

Quo Vadis™ User Manual

Version 2.0 - 2.0c

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1 Introduction

Quo Vadis is a street-level mapping system designed for popular handheld organizers. It replaces the need for using paper maps by letting you store and carry digital maps in your organizer.

You can use Quo Vadis any time you need to find out where you are, avoid getting lost in a new city, verify directions being given to you, find a nearby shopping center, or other such typical uses of maps.

Combined with a GPS (Global Positioning System) receiver, Quo Vadis can be used as a simplified vehicle navigation system. However, operating a vehicle and using Quo Vadis at the same time is potentially distracting and dangerous. We strongly recommend you let a passenger use Quo Vadis to navigate while you concentrate on operating your vehicle.

Before you get started, you should read any Read Me files which accompany this manual or the Quo Vadis software since they contain important last-minute information which may not be included here.

You should also read the Software License Agreement at the end of this manual. You will be required to accept it to use Quo Vadis.

2 Getting Started

2.1 System Requirements

To use Quo Vadis you need an organizer running the Palm™ Operating System version 2.0 or greater with 64K of dynamic heap and at least 150K of available memory in which to store the Quo Vadis application. This is equivalent to no models such as the PalmPilot™ Professional or later.

To use the mapping features of Quo Vadis, you will need additional memory storage depending on the number of maps you wish to use at any given time. You will need to sum the sizes of the maps you intend to carry in order to determine the amount of additional memory needed to store them. After calculating the sum of the map file sizes, increase the sum by another 5% to account for the overhead of storing them in your organizer. This should give you a close approximate total memory requirement.

If you plan to use a GPS receiver with Quo Vadis see the chapter *Using GPS Mode with a GPS Receiver* for complete details and additional requirements.

2.2 Conflicting Applications

Quo Vadis is designed to be 100% Palm™ Operating System compatible. However, some third-party applications such as Hackmaster hacks or other system extensions can interfere with normal operation because they modify the default expected behavior of the operating system. This can result in attempts to draw information to the screen when they shouldn't be doing so and thus can cause system crashes. If you believe you are experiencing crashes or system freezes and you have such hacks installed, you should disable them as they are most likely the cause. Ultimately, we cannot guarantee full compatibility of Quo Vadis with modified operating systems or hardware, not specifically endorsed by us or their respective manufacturers as being fully Palm™ Operating System compatible.

2.3 Installation

To install Quo Vadis into your organizer, all you need to do is locate and transfer the Quo Vadis application file and any map files you would like to use into your organizer by means of a HotSync™ operation. The Quo Vadis application file is always named *QuoVadis.prc* whereas map files always end with a *.pdb* file name extension, and are always named after the area they cover, such as *San_Francisco.pdb*.

The HotSync™ procedure is easily accomplished using the Palm™ Desktop organizer software which should have been provided to you with your organizer. If you have never installed software into your organizer, please refer to the manual which came with your organizer software for complete details. The steps involved are very straightforward and are thus not duplicated here.

2.4 Extracting Maps from ZIP or SIT Archives

If you are installing map files from a compressed archive in either ZIP (Windows) or SIT (Macintosh) format, you must be sure to extract the files without corrupting them. Numerous extraction utilities exist that are capable of extracting from these archives but one common error is for users to extract the files while applying line-feed conversion to the content. Line-feed conversion or any other kind of filtering or conversion should be disabled when extracting the files. If you are unable to HotSync™ extracted files into your organizer, or are experiencing immediate crashes when trying to view or manage your map files, then this may be the problem. Try re-extracting the files and contact our Technical Support for assistance if you still do not succeed.

2.5 Launching the Quo Vadis Application

To launch Quo Vadis, first tap the *Applications* button to display the list of applications in your organizer. Consult your organizer's manual if you're not familiar with this button. Then locate the Quo Vadis application icon in the list and tap on it. If this is the first time you launch Quo Vadis, you will be asked to read and then either agree or disagree to the Software License Agreement which covers your use of the software. A copy of the Software License Agreement can be found at the end of this manual. You won't see the Software License Agreement again, except in some cases when upgrading to a new version or reinstalling Quo Vadis. After you agree to it, you will see a startup screen similar to the one at right. This screen displays the name of the registered user of the software, and also the number of maps that Quo Vadis has found in your organizer. After this screen goes away, you will be taken to the last operating mode you had been using, as described below.



