

GH-615B / GH-615M

User Manual

Version 1.9



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Thank you for purchasing GSat GH-615. We sincerely hope you to enjoy using this high technology GPS device. For fully understand the functions and features of GH-615, please read the user manual before you get started.

Introduction and Features

Introduction

Globalsat GH-615 is a stylish, fully-sealed, waterproof, wrist type GPS device with the features of "Tracking", "GPS positioning", "Time alert", "Heart rate monitor (GH-615M only)", etc. The GPS navigation function can locate and track points anywhere you go. GH-615 is powered by SiRF Star III high performance chip that can fix your position even with a weak signal status. It is adopted for people who exercise for broad kinds of outdoor sports, such as Jogging, Running, Biking, Snow Skiing, etc. It also can be used as a GPS receiver by USB interface.

Features

The main features of GH-615:

- Built-in SiRF Star III high performance GPS chipset. Excellent sensitivity for position fixing even with a weak signal status.
- Built-in rechargeable high capacity lithium-ion battery.
- Large LCD for easy reading.
- WAAS/ ENGOS support.
- Waterproof, rigid design to avoid careless damage.
- Records all history of self-training by defined day.
- GH-615 series can be used as a GPS receiver with an easy setup.
- The firmware of the GH-615 can be upgraded through PC.
- Navigation. Tracking your route as crumb method; marking and saving your tracking points by a special algorithm; finding specified locations.

Specifications

Model		GH-615B	GH-615M
Heart Rate Monitor:		NO	YES
Number of Waypoints:		100	
Tracking point:		60000	
GPS Chipset SiRF Star III	Frequency:	L1, 1575.42MHz	
	C/A code:	1.023 MHz chiprate	
	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	

Heart Rate Monitor (HRM)		
GH-615M (HRM Receiver on PCBA)	Operating Voltage	2.4V~3.6V
	Oscillator	Crystal 32.768KHz
	Standby current	<0.5 uA
	Operating current	<15 uA (without external circuit)
GH-615M (HRM Chest-belt)	Operating Voltage	2.4V~3.6V
	Oscillator	Crystal 32.768KHz
	Standby current	<0.5 uA
	Operating current	<100 uA
	Transmission current	<6 mA
	Battery life	1300 hours
	Battery type	CR2032
	Transmission frequency	5 KHz
	Transmission distance	>0.8 meter
	Transmission signal type	Analog signal without coded
Battery life: (Test condition: 1. Temp: 25°C 2. GPS non fix)	GPS on; HRM & Backlight off	11 hours
	GPS, HRM & Backlight off	25 hours
	HRM on; GPS & Backlight off	25 hours
	GPS, HRM on; Backlight off	11 hours
	GPS, HRM, Backlight on	9 hours
Connect to PC Interface:	Probe Pin to USB interface	
Charger:	Mini USB (333 mA), up to 3 hours for full charge.	
Certification:	FCC, CE, IPX7	

Hardware overview

Package contents

Check the contents of your GH-615 package. If you find any accessories are missing or appear damaged, please contact your dealer immediately.



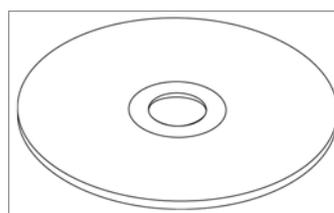
GH-615



Heart Rate Monitor (only for GH-615M)



USB Cable



CD-ROM



Screwdriver



Extended watchband

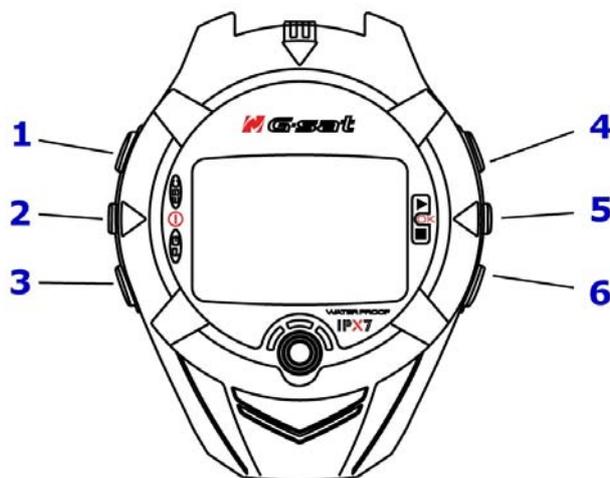


Quick Guide



AC adapter (optional)

Button introduction



	Button	Description
1.	ESC	In Menu mode, press ESC button to escape from the current page and go back to the previous page. Press ESC button to split a lap when timer is running.
2.	Power	Press 2 seconds to turn on/off GH-615. When GH-615 is on, quickly press this button will turn on/off the backlight. Press and hold this button for 14 seconds to do hardware reset if the system is halted.
3.	PG (page)	Switch between the screens 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 enter 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



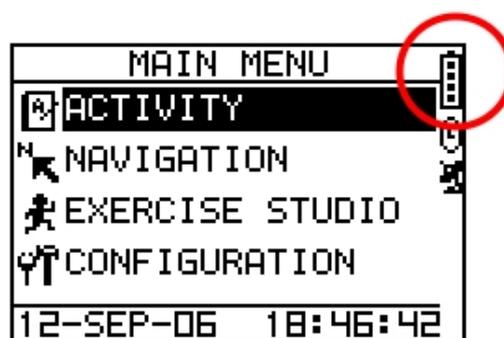
The GPS antenna is located in the lower part of the device. Let it face to the sky for a better reception.

Charge the GH-615

GH-615 operates by a built-in Li-ion rechargeable battery. A battery icon shown on the right top corner of screen indicates the remaining battery power.

To charge the battery:

1. Connect one end of USB cable with your GH-615 and the other end with the AC adapter or USB port on PC.
2. It may need about 3 hours to fully charge the battery.





Connect the USB cable as shown on left figure.

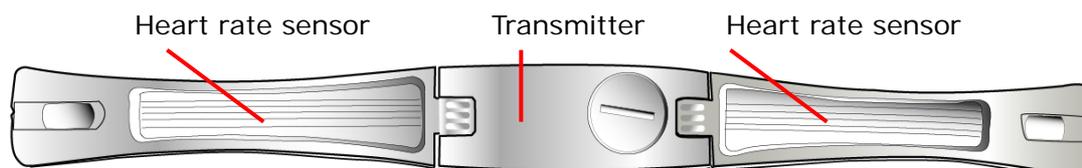


Wear the Heart Rate Monitor

(only for GH-615M)



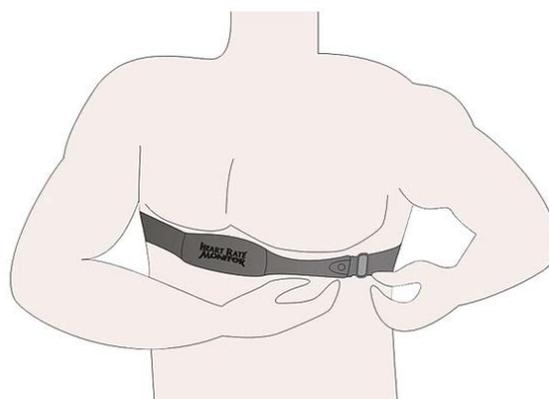
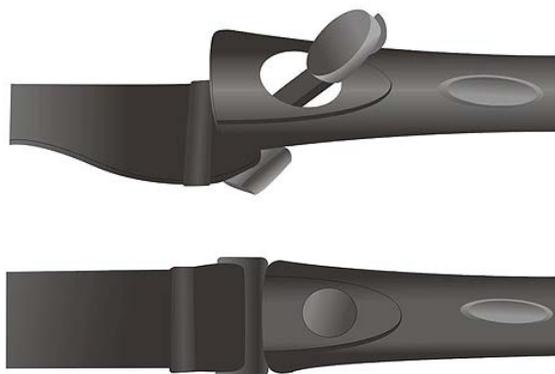
Outer side



Inner side.

Cling this side to your skin. You can wet the sensor to obtain a better reception of your pulse.

1. Put one end of the strap through the slot of the heart rate monitor first.
2. Wrap the heart rate monitor and strap around your chest. Adjust the heart rate monitor to be at the center of your chest.
3. Adjust the strap to fit your chest and make it tight enough to prevent dropping while you are jogging.
4. Put another end of the strap through the slot of the heart rate monitor to finish the wearing.
5. Remember to turn on the heart rate monitor function in your GH-615.
[MAIN MENU] > [CONFIGURATION]
> [SETTINGS] > [HEART MONITOR]
> [HEART RATE MONITOR] > ON.



Getting Started

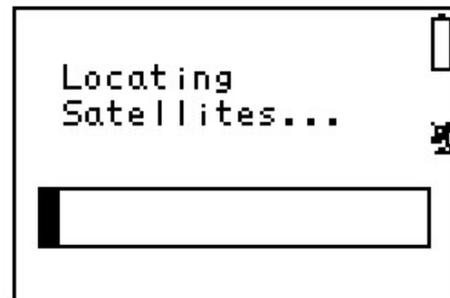
Starting up your GH-615

Press the Power button for 2 seconds to turn on the device. You will see the welcome screen displayed.

Allow the GH-615 a short time to track satellites for the first time you use it.

Take your GH-615 to the outdoor open space with a clear view to the sky and it will be easy to acquire satellite signal with a few seconds. If the device can't get 3D fixed, you can still press PG button to exit the Locating screen.

To turn off your GH-615, press the Power button for 2 seconds.



The battery icon indicates the remaining battery power.

The timer icon is displayed when you start the timer. If you stop the timer, the icon will be flashing. If it is auto paused, you will see the  icon flashing.

