

# **GPSWatch User Manual**

## **Product Version 2.5**

<http://www.i10n.com>

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# **1) Preface**

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## **2) Introduction**

### **2.1 Purpose of this document**

The purpose of this document is to provide a comprehensive overview, screen by screen explanation, operating instructions, installation, and error messages encountered during the usage of GPSWatch application.

### **2.2 Intended Audience**

This document is intended for use by the Lite, Platinum and Pro version customers of GPSWatch.

### **2.3 Version Information**

Document Version 2.5

## 3) Overview

### 3.1 Introduction

GPS Watch is a powerful yet simple J2ME application that transforms your Mobile Phone into a professional Global Position Tracking System. With vast device support, GPS Watch stands as the best option for wide range of users looking for GPS features.

GPS Watch has been carefully designed by Engineers with strong expertise on mobile application thus making it simple, elegant and feature rich. It uses simple data transmitted by your Bluetooth GPS receiver to chart intuitive reports like Speed, Acceleration, Performance Statistics, Position information.

Apart from being a powerful standalone application, GPS Watch provides KML waypoint exporting feature that enables you to use the data collected on your phone on Google Earth or other tracking applications

### 3.2 Purpose of GPSWatch

One of the advancement in the application of mobile phone is the area of GIS . Mobile phones provide a platform for developing powerful applications that can replace many other traditional independent systems like bulky GPS receivers,MP3 players, camera's etc.

Traditional GPS Receivers are bulky and expensive, an alternative to them is Bluetooth GPS receivers which are miniatures of the bulky brothers which usually dont have a display and feature minimal lights to indicate their status. They broadcast their location information correct up to +/- 1m accuracy, originally designed to be interfaced with Laptops, Bluetooth enabled phone thus turning your phone + simple BT receiver into a professional GPS receiver.




GPSWatch offers a lot more feature than traditional GPS receivers. GPSWatch offers exhaustive trip statistics, providers users ability to track their position on map images, trace their own maps, export way points to Google Earth, import trip data created in GPS Receivers and much more...It can provide better functionality at reduced cost.

Some advantages of GPSWatch + mobile phone + BT GPS over traditional GPS Receiver

- Compactness
- Cost effective
- Provides import/export to memory card
- Works on Internet Enabled Platform
- Bluetooth is wireless so the receiver can be far apart from the phone
- Exhaustive features on trip and location
- Easily interface with other applications like Google Earth.

### 3.3 GPSWatch Features

The following table gives a list of features and the information on the versions that have those features.

Screenshot	Feature Description
	<p><b>Altitude Metering (Platinum)*</b></p> <ul style="list-style-type: none"><li>✔ Track your Altitude On Graphs</li><li>✔ Configurable Sampling Rate thus the Precision</li></ul> <p>* Not available on SXG-75 versions as the data is not provided by the phone</p>
	<p><b>Auto Map Downloading (Platinum)</b></p> <ul style="list-style-type: none"><li>✔ Downloads maps from Google Earth/Maps, Microsoft Virtual Earth and Yahoo Maps</li><li>✔ Panning and Zooming in/out maps to 16 levels</li><li>✔ Intelligently caches maps so that you will not have to download them again</li><li>✔ Capable of operating without any GPRS usage by working on offline maps downloaded on PC using OMD Tool (<a href="http://www.i10n.com/omdt">www.i10n.com/omdt</a>)</li></ul>
	<p><b>Location Tracking (Pro, Lite)</b></p> <ul style="list-style-type: none"><li>✔ Loads maps in PNG format from Phone* or Memory Card* or JAD file and tracks the current location on it</li><li>✔ Trace Map and Image Map can be zoomed in and out to any level</li></ul> <p>* Not supported in Lite version</p>



### Navigation Information (Platinum, Pro, Lite)

- ✓ Locates the current location with pin pointed Latitude, Longitude and Altitude statistics
- ✓ Scalable and Extensible User Interface supporting screens from 128 x 120 px upto 320 x 240 px
- ✓ Provides accurate UTC date and time reports



### Waypoint and Tracepoints (Platinum, Pro, Lite)

- ✓ Unlimited Waypoints can be created while tracing maps
- ✓ Located the current position on previously traced maps
- ✓ Traces maps in realtime with upto 1 m positioning accuracy.
- ✓ Trace Map and Image Map can be zoomed in and out to any level



### Basic Trip Statistics (Platinum, Pro, Lite)

- ✓ Displace realtime distance from start point and the air distance
- ✓ Provides three stage Trip meter which comes handy on long journeys



### Data Import Export (Platinum, Pro)

- ✓ KML exporting of waypoints enables you to use the data collected on Google Earth
- ✓ Tracepoints can be imported and exported which depicts the route traced
- ✓ Provides standard text file trace output for interfacing with other application
- ✓ Provides backup and restore feature for tracepoints



### Direction Tracking (Platinum, Pro, Lite)

- ✓ Displays Mainers Compass with rotating base scale Feature
- ✓ Reports Bearing, Distance & Time to reach target decision



### Exhaustive Performance Statistics (Platinum, Pro, Lite)

- ✓ Displays Realtime Speed, Acceleration
- ✓ Computes powerful statistics like average speed, average acceleration
- ✓ Keeps track of minimum maximum speeds



### Sport Utility Reports (Platinum, Pro, Lite)

- ✓ Displays time to achieve 10, 20, 30, 40, 60 and 100 KMPH
- ✓ Kicks off the starting time on the first movement of the device



### Satellite Information (Platinum, Pro, Lite)\*

- ✓ Shows detailed information on satellites that are used for tracking the location
- ✓ Displays the data like their ID, position and even the signal strength of the satellites using descriptive colors

\* Not available on SXG-75 versions as the data is not provided by the phone

## 4) Installation

### 4.1 Before You Begin

Download the GPSWatch installation zip file that would have been dispatched to you. Extract the same and you will see the Installer folder which contains

- JAD (Application descriptor)
- JAR (Archive File)

The two files in the Installer folder will be required in the further steps for installing the application on your phone.

