signal acquisitionGPS-compatible camera: can be tagged during shooting (EOS 7D and EOS 1300D / Rebel T6, EOS 1200D / Rebel T5 do not support tagging the shooting direction)
Internal memory	4 GB
Reception frequency	L1, 1575.42 MHz B1, 1561.098MHz
Data format	NMEA-0813
Data update rate	One time per second
Time adjustment	Camera time can be set from GPS time date
Digital compass	Tri-axial geomagnetic sensor and tri-axial acceleration sensor used to calculate direction
Power supply	1900 mAh Li-ion
Dimensions	55 x 75 x 45 mm /2.2 x 3. 0 x1. 8 in. (W x H x D)
Weight	Approx. 110 g / 3. 8 oz.
Operating temperature	-40°C to +80°C /*-40° F to 176° F
Operating humidity	5% to 95%, Non condensing

● Receiver specifications and appearance are subject to change without notice.

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 GMAX-EOS In the event of continued malfunction, contact your retailer or Solmeta-authorized service representative.

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