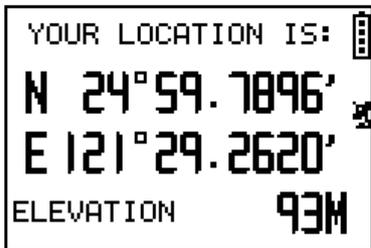
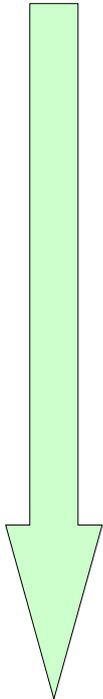
The satellite icon indicates whether the GPS is fixed or not. If the icon is flashing, the GPS is not fixed. If the icon is not flashing, the GPS is fixed. If you turn GPS off, the icon will disappear.

Change the Mode

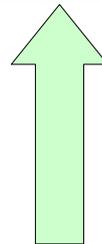
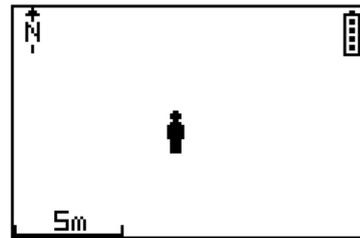
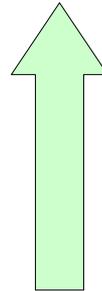
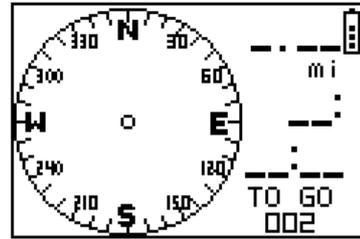
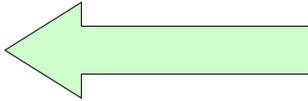
Press PG button to switch between different modes



Menu mode

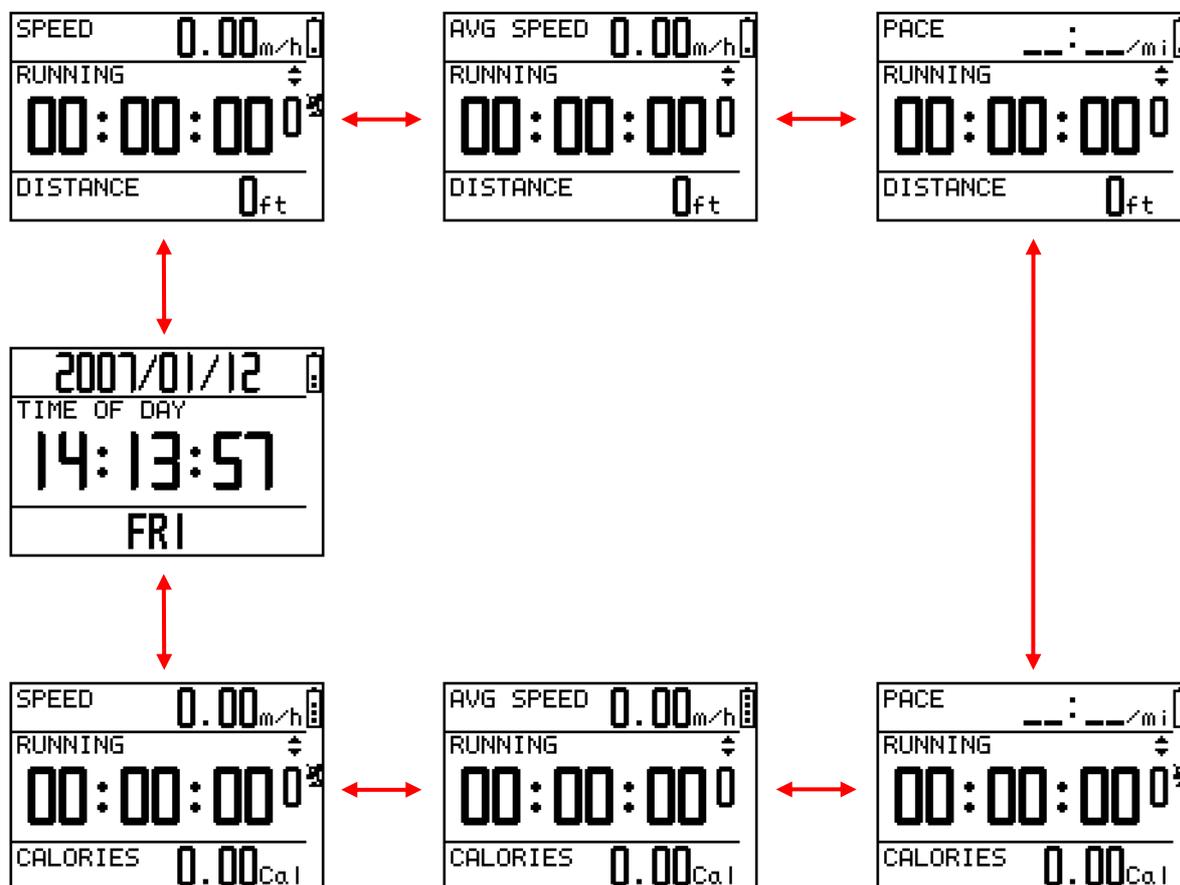


Location mode



Speedometer mode

In Speedometer mode, press Up or Down button to switch between different views.



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 how far you have traveled.

Calories: shows how many calories you have burned.

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

Menu Structure - Main Menu

This diagram presents all the available menu options for your quick look up.

ACTIVITY	ACTIVITY INFO			
	MEMORY CAPACITY			
	DELETE ALL			
NAVIGATION	ADD MAP MODE / REMOVE MAP MODE			
	SAVE WAYPOINT			
	FIND WAYPOINT	LIST ALL		
		DELETE ALL		
	TURN PC-GPS ON / TURN PC-GPS OFF			
	RETURN TO START / STOP GOTO / STOP TRACK BACK / STOP ROUTE			
	ROUTES	CREATE NEW		
		LIST ALL		
		DELETE ALL		
GPS INFO				
EXERCISE STUDIO	AUTO HOLD	AUTO TIMER PAUSE		
	ALERTS	TIME/DIST ALERT		
		SPEED ALERT		
		HEART RATE ALERT		
	CALORIES SETTING	SPORT TYPE		
CONFIGURATION	SETTINGS	SETUP TIME	TIME ZONE	
			DAYLIGHT SAVING	
			TIME FORMAT	
		SETUP GPS	GPS	
			WAAS/EGNOS	
		SET UNITS	UNITS	
			SPEED UNITS	
		SET DISPLAY	BACKLIGHT	
			CONTRAST	
		SET SYSTEM	BEEPER	
			LANGUAGE	
		DATA RECORDING	RECORD DATA POINTS	
		USER PROFILE (username, gender, age, weight, height)		
		DATA LINK TO PC		
		FACTORY RESET		
ABOUT GH-615				
SYSTEM UPGRADE				

Activity

Display/Delete the training data

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

1. Use Up and Down button to scroll to the item you wish to display and press OK 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?	

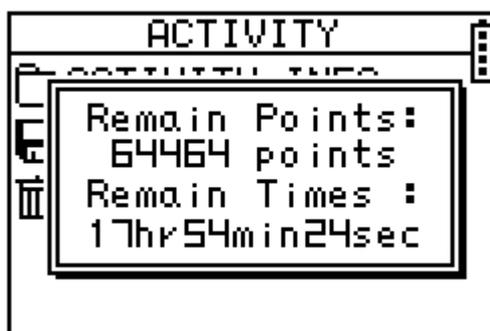
Information items are displayed:

- Date and Time.
- **Total** distance of this training.
- **Total** calories you have burned.
- **Total** time of this training.
- **Average** speed of this training.
- **Fastest** speed of this training.
- **VIEW?** Display this training data on the screen.
- **TRACK BACK?** You can track back to the BEGIN point or END point of this training route.
- **DELETE?** You can delete this training data.

Memory capacity

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

1. Display the remaining memory capacity.
2. You will see how many points left and the remaining time you can use. The remaining time depends on the period of your record setting. (See [main menu] > [configuration] > [settings] > [data recording] > [record data points].)



Delete all training data

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

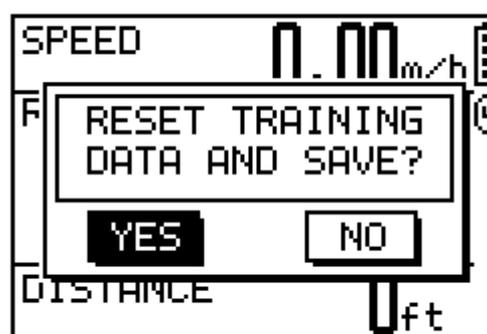
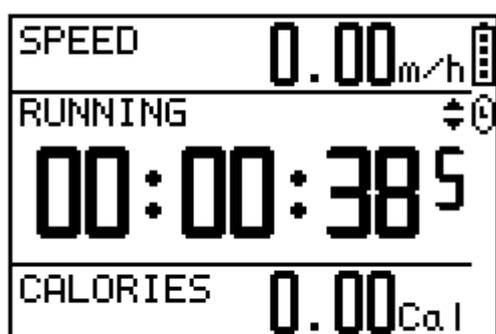
You can delete all the training data stored in the device.



Navigation

Record the route when you are jogging

1. Press PG button to switch to Speedometer mode.
2. Press OK button to start the stopwatch.
3. Use Up and Down button to scroll to different view for the information you need.
4. Press OK or ESC button to stop the stopwatch. When the counting is stopped, press ESC will ask you whether you want 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]

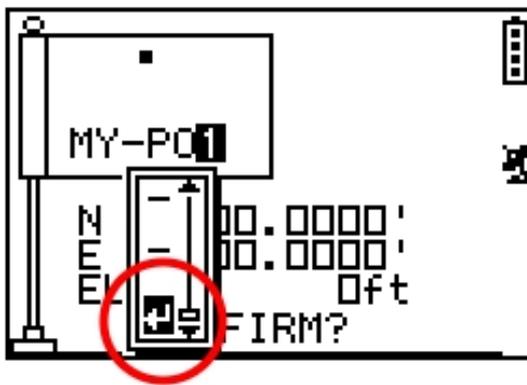
You can use this feature to display or not display the map mode.