*For GPSWatch Platinum you will need to create a folder “GPSWatch” and a subfolder “data” (GPSWatch\data) on your memory card before you install the application. For SXG75, the folders should be created under mmc-miscellaneous (mmc-micellaneous\GPSwatch\data\). This folder will be used by the application to cache maps.*

### 4.2 Compatibility

Ensure that your phone is listed in <http://www.i10n.com/compatibility> to ensure that you have a smooth experience with GPSWatch application.

### 4.3 Installation Procedure

#### 4.3.1 Sony Ericsson Phones

In general, applications can be installed either by copying the jar and jad files to phone memory or memory stick and invoking the application from the file manager in the phone.

#### 4.3.2 Nokia Phones

To install the application on Nokia phone, its recommended that you use Application Installer of Nokia PC Suite. Point the application to the files in the installer folder and choose to install in the phone memory.

### 4.3.3 Motorola Phones

The simplest would be transferring the application over Bluetooth. If your phone has the application installation feature locked, then follow the instructions below to install GPSWatch.

In order to install Java applications from the file system (such as in development) you need to enable JAL (Java Application Loader) for the phone. By default this is locked out of Motorola phone because of the DRM issues. Non-signed binaries can be run but it is not clear if it treats them differently or not.

<http://www.grapnel.co.uk/v620/transfergames.aspx> - Gives a rough overview of how it is achieved.

On Linux it is a little more skilled but not so hard either. Using moto4lin you can edit the seem table and enable the flag. ([http://www.planetmotox.net/motox101/v3\\_seem\\_table.htm](http://www.planetmotox.net/motox101/v3_seem_table.htm)) Then it is just a simple case of copying the jad/jar files across to flash and selecting GPW. Triggering the JAL, enables windows users to use the program to manage the midlets for them. moto4lin doesn't do that but seeing as I

have direct access to the file system instead it doesn't bother the user.

Courtesy: D LoCascio

### 4.3.4 Siemens Inbuilt GPS Phones

In order to install Java applications on one of the BREW devices of BenQ-Siemens you need a Windows based software named Java Midlet Installer (JMI).

This software can be downloaded free of charge at the software section on [www.BenQmobile.com](http://www.BenQmobile.com). To be redirected to the section of your phone add a slash and the device's name, e.g.:  
[www.BenQmobile.com/SXG75](http://www.BenQmobile.com/SXG75)

After extracting the software you can start it and connect your mobile phone to the data cable. After some seconds the application should state in the right hand side of its screen that the phone is connected. If the phone isn't recognized check connection with the Mobile Phone Manager which ships with your phone and can be downloaded on [www.BenQmobile.com/SXG75](http://www.BenQmobile.com/SXG75) in the support section. (For other mobile phones just type your mobile phones name). If you haven't installed the „MPM“ yor system may just lack the necessary drivers.

Choose which type of application you want to install (application or game). Browse in the left part of the screen to the folder in which the JAD and JAR files of the application are present and select one. Click on the „Install“ button on the right side. The application will be transferred to the phone. After the transfer is completed the phone needs a restart.

Now you can find the application in the games or application list in the menu depending on what you had selected as you installed it.

Incase you are not able to locate the JMI installer on the support website, please write to us.

Courtesy: Stefan

## 5) Configuration

### 5.1 Permission on Phones

The application tries to access features on your mobile like Bluetooth, File System on Memory card, etc. So its necessary to provide the application the privileges to ensure smooth operation. The settings are usually available in the Application Properties or Application Permissions tab on your phone. Ensure that you provide access to read/write user data and bluetooth connectivity in the settings.

### 5.2 Other Settings

Having configured the environment, the next step is to start the application and set the application properties. Select the “Other Settings” option in the main menu.



(Please note, some settings are specific only to Platinum version, these are not applicable for Pro and Lite versions)

#### Choose the Unit System

You can choose your unit preference which will be used in the various reports of GPSWatch application. You are free to change this anytime.

#### Map Source

Indicates the provider. Please note availability of data for your location depends on the availability of data and support of the provider to GPSWatch application.

## **Cache Level**

No Cache Does not cache the maps

Cache Min Caches 3 maps tiles in every zoom level for every provider

Cache Med Caches 6 maps tiles in every zoom level for every provider

Cache Max Caches 12 map tiles in every zoom level for every provider

The choice of these options depends upon the application memory availability in your device. If you face any issues while using the application, please revert to lower cache memory settings.

## **Cache Store**

RecordStore Stores maps in the memory allotted by Java runtime for midlet applications on the phone. This space is limited (usually <500 kb) so only few images can be stored and is preferable for light navigation. You are advised to choose Cache Min while using this store option.

FileSystem Stores maps in e:/GPSWatch/data . Where e: refers to your Expansion Memory Card. So it is mandatory that folder GPSWatch/data needs to be created on your memory card to use this feature. The memory available for caching is just limited to the size of your card so you can choose Cache Max option with FS. But the disadvantage here is every time it accesses the cache on the card, application will show a security alert.

## **Internet Usage**

Never - Does not use Internet, just works on cached maps

Intermittent Connects to Internet whenever maps have to be downloaded

Continuously Connected Keeps a shadowed connection (suitable for users whose providers charge on per call basis).

## **Memory Management**

Phone The responsibility of garbage collection and clean up is left to the phone

Application GPSWatch Application takes partial responsibility in garbage collection and memory clean up.

Some phones do not allow application to perform these operations. So if you face any problem, revert back to Phone setting.

## **GPS Autoconnect**

When the Autoconnect feature is enabled, the application automatically tries to connect to the last connected BT GPS equipment on startup. It does not prompt you to select the device thus speeding up the time to get going.

