Using GPS Locate Getting Acquainted

Your HP iPAQ includes Global Positioning System (GPS) Navigation technology; therefore it is capable of using GPS software applications that are compatible with this device. The GPS technology on your HP iPAQ is



based on a worldwide system of GPS satellites orbiting the earth that continuously transmit digital radio signals. These radio signals contain data on the satellites' locations and their exact clock time and are used to determine your location on the earth.

With your GPS capable device, you can use navigation software from other third-party companies. For GPS navigation solutions recommended by HP, visit www.hp.com/go/gpsnavigation. However, before you purchase, download or install any GPS software, you must determine that the application is compatible with this device. Check with the GPS software supplier to see if their software is compatible with the HP iPAQ hw6500 Mobile Messenger series.

Setting Up Your HP iPAQ

First follow the instructions in the printed Getting Started document until you complete creating a partnership with your personal computer. This includes installing the Subscriber Identity Module (SIM) and battery, synchronizing your HP iPAQ you're your personal computer, and establishing a partnership.

Setting Up Internet Access on Your HP iPAQ

Now that you have completed the steps in the Getting Started document, verify you have Internet access on your HP iPAQ by visiting a web site such as www.google.com or www.yahoo.com. If you cannot access the Internet, take your HP iPAQ out of the cradle and use a GPRS connection.

Using HP iPAQ Quick GPS

Connection Utility

To improve GPS hardware performance, you need to enable the HP iPAQ Quick GPS Connection Data Utility and download the latest data file.



It is recommended to set the default to

"enable updates" and "initiate GPRS connection for update" in order to download GPS file automatically.

To Change the default settings:

1. From the Start menu, tap **Settings > Connections > Quick GPS Connection icon.**

2. In the Settings tab:

Enable updates—This setting allows you to enable the Quick GPS Connection capability. If you disable it, then your HP iPAQ will no longer receive Quick GPS Connection updates and your GPS start-up times could be longer.

Initiate GPRS Connection for updates—This setting allows Quick GPS Connection updates to your device over the air via GPRS.

Show expiration reminders and warnings—This setting reminds you by notification when your satellite location file is out-of-date.

Show tray icon on today screen—This setting turns on a Quick GPS Connection icon in the Command bar. It is in green color if your satellite location file is up-to-date.

Downloading the Quick GPS Connection Data

file

1. Verify the correct date and time on your HP iPAQ. Tap the Clock icon to adjust time.

2. Access your Quick GPS Connection status by tapping **Start > Settings > Connections > Quick GPS Connection icon.** 3. If your HP iPAQ shows that the file has expired, again verify the date and time on the HP iPAQ is correct and press Download Now.

4. Tap OK to close the program.

TIP: In the future, you can access the Quick GPS Connection Utility by tapping in the Command bar > Download Now.

After the GPS Quick Connection data file has been downloaded, GPS performance Improves. We recommend to set default to automatically download GPS file.

TIPS

1. Update GPS file every 48 hours manually or

allow auto download

2. Auto download by "Enable Updates" & "Initiate

GPRS for update"

3. Update GPS file first before using MapKing

NOTE: If you are going to use GPS Navigation in your vehicle for an extended period of time, connect your HP iPAQ to an Auto adapter to save battery power. If you don't have an Auto adapter, you can order one at http://www.hp.com/apac/ipaq/accessories

GPS Technical Support and Service FOR TECHNICAL SUPPORT on HP iPAQ

Quick GPS Utility:

Please refer to website at

http://ap.compaq.com.sg

GPS connection problem - Testing with GPS Viewer please refer to Page 48

MapKing 3D English version user's Guide

For Microsoft Windows Pocket PC 2003



© 2002-2005, MapAsia.com Limited

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IMPORTANT MESSAGE CONCERNING THE USE OF MAPKING BY VEHICLE DRIVER:

TO ENSURE SAFETY DRIVING, WE STRONGLY ADVISE THAT A DRIVER SHOULD NOT OPERATE MAPKING WHILE DRIVING THE VEHICLE SIMULTANEOULSY. A DRIVER SHOULD NEVER FOCUS HIS OR HER ATTENTION ON THE MAPKING DISPLAY WHILE DRIVING.

In case MapKing needs to be used inside a vehicle, we suggest that it should be operated by a passenger other than the driver or the driver should stop the vehicle at a convenient spot before starting to use MapKing.

IMPORTANT MESSAGE CONCERNING ROUTE PLANNING :

The route planning function of MapKing is ONLY meant to be and should ONLY be used as a crude reference. IT SHOULD NEVER BE USED TO DETERMINE ACTUAL DRIVING DIRECTIONS. The Route Planning function of MapKing is subject to the following limitations :

- Whilst we have taken great care and endeavors in developing the product, we CANNOT guarantee that the road network data and routing calculations of MapKing are free of any omission or defect.

- The road network and traffic conditions in the real world are ever changing, MapKing being a pre-packaged product cannot reflect all these changes on a constant basis.

- Road network parameters specifically required for route planning, like one-way traffic indicator or turn restrictions at street crossing, are difficult or almost impossible to obtain for China or some other Asian countries. The lack of these data would significantly affect the performance of route planning.

IMPORTANT MESSAGE CONCERNING GPS (Global Positioning System) TRACKING:

The GPS tracking function of MapKing works on GPS satellite signals broadcasted for civilian use. It is subject to inherent signal deviations and environmental interferences caused by surroundings and bad weather. We cannot guarantee nor specify a precise level of accuracy for the GPS positioning data displayed by MapKing. It should also be noted that the Unites States Department of Defense, who builds and operates the GPS system, is free to turn off or down-grade the civilian signals of GPS during rare occasions like regional military conflict. Although MapKing should work with most GPS receivers on NMEA0183 signal output format regardless of their brand name or model, we cannot guarantee that MapKing integrates flawlessly with ALL GPS receivers available in the market.

1.1 Product Description

Thank you for using MapKingTM!

MapKing is the first pan-region multilingual mobile mapping system in Asia managed by MapAsia.com Limited with input from leading Asian partners. It is a great tool for trip planning and to explore the huge potential market in Greater China and Asian countries (Maps sold separately for different OS and language). MapKing is the first digital map provides English road name and place name in China and Asian cities. MapKing has firmly established market leader status as the bridge between western travelers and the rapid growing cities in East.