However, while the Map Mode is off, and you execute "Return to start" or "GOTO" a waypoint, the Map Mode will be turn on again.

Save a Waypoint

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

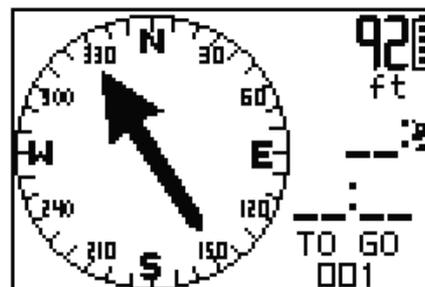
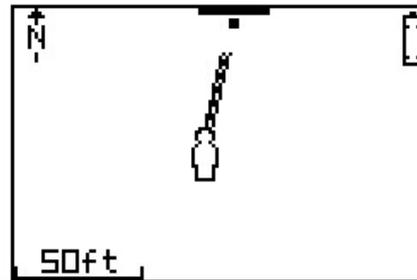
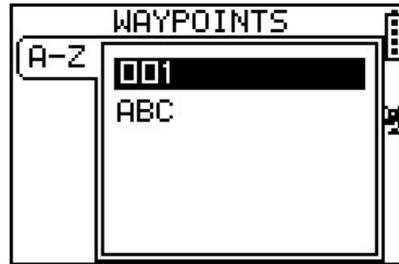
1. You can save the current position. If the GPS position is fixed, it shows the longitude, latitude and elevation on the screen. If the GPS position is not fixed (no GPS signal is received), the value will be zero.
2. Use Up and Down button to scroll to the item you wish to modify and then use the OK button to select and confirm.
3. When you finish the modification, input a "enter sign" character or press the ESC button to exit.
4. Move highlight to "CONFIRM?" and press OK button. The location data will be stored in the memory of GH-615.



Find and Go to a Waypoint

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

1. Use Up and Down button to scroll to the Waypoint you wish to go to and press OK.
2. Highlight "GOTO?" item and press OK.
3. You will see your current position and destination point on the screen, and those nearby waypoints are also displayed. Press Up and Down button to zoom out and zoom in the map view.
4. Press PG button display the distance and time for you to reach destination on the right part of screen. The direction of destination waypoint is shown by the arrow sign of the compass.
5. To stop the GOTO, press [MAIN MENU] > [NAVIGATION] > [STOP GOTO].



Delete a Waypoint

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

1. Use Up and Down button to scroll to the Waypoint you wish to delete and press OK.
2. Highlight "DELETE?" item and press OK.
3. This waypoint will be deleted immediately.

Delete all Waypoint

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

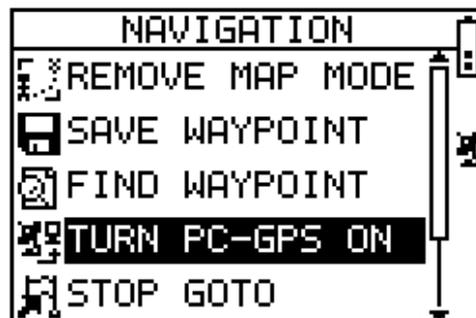
1. A confirmation dialog box will appear.
2. Use Up and Down button to highlight "YES" and press OK.
3. All waypoints in memory will be deleted.



Turn PC-GPS on/off

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

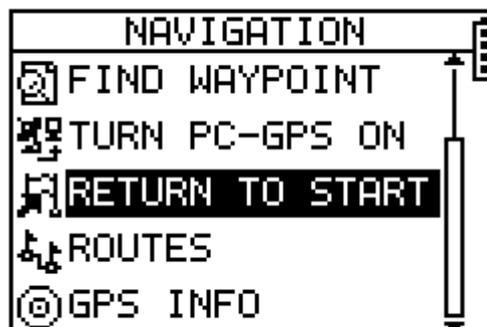
1. You can use GH-615 as a G-mouse by connecting it to your PC.
2. Use the USB cable to connect GH-615 with your PC. Turn PC-GPS function on.
3. Start your PC software; select the correct COM Port and set Baud rate to 57600.
4. The G-mouse function is ready for your use.
5. When the GPS function is not needed, you can turn it off to save the battery power and extend more battery life.



Return to start

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

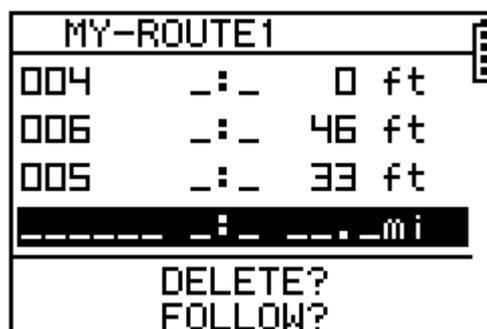
1. You can use this feature to navigate you back to the start point of the latest saved training data.
2. The navigation screen is shown and you can follow the direction of arrow to go back to the start point.
3. If you want to stop the navigation, press [MAIN MENU] > [NAVIGATION] > [STOP GOTO].



Create a route

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

1. You can add the waypoints to create your own route. Press OK button to insert a waypoint.
2. Highlight a waypoint and press OK button for deleting this waypoint or insert another waypoint in above.
3. In the first line of the screen, you can edit the name of this route.
4. When you are 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 route you want to navigate, and select "FOLLOW?". You will be asked which point (start point or end point) to navigate. You will see your current position and destination point on the screen, and those nearby waypoints are also displayed. Press Up and Down button to zoom out and zoom in the map view.
2. Press PG button display the distance and time for you to reach destination on the right part of screen. The direction of destination waypoint is shown by the arrow sign of the compass.
3. If you want to stop the navigation, press [MAIN MENU] > [NAVIGATION] > [STOP ROUTE].
4. Select the route you want to delete, and select "DELETE?". This route will be deleted immediately.

Delete all routes

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

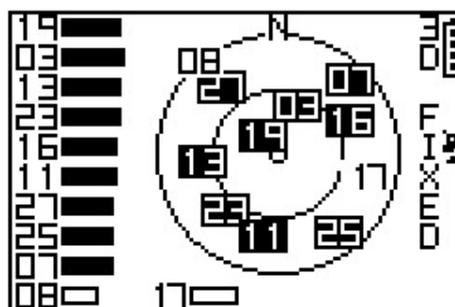
1. A confirmation dialog box will appear.
2. Use Up and Down button to highlight "YES" and press OK.
3. All routes data in memory will be deleted.



GPS Info

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

Here you can see the positioning status of how many satellite signals are obtained and their signal strength.



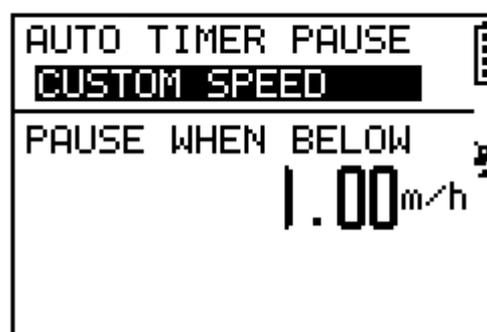
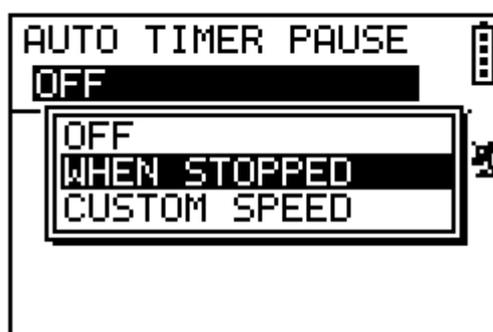
Exercise Studio

The Exercise Studio allows you to setup the pause, alarm and sport type for GH-615.

Auto Hold

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

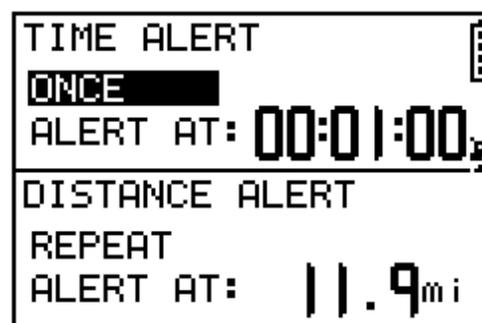
1. The Auto Hold function allows you to pause the timer automatically when you stop moving or your speed falls below a certain value.
2. When the timer is paused, the data is not recorded. Thus the average speed and calory calculation could be more accurate.



Alerts — Time / Distance Alert

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

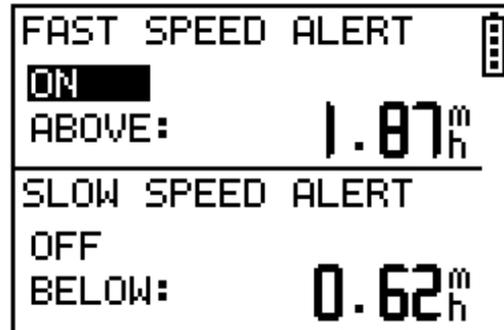
1. Use Up and Down button to select the item and press OK to modify it.
2. You can set the alarm to sound once when the specified time is reached, or repeat to sound on every specified time, or turn it off.
3. You can set the alarm to sound once when you reached the specified distance, or repeat to sound on every specified distance, or turn it off.