## 6) Using GPSWatch

Having set the application, its time to explore all the features. In this section we will be discussing about the various reports, the controls used in the particular report. On launching you will see the main menu with the various report options

### 6.1 Connecting to GPS



#### 6.1.1 Inbuilt GPS (JSR179 phones like SXG75)

We request you to try connecting to GPS by using inbuilt GPS softwares like SpotGPS. Once you are quite sure that satellite signal is available start GPSWatch. Press connect and you will get one of the three status messages in a few seconds.

- |  |   |
|--|---|
| LocationProvider Available               | - Connection established, status ok                     |
| LocationProvider Out of Service          | - Location Provider is not accepting connection.        |
| LocationProvider Temporarily Unavailable | - Retry from a location where GPS signal will be better |
| LocationProvider unknown                 | - Fatal error indicating in the application             |

## 6.1.2 External Bluetooth GPS

1. Enable Bluetooth on your phone before opening the application.
2. Open the application and click "Connect GPS", the application will now search for all the BT devices in your vicinity and display them (Ensure that BT GPS Receiver is powered on).



3. Now select the GPS Receiver in the list and select OK
4. Some phones prompt for a security alert while establishing Bluetooth connection, click yes for the prompt if any. And there you go, you are now connected and now you will be back in the main menu.
5. We are done, now the connection has been established with the location provider (GPS device).

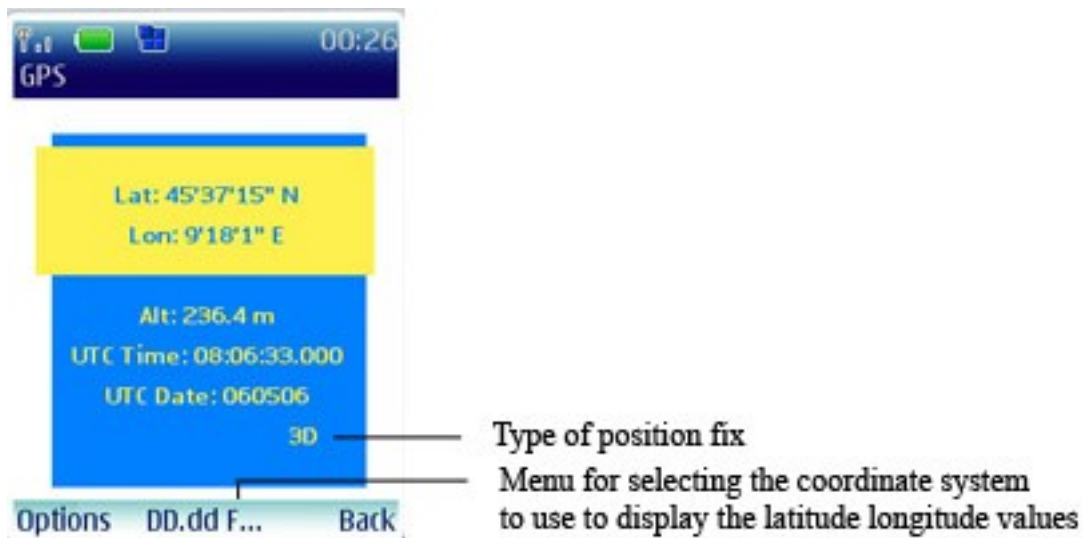
Please note, the inbuilt GPS version will not be able to connect to bluetooth devices or vice-versa because the inbuilt GPS build uses JSR179 (Location API) and BT version uses JSR082 to connect to location providers.

## 6.2 Navigate

A geographic coordinate system expresses every location on Earth by two of the three coordinates of a spherical coordinate system which is aligned with the spin axis of Earth.

latitude (Lat.) is the angle between any point and the equator. Lines of constant latitude are called parallels. They trace circles on the surface of Earth, but the only parallel that is a great circle is the equator (latitude=0 degrees), with each pole being 90 degrees (north pole 90° N; south pole 90° S).

longitude (Long.) is the angle east or west of an arbitrary point on Earth: The Royal Observatory, Greenwich (UK) is the international zero-longitude point (longitude=0 degrees). The anti-meridian of Greenwich is both 180°W and 180°E. Lines of constant longitude are called meridians. The meridian passing through Greenwich is the Prime Meridian. Unlike parallels, all meridians are halves of great circles, and meridians are not parallel: they intersect at the north and south poles.

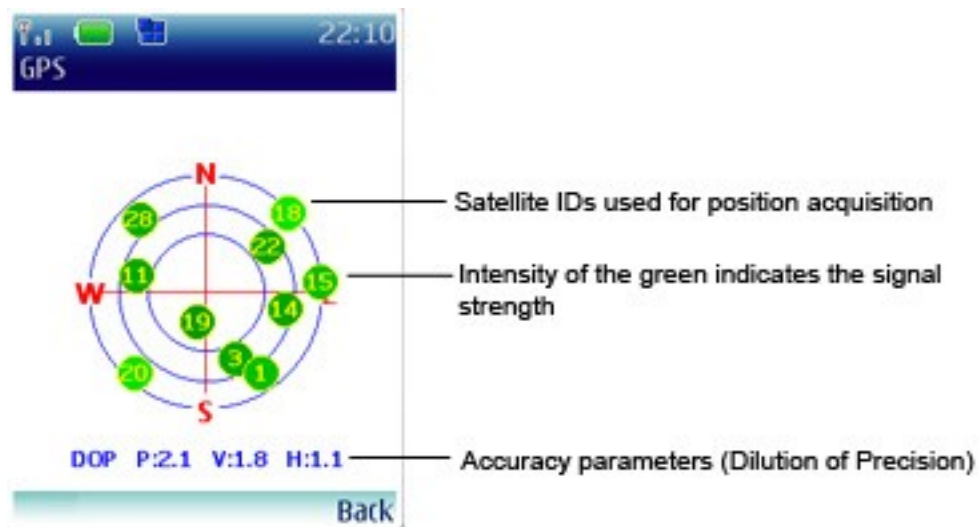


### Formats supported by GPSWatch for displaying the values

DD'MM'SS" Direction	Degree'Minute'Second eg: 22'55'12 N
DD'MM.mm" Direction	Degree:Minute:MinuteDecimals eg: 22.55.04 N
DD.dd" (signed)	Decimal Degree eg: 22.8
OSGB36	British national grid reference system eg: NN166712

