

LOCATION Plus A1

User Manual

FCC NOTICE

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRERED
OPERATION.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE : The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

LOCATION Plus A1

User Manual

© 2007 Cuub Corporation

Contents

Chapter 1. Product Information

Product Features

Product Specifications

Definition and Application of GPS

Chapter 2. Preparation

Components

Names of Each Part and Status Display

Installing Location PLUS Software

Chapter 3. Caution

Safety Tips

User Tips

Chapter 4. Using the Product

- Easy-to-use One-touch Button
- Checking Terminal Status
- Using Location PLUS Software

Chapter 5. Other Information

- Errors and Troubleshooting
- Certification/Trademark/Exemption
- Warranty
- Applying for After-sale Service

Location PLUS A1 Chapter 1. Product Information

■ Product Features

Location Plus A1 is a portable receiver that receives and records location information(latitude and longitude) sent from GPS satellite.

Using this product and web services, you can check travel or mountain-climbing course and show photos taken during a trip on your map.

◆ Easy-to-use One-touch Button

Location PLUS A1 starts recording even with one touch of turning power on when you arrive at a location and completes recording by power turned off after travel, mountain climbing or taking photos for enough hours(about 10 hours).

Also, without direct connection with a camera when taking photos, the location can be conveniently identified just by having the product.

Principle of this product is very simple.

The product records current time, latitude and longitude using GPS. Digital camera records the time and a photo file when taking photos.

Coordinates of latitude and longitude are identified by comparing the recorded time of the product and the time on the digital camera.

By using “Location PLUS software”(installed in this product’s memory) based on this principle, location information(latitude and longitude) is automatically added to a photo file.

◆ Various Uses through Various Web Services(Google Earth, Cyworld Studio, Yahoo Korea Live Map, etc.)

When uploading a photo with the location information added, the photo appears at the location on the map.

Travel or mountain-climbing course recorded by this device is shown on the map using web services(e.g. Google Earth) even without a photo. (it supports Google Earth kml file type to create a file)

The number of web services using maps is continuously growing and it can be used in various purposes including not only personal travel log in blogs/mini homepages and mountain-climbing sources for mountain-climbing community but also travel or mountain-climbing-related business and real estate business.

** See Wikipedia
(http://en.wikipedia.org/wiki/Geocoded_photo)

◆ Easy to Carry

Smoothly curved Location PLUS A1 is easy to carry in a bag or hold by hand and the weight is only 54g including the battery.

It can use both regular AA size Alkaline battery and AA Ni-MH battery and is easy to use outdoors.

It is also easy to use during long-hour travel or a business trip since it can store location information for up to 2 months when used 12 hours a day.

Location PLUS A1 Chapter 1. Product Information

■ Product Specifications

Design and product specifications are subject to change in order to improve its performance and quality.

Item	Content
Camera compatibility	Supports digital camera of JPEG EXIF 2.1 or higher
Storing capacity	Max. 60MB
Receiving type	20-channel GPS receiver All-in-view positioning
Power	1 AA size battery
Battery hours (if storing gap is 30 sec.)	Approx. 10 hrs.(Alkaline battery) Approx. 14 hrs.(rechargeable Ni-MH battery)
Frequency band	1575.42 MHz(BAND L1, C/A code)
Receiving power	Below -156 dBm
USB type	USB 2.0 full speed
Size	84 × 41 × 30 (mm)
Weight	Approx. 40g(battery not included); approx. 54g with battery
Accessories and content	USB cable, hand strap, manual and other printed materials
Operating temperature	Approx. 0 ~ +40°C
Storing temperature	Approx. 20 ~ +60°C

■ Definition of GPS

It is Global Positioning System, a global navigation satellite system.

- ◆ It is a system that identifies the location of an airplane, a ship or a car or anywhere in the world using a satellite.
- ◆ GPS receiver can accurately calculate the current time and location from 3 different distances(trigonometry) as it receives information from 3 or more GPS satellites circulating at the altitude of approx. 20,000km. Most widely used method is to receive information on distance and time from 3 satellites and correct error through 1 satellite.
- ◆ Location accuracy for civil use is ranged 10~15m.
- ◆ GPS using satellite was developed by US Pentagon(the Department of Defense); its use was extended to civil use and currently its use range became even wider from providing simple location information to much broader use.

■ GPS Application

◆ Car Navigation System

- Car navigation system is one of the most familiar GPS applications in our daily life.
- It is used for smooth land transportation, shipping and air transportation as well as traffic system, carrier trucks and messenger service.

