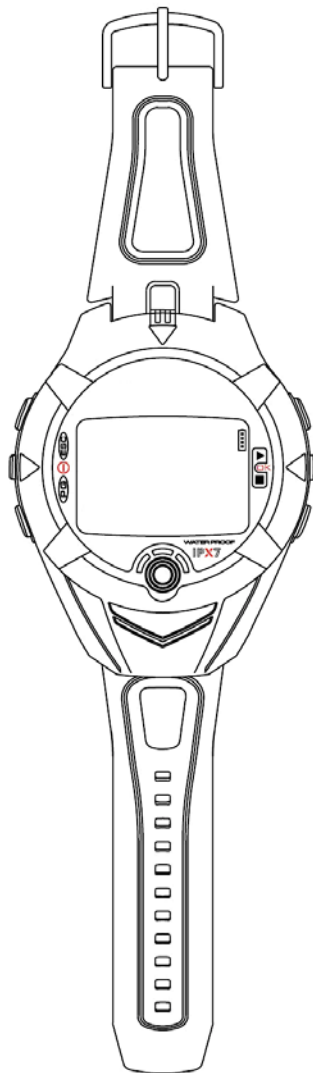


CANYON

CNS-GPS2

User Manual V 1.0



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Thank you for purchasing CANYON CNS-GPS2. We sincerely wish you to enjoy using the high technology GPS device. To fully utilize the functions and features of CNS-GPS2, please read through the user manual before you get started.

# Introduction and Features

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## Introduction


CANYON CNS-GPS2 is a water tolerating, wrapped around the wrist, yet stylish GPS device with features such as "Tracking", "GPS positioning", "Time alert", etc. The GPS navigation function is able to locate and track points anywhere you go on the surface of earth. CNS-GPS2 is powered by **SiRF Star III** high performance chip that can detect your position even with a weak signal status. It is adopted for people who exercise for a board variety of outdoor sports, such as jogging, running, biking, snow Skiing, etc. It can also act as a GPS receiver via USB interface.

## Features

The main features of CNS-GPS2:

- **Built-in SiRF Star III** high performance GPS chipset, extraordinary sensitivity for position detection even with weak signal status.
- Built-in rechargeable lithium-ion battery with extended capacity.
- Large LCD screen for easy viewing.
- Supporting **WAAS/ ENGOS**.
- Waterproof, rigid design to avoid accidents.
- Records all history of self-training by user defined time frame.
- CNS-GPS2 series can act as a GPS receiver with easy setup.
- The firmware of the CNS-GPS2 can be upgraded through PC.
- Navigation. Tracking your route using crumb method; marking and saving your tracking points by a special algorithm. Thus making it more convenient finding specific locations.

# Specifications

Model		CNS-GPS2
Number of Waypoints:		100
Tracking point:		60000
	Frequency:	L1, 1575.42MHz
	C/A code:	1.023 MHz chip rate
	Channels:	20 channel all-in-view tracking
	Antenna:	Built-in patch antenna
	Position:	(10meters,2DRMS), (5meters,2DRMS,WAASenabled)
Display Size:		24.9 x 39.88(H x W in mm.)
Display type:		Black & White LCD
Pixels (H x W):		80x120
Unit Weight:		86 g (Estimated)
Waterproof Standard:		IPX7
Unit Size:		58H x 78W x 20D (Estimated in mm.)
Backlit Display:		Single level
Operating temperature:		-10°C to 60°C
Storage temperature:		-20°C to 70°C (Power off, storage for 72 hours)
Humidity:		5% to 95% Non-condensing
Voltage:		3.7 V for a rechargeable battery, 5V for charging input.
Charging connector:		DC5V
Battery:		Rechargeable 750mAh Li-ion Polymer battery

# Hardware Overview

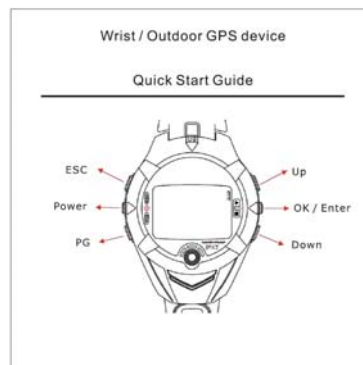
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## Package Contents

Check the contents of your CNS-GPS2 package before using. If you find any accessory that is missing or appears damaged, please contact your dealer immediately.



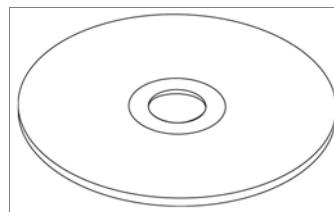
CNS-GPS2



Quick Guide



USB Cable



Installation CD-ROM

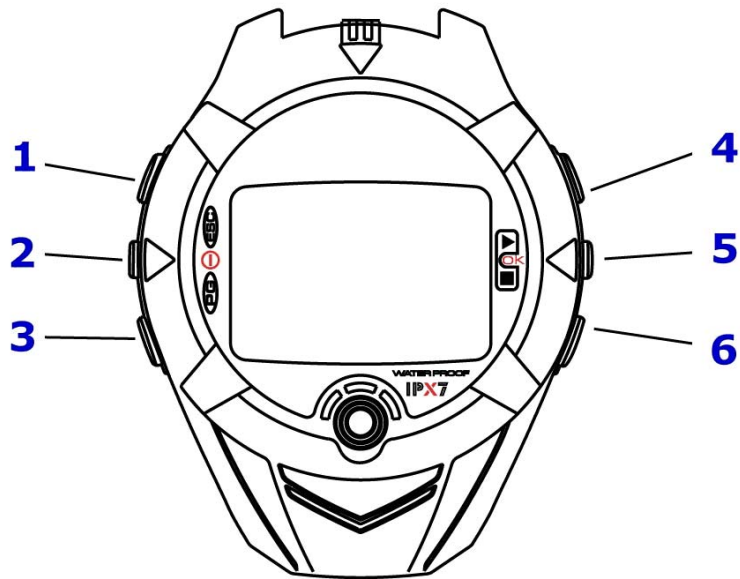







Screwdriver



Extended Watchband

# Button Introduction



	Button	Description
1.	 (ESC)	In Menu mode, press the button to escape from the current page and go back to the previous page. Press the button to split a lap when timer is running.
2.	 (Power)	Press and hold for 2 seconds to turn on/off CNS-GPS2. When CNS-GPS2 is on, pressing this button will turn on/off the backlight. Press and hold this button for 14 seconds to perform hardware reset if the system halts.
3.	 (page)	Switch between the pages of "Menu mode", "Location mode", "Speedometer mode" and "Map mode".
4, 6	 (Up/Down)	To move upward/downward for highlighting an item. In Speedometer mode, press to switch between two views. In Map mode, press to zoom in or zoom out.
5	 OK / Enter	Press to select the highlighted item. Press to confirm data entry or feature selection in Menu mode. In Speedometer mode, press to start/stop the timer.

# Hardware Introduction



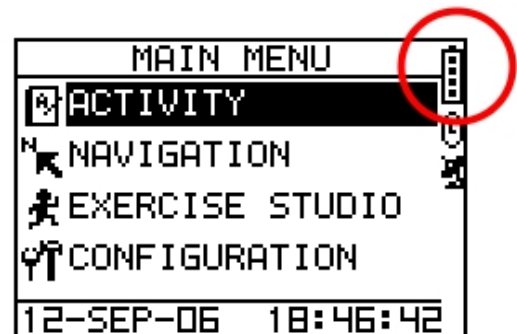
The GPS antenna is located at the lower part of the device shown in the diagram. Have it facing up to the sky for best reception.

## Charge CNS-GPS2

CNS-GPS2 operates on a built-in Li-ion rechargeable battery. A battery icon shown at the top right corner of screen indicates the remaining battery power.

To charge the battery:

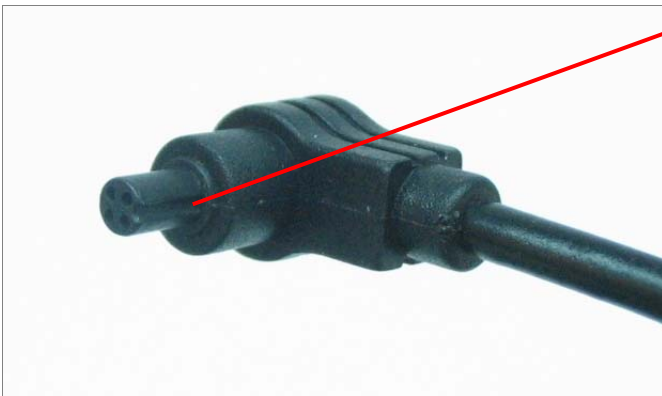
1. Connect one end of USB cable with your CNS-GPS2 and the other end with the AC adapter or USB port on PC.
2. It may require approximately 3 hours to fully charge the battery.



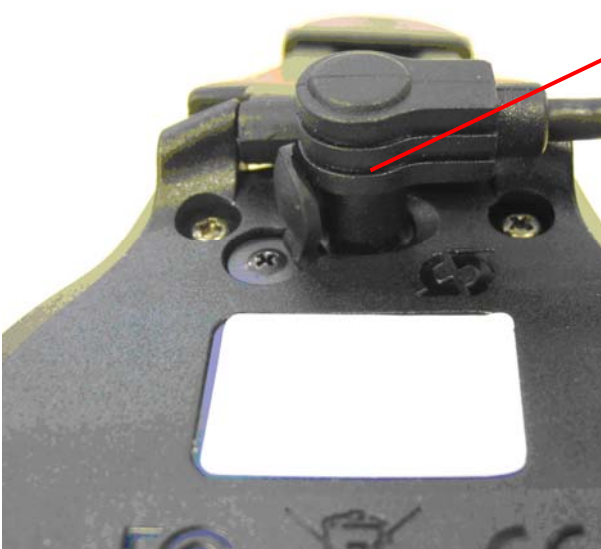




There is a small "bar" at the right of the USB socket,




There is a "track" at one side of USB connector.





To plug in the USB connector, position the "track" so it aligns with the "bar" in the USB socket.

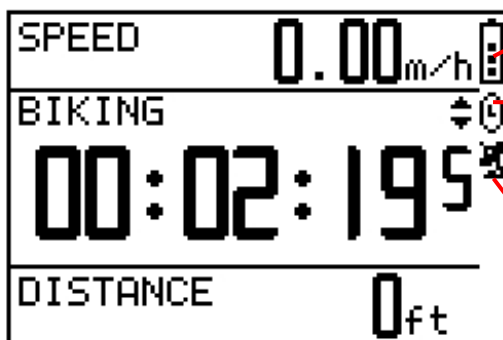
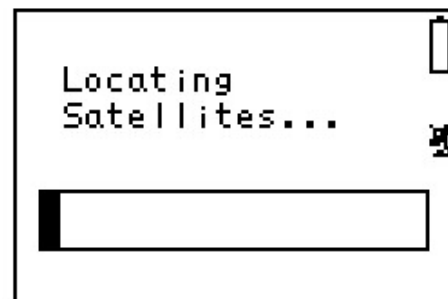
# Getting Started

## Start Up your CNS-GPS2


Press and hold  button for 2 seconds to turn on the device. A welcome screen will be displayed.