### 6.3 Satellites

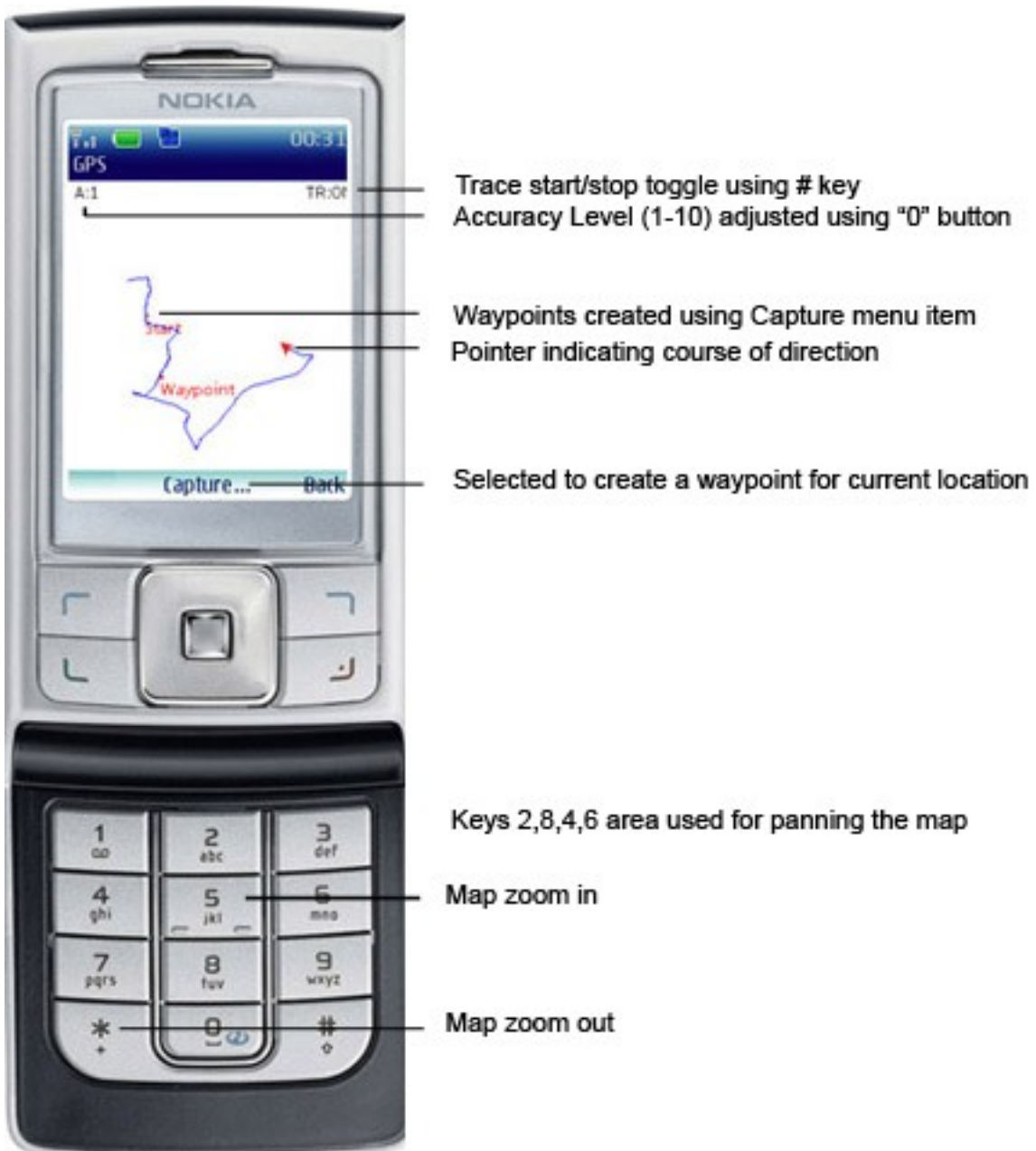
This report shows the various satellites in the orbit that are used for fixing the location of the GPS. GPS allows receivers to accurately calculate their distance from the GPS satellites. The receivers do this by measuring the time delay between when the satellite sent the signal and the local time when the signal was received. This delay, multiplied by the speed of light, gives the distance to that satellite.



The receiver also calculates the position of the satellite based on information periodically sent in the same signal. By comparing the two, position and range, the receiver can discover its own location.

## 6.4 Trace Route

Trace map feature is used to trace the route along which the GPS Receiver moves. You can enter into this report by selecting "Trace Route" option from main menu



1. You will initially see a blank screen if you have not traced maps before. Otherwise your trace history will be shown.
2. It is possible that your traced route is not visible in your current view, press \* key couple of times to come to the vicinity where previous trace was made.
3. New trace can be started and stopped using # Key. Please not for efficiency reasons, traced data is stored only when trace is switched off by using # key. So quitting the application with trace on might result in loss of last trace data.
4. You may come back to the main menu and browse other reports while the trace is on. The application is multithreaded so tracing will continue in background.

### **Smart Usage of Accuracy Level**

Mobile phones have limited amount of memory so they may not be able to handle huge trace data if you happen to do a trace on a long journey for hours together. The problem will be more pronounced when you try to export the trace data available in the memory to formats like GPX which are very heavy to be processed in memory (before being written out).