2.6 Operating Modes

Quo Vadis includes both mapping and GPS capabilities. These capabilities are actually divided into three *Operating Modes* known as *Directory*, *Map* and *GPS*. The *Map* and *Directory* modes are closely related, but are kept distinct for simplicity. A *Mode* menu is provided in almost every Quo Vadis screen to let you switch from one mode to another. Tap the *Menu* button on your organizer to make it appear. Consult your organizer's manual if you're not familiar with this button. The *Directory* mode is used to view and modify the list of maps that are stored in your organizer. This is the default starting mode the first time Quo Vadis is launched. The *Map* mode is used to view and interact with the maps stored in your organizer. The *GPS* mode is used to establish communication with an optionally attached GPS receiver and then display and interact with the satellite data being received. These three modes and their relationships are covered in the following chapters in greater detail.

3 Using the Directory Mode to Manage Maps

3.1 Map Organization

Before we get into the details of the *Directory* mode, it is important for you to understand the hierarchical, modular model around which Quo Vadis maps are built. This model is based on the idea of breaking up maps into smaller pieces that can be joined at the edges and that follow a chain of ownership. Every map is independent of every other map, but each map contains data which allows Quo Vadis to place it into a universal hierarchy in which parent maps can contain child maps. For example, a United States map can contain state maps, and a state map can contain county maps, and a county map can contain city maps, and so on.

Currently, only city and county maps are available for use with Quo Vadis. References to other types of maps are only included to help explain the structure of the map hierarchy.

All the maps installed in your organizer follow this scheme, with maps being sorted alphabetically within a parent map. However, it is possible to have a hierarchy in which maps don't visually appear to be alphabetically sorted. This happens if there are multiple maps which don't have parent maps installed. For example, if you have installed a California state map, and a city in California, say, San Francisco, as well as a map of Albuquerque (New Mexico), then the three maps would be sorted as follows:

- California
 - San Francisco
- Albuquerque

You probably expected Albuquerque to be placed before California but because you haven't installed a New Mexico state map, the Albuquerque map appears to be in the wrong place. If you had, the order would have made sense, since it would have looked like this:

- California
 - San Francisco
- New Mexico
 - Albuquerque

So, if you now added a map of Paris, France, it would be placed before California, because France is alphabetically ahead of United States, and so on. Countries are sorted on the same level as other countries, states against states, cities against cities and so forth. There is no inter-level sorting. This approach may be modified in a future version of Quo Vadis to accommodate alphabetized sorting of maps mixed at different hierarchical levels.

It is also important to note that map data is not replicated within each parent map. That is, if you only had a map of California installed, you would be able to see an overview of the state, its highways, and so forth, but you would not be able to zoom in and see any county or city details. You would have to install the specific cities that interest you. If this approach were not taken, then every map that was higher in the hierarchy would get bigger and bigger in size, and would take up lots of memory in your organizer, which is probably not what you want. In fact, you wouldn't even be able to store a map of California with every single city's details, since you would likely need at least 50MB of free memory.

Currently, U.S. maps are divided into incorporated cities and counties, based on U.S. government-specific categories. All map data which does not fall within any incorporated city's bounds is placed into a county map. Another way to say this is: There are city maps, and county maps which contain all the remaining roads not part of any incorporated city. Therefore, when traveling between cities, it is usually better to install the county map, because it may contain roads that link the cities together. Otherwise, you might see a gap between non-adjacent cities, where

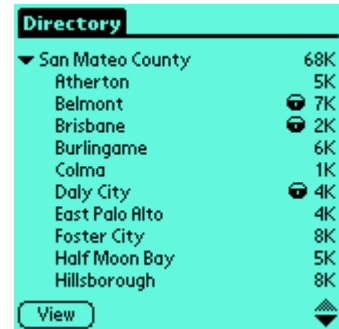
a road segment suddenly belongs to the county, and not to either of the two cities. Essentially, county maps and city maps contain mutually-exclusive data¹.