MapKing offers maps in English, Traditional Chinese, and Simplified Chinese. Current maps are available for the following cities and regions, **Please check the OS and Language before you purchased**

Greater China : Beijing, Shanghai, Hong Kong, Gunagzhou, China 2300 cities Points, Pearl River Delta Road Network, Shenzhen, Dongguan Macau Hong Kong Hiking Trial, Taipei, TaiChung, Tainan, Hsinchu, KaoHsiung

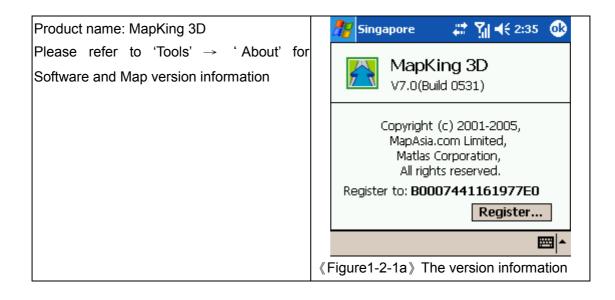
Asia cities countries : Bangkok, Manila, Singapore with Johor, Jakarta, New Delhi, Tokyo, Kuala Lumpur, Ho_Chi_Minh City Tourist map, Seoul Tourist Map, Asia map

Planned locations: Australia, New Zealand, Iceland; Greece...

We wish you enjoy our product and we appreciate your comments and suggestions. Please contact us by support@mapasia.com.

This manual is divided into three main sections: First section: Installation and registration. Second section: Map features and functions Third section: Route Planning and GPS functions

1.2 Software and Map Version



1.3 MapKing 3D Features

Main Features:

- High quatility ditital maps with latest map database
- Multiple Platforms : PC/ Pocket PC / Smartphone
- 2D/ 3D Navigation .
- GPS global satellite positioning function
- Route Planning
- Real-Time Tracking of GPS position
- Intelligent Voice Assiatance
- Track Log Export
- Multiple search modes
- Query by index/ Query by category/ Query by position
- Query by area/ Query by coordinates
- User-defined view point

System Requirement

- Pocket PC 2003 or above
- For Chinese Map, OS must support Chinese display
- Minimum 32 MB RAM
- 8M hard disk space required
- 64MB storage card is recommended
- The PC MUST have Microsoft ActiveSync 3.7.1 or above

Platform:

- PC OS:Windows 98/Me/XP/2000
- PocketPC OS:Pocket PC/2000/2002/2003
- CPU: StrongARM/XScale/MIPS/SH3
- RAM: 32MB(Support Storage Card)

Support GPS:

- RS-232/CF/PCMCIA/Bluetooth/USB
- NMEA0183 Output

2 Installation and Activation

2.1 Product Installation

Installation of MapKing 3D included 2 parts:

- 1. Installation of Main Program
- 2. Installation of Map data

2.1.1 Main program installation

Please reference to the following steps:

Step 1: Enable ActiveSync connection between PC and Pocket PC

Step 2: Locate the 'Setup_MapKing.exe file from the CD-ROM and double click to start.

For download version please run setup directly.

Step 3: Choose the appropriate map language version your have purchased.

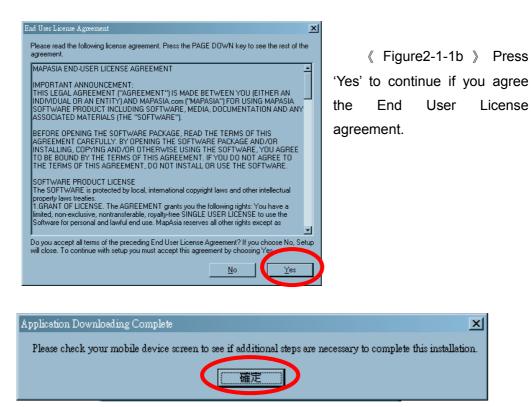
Step 4: Choose Pocket PC version.

Step 5: Click the installation button

- If you cannot find the path, please search out the EXE files e.g. Setup_PPC_MK.exe from your CD-ROM
- If Activesync do not start automatically please press "Start"-> "Program" to start Activesync
- Activesync is available to download from www.microsoft.com



«Figure2-1-1a» Peer with PC by Active sync



«Figure2-1-1c» Check Pocket PC for the installation status.

2.1.2 Map Data Installation

MapKing offers an extensive range of map products and we cannot determine in advance the specific map(s) chosen by a customer. A DEMO Map is included in the 'set up .exe" to verify that the core program has been installed and display successfully. To use a full map you've purchased, please follow the steps below:

Step 1: Enable ActiveSync connection between PC and Pocket PC

Step 2: Copy the map file (File extension .mk7) you've purchased from your CD-ROM.

XXX_TC.mk7 represents Traditional Chinese map files

XXX SC.mk7 represents Simplified Chinese map files

XXX_Eng.mk7 represents English map files

XXX_SP.mk7 represents map files for Smartphone

Step 3: Paste the file to \Storage\Program Files\MapAsia\MapKing3D OR \My documents

If you'd like to place the map file in your storage card, please create a folder name 'My documents' and place it there. "My Documents" is the fixed default path used by MapKing to locate map file.

License

X

2.2 Product Registration

This product MUST be register to activate permanently. User cannot continue to use the product after the 3 days trial period without registration for Pocket PC version The Maps in CD-ROM except the licensed map are for trial only. You may also download the trial version from http://www.mapking.com/hplink/. Please reference to 2.1 for installation of map data for trial, and reference to 2.3 to switch map in program.

2.2.1 Hardware ID (MK ID)

The first thing you can see after you start MapKing 3D program from Pocket PC screen is the registration page. The registration page is shown on the right.

You should see MK ID that is generated from the unique hardware device signature embedded in the hardware (Pocket PC or PC).

Attention: The MK ID must be input correctly to achieve the correct registration code.

difference (e.g.0or O, 1or I)

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Singapore Version 7.0(0531)				
This is a trial full version, visit http://www.mapking.com fo purchasing.	GPRS Register			
Trial period will expire in 2 da	ys			
MK ID; 80007441161977E0	Register			
ode:	njal			
Copyright (C) 2000 2005, Machaia.com Limited. All Rights Reserved.				
	▲			

Please aware the character / number 《Figure2-2-1a》 The hardware code is an unique identification with of your Pocket PC.

2.2.2 **Obtain Registration Code Online**

From the package you will have a product authorization card with a "Product Authorization code" of which is a 10 digits combination code.

