O-GPS1

**A Handy GPS Unit for digital SLR cameras,
Offering innovative features
For effortless tracking and
photographing of celestial bodies**

Art.N°	Product	EAN Code
39012	GPS UNIT O-GPS1	0027075189003

- **GPS function** for effortless recording of shooting location data
- **Compatible with K-5, K-r, 645D**
- **Astrotracer** for effortless astronomical photography
- **Simple Navigation** to indicate location data to a destination
- **Electronic Compass function** to indicate and record direction
- **Simplified weather-resistant construction** for use in light rain
- **Independent power source** (one AAA-size battery)

Simply by mounting the O-GPS1 onto the hotshoe of a PENTAX digital SLR camera,* the user can record the latitude, longitude, altitude, universal time coordinated (UTC) and aspect of shooting locations onto captured images. Image files carrying GPS location data, can be used to track shooting locations and review location data on a PC. GPS location data stored on such files also makes it much easier to sort and file recorded images.

By coupling GPS data with the camera's SR (Shake Reduction) system, the unit offers a range of unique, advanced applications, including ASTROTRACER, Simple Navigation and Electronic Compass.

** Compatible models are the K-5, K-r and 645D (as of May 2011). Some of the O-GPS1's functions may not be available when used with the 645D.*

Note: In order to use the O-GPS1 properly with a compatible PENTAX digital SLR camera body, the camera's firmware must be updated to the latest version.

1. GPS function for effortless recording of shooting location data

The O-GPS1 mounts on the hotshoe of a compatible camera and records the **latitude, longitude, altitude, universal time coordinated (UTC) and direction** of the shooting location onto captured images. Using mapping software such as Google Earth™, the user can easily recall shooting locations and directions on a map. This function is very helpful later in sorting and filing the recorded images.

Note: When the O-GPS1 is used in locations where it cannot receive signals from GPS satellites, location data may be in error or missing.

2. ASTROTRACER for effortless astronomical photography

When mounted on the PENTAX K-5 or K-r camera body, the O-GPS1 also offers the advanced **ASTROTRACER function**,** which couples the unit with the camera's SR (Shake Reduction) system for the effortless tracing and photographing of celestial bodies. The unit calculates the movement of stars, planets, and other bodies using the latitude obtained from GPS data and the camera's alignment data (horizontal and vertical inclinations and aspect) obtained from its magnetic and acceleration sensors, then shifts the camera's image sensor in synchronization with the movement of the objects.*** As the result, **stars and other bodies are captured as solid points** rather than blurry streaks, even during extended exposures. It also makes astronomical photography much simpler, as it requires only a tripod and eliminates the need for an additional accessory such as an equatorial telescope.

*** This function is available only when the O-GPS1 is mounted on a PENTAX digital SLR camera body equipped with a magnet-driven SR system.*

**** The duration of ASTROTRACER operation may vary depending on photographic conditions.*

3. Simple Navigation to indicate location data to a destination

The O-GPS1 offers a Simple Navigation function, which calculates the direction and distance to a given destination from the current position. The user can either locate destinations using location data stored on recorded images, or register and/or **assign them by up loading location data created on a PC**.****

***** At the time of purchase, the O-GPS1 has nine PENTAX international service centers as preset destinations.*

4. Electronic Compass function to indicate and record direction

The O-GPS1 comes equipped with an Electronic Compass function, which displays the camera's direction on its LCD monitor with great precision. Using the aspect of geomagnetism detected by its magnetic sensor and GPS location data, the unit indicates the aspect in relation to true north. The user can also record directional data on captured images.

5. Other features

- Simplified weather-resistant construction for use in light rain
- Independent power source (one AAA-size battery) to eliminate the need for power supply from the camera body

O-GPS1 specifications

Type	Clip-on GPS unit
Recorded Information	Latitude, Longitude, Altitude, Time (UTC), Direction
Receiving Function	Tracking Channels: 50 Supports SBAS (WAAS/EGNOS/MSAS)
Acquisition Time	Cold-start: approx. 40 seconds Hot-start: approx. 5 seconds
Positioning Interval	1 second
GPS Accuracy	10m RMS
Data Format	NMEA-0183
Geodesics	World Geodetic System (WGS84)
Electronic Compass	Accuracy: ±5° (precise calibration) Positioning Interval: approx. 8 times Reference Direction: True North
Dimensions	Approx. 49.0mm (W) x 33.0mm (H) x 59.5mm (D)
Power Source	AAA battery x 1 (alkaline battery, nickel-metal hydride battery, or lithium battery)
Battery Life	approx. 7 hours (23°C) / 4 hours (0°C) with alkaline battery approx. 7 hours (23°C) / 5 hours (0°C) with nickel-metal hydride battery approx. 12 hours (23°C) / 9 hours (0°C) with lithium battery
Weight	Approx. 61g (including alkaline battery), approx. 50g (unit only)

ASTROTRACER Tracking Time (approx)

K-5

Declination (°)	Focal length		
	200mm	100mm	Under 50mm
90	300	300	300
45	160	290	300
0	110	240	300

<sec.>

K-r

Declination (°)	Focal length		
	200mm	100mm	Under 50mm
90	300	300	300
45	80	200	300
0	80	170	300

<sec.>