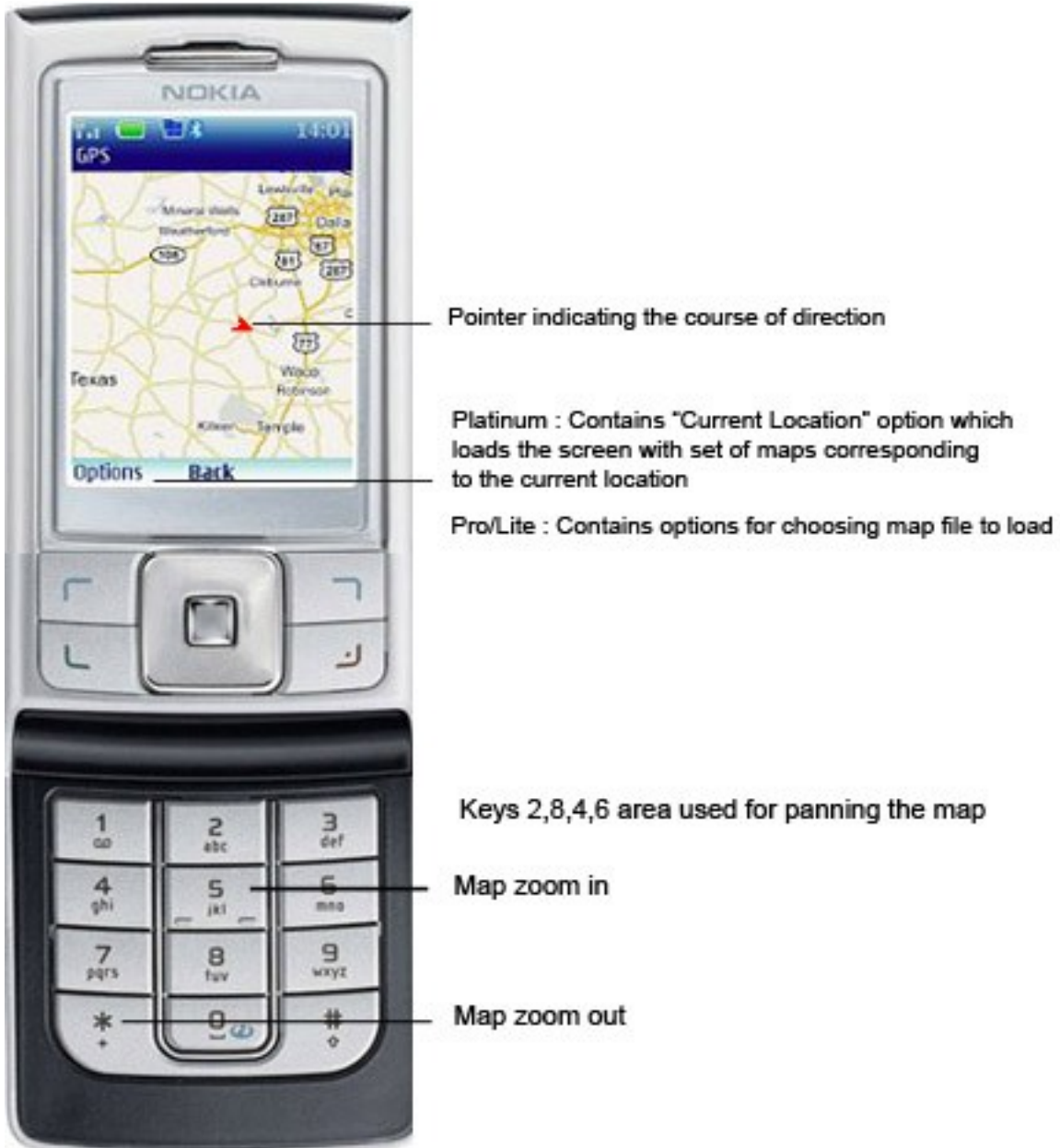
To prevent the data explosion you can use low accuracy level (1-3) when you plan to take a large trace and you can use high accuracy (7-10) when you make a short trip and require high accuracy in the trace.

### **Controls Summary**

Zoom in - 5 Key or middle click  
Zoom out - \* Key  
Move up - 2 Key or joystick up  
Move down - 8 key or joystick down  
Move right- 6 key or joystick right  
Move left - 4 key or joystick left  
Trace on / off - # Key

## 6.5 Locate on Map

This feature is to be used when you want to locate yourself on an existing map.



(Shares the same controls as Trace Route)

### 6.5.1 Locate on Map – Platinum Version

There are two options for downloading maps for Platinum version, the first and the straight forward method is to get the maps for the current location directly on to the phone using GPRS. The second is to download the maps offline on PC for the required location and move them to the phone. The instructions for using the later feature is available in the “Using OMD tool” section.

#### Tips for using the feature

- On entering Locate on Map function, the application tries to download and cache the map tiles for your current location. (PS: If your GPS is not connected, the application might download Lat 0 Lon 0 map (equator) as (0, 0) is the value that is available.



- You may pan and zoom in/out using arrow keys, 5 and \* keys.
- When map tiles for your current location is unavailable, initially an empty tile is displayed and then GPRS icon appears on your phone when the map is downloaded from the provider. Please do not pan (move the map) when downloaded is in progress. This might result in misplaced tiles.
- When you are in some location and want to return to the tile that shows your present location (from GPS data), press Current Location button.
- You can change provider in Other settings menu to which between different providers for the same location and the map with the selected provider gets refreshed for the current location.
- The application remembers the last viewed location, zoom level and the provider and when you restart the application loads the corresponding tiles.

## 6.5.2 Locate on Map – Pro/Lite Version

Locate on Map report can track you if its provided with an image of the map and a GV file describing the min latitude, min longitude (of top left corner location) and max latitude, max longitude (bottom right corner location) of the image. There are couple of options for this

### 6.5.2.1 Creating maps compatible for GPSWatch

### 6.5.2.2 From Google Earth

1. Go to Google Earth and pan zoom to the location your are looking for.
2. Create two placemarks, one at top left corner and other at bottom right corner.