◆ Combination with Mobile Devices

- Built in mobile devices such as cellular phones and PDAs, it provides information on maps, traffic, shopping and restaurants.
- In case of emergency, it helps police vehicles, fire trucks, ambulances location the site as quickly as possible.

◆ Others

- For military use: automatic navigation, guiding missiles, etc.
- For civil use: preventing collision of oil tankers, aviation control, road traffic, major public works, precise measurement, creating maps, geographic information, tracking location, protecting wild animals
- For leisure: mountain-climbing, hiking, tracking and fishing(marking the location where most fish were caught)

Satellite sending radio wave



User's device calculating location, speed and time



Earth station sending orbital driving force and clock-synchronizing signal

Location PLUS A1 Chapter 2. Preparation

■ Components

Components are subject to change without notice in order to improve product performance and quality.



Location PLUS



Hand strap



USB cable



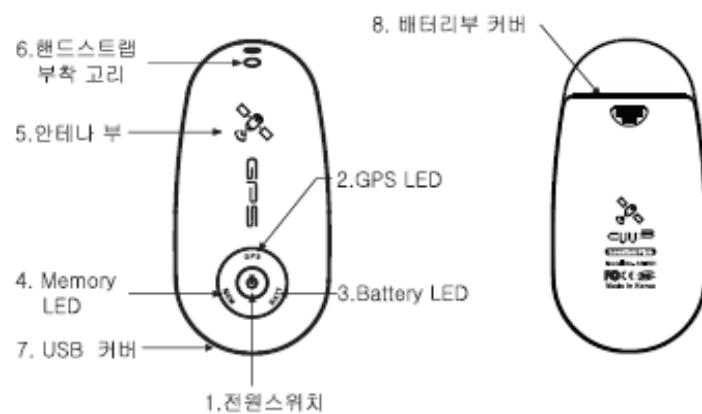
User manual,
Warranty

Location PLUS A1 Chapter 2. Preparation

■ Names of Each Part and Status Display

See the functions below when using.

1. Power switch
2. GPS LED
3. Battery LED
4. Memory LED
5. Antenna
6. Hand strap link
7. USB cover
8. Battery cover



(1) Power Switch

- Short Key: Less than 2 sec. : used for checking the terminal status.
(See (2), (3) and (4).)

-Long Key: 2 sec. ~ 10 sec. : used for turning ON or OFF.

-Long Long Key: More than 10 sec. : used for deleting GPS data.

(2) GPS LED: (displays in 3-second cycle or when Short Key pressed)

- Searching GPS location: Red LED flickers.
- Saving GPS location: Green LED flickers.

(3) Battery LED: (Status display)

- Battery available for over 7 hrs. : no flickering
- Battery available for 6~7 hrs. : LED flickers 7 times
- Battery available for 5~6 hrs. : LED flickers 6 times
- Battery available for 4~5 hrs. : LED flickers 5 times
- Battery available for 3~4 hrs. : LED flickers 4 times
- Battery available for 2~3 hrs. : LED flickers 3 times
- Battery available for 1~2 hrs. : LED flickers 2 times
- Battery available for less than an hour: LED flickers every 1 sec.
- When low battery: LED stays ON for 2 sec. then power is turned OFF.

(4) Memory LED: (Status display)

- More than 10% memory available: no flickering
- Less than 10% memory available: LED flickers for 2 sec.
- 100% memory available: LED stays ON

(5) Antenna

-Make sure that GPS antenna is pointing upward or outward when carrying.

(6) Hand Strap Link

(7) USB Cover

(8) Battery Cover

Location PLUS A1 Chapter 2. Preparation

■ Installing Location PLUS Software

It is installed in the product(Location PLUS A1)'s memory
(No need to install from CD)

Location PLUS software is already installed in "PC Tools" folder in the product's memory.

Please install "Location PLUS Software" on your computer as follows:

[Connecting to Computer]

1. Turn ON your computer.
2. Connect USB cable to your computer.
3. Connect USB cable to Location PLUS A1.

[Installing “Location PLUS Software”]

4. When connected correctly, “external disk drive” appears on your computer screen.

Double-click on  icon under “PC Tools” folder in the external disk drive and installation will begin automatically.