Alerts — Speed Alert

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

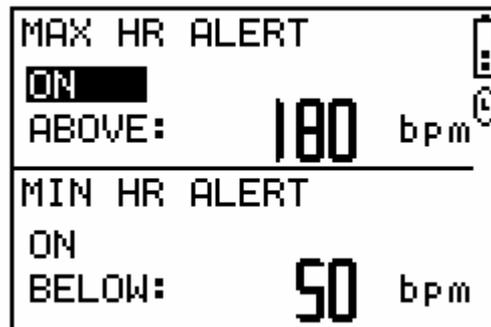
1. Use Up and Down button to select the item and press OK to modify it.
2. You can set the alarm to sound when your speed is above or below a specified value.



Alerts — Heart Rate Alert

[MAIN MENU] > [EXERCISE STUDIO] > [ALERTS] > [HEART RATE ALERT]

1. Use Up and Down button to select the item and press OK to modify it.
2. You can set the alarm to sound when your heart rate is above or below a specified value.



Set Sport Type for calories calculation

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

1. You can select sport type from "Walking", "Hiking", "Running", "Biking" or "By Time".
2. System will calculate the calories consumption depending on the specified sport type.

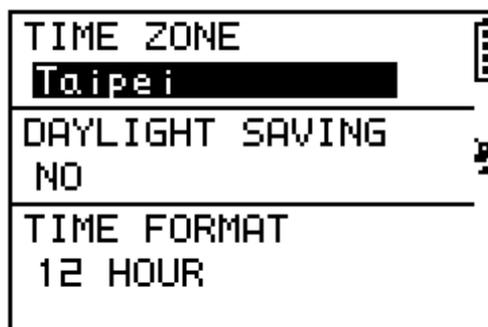


Configuration

Setup Time

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

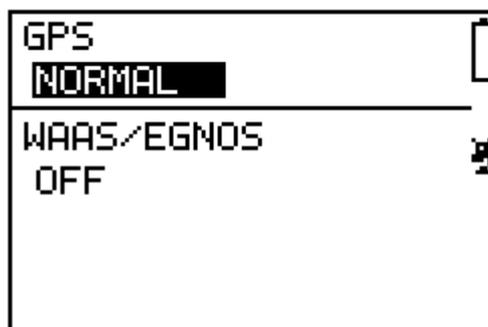
1. Use Up and Down button to scroll to the item and press OK to modify it.
2. You have to select your local time zone and enable Daylight Saving if necessary, so system will display the correct time for you.
3. You can also set the time to display in the 12 Hour or 24 hour format.
4. Press ESC button to return to previous page or PG button to go back to main menu



Setup GPS

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

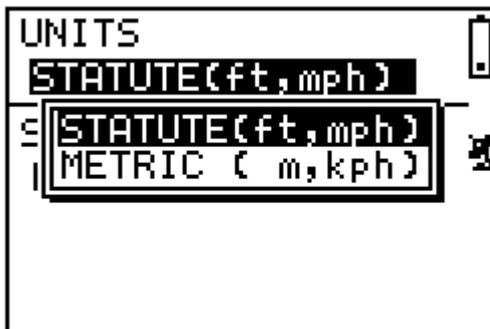
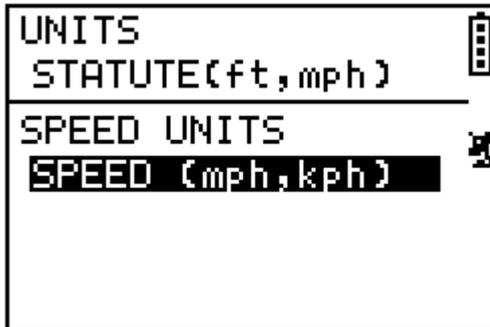
1. The GPS function can be turned off for saving battery power. If the battery power is pretty low, the system will also ask you if you want to turn off the GPS function.
2. You can turn on/off the "WAAS/EGNOS" feature.



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 turn off after a period of time once you press Power button to activate the backlight.



Adjust screen contrast

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

1. Use Up and Down button to adjust the contrast of the screen display.
2. When you are satisfied with the contrast, press OK button to accept it.



Setup beeper

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

You can set the Beeper to sound or to be silent according to your need.



Setup language

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

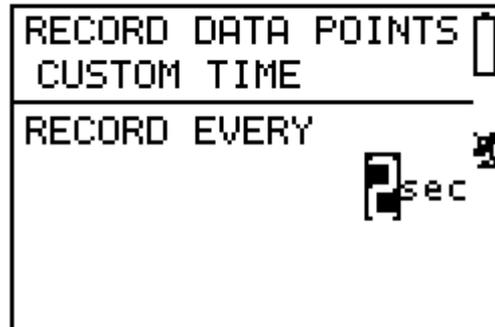
There are 5 different languages of User Interface, including "English", "German", "French", "Italian" and "Spanish".



Set Record Point

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

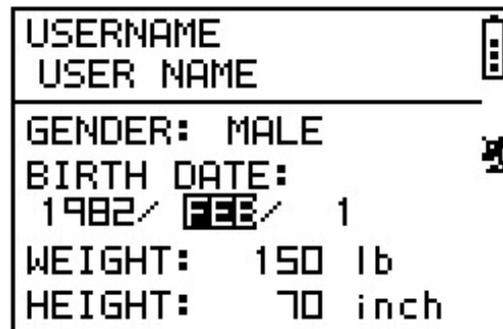
1. System is default to record one point for every second. This will create the most accurate record for your training activity. However, you can set a different interval to record the points.
2. Set the longer interval means less data in a fixed period of time. But you can use the device for a longer time.



Setup user profile

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

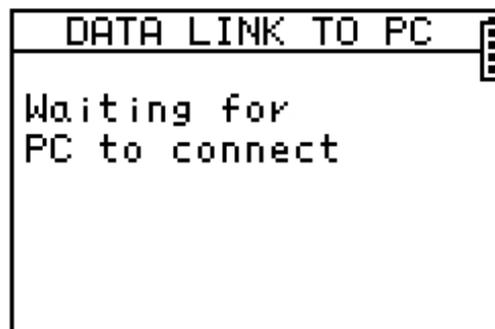
1. You can input your personal information in the user profile.
2. The data fields include "username", "gender", "birth date", "weight" and "height".
3. The system will do the calories calculation base on the information you provide. Please input the correct value.



Transfer data to PC

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

1. You can transfer the training data from GH-615 to your PC.
2. Refer to "PC Utility" chapter for more details.



Factory reset

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

This feature allows you to restore the GH-615 back to factory default status. In another words, the training data, waypoint, and user profile will be deleted.



About GH-615

[MAIN MENU] > [CONFIGURATION] > [ABOUT GH-615]

Display the firmware version information.



System upgrade

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

1. Allow you to upgrade the firmware of GH-615.
2. If you want to cancel the upgrade process, press Power + ESC button at the same time.



PC Utility

Install USB driver

The USB driver is needed when you connect the GH-615 to PC. If the driver is not installed, your PC could not recognize GH-615.

1. Insert the CD into the CD-ROM drive, and the Autorun will start automatically.
2. Click on the "USB Driver" button to install the "PL-2303 USB-to-Serial" driver to your PC.
3. Follow the instruction to complete the installation.



Install PC Utility

You can use PC Utility to download the training data from GH-615 to your PC.

1. Insert the CD into the CD-ROM drive, and the Autorun will start automatically.
2. Click on the "PC Utility" and follow the instruction to complete the installation.



System requirement

For better performance, the following system requirement is recommended for GH-615 PC Utility:

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

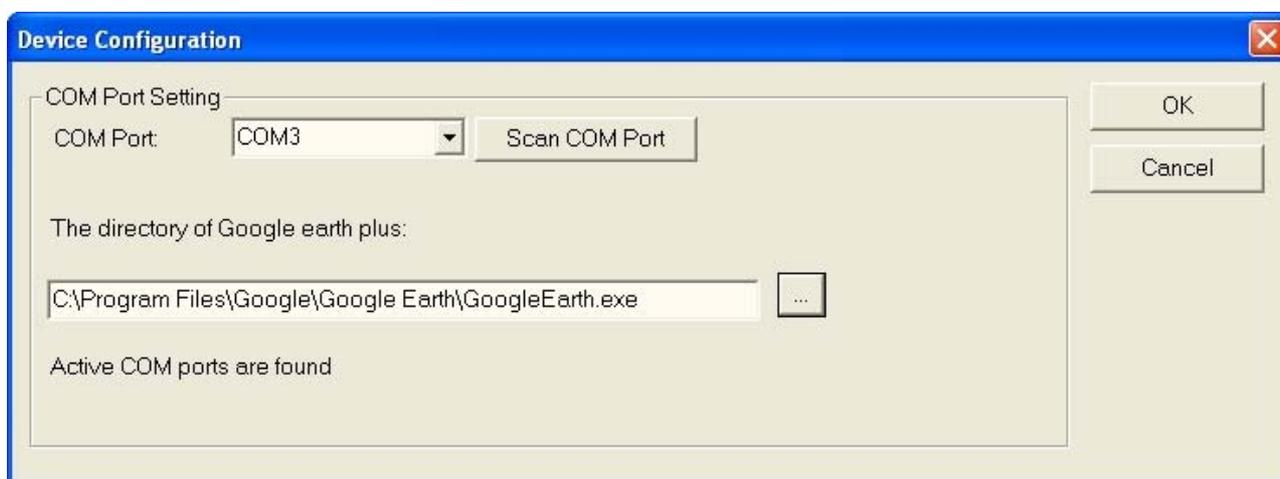
Run the PC Utility

You can run the PC Utility by double click on the "GH-615 PC Utility" icon from desktop. Or click from **Start > All Programs > GlobalSat Technology Corporation > GH615 PC Utility**.



Scan COM port

When you connect GH-615 to PC, click [Settings] > [Configuration] and click "Scan COM Port" button to set the correct COM port.