3. Save the image as locationname.png
4. Export the placemarks to kml and in that file you will find

```
<Point>  
  <coordinates>longitude,latitude,elevation</coordinates>  
</Point>
```

Note down the latitude, longitude values for start and end placemarks

5. Create a new text file with name locationname.gv (ps:the names of both png and gv files should be

identical except for the extension). The .gv file needs to have the min latitude, longitude and max latitude, longitude in the following format

12'55'55'31,77'36'02'94,12'55'16'78,77'36'57'35

where 12'55'55'31 corresponds to Degrees'Mins'Secs'Decimals.

6. Convert the resize and save jpg map file to PNG (ensure that size is <500kb, if more resize the image to 80% (proportional scaling).

7. Put both locationmap.png and locationmap.gv in a folder on your phone and open it with GPSWatch. Now GPSWatch will locate you on that map.

### **6.5.2.3 From Street Maps**

1. Tons of websites provide street maps (eg. yahoo maps, google maps). Choose the location you want in them, then print screen, crop the image and save the map alone in PNG format (<500kb)

2. Now we need the lat, long of this location, so open Google Earth zoom in and move exactly to the location where the street map points to...zoom in to a level that the area represented by the street map and that by Google earth is just the same.

3. Then capture the lat, long values as mentioned for the (Google Earth option).

Put both locationmap.png and locationmap.gv in a folder on your phone and open it with GPSWatch. Now GPSWatch will locate you on that map.

### **6.5.2.4 Loading Map**

#### **6.5.2.4.1 Loading from FS**

Click the option "Load Map from FS" and (your phone might throw security warning while every disk access, press yes for all the warnings). Now select the folder where the map is located, then select the PNG file and click "Load" option (not select option). This will load the PNG aswell as the GV files after subsequent security warnings.

#### **6.5.2.4.2 Loading from JAD**

*Embedding maps in JAD (Only for Lite version/phones that do not support JSR75)*

1. Create a backup copy of JAD/JAR files

2. Add the PNG picture and GV file (with the same name) using append in root folder of JAR file with WinRAR or WinZip

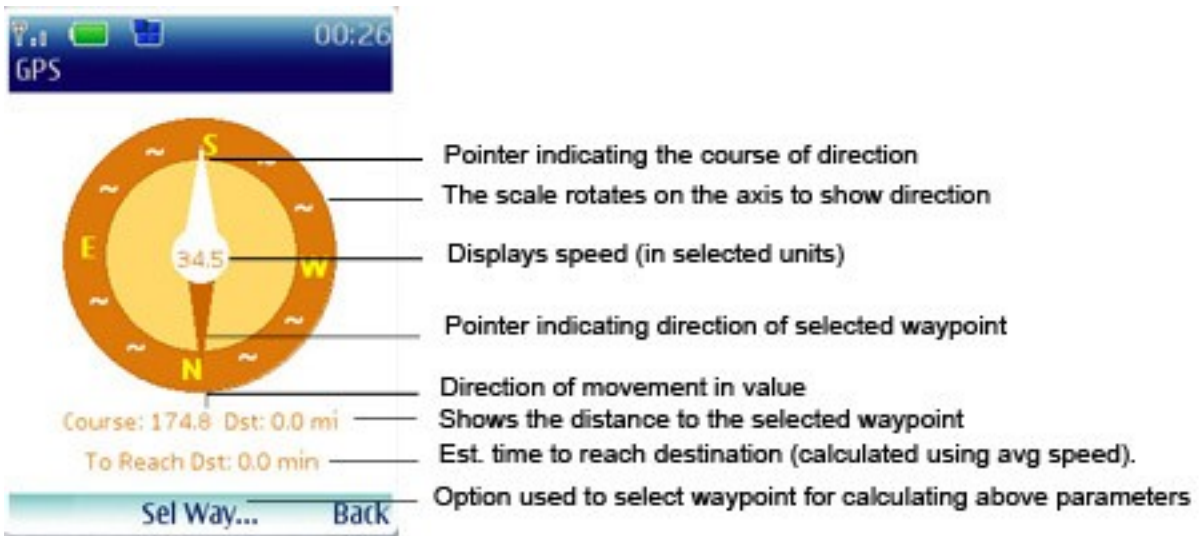
3. Open the JAD file, update the size of the JAR file here. (Size of the JAR file and not "Size on Disk").

4. Now your JAR is ready for installation on the phone once again. Please note when reinstalling, select "yes" when prompted to ask if you want to "Keep Existing Data". This will ensure that your old data, activation information everything is carried forward.

Once you are done with this, open the application, click the option "Load Map from JAD" and enter the name of the image file (w/o extension). For eg, for accessing map.png, map.gv, key in just "map".

## 6.6 Direction Compass

Direction compass report shows the direction of movement along with relative course with to the selected waypoint.



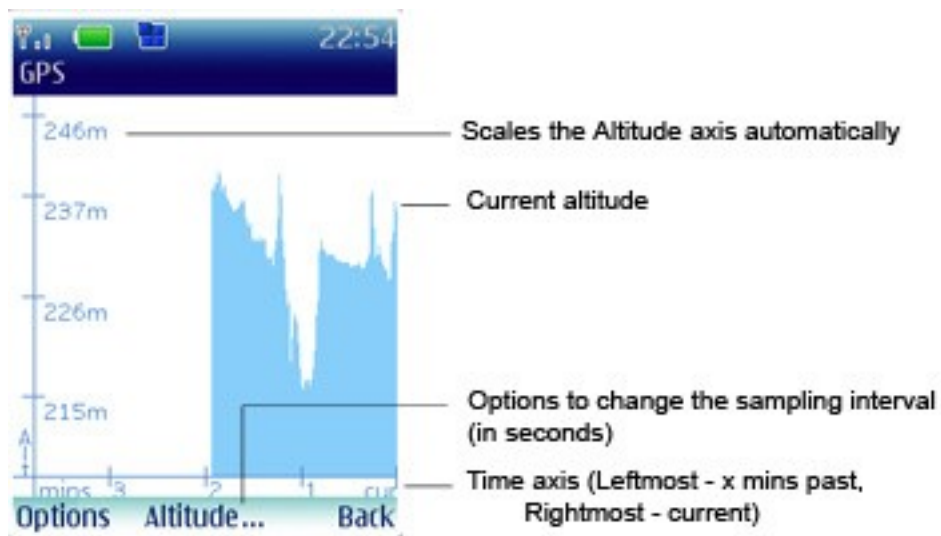
1. The direction compass can also provide additional bearing, heading, speed and time to reach the destination.
2. To view these details, click "Select Waypoint" button and choose the target waypoint. Once a waypoint is selected all the data will be available in the report. The speed is available in the middle of the screen, heading is represented by the second needle and time to reach the destination information is available below the compass.