To get the "Product registration code" (16digits), please follow the steps below:

- 1. Connect to Internet, Choose registration from http://www.mapking.com/hplink/
- 2. Input the "Product Authorization code"
- 3. Input the MK ID (ref: 2.2.1a); please make sure you've input the correct code
- 4. Input the information request. This information is confidential and will use for upgrade notification and promotion. Please make sure you have input all fields correctly.
- 5. Get the "Product Registration code" for registration in Pocket PC.
- 6. Print the page for further reference.

2.2.3 Register in Pocket PC

After you have obtained the Registration Code, launch MapKing and open the map and enter the code in the Registration screen. **Press Register to complete the registration**

If the map is already open, Press 'Tools'->'About'->'Register' to bring up the Registration screen.

🎢 Singapore	- # X	 €€	2:36	٩		
Singapo Version 7)				
This is a trial full version, visit http://www.mapking.com for purchasing.						
Trial period will e	xpire in 2	2 day	s			
MK ID; 80007441161977E0 Register						
Code:			Triá	al		
Copyright (c) 2000-2005. MapAsia.com Limited. All Rights Reserved.						
			Ē	ੜ ^		
Figure2-2-3a 》	Input	the	16	dia		

registration code to register.

2.2.4 Register MapKing with GPRS connection (optional)

 $\langle\!\!\langle$

An alternative way to obtain registration code for your product is to register through GPRS connection. Please press "GPRS Register at registration page as fig2-2-3a. The GPRS Internet connection will be enabled. And use your MKID and Product Authorization code to achieve the registration code of your product.

You must have valid SIM card installed and GPRS service to achieve this function.



《 Figure2-2-4a 》 Enter your Authorization code here. And fill in the registration information the web request.

2.3 Launch MapKing

MapKing is launched in the similar way like other software installed in your pocket PC. Tap the start-up icon at the upper left corner of the screen, you should find the MapKing program icon within the upper row of the pop-up menu, tap again to launch MapKing. If Mapking does not show up in the list of recently launched programs, select "programs" in the menu will open another listing all programs installed in your PPC and you could then launch MapKing from this second Menu

2.3.1 Switch Map

User may have more than one map installed, select "Tools> Switch Map" would bring up a list of all the maps, simply tap on any item within the list to switch to a new map. .



《Figure2-3-2a》Press 'Tools'-> 'Switch Map' 《Figure2-3-2b》 Press select



《Figure2-3-2c》 Map Switched.

Press 'Tool'-> 'Close Map' to close MapKing 3D. Please be remind 'MapKing 3D" will run on the background if you do not exit the program, which occupied resource of your PPC.

2.4 Remove MapKing 3D

Follow steps below to remove / uninstall MapKing 3D Program.

- 1. Press 'Tool'->'Close Map' to close MapKing 3D.
- 2. Press 'Start'->'Setting'->'System' ->'Remove Program'

2.5 Product Upgrade

The license allows end user to register ONLY ONE MAP out of the allowed maps as it is. End user might need to purchase product upgrade. Registered user will receive our News via email. Visit <u>http://www.mapking.com/hplink</u> for more information.

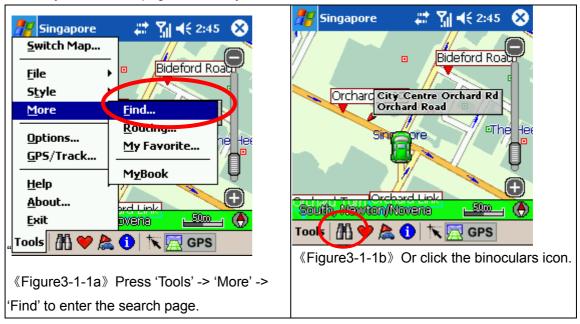
Please read the briefing before you download the latest update.

3 Basic Functions

3.1 Search Functions

MapKing 3D search functions included: Index, Keyword, Position, Area, Long/Lat, Crossing etc. Press the index of pages to switch different search functions.

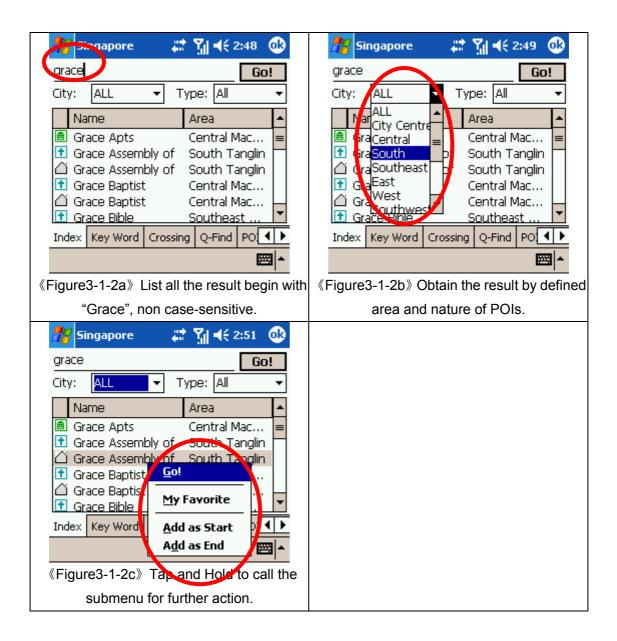
3.1.1 Search Startup



You may start search page in two ways:

3.1.2 Index Search (by alphanumerical order)

This search mode is equivalent to browsing a dictionary or directory organized in alphabetical order. Enter any alphanumerical string and all records with the first X characters of their name matching the input text string will be listed as the search result. The following picture shows the result of index search using "Grace" as input string.



3.1.3 Keyword Search (Wild Card Search)

"Keyword" is equivalent to wild card search. It would search for the appearance of the input string anywhere within the name field of the record. If "mer" is used as the input sting, then the search result would show "Emerald Mansion" and "Mera Garden". You can input up to 5 keywords in each search to be separated by comma, semi-colon or space. For example, if you enter "we mansion" as search string, the system would return "Kim Wee Mansion", "Wedgewood Mansion" and "Welkin Mansion" as search result.

Singapore Image: Singapore Image	G
Name Area ■ Bukit Merah Bus South Que ■ Bukit Merah Town South Que ■ Bukit Merah South Que ■ Cameron North Que ■ Care Comer Family North Woo ■ Care Comer Family North Woo ■ Care Comer Family North Gevl Index Key Word Crossing Q-Find PO Index Key Word Crossing Q-Find PO Index Add as End	

to show that all records relate to 'mer'

«Figure3-1-3a» Enter the Key word as 'mer' «Figure3-1-3b» Tap-and-Hold to call the sub menu

Remarks:

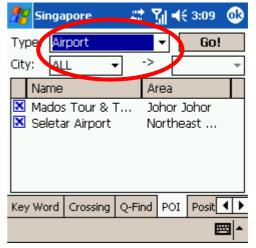
This function used to compare every record from compressed database therefore a longer processing time is required. User may conditioned the search area or type to increase the performance of this search.