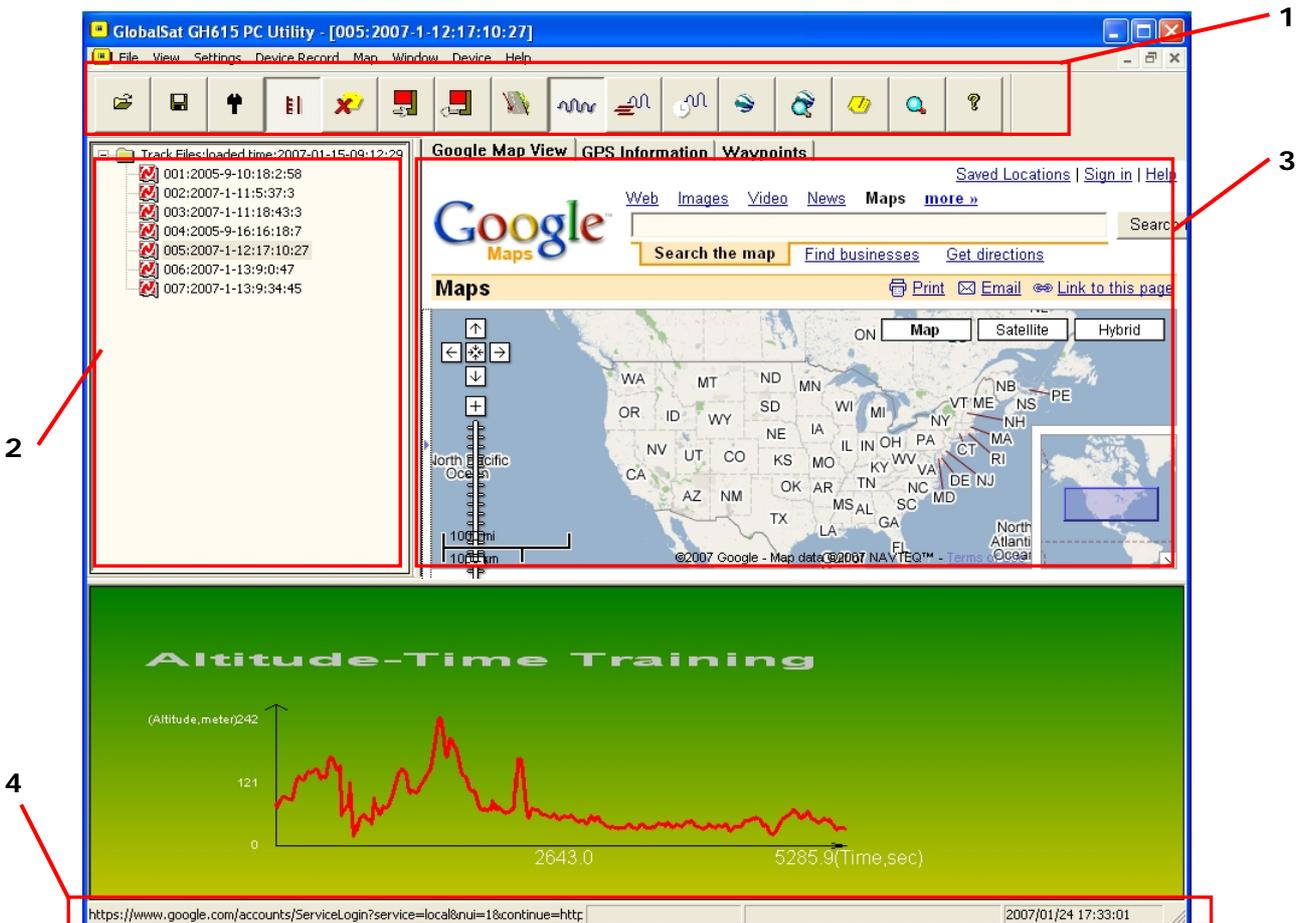
If you want to view your Track points in Google Earth, you have to manually specify the folder which Google earth program installed and its program file name.

For example, "C:\Program Files\Google\Google Earth\GoogleEarth.exe"

The newer version of Google Earth may have different installation path or program file name. If you do not specify the directory, Google Earth may not start automatically from the GH-615 PC Utility.



From menu bar, click View to display 4 working areas of PC Utility.



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

Menu Structure

File	Open	Open a training file.
	Save	Save training information to a ghd format file.
	Export	Export training information to KML, CSV, Text, GPX or NEMA RMC format.
	Preference	Specify the folders for saving different format of files when you export the training information.
	Exit	Quit the application, you will be asked to save the document.
View	Toolbar Status Bar Tree Bar GPS Information	Show or hide these working areas.
	Metric System	Set the application to use the Metric system or Statute system.
	Configuration	To scan the COM port of the device.
	Device Record	<p>Delete All Trackpoints : Delete all activity info from GH-615. It's the same as you press [MAIN MENU] > [ACTIVITY] > [DELETE ALL] in GH-615.</p> <p>Download Trackpoints From Device : Download Trackpoints(training record) from GH-615 to PC.</p> <p>Download Waypoints From Device : Download Waypoints from GH-615 to PC.</p> <p>Upload Waypoints To Device : Upload Waypoints from PC to GH-615.</p> <p>Upload Current Trackpoints To Device : Upload current trackpoints from PC to GH-615.</p> <p>Edit Waypoint : Edit waypoint's name, altitude, latitude and longitude.</p> <p>Select / Unselect Waypoint : Select or unselect one waypoint.</p> <p>Select All Waypoints : Select all waypoints.</p> <p>Unselect All Waypoints : Unselect all waypoints.</p> <p>Show Altitude-Time Curve : Click this button, and double click on the Track File from the Tree Bar. The Altitude-Time Curve will be shown on below window.</p> <p>Show Speed-Time Curve : Click this button, and double click on the Track File from the Tree Bar. The Speed-Time Curve will be shown on below window.</p> <p>Show HeartRate-Time Curve : Click this button, and double click on the Track File from the Tree Bar. The HeartRate-Time Curve will be shown on below window.</p>

Map	Google Earth : Display the Track points in Google Earth.
	Show Track Points in Google Maps : Display the Track points in Google Maps.
	View Points : Display the point information on Notepad.
Device	Show NEMA : Show GPS information.
	Firmware Upgrade : Upgrade firmware of GH-615.
	System Information : Display the System Information of GH-615.
Help	About GlobalSat GH615 : Display program information, version number and copyright.

Download Data from GH-615

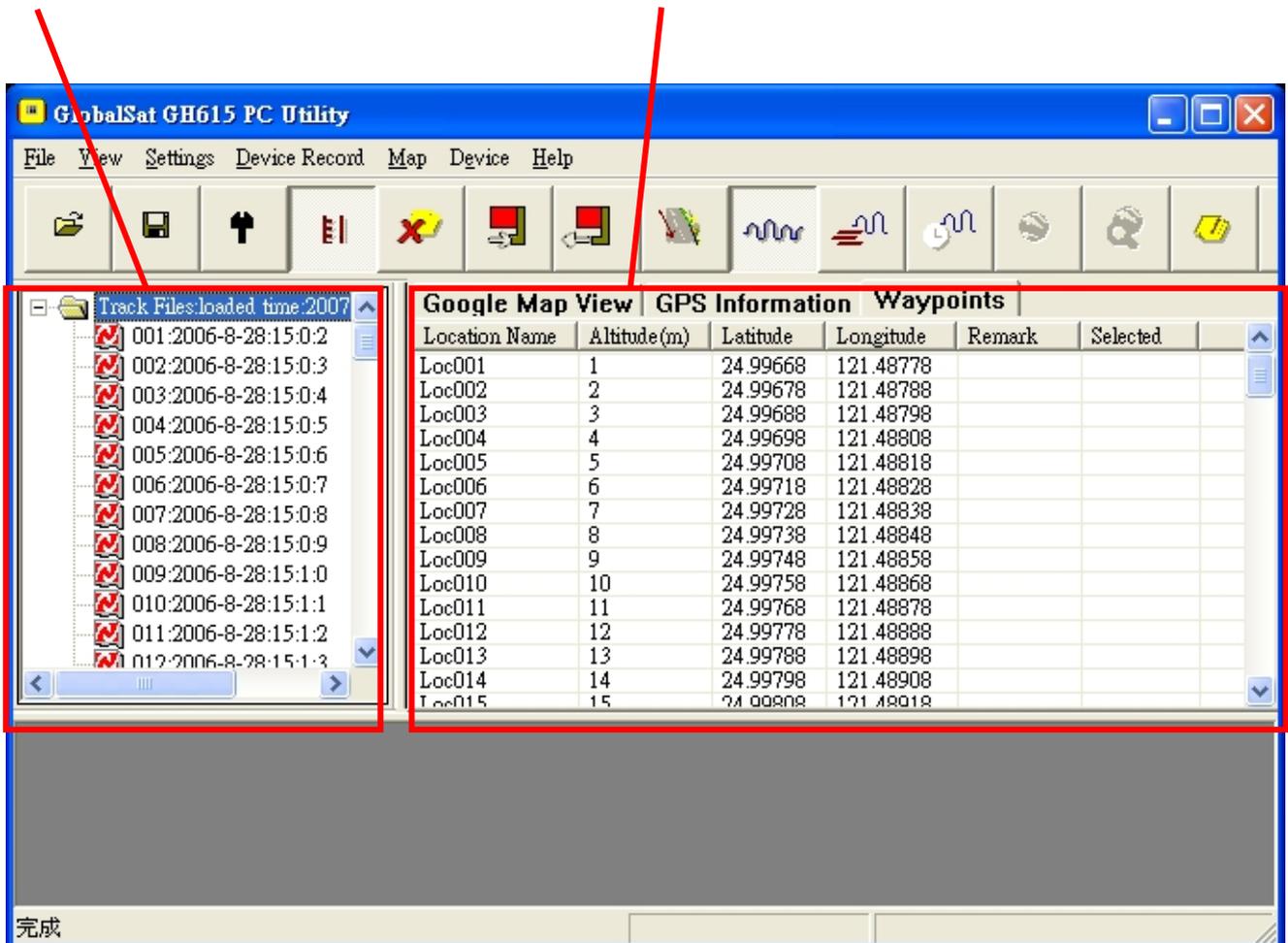
Connect GH-615 to your PC with the USB cable.