This approach gives you the flexibility of storing only the cities which you are likely to need or visit while saving memory space by eliminating the remaining non-essential road data.

3.2 Managing Maps

3.2.1 The Directory Mode

Management of the maps installed in your organizer is done in the *Directory* mode. The screen you see in this mode is called, obviously, the *Directory*. Using this mode, you can view and modify your existing map hierarchy in addition to selecting maps you wish to view in the *Map* mode, which is discussed later. The example at right shows a *Directory* which lists maps in San Mateo County, and their respective sizes in memory. Note that the size of the county map is not the sum of the individual maps. Maps which are stored in ROM cannot be deleted, and have a small lock icon next to them to indicate this. Details on storing maps in ROM are discussed below.



3.2.2 Adding Maps

The procedure for adding maps to your organizer is the same as the one described in the Installation section. You can install as many maps as will fit in your organizer's memory. Maps vary in size from less than 5K for a tiny city to upwards of 800K for really large cities or counties. After you HotSync™ the additional maps into your organizer, they will be available to you when you re-launch Quo Vadis.

3.2.3 Removing Maps

To remove a map, select it by tapping its name, then selecting *Delete Map* from the *Options* menu. If you need to delete a large number of maps, it is sometimes more convenient to delete all the maps, then reinstall just the ones you really wanted to keep, as well as new ones. To do this, use the *Delete All Maps* menu command. Note that once maps are deleted, they cannot be recovered except by reinstalling them.



3.2.4 Storing Maps in ROM

Some organizers contain flash ROM (Read Only Memory) or similar non-volatile storage. Data stored in flash ROM is not lost when power is removed. In general, third-party utilities usually exist which allow you to place map files (or other data, for that matter) in your organizer's ROM for safe-keeping. For example, if your batteries died, you would not lose the map data and Quo Vadis application. You would simply replace the batteries and Quo Vadis would still be in memory and ready for use. Consult your organizer's manual to determine if flash ROM is present in it, and if so, which utilities exist for placing data into such ROM.

¹ In some rare cases, a road serves as the boundary between two adjacent maps, thus existing in both maps and resulting in duplicate, overlapping road labeling.

4 Using the Map Mode to View Maps

4.1 Map Content

In order to maximize the area which can be covered with Quo Vadis maps, given the limited memory available in your organizer, Quo Vadis maps are designed to be as compact as possible. To achieve this, some geographical features which we consider non-essential have been removed, such as bodies of water and railroad tracks. As a result Quo Vadis maps consist almost exclusively of street data. As the storage capacity in organizers increases, we will gradually restore some of these missing features.

4.2 Viewing Maps

4.2.1 The Map Mode

Viewing of maps is done using the *Map* mode. In this mode, Quo Vadis is able to display multiple maps simultaneously, unlike other mapping programs that let you pick only one specific map for viewing at any given time. Maps fit together like puzzle pieces to make larger maps. For example, if you installed maps of two cities which are actually adjoining cities, you would be able to view and scroll transparently between them as one single map.

To use the *Map* mode the very first time, you must select a map from the *Directory* mode and view it by tapping the *View* button at the bottom of the *Directory* screen. You will then be switched to the *Map* mode which is where all drawing takes place. The first time you view a map, Quo Vadis attempts to zoom out to show you as much of the map as possible. You can then zoom in to a suitable scale with more detail.

Quo Vadis is designed to be free of any map boundaries or limits, and does not stop you from scrolling out of the area covered by your maps. If you accidentally scroll into an uncovered area and can't find your way back, you can get back to a map in several ways:

- Search for something in a map.
- Switch to the *Directory* mode and select a map to view
- Select a destination in a map and navigate to it.

When viewing maps, you will sometimes see different symbols representing map features. Some occur far more frequently than others, and vary on an individual map basis. See the appendix for a table of all the symbol meanings. To disable the Symbols and other road labels, select the *Road Labels On/Off* command in the *Options* menu.