## 6.7 Altitude Metering

Altitude metering report continuously records the altitude values from the GPS and plots a graph of the same. This might come handy when users climb a terrain to see how far they have climbed.

Y-axis, the altitude is automatically scaled based on the values that have to be displayed.

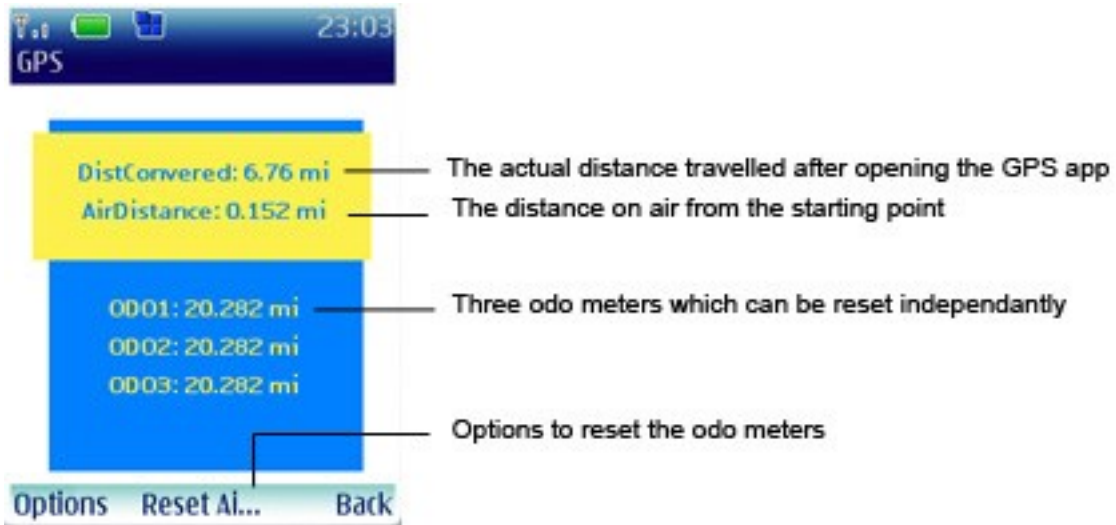
X-axis, the time axis depends on the sampling interval which is a configurable parameter.



The precision of the report can be increased by changing the sampling interval. The sampling interval can be specified between values 1-60 (in seconds).

## 6.8 Trip Details

This report displays realtime distance from start point and the air distance. It also provides three stage Trip meter which comes handy on long journeys

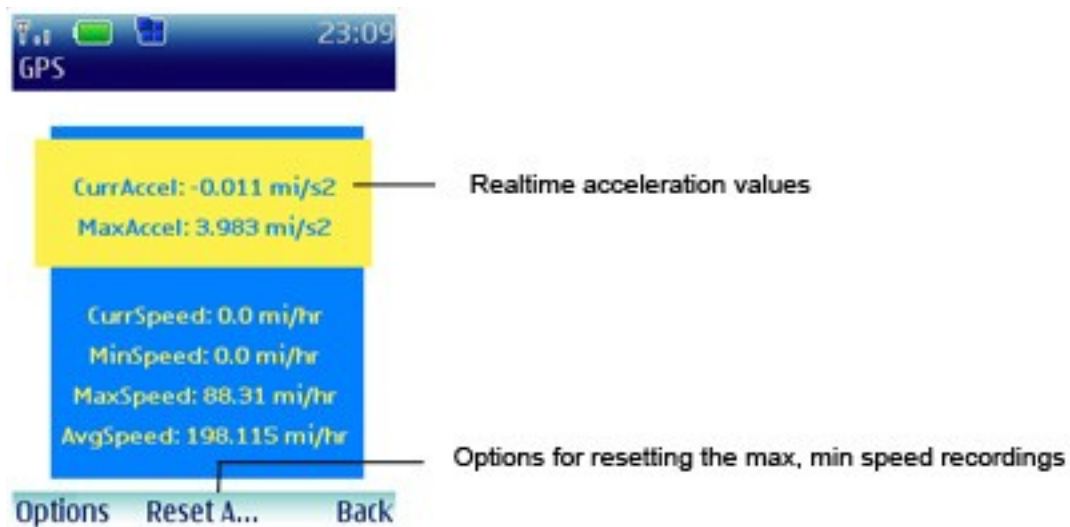


The menu options are provided to help the users to reset the odo meters. The units used in the report can be changed by changing the preference in Other Settings menu.

The ODO values are stored on phone memory so you dont loose these values when you close and reopen the application.

## 6.9 Speed Accel Stats

This report shows the dynamic statistics like speed and acceleration at which the user is moving. It also keeps track of the max, min and average values for speed and acceleration.