Allow a short period of time for CNS-GPS2 to search for satellite signals when it is used for the first time. Take your CNS-GPS2 to an outdoor open space with a clear view of the sky for better and faster satellite connection. If the device could not locate the satellite, you can still press  button to skip the Locating process.

To turn off your CNS-GPS2, press and hold  button for 2 seconds.



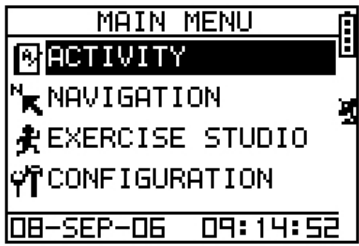
The battery icon indicates the remaining battery power.

The timer icon is displayed when timer function is activated. When the timer is stopped, the icon will be flashing. If it is auto paused, the icon  will flash.

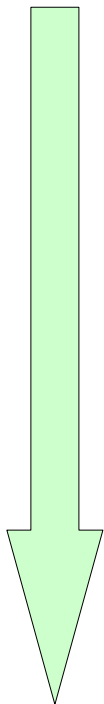
The satellite icon indicates the status of GPS. The icon flashes when the connection is broken. It stays on when the connection is secured. The icon disappears when GPS is off.

# Change Modes

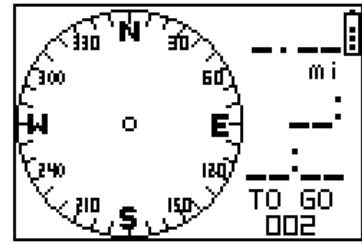
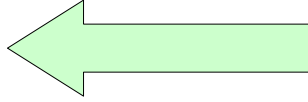
Press **PG** button to cycle through different modes



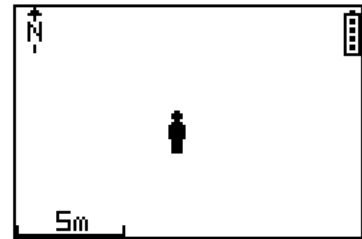
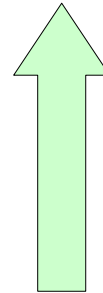
Menu mode



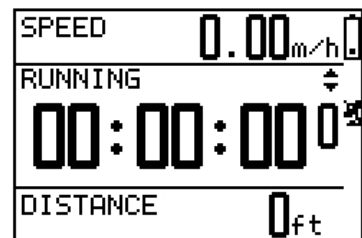
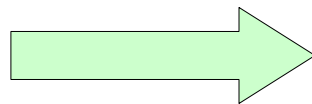
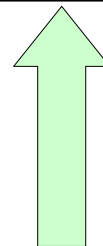
Location mode



Direction compass  
(when a destination is selected)

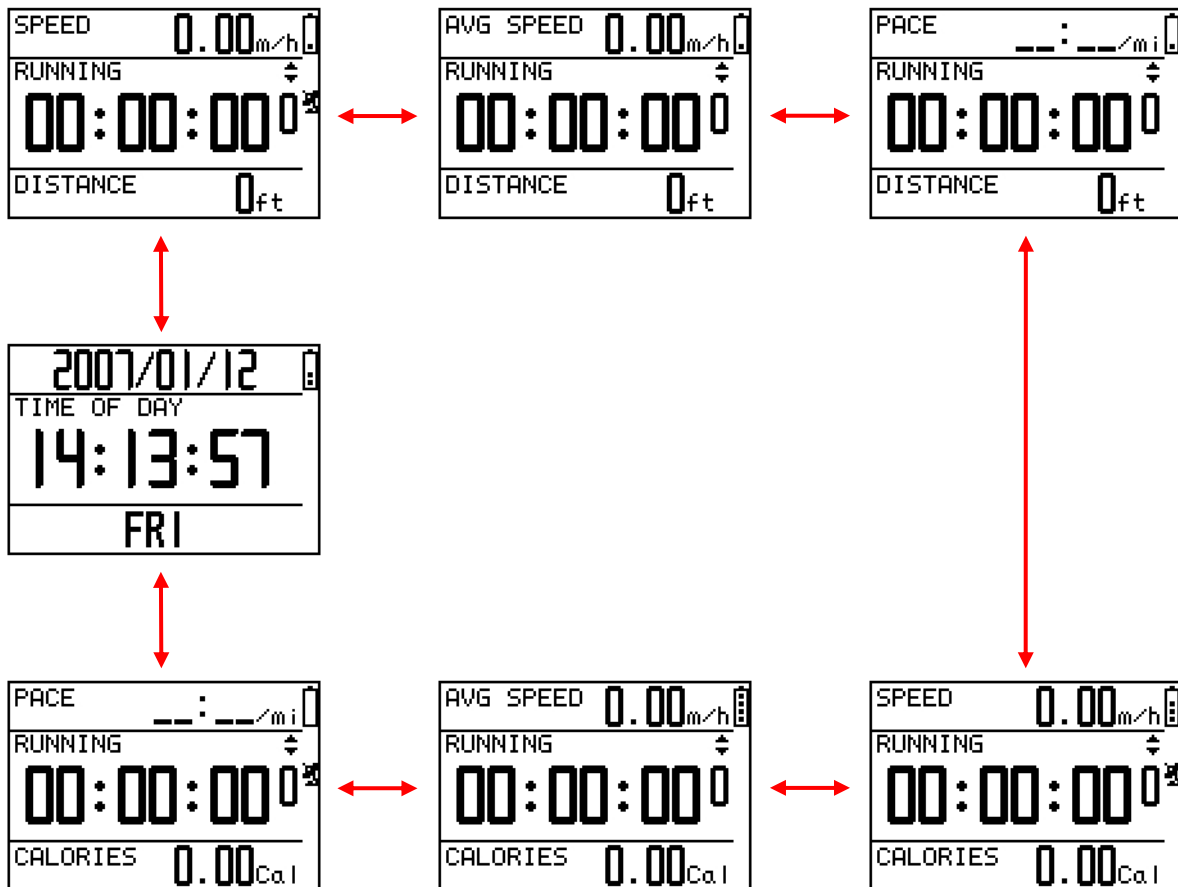


Map mode  
(when enabled)



Speedometer mode

In Speedometer mode, press ▲ / ▼ button to switch between different functions.



Information displayed in different views:

**SPEED:** mile/hour, km/hour.

**AVG SPEED:** the average speed.

**PACE:** the time needed for one mile or one km.

**Sport Type:** the sport type you set for calories calculation.

**Distance:** shows the distance you have traveled.

**Calories:** shows the amount of calories you have burned.

**Time of Day:** shows date, time and day of the week.

# Menu Structure

The following chart illustrates all available menu options for quick reference.

<b>ACTIVITY</b> (Activity)	<b>ACTIVITY INFO</b> (Activity Info)		
	<b>MEMORY CAPACITY</b> (Memory Capacity)		
	<b>DELETE ALL</b> (Delete All)		
<b>NAVIGATION</b> (Navigation)	<b>ADD MAP MODE / REMOVE MAP MODE</b> (Add Map Mode/Remove Map Mode)		
	<b>SAVE WAYPOINT (SAVE WAYPOINT)</b>		
	<b>FIND WAYPOINT</b> (Find Waypoint)	<b>LIST ALL</b> (List all)	
		<b>DELETE ALL</b> (Delete all)	
	<b>TURN PC-GPS ON / TURN PC-GPS OFF</b> (Turn PC-GPS On/Off)		
	<b>RETURN TO START / STOP GOTO / STOP TRACK BACK / STOP ROUTE</b> (Return To Start/Stop Goto/Stop Track Back/Stop Route)		
	<b>ROUTES</b> (Routes)	<b>CREATE NEW</b> (Create New)	
		<b>LIST ALL</b> (List All)	
<b>DELETE ALL</b> (Delete All)			
<b>GPS INFO</b> (GPS Info)			
<b>EXERCISE STUDIO</b> (Exercise Studio)	<b>AUTO HOLD</b> (Auto Hold)	<b>AUTO TIMER PAUSE</b> (Auto Timer Pause)	
	<b>ALERTS</b> (Alerts)	<b>TIME / DIST ALERT</b> (Time/Dist Alert)	
		<b>SPEED ALERT</b> (Speed Alert)	
	<b>CALORIES SETTING</b> (Calories Setting)	<b>SPORT TYPE</b> (Sport Type)	
<b>CONFIGURATION</b> (Configuration)	<b>SETTINGS</b> (Settings)	<b>SETUP TIME</b> (Setup Time)	<b>TIME ZONE</b> (Time Zone)
			<b>DAYLIGHT SAVING</b> (Daylight Saving)
			<b>TIME FORMAT</b> (Time Format)
		<b>SETUP GPS</b> (Setup GPS)	<b>GPS</b> (GPS)
			<b>WAAS/EGNOS</b> (WAAS/EGNOS)
		<b>SET UNITS</b> (Set Units)	<b>UNITS</b> (Units)
	<b>SPEED UNITS</b> (Speed Units)		
	<b>SET DISPLAY</b> (Set Display)	<b>BACKLIGHT</b> (Backlight)	
		<b>CONTRAST</b> (Contrast)	
	<b>SET SYSTEM</b> (Set System)	<b>BEEPER</b> (Beeper)	
		<b>LANGUAGE</b> (Language)	

	<b>DATA RECORDING</b> (Data Recording)	<b>RECORD DATA POINTS</b> (Record Data Points)
	<b>USER PROFILE (username, gender, age, weight, height)</b> (User Profile (username, gender, age, weight, height))	
	<b>DATA LINK TO PC</b> (Data Link to PC)	
	<b>FACTORY RESET</b> (Factory Reset)	
	<b>ABOUT CNS-GPS2</b> (About CNS-GPS2)	
	<b>SYSTEM UPGRADE</b> (System Upgrade)	


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# Activity

---

## Display/Delete Training Data

[MAIN MENU] > [ACTIVITY] > [ACTIVITY INFO]

1. Use ▲ / ▼ button to scroll to the item you wish to display and press  button.
2. The training data information is shown on the screen.

22-JAN-07 10:40:58	
TOTAL:	236 ft
4Cal	00:01:27
AVERAGE:	FASTEST:
1.84m/h	2.17m/h
32:36/mi	27:38/mi
VIEW?	TRACK BACK?
DELETE?	

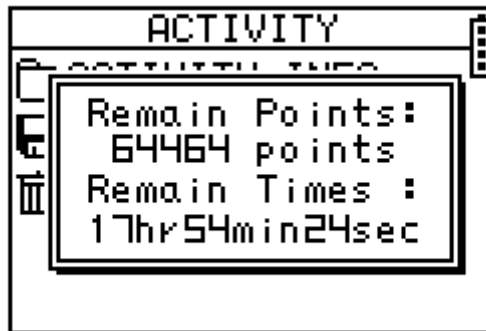
Information items are displayed:

- **Date and Time.**
- **TOTAL** distance of this training, calories you have burned, and time of this training.
- **Average** speed of this training.
- **Fastest** speed of this training.
- **VIEW?** translates training data into graphical data on the screen.
- **TRACK BACK?** tracks back to the BEGIN point or END point of this training route.
- **DELETE?** deletes the selected training data.

# Memory Capacity

**[MAIN MENU] > [ACTIVITY] > [MEMORY CAPACITY]**

1. It displays the remaining memory capacity.
2. It also shows how many points are left and the remaining time allotted. The remaining time depends on the user-defined time period. (See **[main menu] > [configuration] > [settings] > [data recording] > [record data points]**.)