4.2.2 Seeing in Grayscale

Quo Vadis maps are drawn in grayscale and the default preference setting is that all roads are drawn in black. You can select *Road Dark ening On/Off* from the *Options* menu to toggle between drawing roads in gray or black. By toggling this preference and experimenting with adjusting your organizer's screen contrast, you should be able to find a setting which greatly improves the legibility of road labels and symbols even when they are overlapping other map features.

Devices running Palm™ Operating System versions prior to 3.0 do not fully support grayscale. Therefore, when using Quo Vadis on such devices, users may notice an almost imperceptible flicker of the screen when using the menus or switching among different modes.

4.2.3 Zooming In and Out

There are several ways to zoom in or out of a map. The simplest is to use the *Page Up* and *Page Down* buttons built into your organizer. Another is to Graffiti® the letters 'i' to zoom in, and 'o' to zoom out. A third way is to use the *Tap-and-Hold* popup menu which is discussed below. The amount of detail visible changes depending on how far you are zoomed in or out. Highway symbols appear almost always, while road labels appear when you are generally zoomed in close. By zooming in rapid succession, you can skip through several zoom levels of detail at once.

4.2.4 Scrolling

Scrolling is done either by tapping on the map, or by dragging an imaginary line on the screen in the direction you wish to travel. Some users may have an initial tendency to try to pull the map in the opposite direction, like they would a static image. Although commonplace in other programs, this form of scrolling has the disadvantage that you have to let go, lift the pen back to the starting point, and drag the image some more. With Quo Vadis you simply drag the pen in the direction you actually wish to go. The map will scroll continuously until you lift the pen. This allows you to pick a road, and visually follow it until a desired intersection, for example. Because the road label follows the road as you scroll, the resulting visual effect is that the name of the road you're tracking doesn't go out of sight. The example shown here would make scroll the map parallel to highway 384. A short drag would scroll slowly, while a long drag will scroll faster.



4.2.5 The Tap-and-Hold Menu

Additional controls are available via the *Tap-and-Hold* popup menu. To invoke it, tap and hold the pen against a desired location for about 1 second, and a menu will appear, as shown here. The zoom commands will zoom on the location where you tapped. The *Set Destination* command marks the tap location as the selected destination discussed later. The *Set In Center* centers the map where you tapped.



4.2.6 Performance

Map drawing speed and interaction are a key factor in making effective use of Quo Vadis. Although Quo Vadis was designed to work with multiple maps simultaneously, it is possible to reduce its performance by adding hundreds of maps to try to cover very large areas. Given that most organizers have limited computing power, you will achieve better results if you follow the recommended approach of keeping only the maps you use frequently and installing the rest on an as-needed basis. Performance is also affected by map size. Viewing very large metropolitan maps from a high zoom level results in longer delays to complete map drawing. This is because Quo Vadis must process more visible information and either draw it or discard it.

4.3 Searching Maps

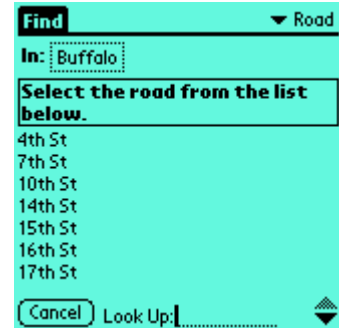
4.3.1 Finding Map Features

When in *Map* mode, Quo Vadis provides the ability to look up roads, intersections, and landmarks. If more than one occurrence exists of a road with the same name, or if two roads intersect in more than one location, Quo Vadis will allow you to view each of these occurrences in turn.

Quo Vadis does not currently have support for map features with multiple names. Thus, highways and freeways are almost always labeled with their numerical equivalent, rather than a locally known name. If you are searching for a highway by name and cannot find it, this is probably why. Whenever possible, interstate highways, U.S. highways and state highways are labeled *I-ddd*, *US Hwy ddd* and *State Hwy ddd* respectively, where *ddd* represents a combination of digits or letters. There are many other road name abbreviations used in Quo Vadis maps and these follow the [U.S. Postal Service Standard Suffix](#) abbreviations.