In GH-615, 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.



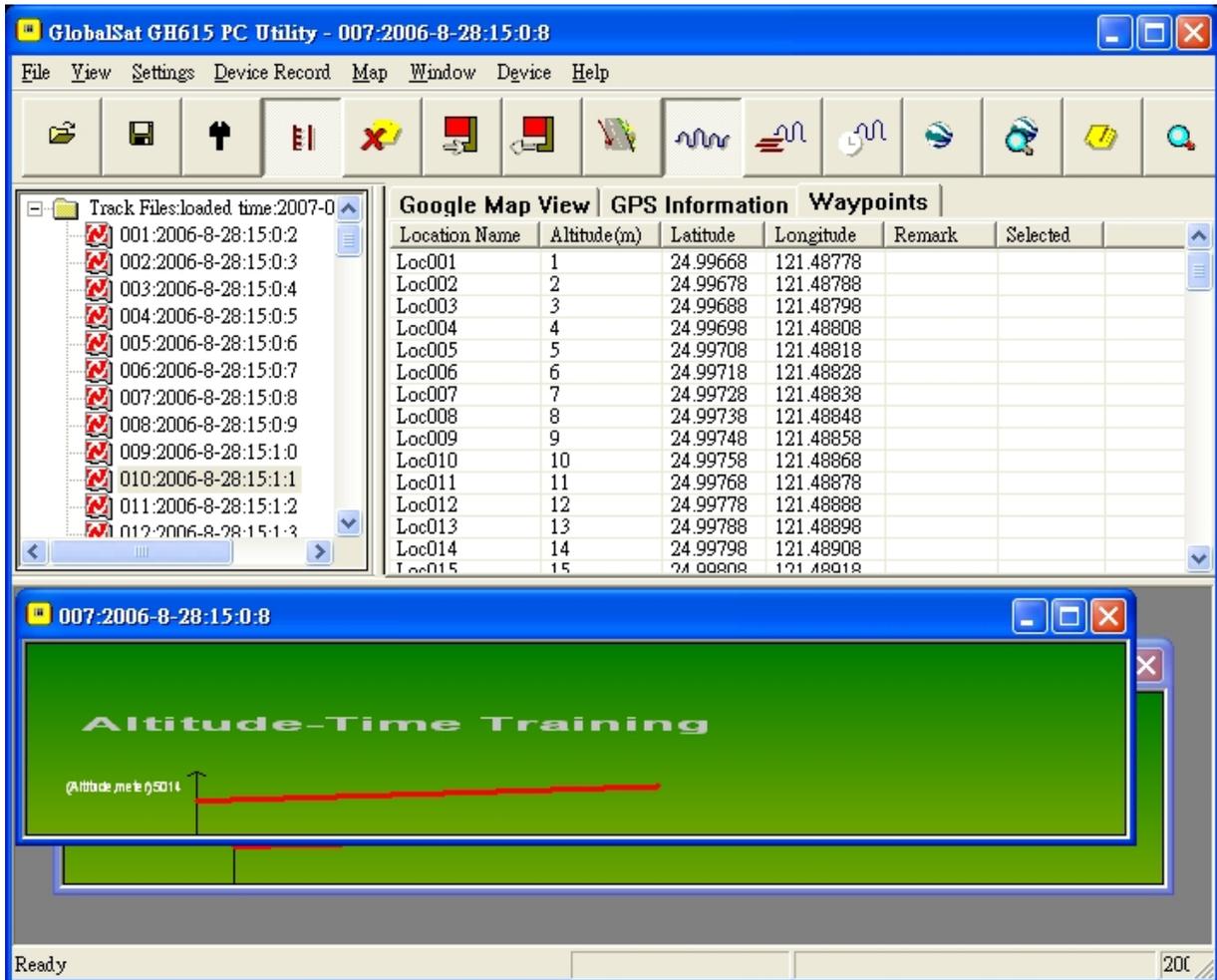
Upload Data to GH-615

Connect GH-615 to your PC with the USB cable.

In GH-615, 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] for uploading Trackpoints.

Right click and select the Waypoint, and then click [Device Record] > [Upload Waypoints To Device] for uploading Waypoints.



GlobalSat GH615 PC Utility - 007:2006-8-28:15:0:8

File View Settings Device Record Map Window Device Help

Track Files:loaded time:2007-0

- 001:2006-8-28:15:0:2
- 002:2006-8-28:15:0:3
- 003:2006-8-28:15:0:4
- 004:2006-8-28:15:0:5
- 005:2006-8-28:15:0:6
- 006:2006-8-28:15:0:7
- 007:2006-8-28:15:0:8
- 008:2006-8-28:15:0:9
- 009:2006-8-28:15:1:0
- 010:2006-8-28:15:1:1
- 011:2006-8-28:15:1:2
- 012:2006-8-28:15:1:3

Google Map View | GPS Information | Waypoints

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		

Altitude-Time Training

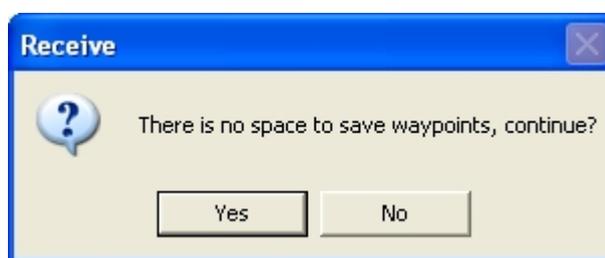
(Altitude: m) 05014

Ready 20

When the upload process is done, the successful message will be displayed on screen.

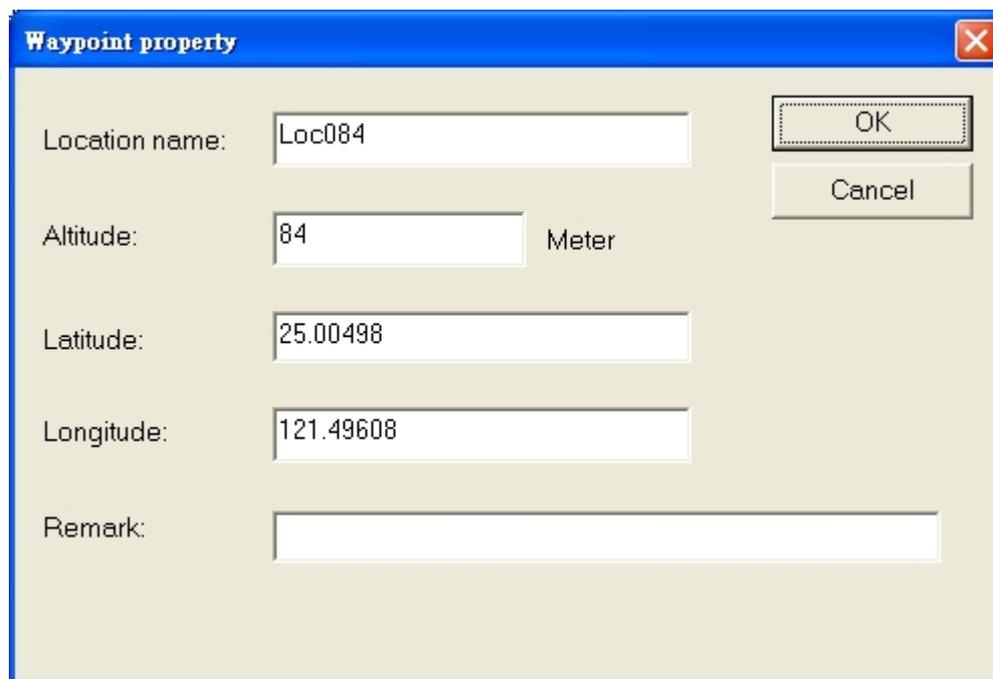


If the memory space is full, you need to delete some waypoints before you can make the uploading. Meanwhile, the waypoint will overwrite the one with the same Location Name.



Waypoint Edition

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



Waypoint property

Location name:

Altitude: Meter

Latitude:

Longitude:

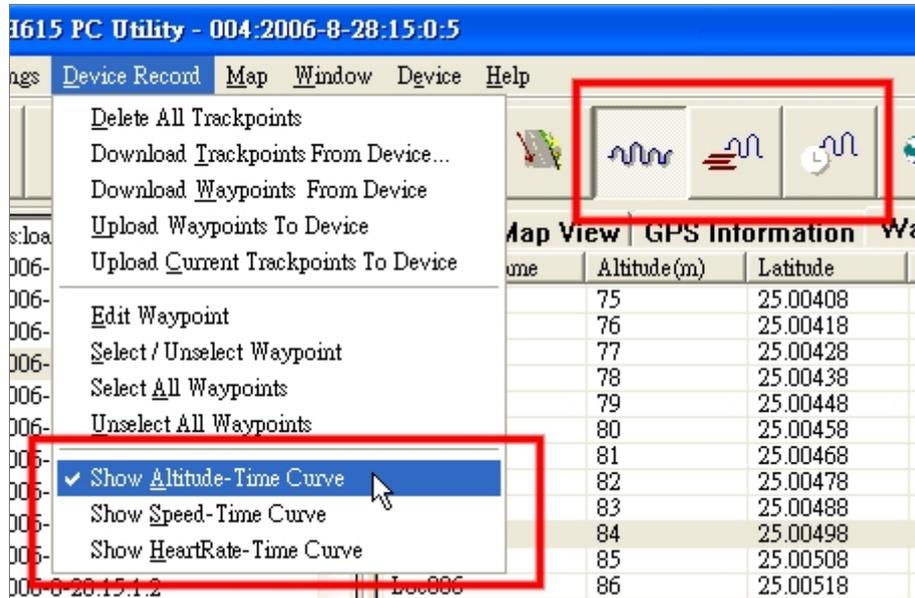
Remark:

OK

Cancel

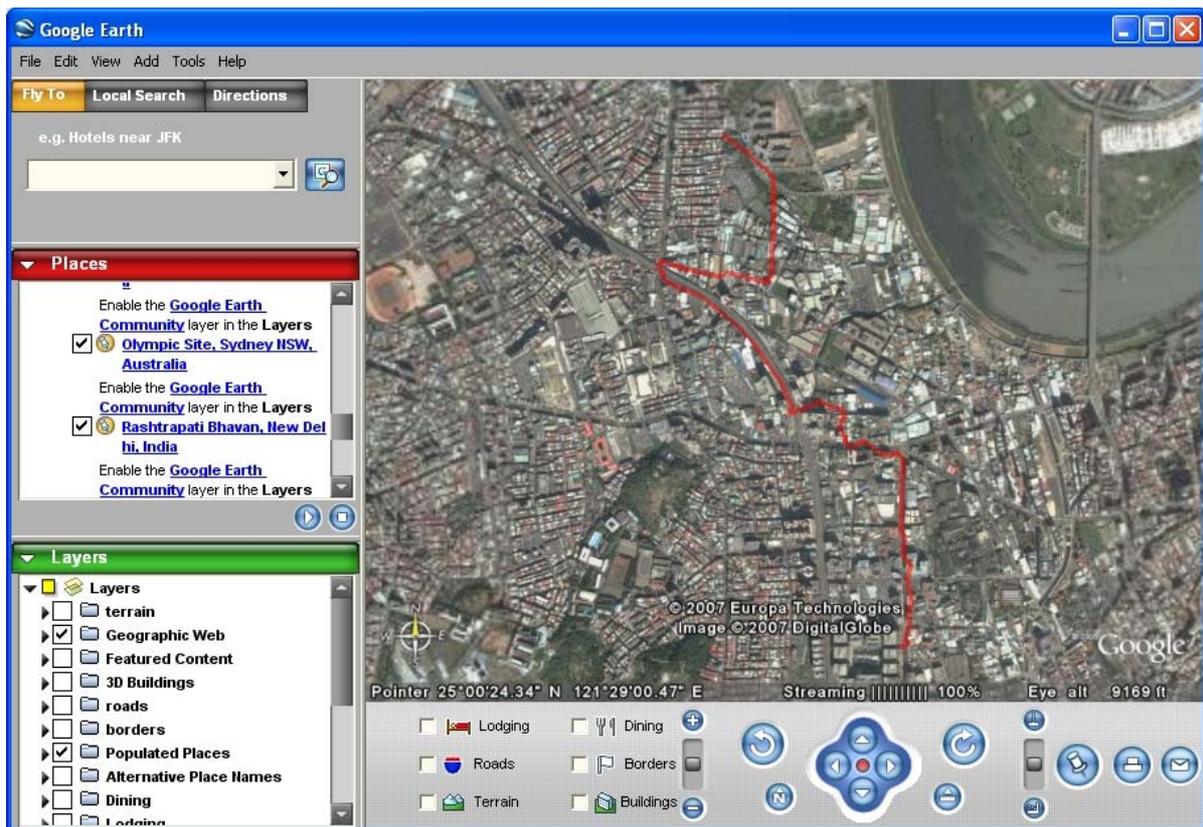
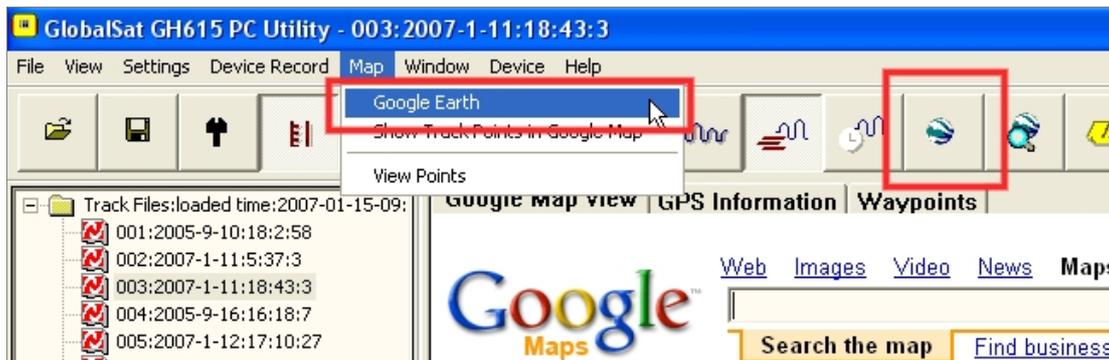
View statistic curve

From menu bar, check the kind of curve you want to view. (Or click the curve buttons from tool bar.) Then double click the Track files on Treebar, the curve window will appear on below.



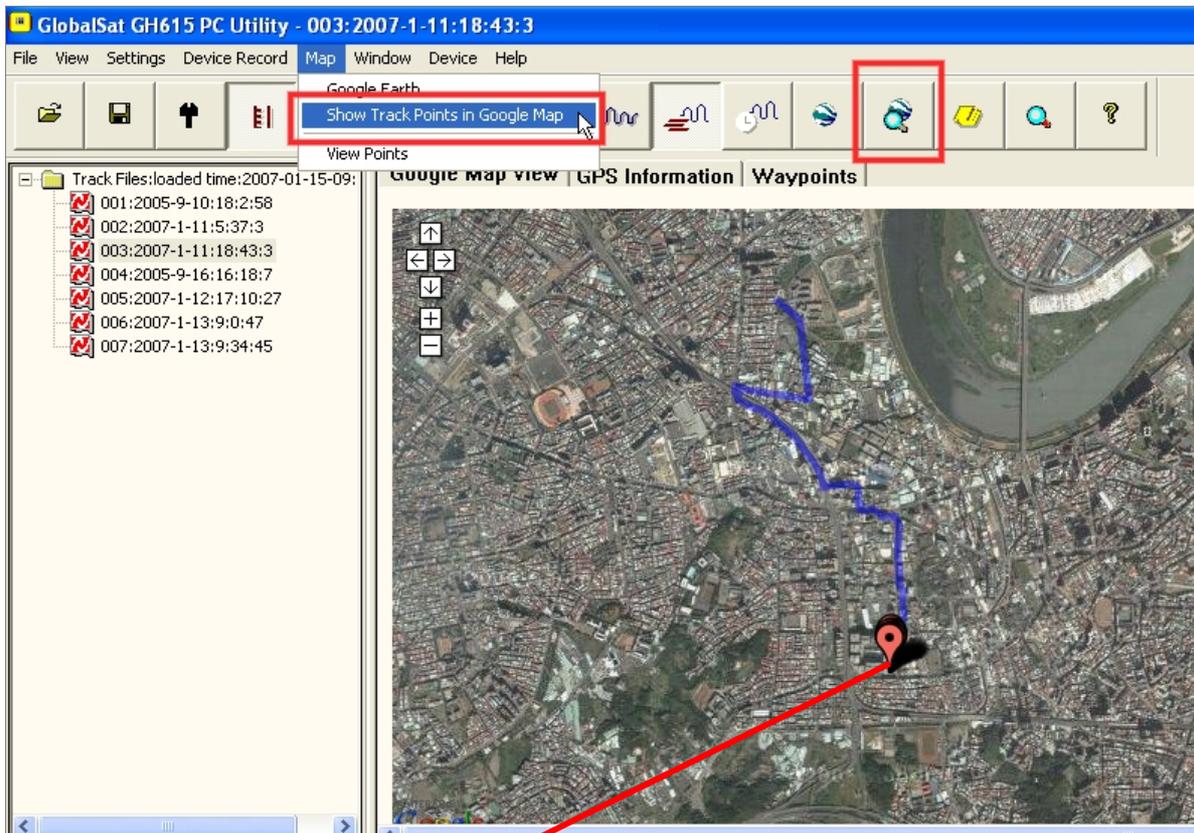
View Track points in Google Earth

Double click the Track files on Treebar, 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 your system.)



View Track points in Google Maps

Double click the Track files on Treebar, 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 in PC Utility, the waypoints will also appear on Google Maps.

View Track points information for details

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

The screenshot shows the GlobalSat GH615 PC Utility interface. The 'Map' menu is open, and 'View Points' is selected. A Notepad window titled 'temp_data.viv - Notepad' displays the following track data:

	Longitude	Latitude	Altitude	IntervalTime	HeartRate	Speed
1:	121.48109	25.01574	277	0	0	80.82
2:	121.48128	25.01559	309	3562	0	81.91
3:	121.48159	25.01539	355	13	0	83.62
4:	121.48182	25.01523	389	11	0	83.78
5:	121.48205	25.01507	421	11	0	83.90
6:	121.48220	25.01494	443	11	0	84.80
7:	121.48237	25.01480	467	12	0	85.51
8:	121.48254	25.01466	492	11	0	85.43
9:	121.48270	25.01451	516	12	0	84.95
10:	121.48304	25.01423	564	12	0	83.91
11:	121.48299	25.01080	585	359	0	46.28
12:	121.48284	25.01073	567	12	0	44.74
13:	121.48285	25.01063	569	12	0	43.73
14:	121.48286	25.01052	572	12	0	42.04
15:	121.48123	25.01091	353	12	0	34.61
16:	121.48108	25.01079	335	13	0	27.15
17:	121.48106	25.01074	333	12	0	23.24
18:	121.47958	25.01104	91	326	0	7.11
19:	121.47952	25.01107	101	10	0	4.76
20:	121.47948	25.01109	101	11	0	4.96
21:	121.47947	25.01110	103	10	0	4.35
22:	121.47946	25.01111	105	10	0	4.07
23:	121.47943	25.01111	105	10	0	3.32
24:	121.47942	25.01112	106	10	0	3.19
25:	121.47942	25.01111	110	20	0	4.28
26:	121.47944	25.01111	114	10	0	3.00
27:	121.47945	25.01110	119	20	0	3.98
28:	121.47944	25.01108	107	160	0	0.35
29:	121.47934	25.01111	99	10	0	0.22
30:	121.47927	25.01113	92	10	0	0.19
31:	121.47922	25.01115	87	10	0	0.24
32:	121.47917	25.01116	82	10	0	0.26
33:	121.47910	25.01118	74	10	0	0.37
34:	121.47907	25.01119	70	10	0	0.24
35:	121.47904	25.01120	67	10	0	0.17
36:	121.47902	25.01121	65	10	0	0.22
37:	121.47901	25.01121	64	10	0	0.22
38:	121.47900	25.01122	63	10	0	0.17
39:	121.47898	25.01122	63	10	0	0.15
40:	121.47897	25.01122	61	10	0	0.19
41:	121.47896	25.01123	59	10	0	0.15
42:	121.47894	25.01123	58	10	0	0.13
43:	121.47893	25.01124	56	10	0	0.22
44:	121.47885	25.01126	49	10	0	0.59
45:	121.47881	25.01127	44	10	0	0.61