# Delete All Training Data

**[MAIN MENU] > [ACTIVITY] > [DELETE ALL]**

It deletes all the training data stored in the device.



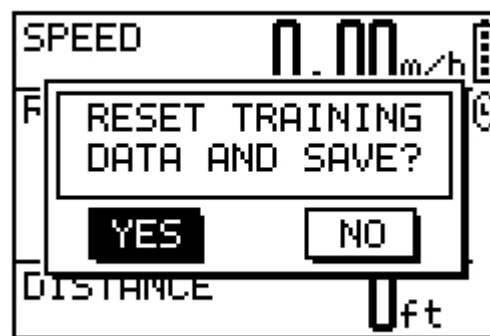
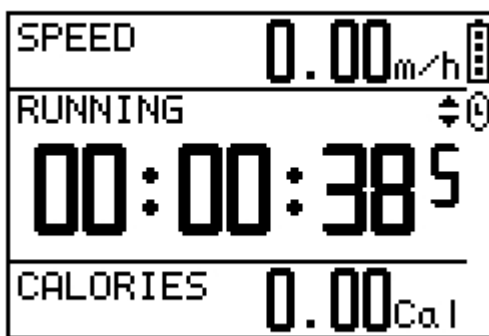


# Navigation

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## Record Traveling Route

1. Press **PG** button to switch to Speedometer mode.
2. Press **OK** button to start the stopwatch.
3. Use **▲ / ▼** button to scroll to different functions for required information.
4. Press **OK** or **ESC** button to stop the stopwatch. When the counting is stopped, pressing **ESC** will prompt for whether to save this training data or not.
5. Press **"YES"** to save the data and reset the timer to zero. Press **"NO"** to go back to previous screen.



## Add / Remove Map Mode

**[MAIN MENU] > [NAVIGATION] > [ADD/REMOVE MAP MODE]**

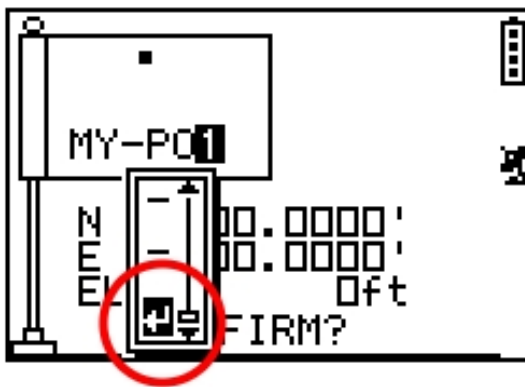
This feature adds/removes the map mode.

In addition, executing **"Return to start"** or **"GOTO"** a waypoint also automatically turns on the map mode

# Save a Waypoint

**[MAIN MENU] > [NAVIGATION] > [SAVE WAYPOINT]**

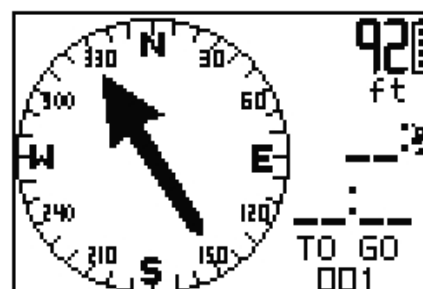
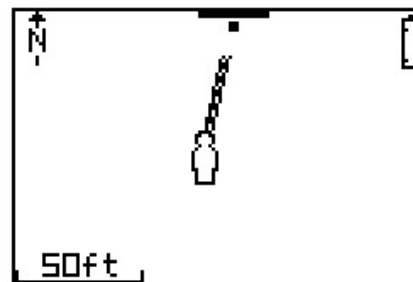
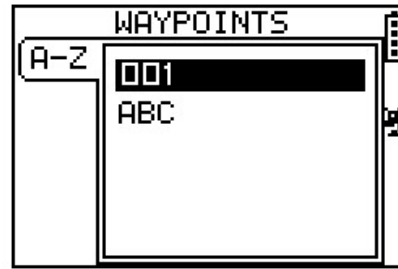
1. This option saves the current position. When the GPS connection is established, longitude, latitude and elevation of the current position will be shown on the screen. If the GPS connection is broken (no GPS signal is received), the values will be zero.
2. Use ▲ / ▼ button to scroll to the item you wish to modify and then use the (OK) button to select and confirm.
3. When modification is complete, input an "enter sign" character or press (ESC) button to exit.
4. Highlight **"CONFIRM?"** and press (OK) button. The data of the recorded location will be stored in the memory of CNS-GPS2.



# Find and Go to a Waypoint

**[MAIN MENU] > [NAVIGATION] > [FIND WAYPOINT] > [LIST ALL]**

1. Use ▲ / ▼ button to scroll to the Waypoint you wish to travel to and press **OK** button.
2. Highlight **"GOTO?"** item and press **OK** button.
3. Your current position will be displayed in the middle of the screen together with destination point. Nearby waypoints are also displayed. Press ▲ / ▼ button to zoom out and zoom in the map view.
4. Press **PG** button to display the distance and time for user to reach the destination on the right part of screen. At the left part of the screen, an arrow sign within the compass shows the direction of destination.
5. To stop the GOTO process, press **[MAIN MENU] > [NAVIGATION] > [STOP GOTO]**.



# Delete a Waypoint

[MAIN MENU] > [NAVIGATION] > [FIND WAYPOINT] > [LIST ALL]

1. Use ▲ / ▼ button to scroll to the Waypoint you wish to delete and press **OK** button.
2. Highlight **"DELETE?"** option and press **OK** button.
3. This waypoint will be deleted permanently.

# Delete All Waypoints

[MAIN MENU] > [NAVIGATION] > [FIND WAYPOINT] > [DELETE ALL]

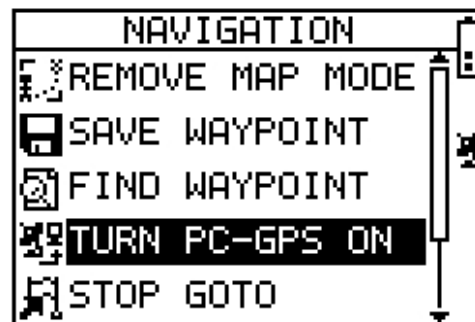
1. A confirmation dialog box will appear.
2. Use ▲ / ▼ button to highlight **"YES"** and press **OK** button or highlight **"NO"** to cancel.
3. All waypoints in memory will be deleted.



# Turn PC-GPS on/off

[MAIN MENU] > [NAVIGATION] > [TURN PC-GPS ON/OFF]

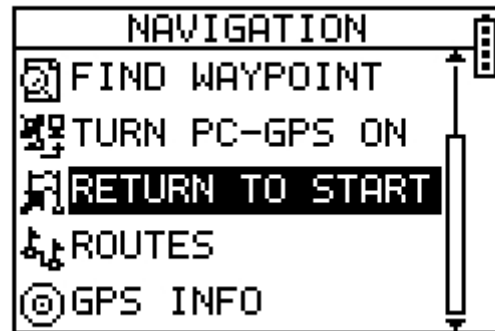
1. By connecting it to your PC, CNS-GPS2 can be used as a G-mouse.
2. Use the USB cable to connect CNS-GPS2 with your PC. Then turn PC-GPS function on.
3. Start your PC software; select the correct **COM Port** and set **Baud rate** to 57600.
4. The G-mouse function is ready for your use.
5. When the GPS function is not needed, turn it off to save the battery power and to extend battery life.



# Return to Start

**[MAIN MENU] > [NAVIGATION] > [RETURN TO START / STOP GOTO / STOP TRACK BACK / STOP ROUTE]**

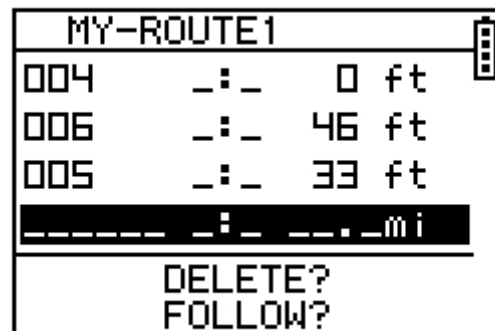
1. This feature navigates user back to the start point of the latest saved training data.
2. The navigation screen will be displayed and The arrow will direct user to return to the start point.
3. To stop the navigation at any point of the course, press **[MAIN MENU] > [NAVIGATION] > [STOP GOTO]**.



# Create a Route

**[MAIN MENU] > [NAVIGATION] > [ROUTES] > [CREATE NEW]**

1. User can add the waypoints to create routes. Press **(OK)** button to insert a waypoint.
2. Highlight a waypoint and press **(OK)** button to delete this waypoint or add another waypoint in above.
3. In the first line of the screen, you can edit the name of this route.
4. When done with editing the route, press **(ESC)** button to save and exit.



# Navigate or Delete a Route

[MAIN MENU] > [NAVIGATION] > [ROUTES] > [LIST ALL]

1. Select the desired route to navigate to, and select "FOLLOW?". The system will prompt for starting point and end point. You will see your current position and destination point on the screen, as well as those nearby waypoints. Press ▲ / ▼ button to zoom out and zoom in the map view.
2. Press (PG) button to display the distance and time for user to reach destination. The information will be located at the right part of screen. The direction of destination waypoint is shown by the arrow sign on the compass.
3. To stop the navigation at any time, press [MAIN MENU] > [NAVIGATION] > [STOP ROUTE].
4. Highlight the desired route to be deleted, and select "DELETE?". This route will be deleted immediately.

## Delete all routes

[MAIN MENU] > [NAVIGATION] > [ROUTES] > [DELETE ALL]

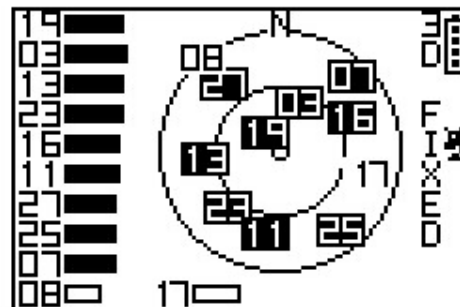
1. A confirmation dialog box will appear.
2. Use ▲ / ▼ button to highlight "YES" and press (OK) button.
3. All route data in memory will be deleted.



## GPS Info

[MAIN MENU] > [NAVIGATION] > [GPS INFO]

This function shows the status of satellite positioning status and their corresponding signal strength.



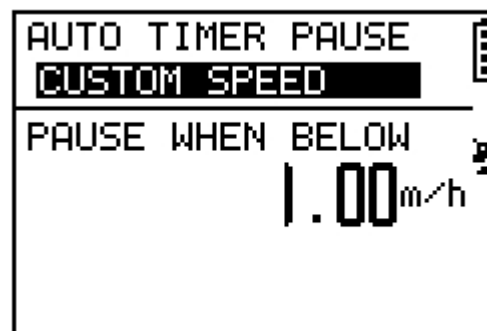
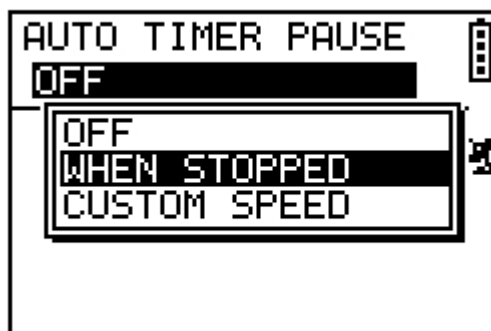
# Exercise Studio

The Exercise Studio allows you to setup the pause, alarm and sport type for CNS-GPS2.