To begin a search, select the *Find* command from the *Options* menu. This will display a new screen such as the one shown at right. Tap on the category pull-down menu in the top-right to select the type of information you wish to find. Note that you must know which map to look in to find the information. Tapping the map name selector on the left will display the Directory and allow you to choose a map to search. The message box displays feedback to help you search.

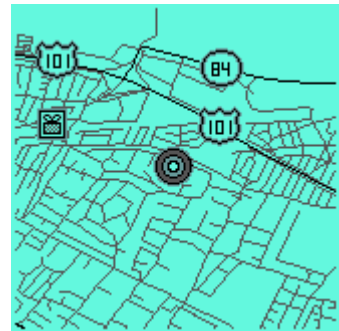
When searching for streets, it is no longer necessary to enter the exact official name of the streets. Sometimes street names include a direction prefix such as N, E, S, W. This requirement it is no longer there.



As you progressively enter a name in the *Look Up* field, the available names list will automatically scroll to display the closest match. When you see the item you wanted, tap on its name to view its location on the map.

4.3.2 Understanding Search Results

After you successfully find and select an item as mentioned above, you are returned to the map view and a bullseye target appears in order to indicate the item's position as shown here. However, sometimes more than one search result exists, such as when two or more disjoint streets have the same name. In this case, you are shown an alert indicating how many multiple results were found. After you dismiss that alert, you are shown the first item found. To examine each successive item, select the *Find Again* command from the *Options* menu. When you reach the last item, another *Find Again* command will return you to the first item found.

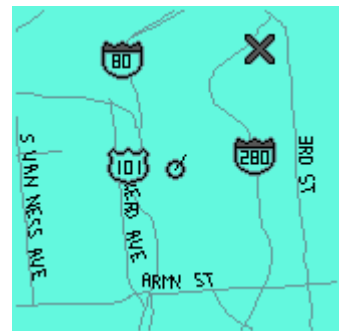


To make the find target go away, select the *Hide Find Target* command in the *Options* menu. This will effectively reset your search and you'll need to perform a new search to make the target reappear.

4.4 Navigating Maps

4.4.1 Selecting a Destination

In *Map* mode, Quo Vadis includes the ability to select and track to a destination of your choice. The procedure for selecting a destination is exactly the same as that for searching as described above. The only difference is that you select a destination using the *Select Destination* command from the *Navigate* menu instead of the *Find* command in the *Options* menu. You can also select a destination using the *Tap-and-Hold* popup menu. Once you select a destination, it is marked with a 'X' icon as shown here. Similar to searching, if multiple destinations are found, you can use the *Navigate* menu's *Select Again* command to switch to each successive destination. Whenever a destination is selected, the *Tracker* indicator automatically appears in the center of the screen as seen here.




4.4.2 The Tracker

The *Tracker* provides a line-of-sight indication to visually assist you in reaching your selected destination. The *Tracker* can be enabled or disabled anytime using the *Navigate* menu's *Tracking On/Off* command.

To use the *Tracker* effectively, the recommended approach is to first find your present location and then select a destination, in this order. You will then have the search bullseye target on your starting point, and the *Tracker* indicating the direction of travel needed to reach the destination. You then need to visually guide yourself from one symbol to the other, scrolling and zooming in and out as necessary to maintain your bearing.

4.4.3 Navigating with GPS

When using a GPS receiver in conjunction with Quo Vadis, you can elect to have your position shown on the maps. You can also force the map to scroll automatically in order to maintain your position fix in the center of the screen. This is especially useful when using Quo Vadis in a moving vehicle.

From the *Navigate* menu, select the *GPS Position On/Off* command to toggle the display of your position. When active, your position fix is represented by the  icon.

To activate automatic scrolling, use the *Navigate* menu's *GPS Scrolling On/Off* command. Note that if you have both automatic scrolling and the *Tracker* active, the *Tracker* icon will be displayed in the center of the screen, thus you will not see the position fix icon mentioned above, because they would both compete for the center of the screen. However, the map will still scroll automatically, and the *Tracker* will correctly indicate your destination, thus giving you the desired result of having a moving map and a destination indicator.