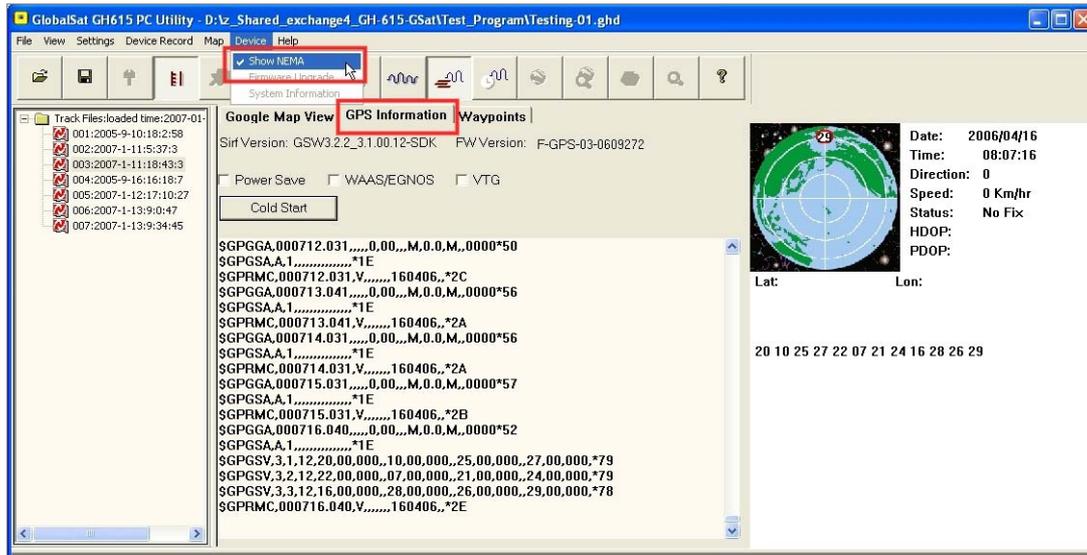
View GPS Information

Connect GH-615 to your PC with the USB cable.

In GH-615, 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.

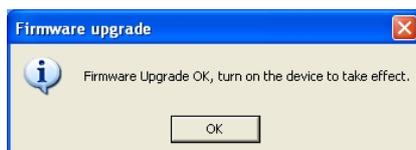
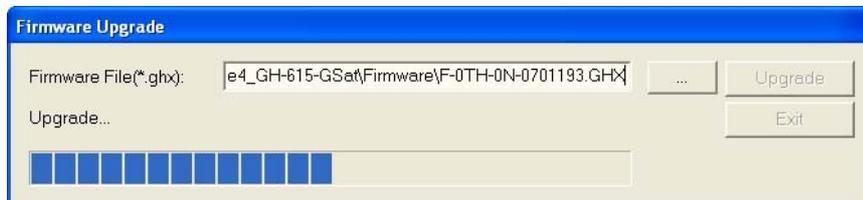


Firmware Upgrade

Connect GH-615 to your PC with the USB cable.

In GH-615, 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.

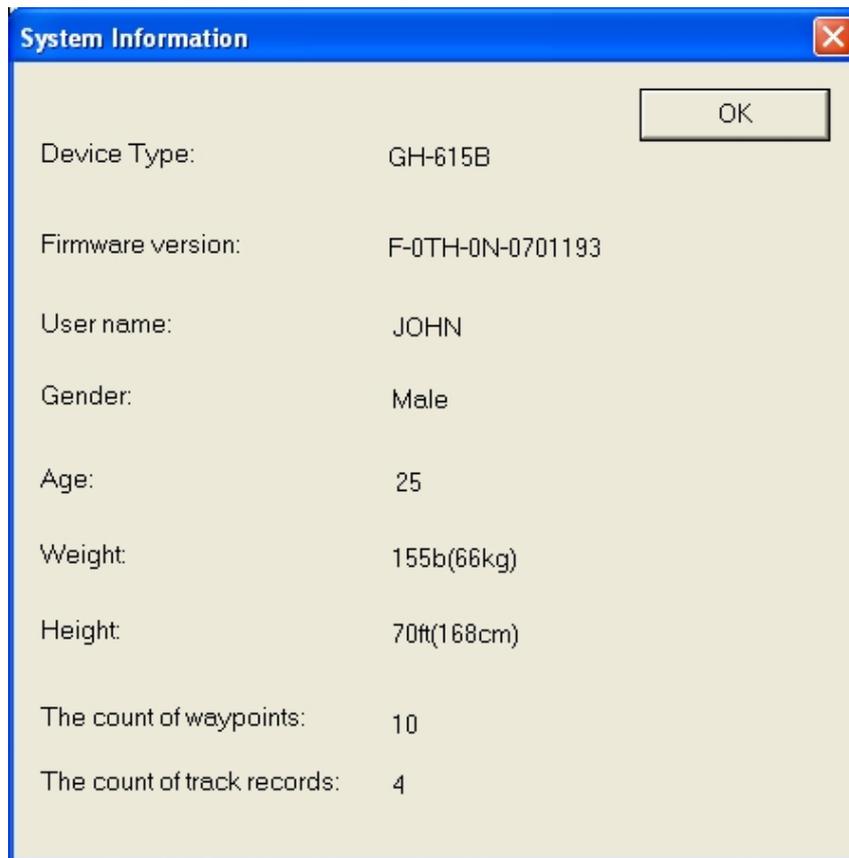
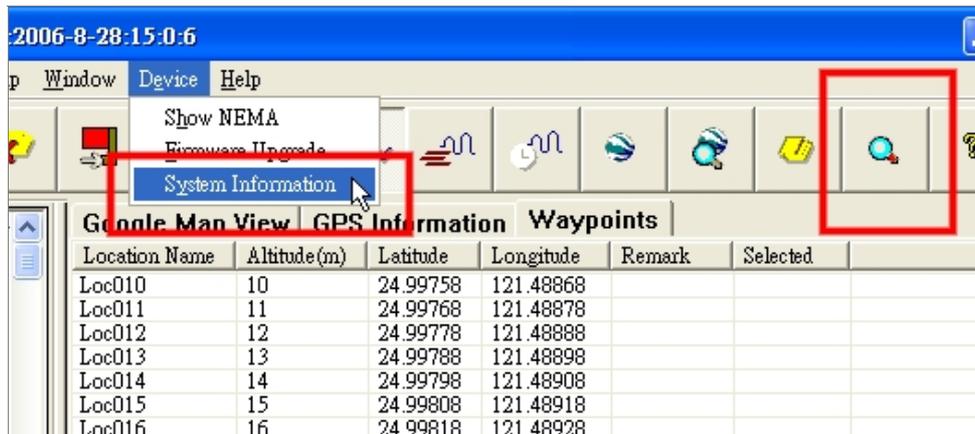


When firmware upgrade process is done, restart the GH-615 to take effect the new firmware.

Display the system information of GH-615

Connect GH-615 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 appear showing the system information of GH-615.



Maintenance

Take care of you GH-615

- Do not store your GH-615 in an extremely high or low temperature environment.
- Use a dampened cloth to clean your GH-615 and wipe dry. If necessary, apply mild detergent solution to the cloth. Do not use strong chemical solvents, for it may damage the plastic surface.

Glossary

Activity	Relates to data being transmitted from GH-615. Activity is a history or log of events. Activity data includes time or distance updates.
Waypoint	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).
Trackpoint	The current moving trace.
Navigation	The act of determining the course or heading of movement.
2D Operating Mode	A two-dimensional GPS position fix that includes only horizontal coordinates. It requires a minimum of three visible satellites.
3D Operating Mode	A three-dimensional GPS position fix that includes horizontal coordinates, plus elevation. It requires a minimum of four visible satellites.
Weak Signal	GPS signal is weak (GPS is fixing).
Receiving	Can't find GPS (GPS turned off or broken down).
WAAS/EGNOS	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 position fixes.
IPX7	An IPX7 designation means the GPS case can withstand accidental immersion in one meter of water for up to 30 minutes.

GMT

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

1. Why can't GH-615M receive heart rate signal?

Solution:

- (1). Check if you correctly wear the heart rate monitor or not.
- (2). Turn on the Heart Rate Alert function in GH-615M.
- (3). If it is still not working, check the battery of Heart Rate monitor.

2. Why does it show "PC com port error" when I download data?

Solution:

- (1). Please check if the USB driver is installed or not.
- (2). Connect GH-615 to your PC with the USB cable.
- (3). Double click the "GH615 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.

FCC Notices

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 undesired operation.

FCC RF Exposure requirements:

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

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.