## Auto Hold

**[MAIN MENU] > [EXERCISE STUDIO] > [AUTO HOLD]**

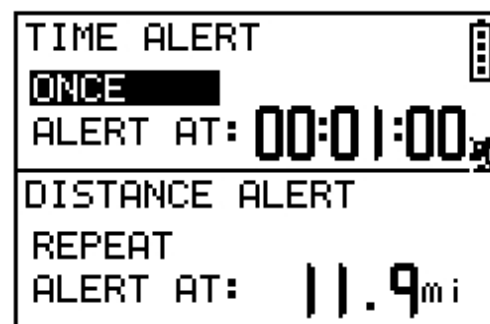
1. The **Auto Hold** function enables system to automatically pause the timer when the user stop moving or speed falls below a certain value.
2. When the timer is paused, the data is not recorded. Thus the average speed and calorie calculation will be more accurate.



## Alerts — Time / Distance Alert

**[MAIN MENU] > [EXERCISE STUDIO] > [ALERTS] > [TIME/DIST ALERT]**

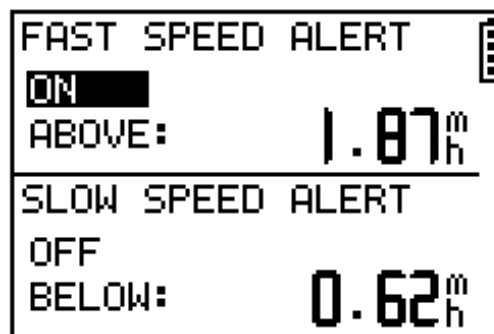
1. Use ▲ / ▼ button to select the item and press **OK** button to modify it.
2. Alarm can be set to notify user once when the specified time is reached, or repeatedly notify user on every specified time, or turn it off.
3. Alarm can be set to notify user once when you reached the specified distance, or repeatedly notify user on every specified distance, or turn it off.



## Alerts — Speed Alert

[MAIN MENU] > [EXERCISE STUDIO] > [ALERTS] > [SPEED ALERT]

1. Use ▲ / ▼ button to select the item and press (OK) button to modify its values.
2. You can set the alarm to sound when your speed is above or below a user defined value.



## Set Sport Type for Calories Calculation

[MAIN MENU] > [EXERCISE STUDIO] > [CALORIES SETTING] > [SPORT TYPE]

1. There are 5 sport types to select from: "Walking", "Hiking", "Running", "Biking" or "By Time".
2. System will calculate the calories consumption depending on the specified sport type.





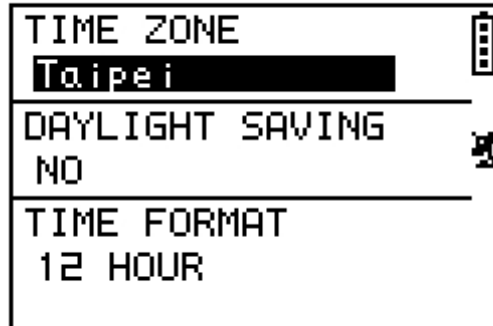
# Configuration

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## Setup Time

**[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SETUP TIME]**

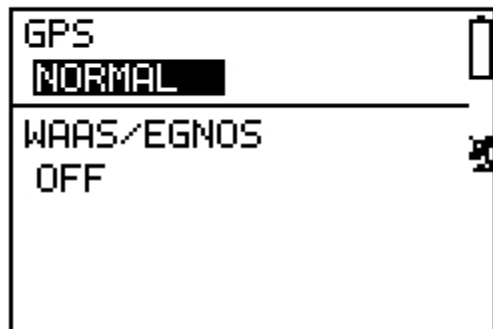
1. Use ▲ / ▼ button to scroll to the item and press (OK) button to modify.
2. Select your local time zone and enable Daylight Saving if necessary. System will display time according to preferences.
3. Time can also be set to display with the 12 HOUR or 24 HOUR format.
4. Press (ESC) button to return to previous page or (PG) button to go back to main menu.



## Setup GPS

**[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SETUP GPS]**

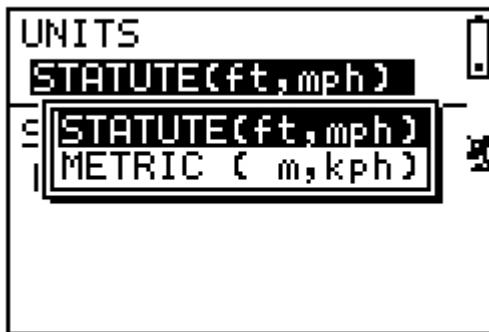
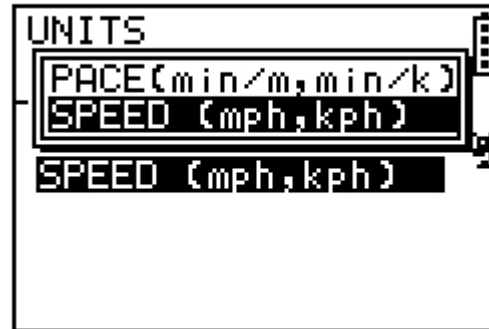
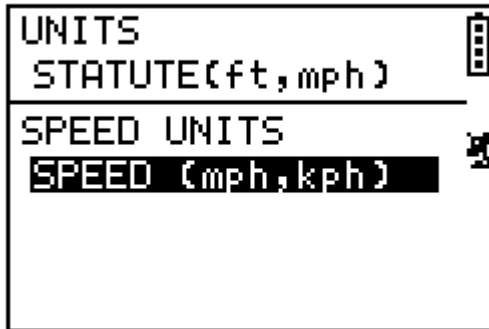
1. The GPS function can be turned off to save battery power. If the battery power is approaching low, the system will also prompt for turning off the GPS function.
2. "WAAS/EGNOS" feature can be switched ON/OFF.



# Set Units

**[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SET UNITS]**

1. The measurement unit can be set as "statute" or "metric".
2. The speed unit can be set as **Pace (min/m, min/K)** or **Speed (mph, kph)**.



# Set Backlight

**[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SET DISPLAY] > [BACKLIGHT]**

Set the backlight to stay on or automatically turned off after a period of time once you press <sup>①</sup> button to activate the backlight.



# Adjust Screen Contrast

[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SET DISPLAY] > [CONTRAST]

1. Use ▲ / ▼ button to adjust the contrast ratio of the screen display.
2. Press **OK** button to accept the change after adjusting.



# Setup Beeper

[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SET SYSTEM] > [BEEPER]

You can activate the Beeper to sound or to be silent.



# Setup Language

[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [SET SYSTEM] > [LANGUAGE]

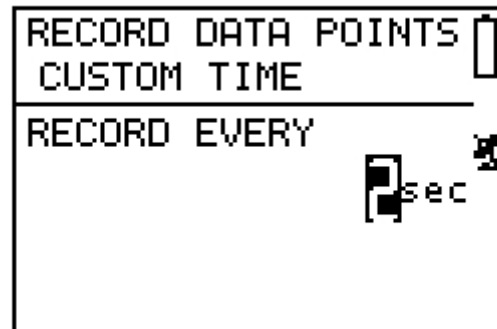
There are 5 different languages that the system displays with, including "English", "German", "French", "Italian" and "Spanish".



# Set Record Point

[MAIN MENU] > [CONFIGURATION] > [SETTINGS] > [DATA RECORDING] > [RECORD DATA POINTS]

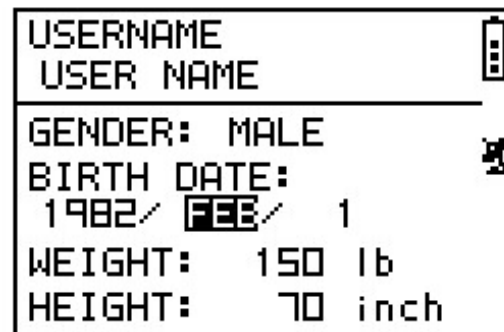
1. System is by default to record one data point for every second. This method will generate the most accurate record for daily training activity. However, user can set a different time interval to record the points.
2. Setting longer intervals indicates less data in a fixed period of time, but the device is able to record more sets of data points.



# Setup User Profile

[MAIN MENU] > [CONFIGURATION] > [USER PROFILE]

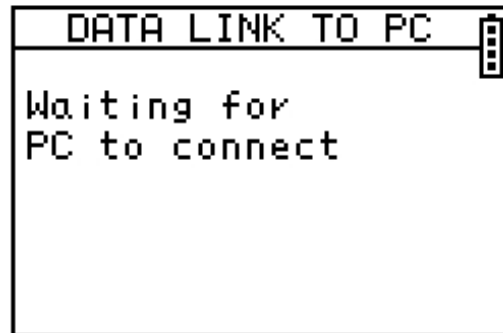
1. User can input personal information in the user profile.
2. The data fields include "username", "gender", "birth date", "weight" and "height".
3. The system will perform the calorie calculation based on the information user inputs. Please make sure the values are accurate.



# Transfer Data to PC

**[MAIN MENU] > [CONFIGURATION] > [DATA LINK TO PC]**

1. You can transfer the training data from CNS-GPS2 to your PC.
2. Refer to "PC Utility" chapter for more details.



# Factory Reset

**[MAIN MENU] > [CONFIGURATION] > [FACTORY RESET]**

This feature allows user to restore CNS-GPS2 back to factory default settings. All training data, waypoints, and user profile will be deleted.



# About CNS-GPS2

**[MAIN MENU] > [CONFIGURATION] > [ABOUT CNS-GPS2]**

Display the firmware version information.



# System Upgrade

**[MAIN MENU] > [CONFIGURATION] > [SYSTEM UPGRADE]**

1. Allow you to upgrade the firmware of CNS-GPS2.
2. If you want to cancel the upgrade process, press **Ⓛ** + **ESC** button at the same time.



# PC Utility

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## Install USB Driver

The USB driver must be installed before connecting the CNS-GPS2 to PC. PC will not recognize CNS-GPS2 if the USB driver is not present.

1. Insert the Installation CD into the CD-ROM drive. Autorun.exe will automatically display the menu. Click on CD-ROM icon if the menu does not appear after a while.
2. Click on the **"USB Driver"** button to install the "PL-2303 USB-to-Serial" driver onto your PC.
3. Follow the instructions to complete the installation.



# Install PC Utility

PC Utility is able to download the training data from CNS-GPS2 to user PC.

1. Insert the Installation CD into the CD-ROM drive. Autorun.exe will automatically display the menu. Click on CD-ROM icon if the menu does not appear after a while.
2. Click on the **"PC Utility"** and follow the instructions to complete the installation.