5. When auto-installation complete, “Location PLUS” short cut icon  appears on your desktop.

6. Installation is complete.

[Removing from your computer]

7. Click on the icon  on the taskbar. When the message below appears on screen, click on it.

Safely remove USB Mass Storage Device-Drive(F:)

8. When “Safely remove hardware” message appears, remove USB cable.

<Tips>

- When Long Long Key(pressed longer than 10 sec.) of Power button pressed, only product's internal memory log file will be deleted.
 (“Location PLUS” won’t be deleted)
- Icon may be hidden on the taskbar depending on OS such as Windows XP.
 When a hidden icon clicked, it appears.
- When application programs such as Windows Explorer and Windows Player are run, safe removal may not work.
 Try safe removal after quitting all application programs.

♦ Followings are available by using “Location PLUS Tools” software:

- Sending GPS log recorded on the product to a computer
- Adding GPS location data to a photo file
- GPS log file management

♦ System Requirement

OS: Microsoft Windows 2000 Professional
XP Home Edition / XP Professional
CPU/Memory: Pentium III 800 MHz or higher
256MB or higher

Hard disk: required disk space for installation – approx. 15MB

Location PLUS A1 Chapter 3. Caution

■ Safety Tips

Make sure not to expose it in rain or humidity to prevent fire or electric shock.

1. Product: not treated for dustproof, pollution and waterproof

◆ Do not put metal(coin, hairpin, etc.) or foreign flammable substance in the product or drop the product.

◆ Make sure not to sit on a chair with the product in your pants' pocket or in a bag. It may cause damage or malfunction.

◆ When the product is soaked by rain(water), drink, drug or cosmetic products, DO NOT turn the power on, wipe it out with dry cloth and get it checked at the service center. Otherwise it may cause damage or malfunction.

◆ Do not place the product in a place with much humidity, dust, sand and dirt. It may cause malfunction.

◆ Avoid a place of direct sunlight or extremely high/low temperature.
(e.g. inside a car, around air conditioner or heater)

It may cause malfunction.

◆ Do not place the product around objects with strong magnetism such as a magnet, TV, a monitor and speakers. It may cause malfunction.

◆ DO NOT disassemble, repair or remodel the product. It may cause malfunction.

◆ DO NOT use chemical product or detergent for it deteriorates the surface and surface coating. (e.g. benzene, alcohol, thinner, insecticide, etc.)

It may cause malfunction.

◆ Do not drop or shake the product or apply strong impact on the product(e.g. strong vibration, etc.). It may cause damage, data loss or malfunction.

◆ Do not leave the product with rubber or plastic/vinyl substance attached. It may cause malfunction.

- ◆ Do not remove USB cable during data transmission. It may cause malfunction.

2. Battery: buy AA size battery separately

- Alkaline battery(disposable): approx. 10 hrs.
- Ni-MH battery(rechargeable): approx. 14 hrs.

- ◆ Keep the product with battery removed when not used for long period.
- ◆ When battery leaks, clean the battery receptacle and replace with a new battery.
- ◆ Make sure on battery's (+)(-) reverse insertion.
- ◆ Do not recharge Alkaline battery((AA, 1.5V)).
- ◆ Refer to User Manual on recharging when using rechargeable Ni-MH battery.
- ◆ When using rechargeable Ni-MH battery, make sure it gets maximum discharge and keep it cool and dry place.
- ◆ Battery lifespan is subject to surrounding conditions or use conditions.

3. Others

- ◆ Make sure to have a backup before reformatting the disk for it is irrecoverable after all files deleted.
- ◆ Connect the USB cable correctly.
- ◆ Camera and some devices may not function properly when multiple USB cables connected to one computer at the same time.
- ◆ Information may be lost when computer or the product's power cut off or USB cable disconnected abruptly during copying or transferring files/folders.

Location PLUS A1 Chapter 3. Caution

■ User Tips

Try to use the product where you can receive wireless signals from GPS satellite clearly.

◆ Try to use the product in cleared area(where you can see the sky).

Especially when you try to turn the product ON, cleared area(where you can see the sky) is recommended.

◆ Make sure to have antenna pointing upward or outward when carrying the product.

(Carrying the product as outside as possible recommended for receiving GPS satellite signals)

◆ Location of GPS satellite is constantly changing. It may take time to locate a spot or fail to save the location information depending on location and time of using GPS receiver.

◆ Using the product where too many buildings or trees not recommended for blocking or bouncing GPS satellite wireless signals.