3.1.4 POI Search (Point of Interest) search Category

Select POI based on the following four criteria from the pull-down menu highlighted :

- -0 Area : First-tier District
- -1 Town : Second-tier District
- -2 Type : Main POI Category
- -3 Sub-type : Secondary Category

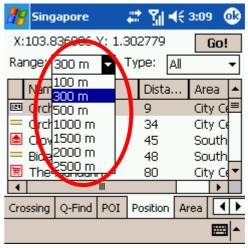
Tap an item within the result list and select "Position" to show its location in the map window.



«Figure3-1-4a» Choose the type, area and district.

3.1.5 Search by Distance Range

Find locations within a fixed distance range from the center point of the current map window. There are 7 fixed search ranges from 100 meters to 2500 meters. Tap an item in the result list and select "Go" to have the map zoomed into that item. Coordinates of the search center point are displayed on top of the menu.



«Figure3-1-5a» Ranges from 100 meters to 2500 meters.

3.1.6 District Centre Location

Select a main district from the "City List" and **Singapore** then a secondary district from the "Town City List List"; tap "Go" to locate the selected district in the map window. City Centrel South



«Figure3-1-6a» Choose the area and sub-area.

3.1.7 Search by Co-ordinates

Enter the longitude latitude coordinates either in decimal format or degree-minute-second format, hit the "Go" button and the map will be re-centered to the input coordinates.

🎥 Sir	ngapo	re	# 3) 🚯	
WGS84	4(X,Y))				
X:	103.8	36006	Y:	1.302779	9	
WGS84	4(Coo	rdinate)				
East	103	<u>° 50</u>	_ 9	.6		
North	1	° 18	1	0.0 🤇 🗖	Go!	
Q-Find	POI	Position	Area	Lat/Long		
«Figure3-1-7a» Enter the longitude latit						

«Figure3-1-7a» Enter the longitude latitude coordinates.

3.1.8 Search by Group Category (Q-find)

Q-find is to check the POIs from GPS position with 2km radius. Available at 'GPS' mode.



«Figure3-1-8a» Pick the types of POI.

Singapore	₩¥] - 4 € 3:11	ok
	Back	Go!
🚹 45m Cro	own Prince	▲
🚹 98m Me	eritus Mand	ari
🚹 430m P	hoenix	
🚹 461m M	larriott	
🚹 476m Y	ork	-
Q-Find POI Positio	on Area Lat/Long	• •
		E

[«]Figure3-1-8b»Highlight the result and press Go!'.

"My POI" lets you place and manage self-created POI(Point of interest) in an overlaid map layer. To create a new POI, tap at the target spot on the map screen and select "My POI', then enter relevant information in the input menu.

In this chapter we'll show you how to build-up, manager your own POI database.

3.2.1 Build POI

Build a new record in two ways:

1. Build from the current map: Tap and Hold the position to call the submenu, 'Add My favorite'



«Figure3-2-1a» Tap and Hold on main map and press ' My Favorite' to add POIs.

2. From Search result: Use any search method to search a POI, Tap and Hold the result and press 'My Favorite'



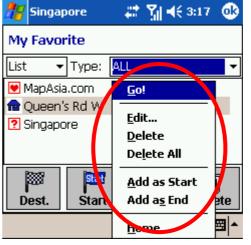
«Figure3-2-1b» Press 'My Favorite' to build POI



《Figure3-2-2a》Press 'Tools'-> 'More' -> 'My Favorite' to enter the POI management page.

3.2.3 Edit POI





«Figure3-2-3a» Choose the display mode or «Figure3-2-3b» Tap-and-hold POI for sub the type of 'My favorite'.

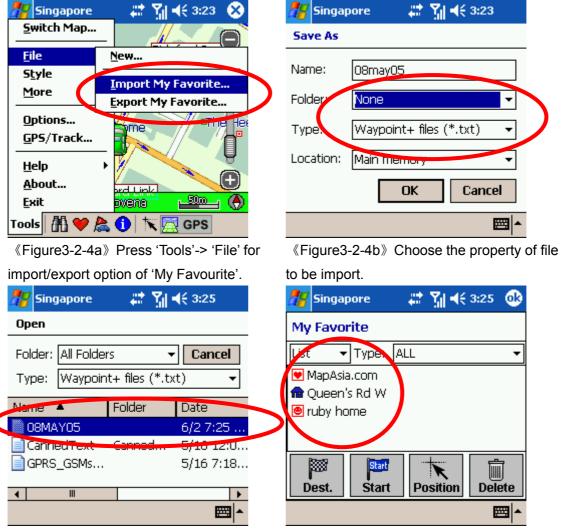
🎊 Singa	pore 💦 🚑 🏹 📢 3:22 🐽
Edit My I	Favorite
X: 103.	835870 Y: 1 202670
Name:	ruby home
Type:	Family
Note:	Family My Equation
🗌 Alar	My Favourite Confidential Unknown Flag Speed Cam
	Others ,

menu options of the PO I

«Figure3-2-3c» Press 'edit' to edit the contents of POI. The 'Alarm'checkbox is a reminder if your route is close to 'My favorite' POI.

3.2.4 Import/Export POI

After POI database build up, user may need to backup the POIs or share with friends. Use the Import/ Export functions to do it.



 $\langle\!\!\langle Figure 3\mathchar`-2\mathchar`-4c \rangle\!\!\rangle$ Choose the import file.

«Figure3-2-4d» Import succeed!

4 Route Planning

IMPORTANT MESSAGE CONCERNING ROUTE PLANNING:

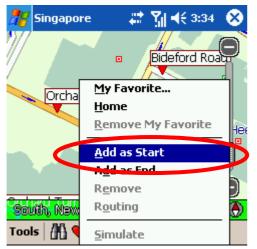
The route planning function of MapKing is ONLY meant to be and should ONLY be used as a crude reference. IT SHOULD NEVER BE USED TO DETERMINE ACTUAL DRIVING DIRECTIONS. The Route Planning function of MapKing is subject to the following limitations:

- Whilst we have taken great care and endeavors in developing the product, we CANNOT guarantee that the road network data and routing calculations of MapKing are free of any omission or defect.
- The road network and traffic conditions in the real world are ever changing; MapKing being a pre-packaged product cannot reflect all these changes on a constant basis.
- Road network parameters specifically required for route planning, like one-way traffic indicator or turn restrictions at street crossing, are difficult or almost impossible to obtain for China or some other Asian countries. The lack of these data would significantly affect the performance of route planning.