## System Requirement

For better performance, the following system requirement is recommended for CNS-GPS2 PC Utility:

- CPU: Pentium III or above.
- RAM: 512 MB or above
- OS: Windows 2000 or XP
- Internet Explorer 6.0 or above



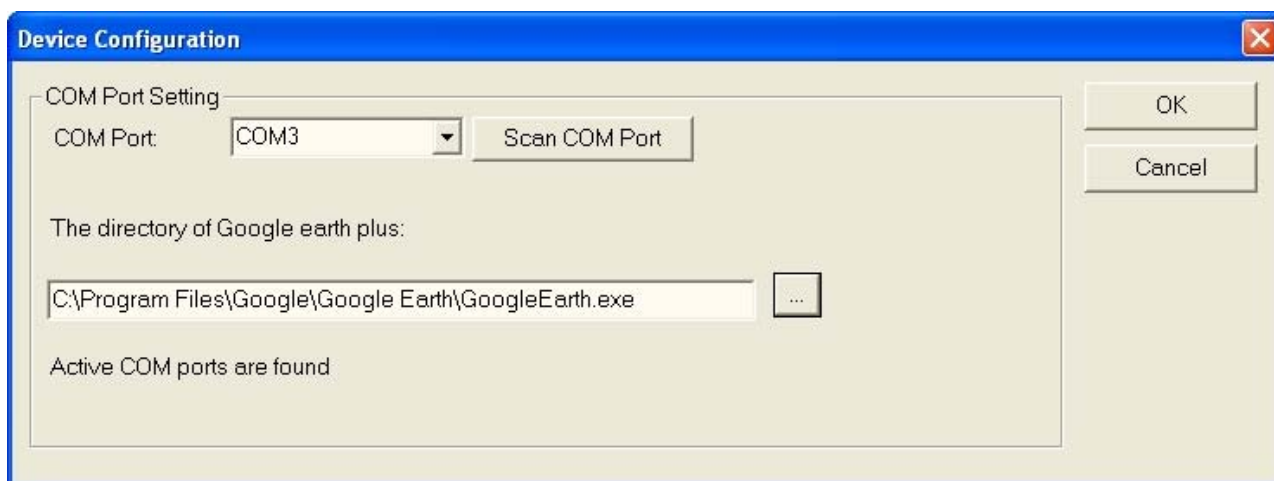
# Run the PC Utility

To run the **PC Utility**, double click on the **"CNS-GPS2 PC Utility"** icon from desktop, or click from **Start > All Programs > GlobalSat Technology Corporation > CNS-GPS2 PC Utility**.



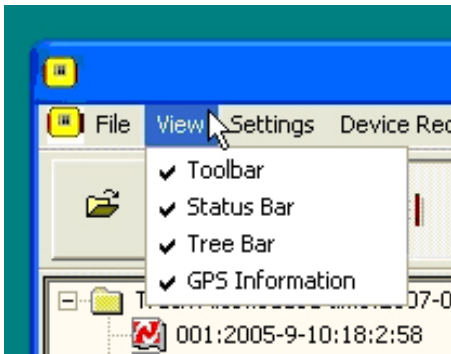
## Scan COM Port

When CNS-GPS2 is connected to PC, click **[Settings] > [Configuration]** and click on **"Scan COM Port"** button to configure the appropriate COM port.

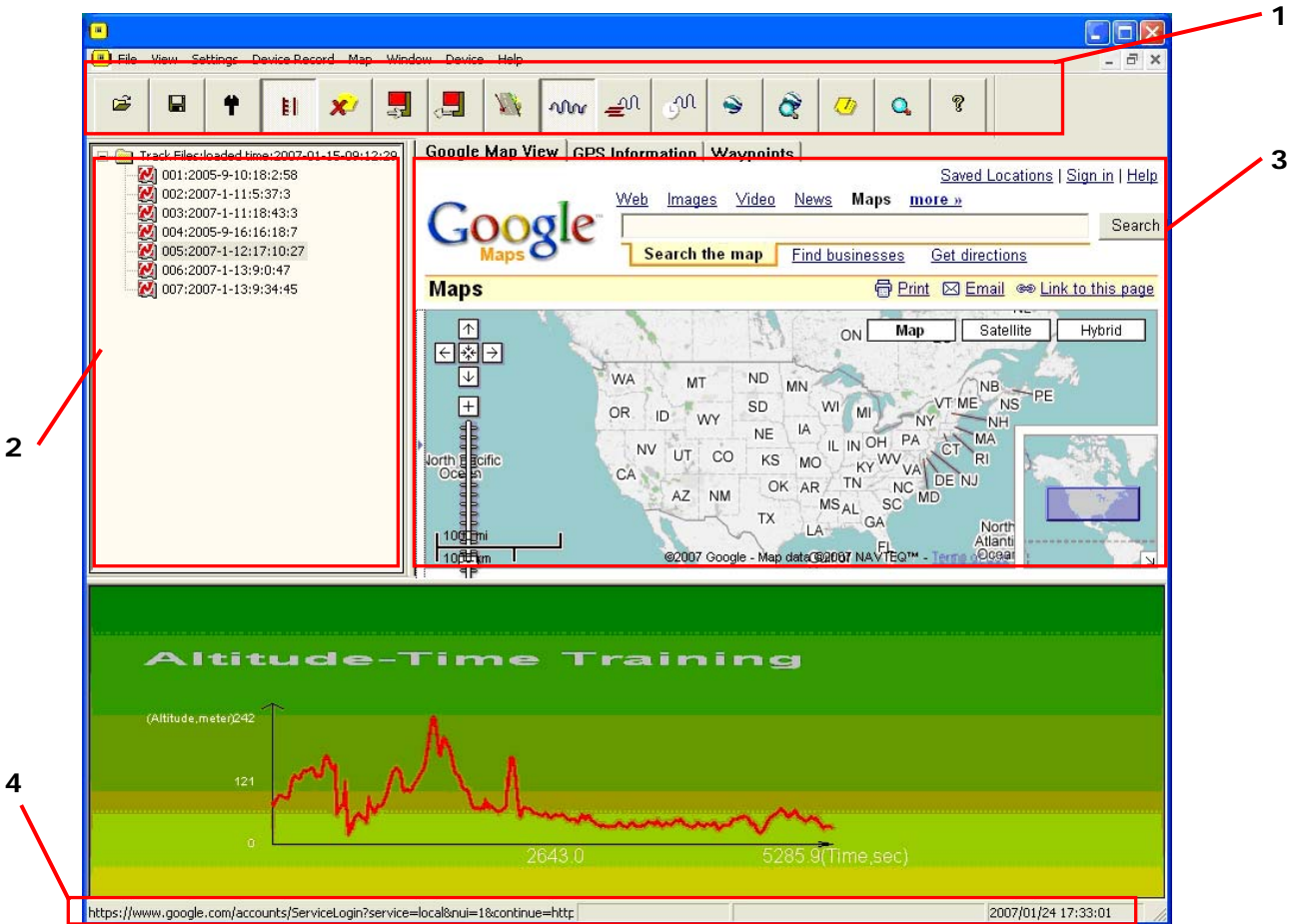


To view recorded Track points on **Google Earth**, it is required to manually specify the folder path where Google earth program is installed and its file name. For example, "C:\Program Files\Google\Google Earth\GoogleEarth.exe"

The latest version of **Google Earth** may have different installation path or file name. If the path is not correctly specified, **Google Earth** may not start automatically when **CNS-GPS2 PC Utility** starts up.



From menu bar, click **View** to display desired utility panels of **PC Utility**.



1. Toolbar
2. Tree Bar
3. GPS Information
4. Status Bar

# Menu Structure

<b>File</b>	<b>Open</b>	Open a training file.
	<b>Save</b>	Save training information to a <b>ghd</b> format file.
	<b>Export</b>	Export training information with <b>KML</b> , <b>CSV</b> , <b>Text</b> , <b>GPX</b> or <b>NEMA RMC</b> format.
	<b>Preference</b>	Specify the paths for saving different format of files when exporting the training information.
	<b>Exit</b>	Quit the application, you will be asked to save the document.
<b>View</b>	<b>Toolbar</b>	Show or hide utility panels.
	<b>Status Bar</b>	
	<b>Tree Bar</b>	
	<b>GPS Information</b>	
<b>Settings</b>	<b>Metric System</b>	Switch between Metric system or Statute system.
	<b>Configuration</b>	Scan the COM port of the device.
<b>Device Record</b>	<b>Delete All Trackpoints</b> : Delete all activity info from CNS-GPS2. It's the same as pressing <b>[MAIN MENU] &gt; [ACTIVITY] &gt; [DELETE ALL]</b> in CNS-GPS2.	
	<b>Download Trackpoints From Device</b> : Download <b>Trackpoints</b> (training record) from CNS-GPS2 to PC.	
	<b>Download Waypoints From Device</b> : Download <b>Waypoints</b> from CNS-GPS2 to PC.	
	<b>Upload Waypoints To Device</b> : Upload <b>Waypoints</b> from PC to CNS-GPS2.	
	<b>Upload Current Trackpoints To Device</b> : Upload current <b>trackpoints</b> from PC to CNS-GPS2.	
	<b>Edit Waypoint</b> : Edit <b>waypoint</b> 's name, altitude, latitude and longitude.	
	<b>Select / Unselect Waypoint</b> : Select or unselect one <b>waypoint</b> .	
	<b>Select All Waypoints</b> : Select all <b>waypoints</b> .	
	<b>Unselect All Waypoints</b> : Unselect all <b>waypoints</b> .	
	<b>Show Altitude-Time Curve</b> : Click this button, and double click on the <b>Track File</b> from the <b>Tree Bar</b> . The Altitude-Time Curve will be shown at the bottom.	
<b>Show Speed-Time Curve</b> : Click this button, and double click on the <b>Track File</b> from the <b>Tree Bar</b> . The Speed-Time Curve will be shown at the bottom.		

<b>Map</b>	<b>Google Earth</b> : Display the Track points on <b>Google Earth</b> .
	<b>Show Track Points in Google Maps</b> : Display the <b>Track points</b> on <b>Google</b> Maps.
	<b>View Points</b> : Display the point information on Notepad.
<b>Device</b>	<b>Show NEMA</b> : Show GPS information.
	<b>Firmware Upgrade</b> : Upgrade firmware of CNS-GPS2.
	<b>System Information</b> : Display the System Information of CNS-GPS2.
<b>Help</b>	<b>About CNS-GPS2</b> : Display program information, version number and copyright statements.