◆ Following conditions may not be suitable for using the product because GPS satellite wireless signals may not get through:

- Inside a tunnel, under a bridge, underground, indoors or too many buildings

- Strong magnetism around transmission tower or high voltage cable

- Other products using the same frequency for wireless signals around the product

◆ Location accuracy for civil use is ranged 10~15m.

◆ It takes about 1 min. after the product turned ON to locate the current location. Take photos when green LED flickers on GPS receiving lamp. Check GPS receiving lamp occasionally.

◆ **(IMPORTANT) Make sure to synchronize the time on the camera and GPS receiver.**

Otherwise the location appears differently.

◆ Use soft cloth with a little bit of water to wipe out the product then remove moisture with dry cloth thoroughly.

◆ Log data may be damaged if removing battery without turning OFF during use. Make sure to turn the power OFF before removing the battery.

◆ The product cannot receive wireless signals when covered with metal object.

- ◆ Searching location consumes more power than saving location.
- ◆ The product can be used when covered with a cloth.
- ◆ GPS log files can be stored for about 2 months(720 hrs.) when using 12 hrs. a day.

Location PLUS A1 Chapter 4. Using the Product

■ Easy-to-use One-touch Button

Location PLUS A1 is ultra easy to use just by turning it ON without additional menu setting or directly connecting to digital camera.

1. Press and hold the power button for a few seconds to turn ON Location PLUS A1.

In travel locations or location for taking photos, make sure to have the GPS antenna toward the sky to receive clear signals(cleared area recommended. See User Tips). Press and hold the power button for 2~3 seconds to turn ON GPS LED, Battery LED and Memory LED lamp. Power is turned ON when removing your finger from the power button.



After the power is ON, red LED flickers every 3 sec. because the location is not yet identified through GPS. After 1~2 min.(it varies depending on conditions) the location is identified, the information is recorded and green LED flickers every 3 sec.

After that you can put Location PLUS A1 in your bag or hang it on your bag strap. It is desirable to have the antenna pointing upward or outward.

2. Take photos with your digital camera.

However, Location PLUS A1 only stores location information therefore no association with the camera.

If you want to do traveling or mountain-climbing without taking photos, you can record travel path only.

3. Press and hold the power button for a few seconds to turn OFF Location PLUS A1.

Press and hold the power button for 1~2 sec. after traveling or taking photos to turn ON GPS LED, Battery LED and Memory LED lamp. The power is turned OFF when removing your finger from the power button.

Location PLUS A1 Chapter 4. Using the Product

■ Checking Terminal Status

You can check the terminal status through 3 LED lamps by pressing the power button of Location PLUS A1.

(1) Available Memory Display (Memory LED)

The terminal can store GPS log files of up to approx. 720 hrs.(30 days).

- Memory LED(red) flickers for 2 sec. when available memory is less than 10%(storing capacity for approx. 3 days)
- Memory LED(red) stays ON if no available memory left.



(**) How to delete memory from the terminal:

Press and hold the power button for more than 10 sec. All 3 LEDs flicker 3 times per sec. then memory is deleted. Power is turned OFF then turned back ON.

(2) Available Battery Display (Battery LED)

You can use the terminal for 10 hrs. with dry battery and for 14 hrs. with Ni-MH battery; however it varies depending on conditions.

Battery consumption is higher in favorable condition than in unfavorable condition.

- Battery available for over 7 hrs. : no flickering
- Battery available for 6~7 hrs. : LED flickers 7 times
- Battery available for 5~6 hrs. : LED flickers 6 times
- Battery available for 4~5 hrs. : LED flickers 5 times
- Battery available for 3~4 hrs. : LED flickers 4 times
- Battery available for 2~3 hrs. : LED flickers 3 times
- Battery available for 1~2 hrs. : LED flickers 2 times
- Battery available for less than an hour: LED flickers every 1 sec.
- When low battery: LED stays ON for 2 sec. then power is turned OFF.



Location PLUS A1 Chapter 4. Using the Product

■ Using Location PLUS Software

Run the program.



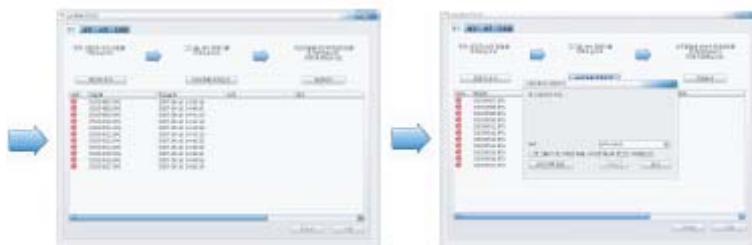
Press “Add Image” button.