4.5 Map Accuracy

Quo Vadis maps are built using a proprietary system that takes complex source map data obtained from other vendors and converts it into databases compatible with the Palm™ Operating System. Therefore, the maps are only as accurate as the original source we purchased or licensed, and are not meant to be used for high-precision measurement or navigation applications which require highly accurate measurements of the earth's surface.

The maximum positional accuracy error claimed by our current source data provider is approximately 150 feet but in practice we have found the errors to be on the average of about 20 feet.

As much as we would like to, we cannot guarantee that all existing roads are present in the map data because our sources do not guarantee it to us. Maps vary in age, and older cities like New York, for example, are unlikely to have any missing streets at all. Newer, fast-growing cities are more likely to be lacking some streets.

4.6 Preferences

You can set various preferences checking their box. From the *Option* menu select the *Preferences* command. The preference choices are fairly self-explanatory and include options for abbreviating road names in various forms, making roads darker, or warning you of multiple search results, to name a few. Try them all to see the differences they make.

5 Using the GPS Mode with a GPS Receiver

5.1 How GPS Works

The Global Positioning System (GPS) works by receiving signals transmitted by a set of satellites orbiting the earth. Each satellite transmits a highly accurate atomic clock signal. By calculating the clock differences of the signals received by a minimum of 3 satellites, a GPS receiver is able to triangulate a position. With only 3 satellites, the position is known as a 2D (two-dimensional) fix and produces a valid latitude and longitude value. With 4 or more satellites, a receiver is also able to estimate altitude, resulting in a 3D (three-dimensional) position fix.

To work correctly, satellite signals must be received directly by the receiver. That is, the receiver must have a line-of-sight view to the satellites in the sky. Any obstructions such as buildings, trees, walls, etc., will block the signal or even reflect it resulting in an inaccurate clock signal and no position fix.

5.2 Selecting a GPS Receiver

To use a GPS receiver with Quo Vadis, you'll need one that is able to serially output one of these formats:

- NMEA 0183 version 2.01 at 4800 baud, 8 data bits, no parity, 1 stop bit.
- Rockwell Zodiac Binary format at 9600 baud, 8 data bits, no parity, 1 stop bit

Check the GPS Compatibility Table in the appendix to see if your receiver is listed as being compatible. If it's not listed, consult your GPS receiver's manual or contact the manufacturer to determine if these output formats are present.

5.3 Connecting a GPS Receiver

Nearly all GPS receivers with output capability have a RS-232 serial output connector that terminates in a standard DB-9 pin, as shown at right. Likewise, most Palm™ Operating System organizers have a RS-232 serial output connector that can be attached to a HotSync® cable that terminates in a standard DB-9 pin. By attaching these two DB-9 pins using an additional null-modem adapter and gender changer between them, the connection can be completed, as in the illustration shown here:



DB9
Connector

Organizer ← → HotSync® cable ← DB9 → null-modem ← DB9 → gender changer ← DB9 → GPS

In lieu of the above connection, some GPS manufacturers offer their own GPS cables which connect directly to Palm™ Operating System devices and eliminate the need for a HotSync® cable, null-modem adapter, or gender changer. In any case, these other parts can be obtained from your local electronics store.

5.4 Communicating with a GPS Receiver

5.4.1 The GPS Mode

All communication and interaction with an attached receiver is done while in *GPS* mode. This mode can be accessed from any of the other modes by means of the *Mode* menu.

The *GPS* mode consists of four screens that allow you to view and exchange data with your receiver. These are the *Initialization*, *Navigation*, *Satellites* and *Sky Chart* screens. The first time you enter *GPS* mode, you will see the *Initialization* screen.

Each screen contains a pull-down popup menu in the top-right corner which can be used to switch between screens. Alternatively, you can press the *Page Up* or *Page Down* buttons on your organizer to cycle through the different screens.

At the top of each screen, you will see the words *No Fix*, *2D* or *3D* depending on what kind of position fix you are receiving.