# Download Data from CNS-GPS2

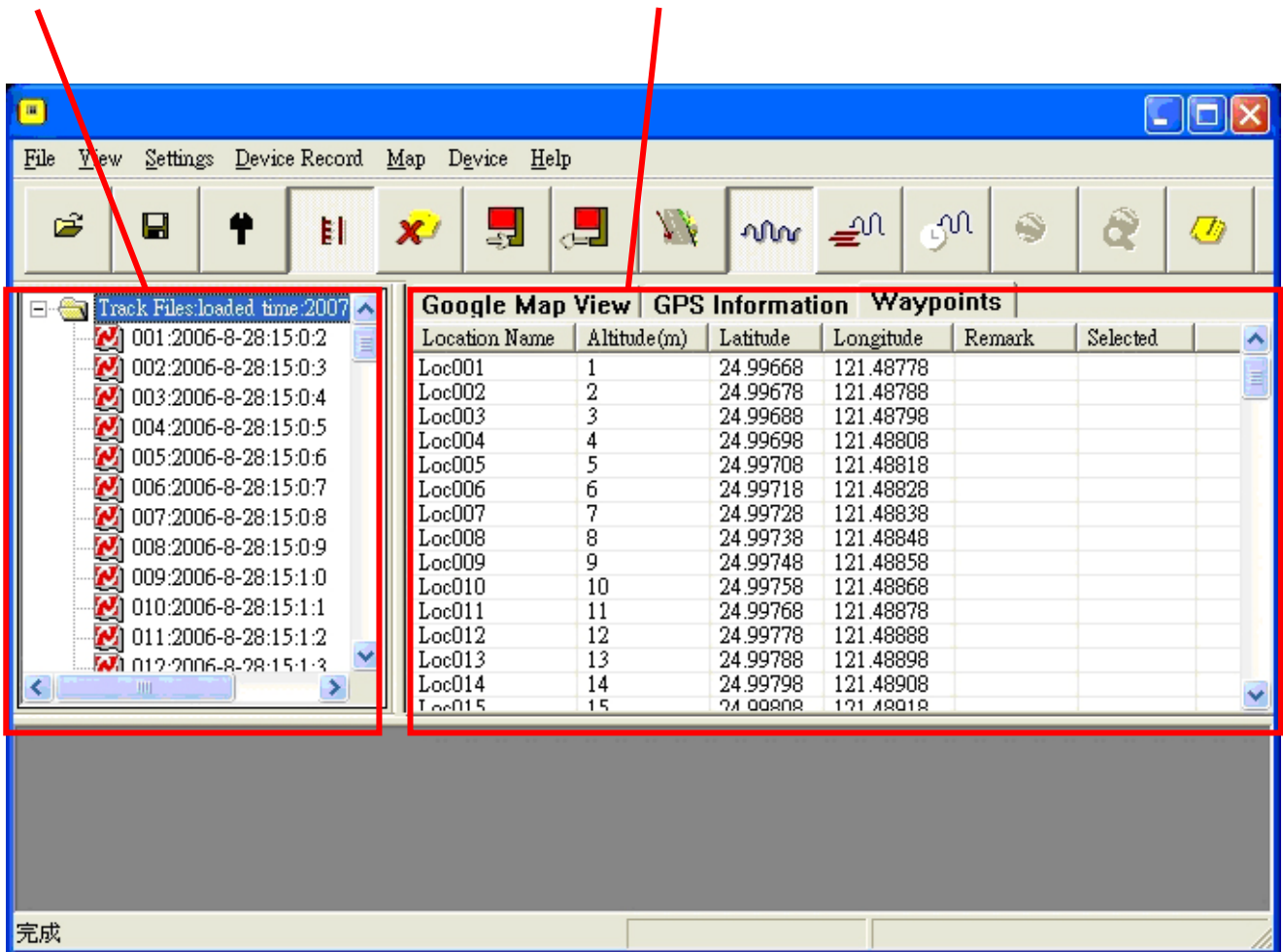
Connect CNS-GPS2 to your PC with the USB cable.

On CNS-GPS2, press **[MAIN MENU] > [CONFIGURATION] > [DATA LINK TO PC]**.

In PC Utility, click **[Device Record] > [Download Trackpoints from Device]** or **[Download Waypoints from Device]**.

The downloaded **Trackpoints** are displayed in this panel.

The downloaded **Waypoints** are displayed in this panel.



# Upload Data to CNS-GPS2

Connect CNS-GPS2 to your PC with the USB cable.

On CNS-GPS2, press **[MAIN MENU] > [CONFIGURATION] > [DATA LINK TO PC]**.

In PC Utility, double click track files from tree bar and click **[Device Record] > [Upload Current Trackpoints To Device]** to upload Trackpoints.

Right click and select the **Waypoint**, and then click **[Device Record] > [Upload Waypoints To Device]** to upload **Waypoints**.

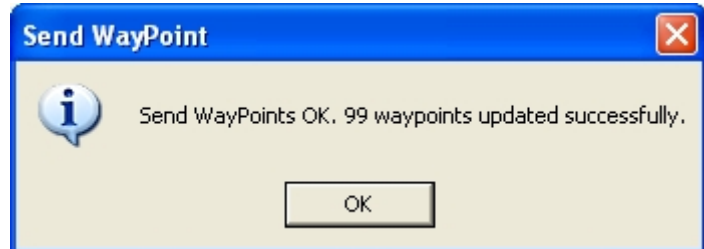
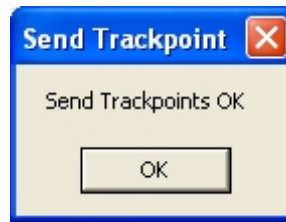
The screenshot shows the PC Utility software interface. The top menu bar includes File, View, Settings, Device Record, Map, Window, Device, and Help. Below the menu is a toolbar with various icons. The main window is divided into several sections:

- Track Files:** A tree view showing a folder named "Track Files:loaded time:2007-0" containing 12 files with names like "001:2006-8-28:15:0:2" through "012:2006-8-28:15:1:3".
- Waypoints Table:** A table with columns: Location Name, Altitude (m), Latitude, Longitude, Remark, and Selected. It lists 15 waypoints (Loc001 to Loc015) with their respective coordinates and altitudes.
- Altitude-Time Training Graph:** A graph window titled "Altitude-Time Training" showing a red line representing altitude over time. The y-axis is labeled "Altitude (m) (5011)".

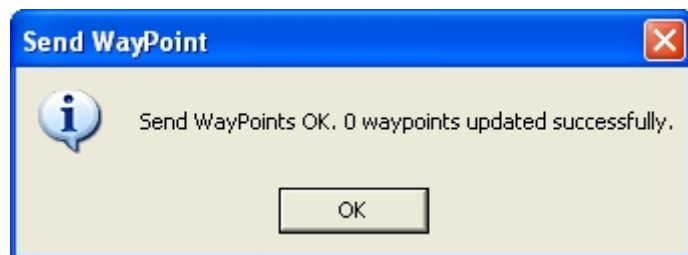
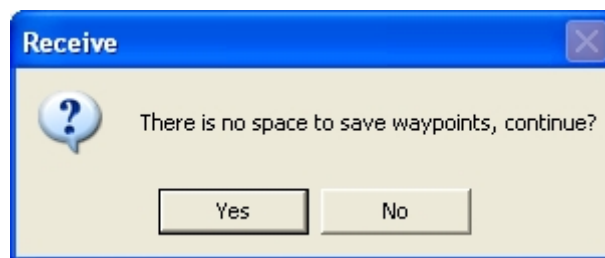
The status bar at the bottom shows "Ready" on the left and "200" on the right.

Location Name	Altitude (m)	Latitude	Longitude	Remark	Selected
Loc001	1	24.99668	121.48778		
Loc002	2	24.99678	121.48788		
Loc003	3	24.99688	121.48798		
Loc004	4	24.99698	121.48808		
Loc005	5	24.99708	121.48818		
Loc006	6	24.99718	121.48828		
Loc007	7	24.99728	121.48838		
Loc008	8	24.99738	121.48848		
Loc009	9	24.99748	121.48858		
Loc010	10	24.99758	121.48868		
Loc011	11	24.99768	121.48878		
Loc012	12	24.99778	121.48888		
Loc013	13	24.99788	121.48898		
Loc014	14	24.99798	121.48908		
Loc015	15	24.99808	121.48918		

When uploading process is done, the confirmation dialog box will be displayed.

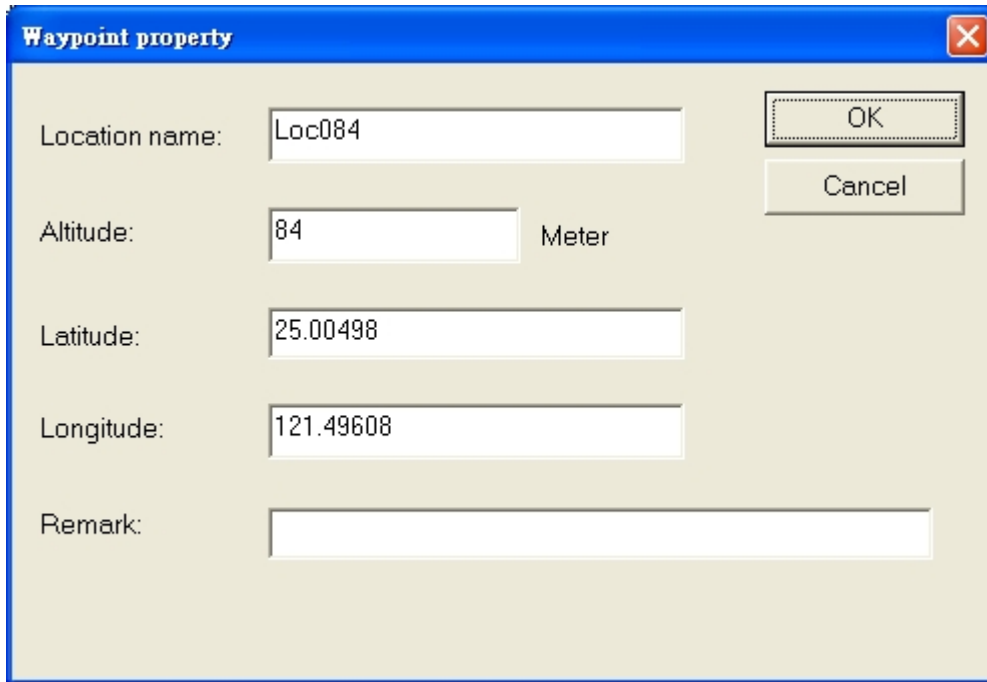


CNS-GPS2 is capable of storing 100 sets of waypoints. Please remove some waypoints before uploading when the memory is full. Existing waypoints will be overwritten by new waypoints if location names are identical.



# Edit Waypoint

Select a **waypoint** and click **[Device Record] > [Edit Waypoints]**. **Waypoint** properties, including Location name, Altitude, Latitude, Longitude and remark can be modified



Waypoint property

Location name:

Altitude:  Meter

Latitude:

Longitude:

Remark:

OK

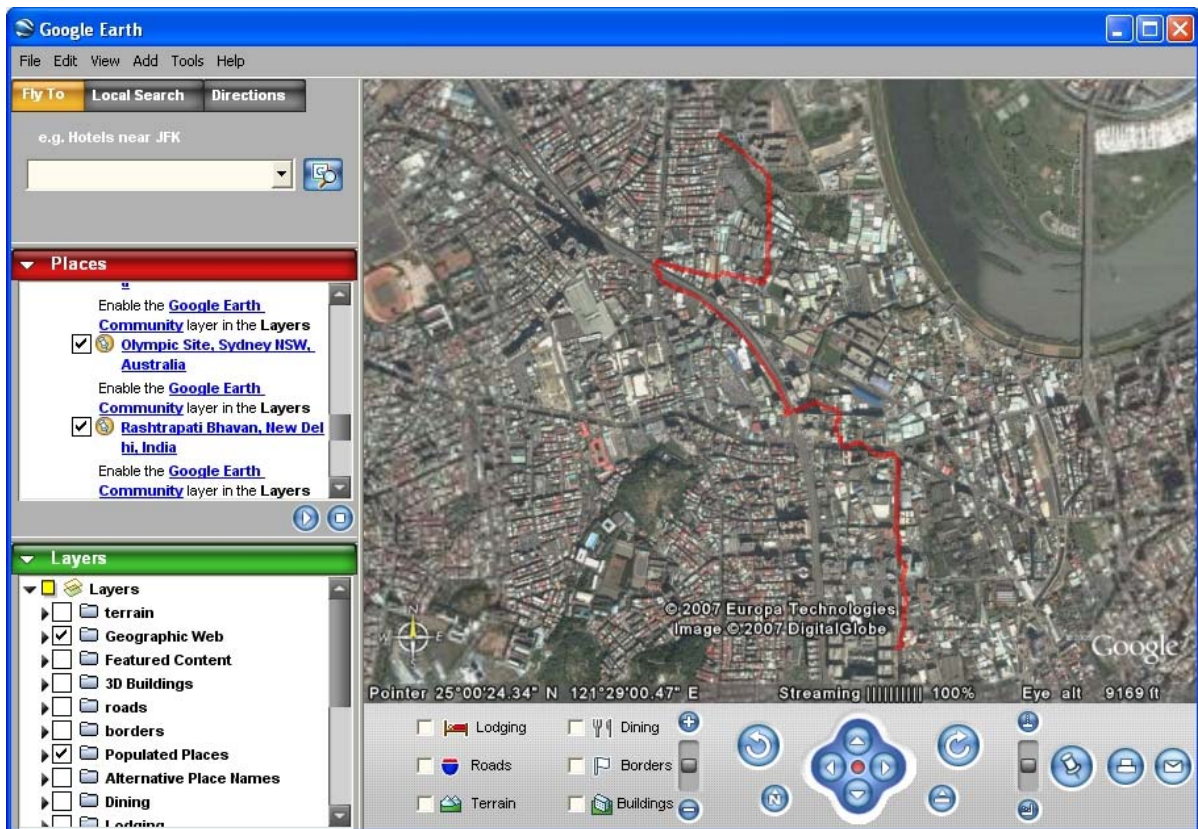
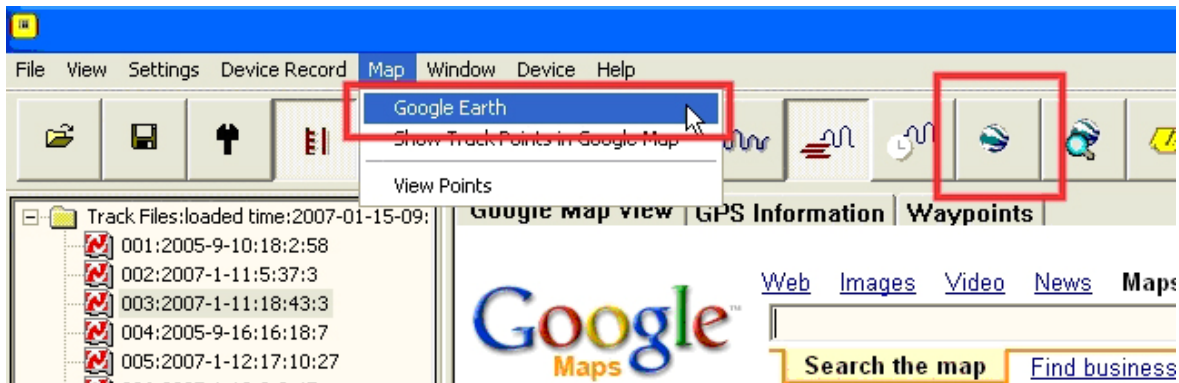
Cancel





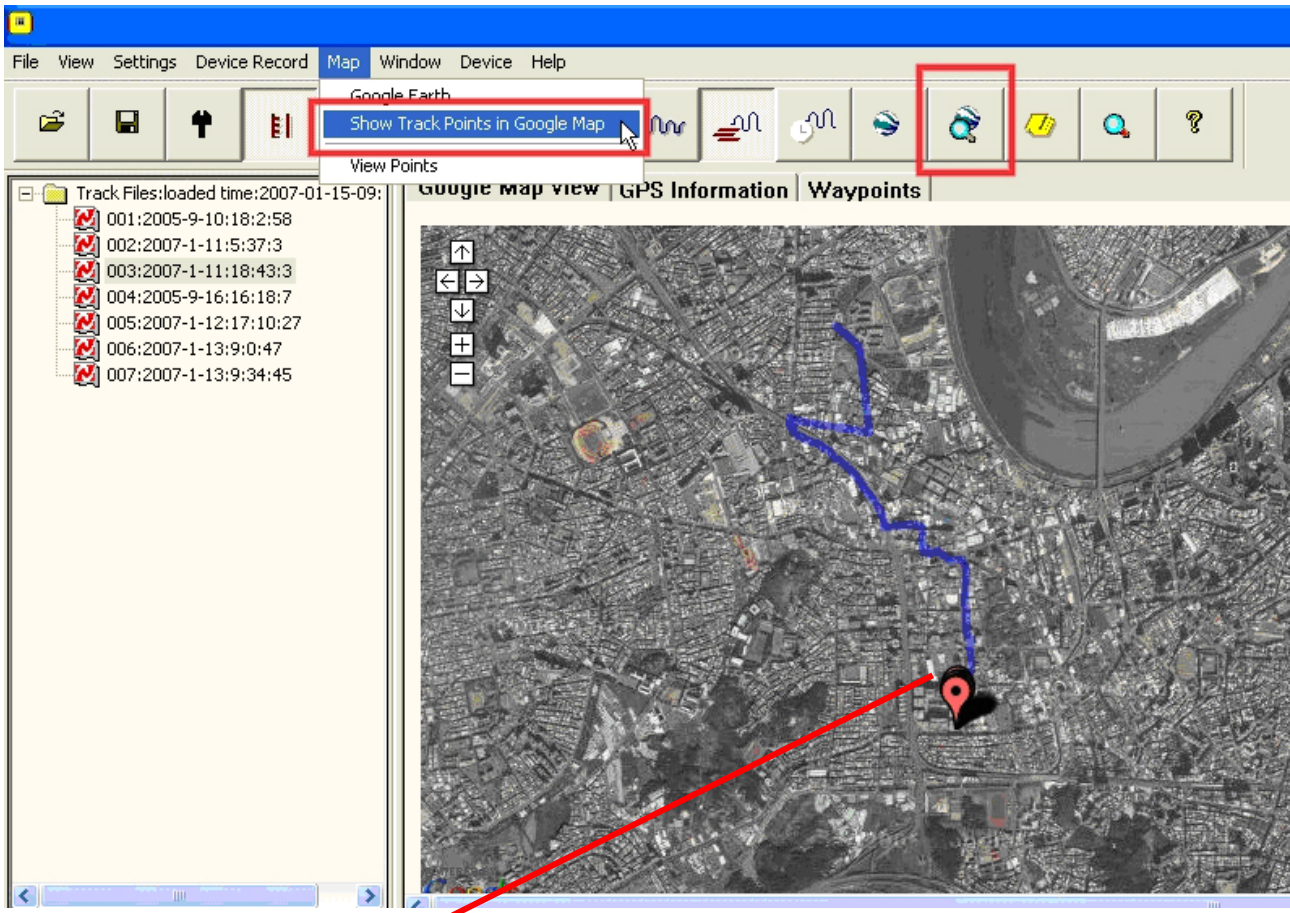
# View Track Points on Google Earth

Double click the **Track files** on **Tree bar**, and then click from menu bar **[Map] > [Google Earth]**, or press the **Export to Google Earth** button on tool bar. The **Track points** will be shown on **Google Earth**. (This feature requires **Google Earth** installed on the system.)



# View Track Points on Google Maps

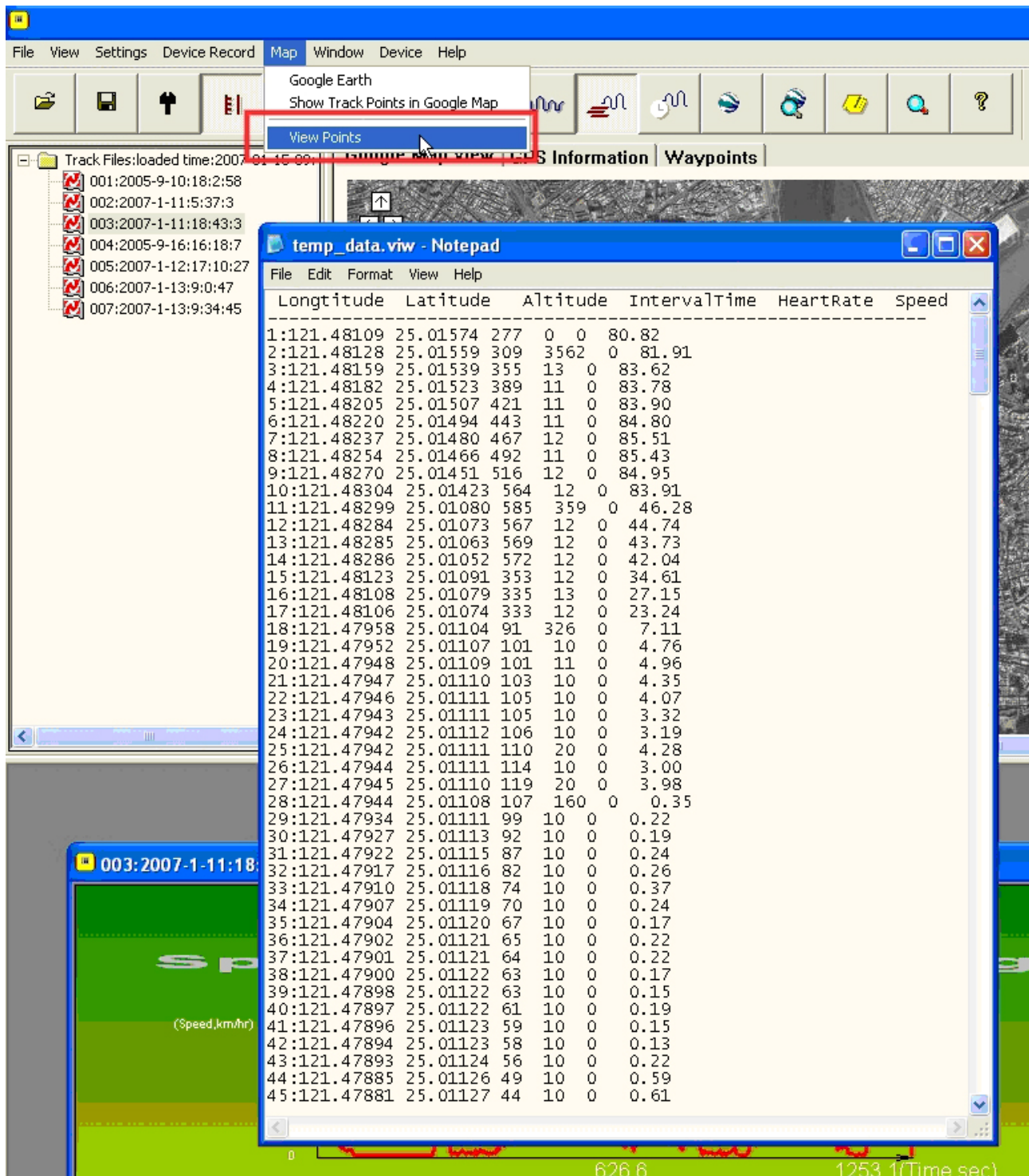
Double click the **Track files** on **Tree bar**, and then click from menu bar **[Map] > [Show Track Points in Google Map]**, or press the **Show track trace** button on tool bar. The **Track points** will be shown on **Google Maps**.