When Add Image window pops up,
select the image folder, then press Open.

Now the image has been added.

Press “Add Log” button.



The image under the selected folder appears in the window.
(If a log file appears first, location information(latitude and longitude) will appear.

When Add Log window pops up, select a log file then press Open.

Now the log has been added.

Press “Save” button.



Location information(latitude and longitude) appears in the image file.

When Save window pops up, select a folder then press Save button.

Now the log has been stored.



All process is complete.

Location PLUS A1 Chapter 5. Other Information

Solve problems as follows when problems occur in using the product.

If the problem is still unresolved, contact the service center.

■ Errors

◆ Location Information Error due to GPS Satellite Location

- GPS satellite location is constantly changing.

Most widely used method is to receive information on distance and time from 3 satellites and correct error through 1 satellite.

Location accuracy for civil use, not military use, is ranged 10~15m.

Therefore errors may occur depending on travel path or location of taking photos and the location may not match to the one on the map on the internet.

◆ Time Setting Error due to Incorrect Camera Time Setting (IMPORTANT)

- If the time setting of the camera and GPS receiver is different, accurate location information(latitude and longitude) cannot be stored.

Make sure to set the current time correctly on your camera.

(See camera's User Manual for time setting.)

- ◆ Errors during Saving Location

- GPS location information can be stored as follows:
 - Time gaps: store every 1, 5, 10, 15, 20, 25, 30 sec.
- When taking photos at different time than the time of storing location information, it roughly calculates the distance between the locations before and after taking photos, therefore the location of the stored photo may not match to the location on the map on the internet.

- Troubleshooting

Solve problems as follows when problems occur in using the product.

If the problem is still unresolved, contact the service center.

1. Q: Why can't I see the log file stored in the product?

A: Try to avoid tunnels, indoors, underground and places of too many buildings to receive clear wireless signals because storing GPS location is impossible in such conditions.
Please refer to "User Tips" in this manual.

2. Q: Why can't the product receive wireless signals from GPS satellite?

A: Please refer to "User Tips" in this manual.

3. Q: Why does it take too long to receive wireless signals from GPS satellite?

A: It may take time to locate the location because the satellite location is constantly changing. Please refer to "User Tips" in this manual.

4. Q: Why can't I turn the product ON?

A: Check the battery status and replace for a new one when low battery.

A: Check if the battery's (+)(-) reverse insertion is correct and insert again.

A: Check if the battery cap is correctly closed. The connection may be poor.

A: Please refer to "Inserting Battery" in this manual for correct way to insert battery.

Location PLUS A1 Chapter 5. Other Information

■ Certification/Trademark/Exemption

◆ Certification

MIC

Class B (home IT device): this is a home device registered for proper electromagnetic waves and can be used not only in residential area but also in other areas.

◆ Trade Mark and Exemption

Windows 2000 and Windows XP are registered trademarks of Microsoft Corp.

◆ Exemption

Manufacturer, importer and agencies are not responsible for accidental damage and other damage caused by inappropriate use or operation of the product.

Information in the User Manual is based on current product specifications.

Cuu:B Co., the product's manufacturer, is adding new functions to the product and will continue to apply new technology.

All specifications are subject to change without prior notice to individual users.

Location PLUS A1 Chapter 5. Other Information

■ Warranty

◆ Warranty period of this product is 1 year and free after-sale service is offered when product has a defect not caused by the user.

◆ Paid service is offered when product defect in the following cases even during the warranty period:

- if the product was disassembled by a third person than an employee of a designated company;
- if the product was damaged by negligence of the user;
- if the defect was caused by not observing the User Manual;
- and if the product has a defect due to the computer's power defect.

Location PLUS A1 Chapter 5. Other Information

■ Applying for After-sale Service (using home delivery)

- ◆ Register your product in www.cuub.co.kr and apply for A/S.
- ◆ Please send your product in safe package to avoid damage by impact.
- ◆ Make sure to include your name, telephone number and problem description in the package.
- ◆ If it is for free repair during the warranty period, the company pays for the delivery expense.
(when using a designated delivery service)
- ◆ Before applying for A/S, make sure to backup your data in a safe place.
(the company is not responsible for data loss that may occur during repair)
- ◆ For related regulations and details on A/S, refer to www.cuub.co.kr.



<http://www.cuub.co.kr/>