4.1 Route Planning

4.1.1 Create Start/ Destination (Routing points)

To initiate route planning, at least 2 routing points (Start, Stop, and End) must be assigned. Tap at the precise spot and select "Routing" to add a routing points (Start / End / Stop), select "Remove Stop" to delete a routing point. MapKing supports up to a total of 9 routing points. It should be noted that Route Planning is calculated from the embedded road network data. Accordingly, the routing points should be placed either on top of or very close to the street lines. There're 3 ways to setup routing point : Namely Search on Main Map / My Favorite / coordinates



🎢 Singapore 🛛 🐥	🕈 🎢 📢 3:35 🛛 🚳
My Favorite	
List 🔻 Type: ALL	-
💌 MapAsia.com 💼 Queen's Rd W	<u>G</u> o!
ruby home	<u>E</u> dit <u>D</u> elete De <u>l</u> ete All
Dest. Start	<u>A</u> dd as Start Add as End
	<u>H</u> ome

《Figure4-1-1a》 On Main Map, Tap and Hold 《Figure4-1-1b》 In 'My Favorite' page, Tap the file and choose 'Add as Start' option at sub-menu.

and Hold the POI and choose the option at sub-menu.



«Figure4-1-1c» From search result, Tap and Hold the POI and choose the option at sub-menu.

4.1.2 Enter Route Planning page

Once you have 2 or more routing point, you can start the route planning. You have 2 ways to enter routing page.



«Figure4-1-2a» Set up 2 Routing points.



《Figure4-1-2b》Press 'Tools' -> ' More' -> 'Routing' or press the "Flag by Car" Button in the function bar.



In Routing planning page press 'Routing' to achieve the result.

《Figure4-1-3a》 Press 'Routing', the total

distance and calculation cost will be display.





《Figure4-1-3b》 Press 'ok' to exit. The recommend path will be highlight on map.

《Figure4-1-3c》Turn-by-turn result will be display if you press 'Summary'

4.1.4 Adjust the route

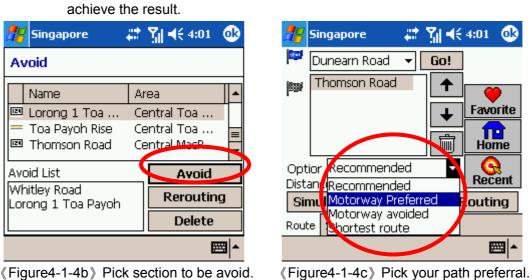
There're several options you can adjust the results.

- 1. by adjust the sequence of destination
- 2. by eliminate section
- 3. by calculate condition

🎥 s	ingapo	re	47	% ◄	(4:00	ⅆ
P [Dunearr) Road	•	Go!		
	Thomso	in Road	1	+		
				Ŧ	Favo	rite
				Ŵ		ne
	r Reco		led	•	- <u> </u>)
Distar	nce: 9.8	32 km			Rece	ent
Sim	ulate	A	void		Routir	ng
Route	Summa	ary				
					E	ਕ∣▲

«Figure4-1-4a» Change the sequence to

destinations. Press Routing again to



«Figure4-1-4b» Pick section to be avoid.

The parameter of 'Option' is as below.

- Recommended: This is the default Option based on the parameters of each street line segments within the road network.
- Motorway preferred: Assigns high priority to expressways, highways and freeways and avoid secondary roads and streets. This is particular suitable for vehicle route planning.
- Motorway avoided: Avoids expressways, highways and freeways. This option is suitable when planning a cycling or walking trip. You may also use this option during rush hours to stay away from highways that are prone to traffic jams.
- Shortest route: this option Ignores road class parameters and calculates routes purely on length of road segments. This is a rarely used option since the shortest route in many cases does not mean the fastest route.

- 1. Change the sequence of destination. Press Routing again to achieve the result.
- 2. Press 'Avoid' to enter the avoid list of section.
- 3. Press the list box of 'option' to avoid specific types of road. You must press 'Routing' again to achieve new result.

4.2 Route Simulation

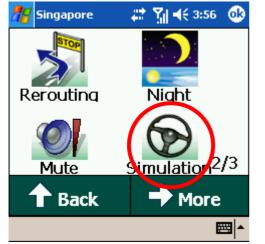
MapKing provides more than result and paths. We also provide 2D/3D simulation. After Start and Destination have been created, with the routing result you may simulate the course of the planned route and have further adjustment.





« Figure4-2-1a » Press 'Simulate' to enter « Figure4-2-1b » Simulating by standard
 'Simulation mode' speed 85km/h. Click on the center to enter

« Figure4-2-1b » Simulating by standard speed 85km/h. Click on the center to enter setting. Click on upper row to enter search options.



《Figure4-2-1c》 In setting, Press Stop Sim.'
to stop Simulation.

5 GPS Positioning

IMPORTANT MESSAGE CONCERNING GPS (Global Positioning System) TRACKING:

The GPS tracking function of MapKing works on GPS satellite signals broadcasted for civilian use. It is subject to inherent signal deviations and environmental interferences caused by surroundings and bad weather. We cannot guarantee nor specify a precise level of accuracy for the GPS positioning data displayed by MapKing. It should also be noted that the Unites States Department of Defense, who builds and operates the GPS system, is free to turn off or downgrade the civilian signals of GPS during rare occasions like regional military conflict. Although MapKing should work with most GPS receivers on NMEA0183 signal output format regardless of their brand name or model, we cannot guarantee that MapKing integrates flawlessly with ALL GPS receivers available in the market.

Please read the package for product information for product support GPS.

In this chapter we will discuss how to setup, operate the GPS functions and the functions provides by MapKing 3D with GPS.

5.1 About GPS

About GPS

GPS (Global Positioning System) is developed and maintained by the US Defense Department. The system was initially deployed for military use but was later open for civilian navigation. The system comprises of 24 satellites on different orbits. The GPS receiver on the ground picks up signals from at least three satellites and calculates its real time position by a set of mathematical formulas generally known as "triangulation".

GPS receivers must maintain line-of-sight with the satellites. GPS won't work indoor and its accuracy tends to degrade significantly when the receiver is located under sheltered area or near high-rise building structure or terrain.