If you have downloaded the **waypoints** into **PC Utility**, the **waypoints** will also appear on **Google Maps**.

# View Detailed Track Point Information

Double click the **Track files** on **Tree bar**, and then click from menu bar **[Map] > [View Points]**. The **Track point** information will be shown on Notepad. The information includes "Longitude", "Latitude", "Altitude", "IntervalTime", and "Speed".



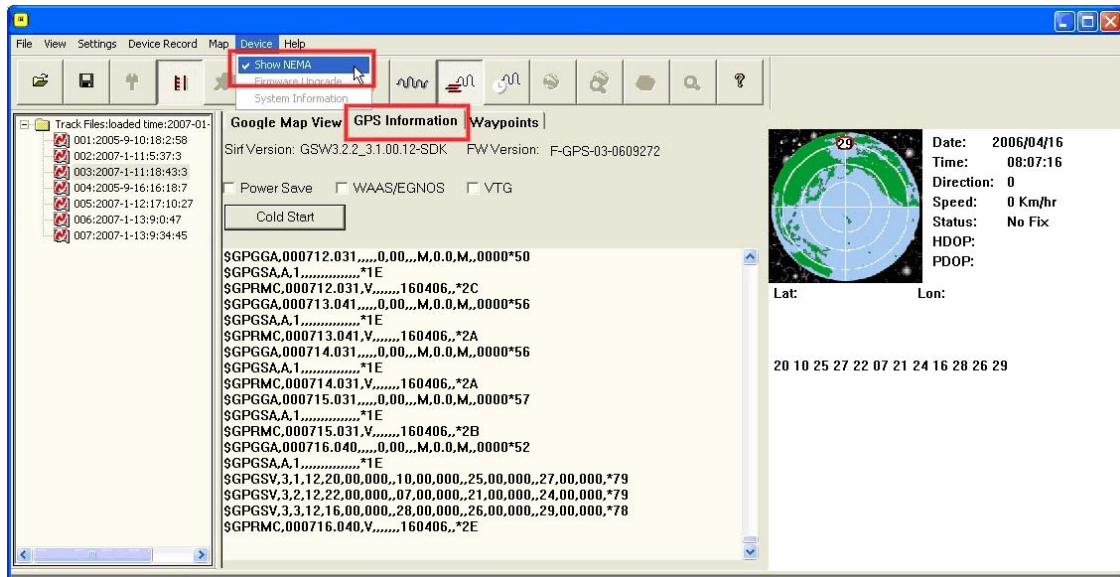
# View GPS Information

Connect CNS-GPS2 to your PC with the USB cable.

In CNS-GPS2, press **[MAIN MENU] > [NAVIGATION] > [TURN PC-GPS ON]**.

In **PC Utility**, click **[Device] > [Show NEMA]** from menu bar and switch to **"GPS Information"** tab. You will see the GPS information running.

Click **[Device] > [Show NEMA]** again to uncheck and stop this function.

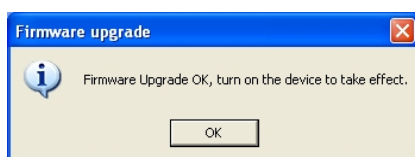
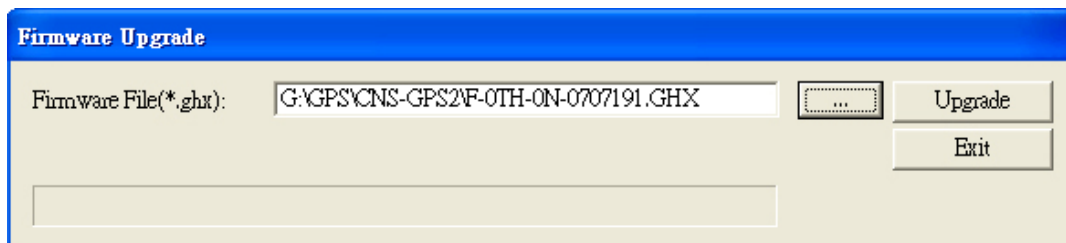


# Firmware Upgrade

Connect CNS-GPS2 to your PC with the USB cable.

In CNS-GPS2, press **[MAIN MENU] > [CONFIGURATION] > [SYSTEM UPGRADE]**.

In PC Utility, click **[Device] > [Firmware Upgrade]** from menu bar and browse for the firmware file (\*.GHX). Click on the **"Upgrade"** button to start firmware upgrade process.

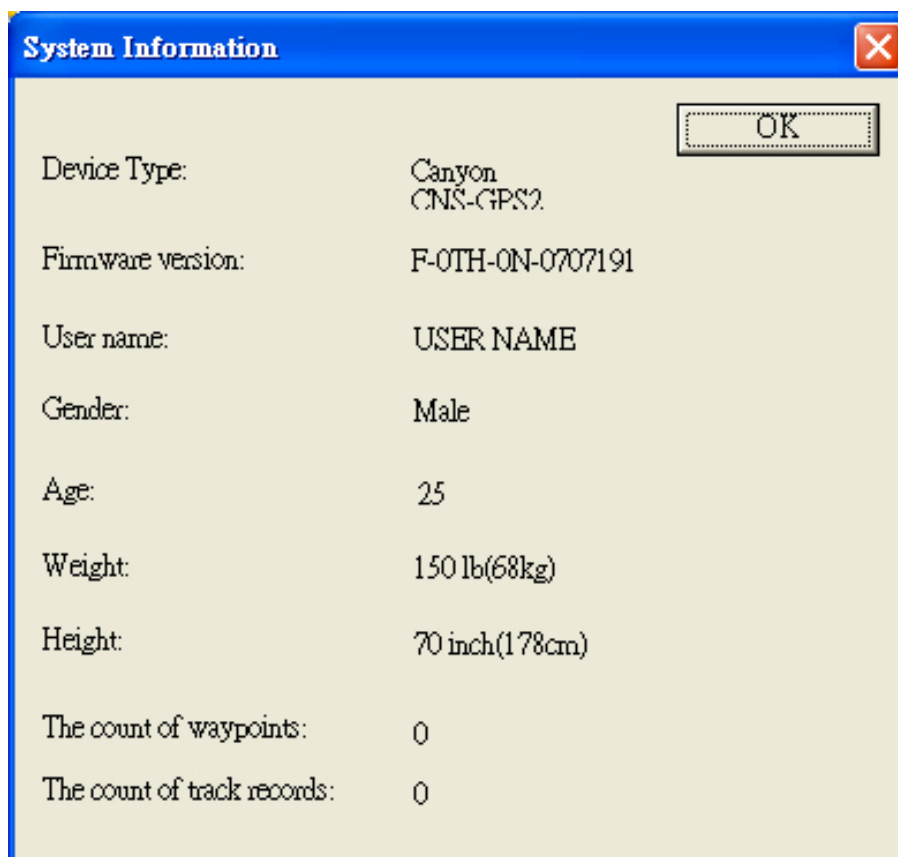
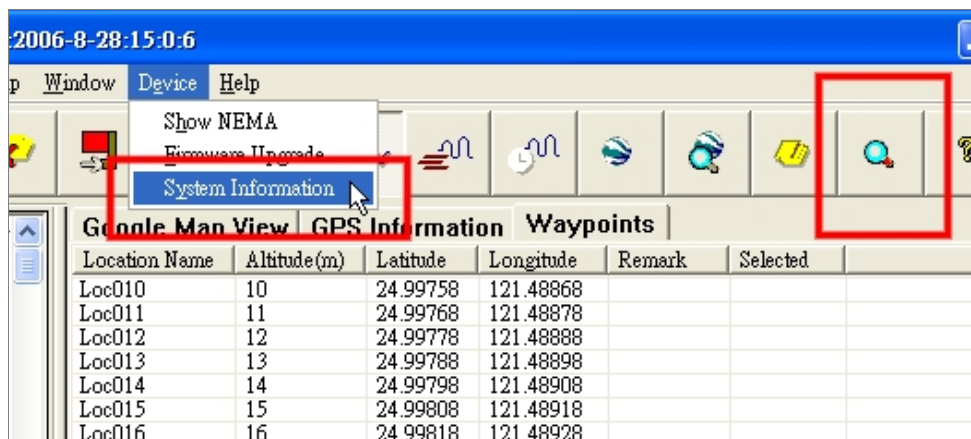


When firmware upgrade process is completed, restart the CNS-GPS2 for new firmware to take effect.

# Display the Information of CNS-GPS2

Connect CNS-GPS2 to your PC with the USB cable.

In PC Utility, click **[Device] > [System Information]** from menu bar or click the **System Information** button from tool bar. A window will be displayed showing the system information of CNS-GPS2.



# Maintenance

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## Take Care of Your CNS-GPS2

- Do not place your CNS-GPS2 in an extremely high or low temperature environment.
- Use a dampened cloth to clean your CNS-GPS2 or to wipe dry. Apply mild detergent solution to the cloth if necessary. Do NOT use strong chemical solvents, for it may damage the plastic surface.

# Glossary

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<b>Activity</b>	Refers to data being transmitted from CNS-GPS2. Activity is a history or log of events including properties such as time or distance updates.
<b>Waypoint</b>	Waypoints are sets of coordinates that identify a point in physical space. For the purposes of terrestrial navigation, these coordinates usually include longitude and latitude, and sometimes altitude (particularly for air navigation).
<b>Trackpoint</b>	The current moving trace.
<b>Navigation</b>	The act of determining the course or heading of movement.
<b>2D Operating Mode</b>	A two-dimensional GPS positioning technique that includes only horizontal coordinates. It requires a minimum of three visible satellites.
<b>3D Operating Mode</b>	A three-dimensional GPS positioning technique that includes horizontal coordinates, plus elevation. It requires a minimum of four visible satellites.
<b>Weak Signal</b>	GPS signal is weak (GPS is connected to satellite).
<b>Receiving</b>	Unable to locate satellite (GPS turned off or broken down).
<b>WAAS/EGNOS</b>	Wide Area Augmentation System / European Geostationary Navigation Overlay Service. These are two satellite-based systems that can be used to increase the accuracy of GPS positioning.
<b>IPX7</b>	An IPX7 standard indicates that the device is able to withstand accidental submersion in one meter of water/non-toxic liquid for up to 30 minutes.
<b>GMT</b>	Greenwich Mean Time (GMT) is a term originally referring to



mean solar time at the Royal Observatory, Greenwich in England. It is now often used to refer to Coordinated Universal Time (UTC) when this is viewed as a time zone, although strictly UTC is an atomic time scale which only approximates GMT in the old sense. It is also used to refer to Universal Time (UT), which is the astronomical concept that directly replaced the original GMT.

# Troubleshooting & FAQ

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## 1. Why can't CNS-GPS2 receive GPS signal?

Solution:

- (1). Exit the building to prevent metal interference.
- (2). Face GPS antenna (bottom of the device) towards up for better reception.

## 2. Why does it show "PC com port error" when downloading data?

Solution:

- (1). Please make sure that the USB driver is installed.
- (2). Please secure the USB connection between CNS-GPS2 and your PC.
- (3). Double click the **"CNS-GPS2 PC Utility"** icon from desktop to start the application.
- (4). From menu bar click **"Settings" / "Configurations"**, and click **"Scan COM Port"** button. COM port will be automatically scanned.