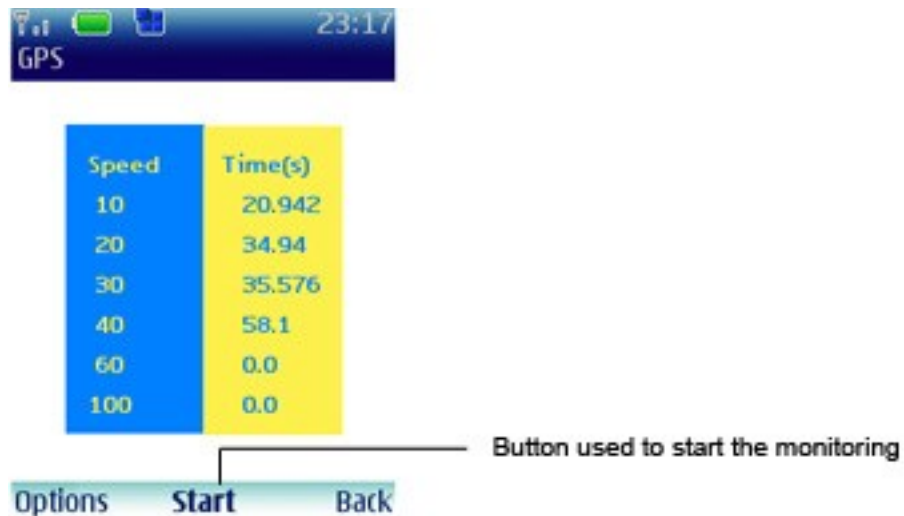


The acceleration values may not be very accurate when the speed values dramatically fluctuate. The reset options are provided for the stored average, max, min values.

This report does not store this data on the phone, so its basically the values for the particular session.

## 6.10 Performance Stats

This report is used for measuring and benchmarking the performance of cars. When you press start, application waits for the slightest motion, when you move, it starts the ticker and measures the time in seconds taken by you to touch the various speed marks.



The highlight is that even when you press Start, the application starts measuring time only after you move, so the task of exactly starting the capture is done by the application.

## 6.11 Import/Export Data



### 6.11.1 Manage WayPoints

1. This menu enables you to view, delete or export the waypoints that were captured in the "Locate on Map" or "Trace Route" reports.
2. The report initially lists all the captured waypoints, click select to view the waypoint info. In phones that do not support KML exporting, you may read this information and key it in Google Earth to locate the point.
3. To export, move the cursor over the waypoint you want to export and click the "Export" option.
4. You will be prompted to select the location (on phone memory/memory card). You may get security alerts, accept them.
5. After you select a location, click "Store" and then key in a file name to store.

### 6.11.2 KML/LOC Imports

1. This will come in handy when you want to import a particular location from a provider like Google Earth or Geocaching.com
2. Importing is simple, follow instructions similar to loading map or exporting KML files (Basically selecting the folder and then the file).
3. After the import is done, you will see the new waypoint in the Manage Waypoints menu.

### **6.11.3 Tracepoints**

1. This feature enables you to have a text output of the points (in radians) that represent the route you traced on "Trace Route" report.
2. Select import or export and follow instructions similar to loading map or exporting KML files (Basically selecting the folder and then the file).

### **6.11.4 GPXData**

1. This feature enables you to share trip data with other GPS Receivers and PC based GPS applications. The instructions for using this feature is similar to the tracepoint import and export.
2. For more information on GPX data visit [www.topografix.com/gpx .asp](http://www.topografix.com/gpx.asp)
3. The maximum size of the GPX data file that the application can handle depend upon the device capability.

## 6.12 Clear Data



This is used to clear the data that gets captured into the phone memory when GPSWatch application is used.

### 6.12.1 Good reasons to clear data

- Some phones have problems in manipulating large tracepoint/waypoint database. So you can export the trace, store it externally and clear the trace using this feature.
- You may then load the old trace by using the import feature.

### 6.12.2 Clearing Cache

In Platinum version, maps get stored into phone memory known as Record store when the particular "Record Store" option is selected for caching. When you move to a new area, its a good practice to clear your old cache so that you will have enough room to accommodate new maps.

### **6.13 Other Settings**

This menu item is used to configure the GPSWatch application. The details of the same has been discussed in the “Configuration” section of this document.

### **6.14 Exit**

This is quite an important step in the application lifecycle. All the data collected during the course of execution of the application is stored into the permanent memory when Exit is pressed. So you might lose precious data if you kill the application instead of closing it.

## 7) Using the OMD Tool

OMD Tool is a Java based command line application for PCs (not for mobile phones). For this application to download the maps, you need to provide the start and end latitudes / longitudes, the zoom levels, map type which you want to download.

OMD tool is shipped as a zip file containing a jar file and a batch file. Ensure that both are extracted to the same folder. The command line help gives you more information about the parameters (getmaps – help or getmaps /?).

### Usage:

getmaps <start latitude> <start longitude> <end latitude> <end longitude> <map type> <start zoomlevel> <end zoomlevel> <destination folder>

start latitude & longitude	corresponds to coordinates of top left corner of the map span
end latitude & longitude	corresponds to coordinates of bottom right corner of the map span (all coordinate values should be in decimal format eg: 11.11, -33.23, etc).
map type	0 - Google Earth 1 - Google Maps 2 - Virtual Earth 3 - Yahoo Maps
zoom level	value between 1-15 where 15 is lowest zoom level and 1 is highest zoom level
destination folder	The folder where maps are to be generated

**Example:** getmaps 12.5 77 13 78 2 12 13 c:\maps

Once the application generates the map files, you need to copy them to e:\GPSWatch\data in your mobile's filesystem, then go to your GPSWatch settings, select Never connect to Internet option, select the appropriate map type that you have downloaded. Phew, you are done with it.

### Note:

Please select small size area for downloading maps at a high zoom levels (<8 levels) because the map size will explode if you choose a large area causing problems with application (because of memory constraints).

So probably you can download in two stages selecting little larger area for zoom levels 8-15, smaller area for higher zoom levels (<8) and very small area for very high zoom levels (<4).

Ensure that no map file is larger than 250KB.

**For technical queries or questions regarding GPS Watch we request you to make utilization of the Forum (Community) feature in our portal.**

**For other queries, contact us at [support@i10n.com](mailto:support@i10n.com)**