5.2 GPS startup

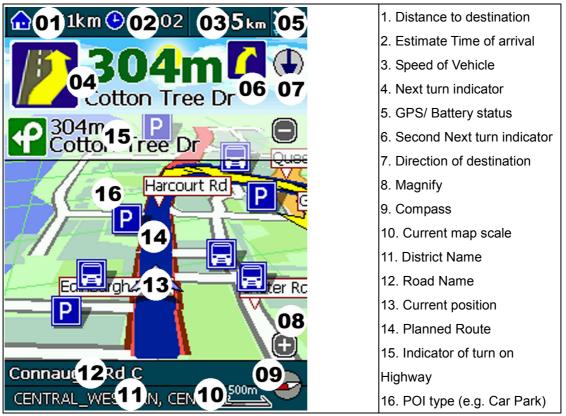
5.2.1 GPS setup

GPS receiver needs to establish clear line of sight to receive signals from satellites orbiting in the space. If the receiver is placed inside a vehicle or vessel, an extended antenna is normally required to pick up signals beyond the enclosed area of the vehicle or vessel. Please note that various types of I/O interface exist among different types of pocket PC (even for the same brand), you should ensure that the output interface of the receiver is compatible with your pocket PC. Consult the technical specifications or device dealer of your receiver or pocket PC if you are in doubt about compatibility.

For Bluetooth GPS, you'll need to setup the connection between GPS receiver and your Pocket PC. Please follow the manufacturer instructions and be reminded to press 'Connect' of GPS device before you start using GPS.

5.2.2 GPS Setting

With GPS and routing function MapKing 3D provide navigation function. Navigation mode also provides vocal assistance and turn indicator. 《Figure5-5-1a》

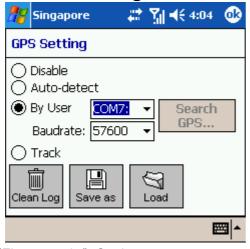


5.3 GPS mode

Open GPS will lead you to 'GPS mode' in MapKing 3D which contains the following displays.

Close GPS	Destination	Rerouting	Night	Switch Map	Exit
2D View	GPS Status	Mute	Stop Sim.	м.о.в.	Options
A Back	1/3 → More	A Back	2/3 → More	A Back	3/3 → More
Close Map Close GPS, switch to 'Map View' mode		Rerouting Activate the Rerouting based on actual position		Switch Map Switch to other Map file.	
Destination Change your destination or Stop GPS and routing options.		Day/Night Switch Day/Night mode		Exit Close MapKing 3D	
2D/3D view Switch between 2D and 3D GPS view		Mute Disable vocal assistance		M.O.B. Mark the point of GPS position, only work when GPS is on.	
GPS Status View the GPS signal status		Start/Stop Simulation Re-start simulation from the beginning.		Option Enter the general setting.	

5.4 GPS setting / Track Record 5.4.1 GPS Setting



«Figure5-4-1a» Setting page

Disable--- stops any track playing or GPS real-time tracking.

Auto-detect--- can detect most brands of GPS in the market.

By User--- user select, for HP HW6515 please use the default setting COM7, Baudrate 57600 **Track---** Open, Save and replay the track records.

Remarks: Only Track Log files captured on live GPS signals can be saved, simulated routes generated by Route Planning cannot be saved."

5.4.2 Connecting GPS

GPS/Track setting is 'COM7, Baudrate 57600', which needs simply one click to enter GPS



《Figure5-4-2a》 Default COM7, Baudrate 《Figure5-4-2b》 Press 'GPS' to enter GPS
57600. mode



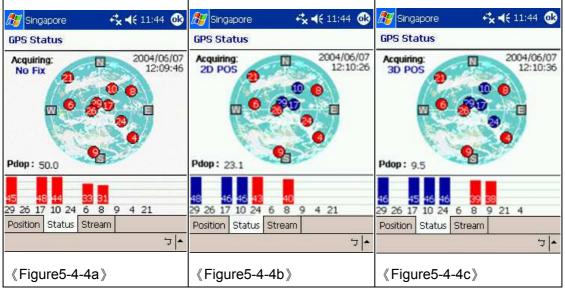
《Figure5-4-2c》 MapKing 3D will use the 《Figure5-4-2d》 GPS mode on! default setting

5.4.3 Position Information



《Figure5-4-3a》

- 1. Date/Time --- The clock is accurate only until positioning succeeds.
- 2. Vehicle Speed --- speed of vehicle by reading GPS.
- 3. Vehicle direction --- The estimate direction heading from last position.
- 4. Altitude --- for 3D GPS positioning system will need 4 good satellite signal or above.
- 5. Current Position --- can be fixed only with minimum 3 or more satellites detected.
- 6. GPS status --- 3 kind of status available, tick(v) for successful position, question mark
 (?) for GPS warming up, cross (X) for GPS not available.



7. 5.4.4 GPS status

 $\langle\!\!\!\!\langle$ Figure5-4-4a $\rangle\!\!\!\rangle$ Acquiring No Fix represent the GPS is achieving position, all signals are not strong enough and displayed in red . Time/date not tuned and the Pdop value is big.

«Figure 5-4-4b» 2D Positioning acquired when 3 fixed satellite signals are in blue .

 $\langle\!\!\!\langle$ Figure5-4-4c $\rangle\!\!\!\rangle$ 3D Positioning acquired when 4 or more satellite signals are fixed and the Pdop value is relatively small.

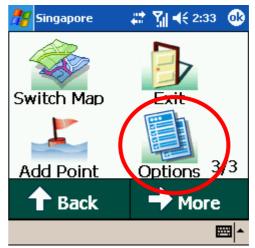
Remarks: Large PDOP value means weak signal

6 System Options

6.1 Enter System Options

There're 2 ways to set the options of MapKing 3D:





《Figure6-1-1a》Press 'tools'-> 'Options' in 《Figure6-1-1b》Press 'Options' in 'GPS' 'Map view' mode.

mode.

🎥 Singapore		{ € 2:33 @	Unit: the unit of distances can be either in		
Options - General			miles or kilometers.		
Guide Line: Maximal Volu	erface: English		 Interface: MapKing 3D support English, Traditional Chinese and Simplified Chinese interface. Choose appropriate interface according to your hardware OS. Zoom control: The Zoom control bar position on main map. 		
General Navi.			Guide line:		
		⊠ ^	"GIS" : grid lines on the ground rotates with		
《Figure6-2-1a》General option page		al option page	the screen		
			"Camera" : grid lines on the ground are static		
			and do not rotate with the screen		
			Multi-turn Alarm: add 'then' in between the		
			vocal instruction of the approaching turns.		
			Modify system time: use GPS time as		

6.2 General setting

	system time.
	Day/ Night auto switch: Switch Day/night
	mode by system clock.
🎢 Singapore 🛛 🛤 🎢 📢 2:34 🚳	Automatic Scaling: Shows best scale in
Options - Navigation	GPS mode.
Automatic Scaling	Crossing Information: Show information of
 Crossing Information Automatic Rerouting 	street intersections along the route
Reroute Distance: 100 m -	Automatic Rerouting: activates re-routing
Fix GPS Position: 70 m 👻	if actual position tracked by GPS is deviated
2D Symbol: CR-V	from the planned or desired route.
Motorway Information: 3	Reroute Distance: The distance to define
General Navi. Voice POI	deviation.
←	Fix GPS Position: Re-align GPS position to
《Figure6-2-1b》Navigation options	the nearest road of the desired distance
	range
	2D Symbol: The Symbol to represent the
	current position
	Motorway information: The number of
	sub-indicators shows on screen. (Reference
	to 5.4)
🎢 Singapore 💦 👬 👫 2:34 🚳	Enable Voice: Enable vocal assistance in
Options - Voice	' GPS mode'
☑ Enable Voice	Instructor: The Instructor is defaulted with
Instructor: English 👻	installed language version. Install plug-in to
Safety Speed Expresswar → 110 →	enable more vocal instructor.
Speed Camera	Safety Speed: Set the limit of safety speed
Crossing 🗹 Far Vocal 🔽 Middle	alarm here.
Sounds Vear	Vocal Prompt for crossing point ahead:
General Navi. Voice POI	Far 500 meters ahead
<u></u>	Middle 300 meters ahead
《Figure6-2-1c》 Vocal assistance options	Near 100 meters ahead

🎊 Hong Kong	∉ <mark>x</mark> ¥j € 4:17	ⓓ
Options - POI		
 Default Setting User Define 		
Bus/Railway Stat Car Park Gas Station	ion	
Airport		•
General Navi. Voice	POI	
	E	≝∣≜
《Figure6-2-1d》F	POI display optio	ns

6.3 Road sign

The road sign defines in MapKing 3D (from left to right):



«Figure6-3-1a» Road sign summary

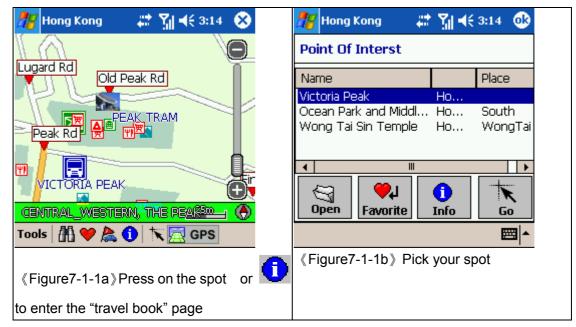
Upper row (from left to right)	Lower row (from left to right)
Leaving expressway along the right lane	Entering tunnel ahead
Leaving expressway along the left lane	Entering bridge ahead
Leaving expressway	Tollgate
Entering expressway along the left lane	Rest area
Entering expressway along the right lane	Interchange
Entering expressway	Turn left at intersection ahead
Entering freeway along the left lane	Turn right at intersection ahead
Entering freeway along the right lane	U-turn to the left at intersection ahead
Entering freeway	U-turn to the right at intersection ahead
Stay on the right lane	Stay on the left
Stay on the left lane	Stay on the right
Entering interchange	Distance to destination
Entering elevated road	Please set destination

7 Travel Book

MapKing 3D[™] provides a travel book log function. This function allow you have the best schedule of travel

7.1 Travel book startup

Press 💟 to enter "Travel Book" main page, this function is not available in GPS mode.



7.2 Travel book functions

This chapter introduce the main functions of "travel book"



Open: Import the travel book files.

Favorite: Add highlighted spot to 'My favourite'

Info: View detail of highlighted spot

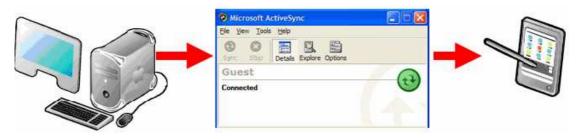
Go: go to the spot

- 7.3 Read travel book
- 7.3.1 Prepare importation

You may download the latest "Travel book" from MapKing.com and create your own travel book by PC version, too. This chapter tell you what you need to do before importation.

You must copy the travel book file to your Pocket PC.

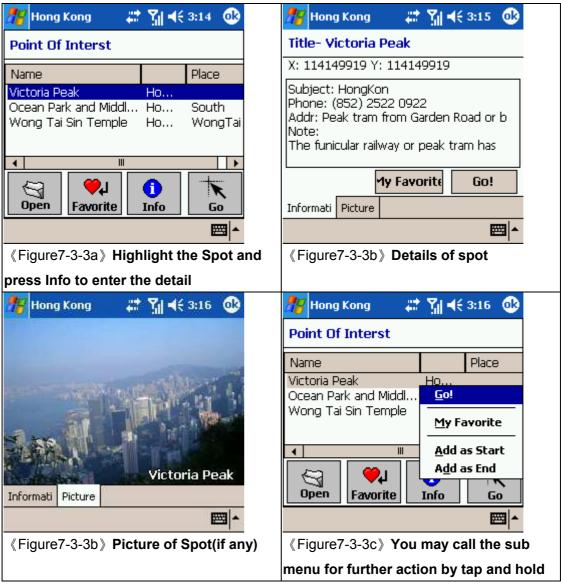
- 1. Synchronize your Pocket PC and PC with ActiveSync.
- 2. Download the travel book file from MapKing.com and save it to desktop.
- 3. Copy the file *.ti1 and *.ti2 to 'My documents' folder of your Pocket PC
- 4. Start MapKing3D™



7.3.2 Import the travel book

🕂 Hong Kong 🦳 🗱 🏹 📢 3:14 🏾 🖸	🚯 🛛 🎢 Hong Kong 🛛 🚓 🏹 📢 3:15
Point Of Interst	Open
Name Place	Folder: All Folders Cancel
Victoria Peak Ho Ocean Park and Middl Ho South	Type: MyBook files (*.ti1) 🔻
Wong Tai Sin Temple Ho WongTa	ai Name 🔺 Folder Date
	HK_Tour 4/23 7:12
	HK_Tour My Doc 4/29 11:0
Image: Constraint of the second sec	
	▲ Image: A marked black bl
《Figure7-3-2a》 In the travel book m	nanual, 《Figure7-3-2b》Pick the Travel book you
press "open"	want to import. MapKing 3D™will contra
	the identity records from difference trave
	book.

7.3.3 Spot details

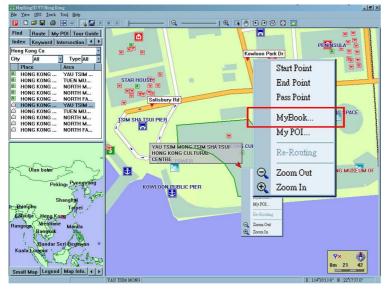


7.4 Create your own travel book

If you have PC version, you may create your own travel book. This chapter tell you how to create your own travel book and import to your Pocket PC.

7.4.1 Add location by PC version

Add location by right click the screen and click 'My book'



Enter the details and press ok.

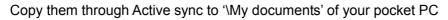


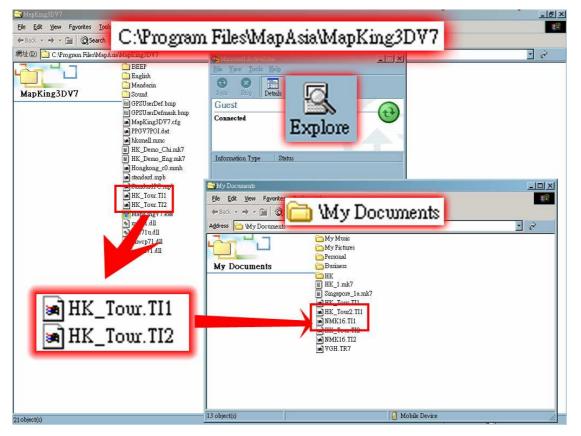
A new record will be created on the Tour guide page of your MapKing3D™.

Find Route My POI Tour Gu	de
Name Subject P	ace
Victoria Peak HK T H	K
Ocean Park and Mi HK_T	
Wong Tai Sin Temple HK_T	
Hong Kong cultural HK_T	
Add Open Edit Del	Add is to create a new book

7.4.2 Copy travel book files

The Travel book data files are default at C:\Programfiles\MapAsia\MapKing3DV7\ XXX.ti1 and XXX.ti2

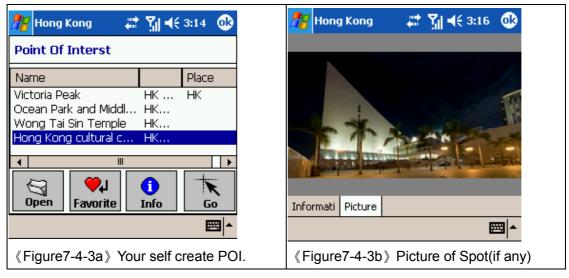




7.4.3 Import and details

Follow the instruction of Import the travel book 7.3.1.

You'll see the self-created travel book.



8 FAQ and Technical Support

GPS Technical Support and Service for using HP iPAQ Quick GPS Connection Utility http://ap.compaq.com.sg

MapKing software Technical Support and Service

Please send e-mail to following with your Product Authorization code, MK ID and email during registration and a detailed description of the problem you encounter

Countries / Cities	Email		
China	service@mapasia.com		
Hong Kong	support@mapasia.com		
India	mapking.support@adroitecinfo.com		
Indonesia	mapking@dag.co.id		
International	support@mapasia.com		
Japan	support@mapasia.com		
Korea	support@mapasia.com		
Malaysia	support@mapasia.com		
Philippine	support@inlis.ph		
Singapore	mapking@eastgear.com		
Taiwan	service@mactiontech.com		
Thailand	support@mapasia.com		
USA	support@mapasia.com		

Tips for Registration

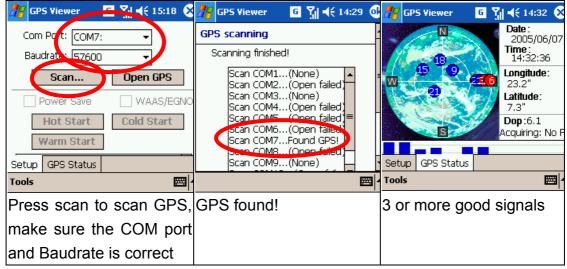
A: Please make sure that:

- 1. The Registration code composes of 16 digit characters and numbers in UPPERCASE ONLY. Please be aware of the difference between similar characters like 0 and 0, 1 and I etc.
- 2. We suggest you to use the "Keyboard input" instead of "Hand writing"
- 3. Open the correct map file/ correct language version. Make sure you're not registering the DEMO Map.
- 4. Store the map files (.mk7) in 'My documents' folder.

GPS connection Problem

We have a GPS testing program in our CD-ROM named GPS viewer to check the GPS Hardware/Software status. In case you have difficulty on GPS please install this program to check the GPS device status.

- 1. Soft reset your pocket pc.
- 2. Install GPS viewer from Technical support page of your CD-ROM
- 3. Open GPS viewer from your Pocket PC 'Start' ->'Program' -> 'GPS viewer'
- 4. Set to COM7, Baud rate 57600.
- 5. Press 'Scan', you should have the result 'FOUND GPS' on COM7
- 6. After you scan the GPS, press 'Open GPS' to start positioning, make sure you are on an open area.



Normal

GPS failure

🎢 GP5 Viewer 💿 🖸 🏹 📢 14:29 🧕	🎊 GPS Viewer	🖸 🎢 ┥€ 14:29 🚷	🎢 GPS Viewer 🛛 🛛	ā 🎢 📢 14:30 🚫
GPS scanning	N	2004/29/07	14	Date: 2005/06/07
Scanning finished!		Time : 14:29:44		Time : 14:30:14
Scan COM1(None) Scan COM2(Open failed) Scan COM3(None) Scan COM4(Open failed) Scan COM6(Open failed) Scan COM6(Open failed) Scan COM7(None) Scan COM9(None)	Setup GPS Status	Longnaae. 0.0" Latitude: 0.0" Dop :0.5 Acquiring: No F	GPS Statue	Longitude: 0.0" Latitude: 0.0" Dop:0.5 Acquiring: No F
	Tools		Tools	• =
No GPS found	No/ wrong G	PS Status	Continuous ba	ad signal
Contact HP office	Contact HP office		Update Quick GPS connection	
http://ap.compaq.com.sg	http://ap.compaq.com.sg		(Start > Settings > Connections	
			> Quick GPS Con	nection icon

-End of Manual-