If you exit the *GPS* mode, the next time you return to it you will be placed in the last screen which you were viewing when you exited.

5.4.2 The Initialization Screen

The *Initialization* screen is where you begin communication with your receiver. To establish the communication, you must select a receiver from the *Receiver* list that matches yours. If you don't see a matching type, try using the *NMEA Compatible* option, since it is a standard protocol.

If you know your approximate latitude and longitude, and altitude, enter them in their respective fields, otherwise leave them blank. These fields will later be updated and filled in automatically each time you enter this screen.

The *GMT* setting is the difference between your local time and the Greenwich Mean Time, also known as Zulu time. The PST, MST, CST, EST U.S. time zones correspond to -8, -7, -6, -5 offsets respectively.



Check the *DST* checkbox if daylight savings time is in effect.

The update *Interval* determines how often the *Navigation*, *Satellites* and *Sky Chart* screens update.

When you are ready to start the communication, tap the *Start* button. This will open the serial port and then wait for a response from your receiver. If valid GPS messages are being received they will appear in the *Messages* box. When you are done using your receiver, tap the *Stop* button to close the serial port. Because the serial port is used when using a GPS, your organizer's batteries will be consumed faster.

To update your organizer's clock from the atomically correct satellite clocks, tap the *Set Time* button. The next time you receive a valid date & time, your organizer's date & time will be updated. In order for this to work, you must have correctly set the *GMT* and *DST* options, otherwise your clock will be incorrectly updated!

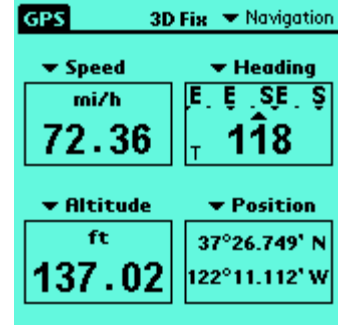
Your receiver may take some time to obtain a position fix depending on obstructions and battery level. As long as you see incoming messages however, you know the connection is working. Depending on receiver type, it is possible to not receive any messages for as long as 45 seconds. If you suspect something is wrong, check your connection, batteries, and settings above, then tap the *Start* button again.

5.4.3 The Navigation Screen

The *Navigation* screen displays incoming data such as speed, heading, position, altitude, latitude, longitude, and time. There are four multi-function displays (MFD) which can each be set to display any of the afore-mentioned items. Each MFD has a pull-down popup menu above it which can be used to change the MFD display. Also, by

tapping in an MFD, another popup menu of MFD-specific choices can be displayed, when applicable. For each MFD type, the popup choices are:

- Speed – ft, m, km, mi, nm
- Heading – magnetic or true
- Altitude – ft, m, km, mi, nm
- Position – no options
- Time – 24 or 12 hour format



When no data is available for a particular MFD type or option, the MFD will be completely grayed out. For example, not all receiver output magnetic variation, so selecting the *Magnetic* option in the Heading MFD will be cause it to be blank if such data cannot be displayed. When no position fix is available, practically all navigation data is lost, and the MFDs are mostly blank. They will automatically activate when data becomes available to display.

Note that multiple MFDs can be set to show the same information in different units of measurement to perform comparisons.

5.4.4 The Satellites Screen

The *Satellites* screen displays individual information for each satellite visible by your receiver. The table headings representations are as follows:

- CH (receiver channel). This is the channel used to receive the satellite data. It ranges from 1 to 12.
- SV (satellite value). This is the unique number assigned to each satellite. It is also known as PRN (pseudorandom noise number) and ranges from 1 to 32.
- AZ (azimuth). This is the horizontal angle the satellite makes with respect to true North from your position and ranges from 0° to 359°.
- EL (elevation). This is the vertical angle of elevation the satellite makes with respect to you and ranges from 0° to 90°.
- SN (signal-to-noise ratio). This is the incoming signal strength of the satellite in dB (decibels) and ranges from 0 upwards.
- UP (used-in-position). This is checked if the satellite is being used to compute your position fix.

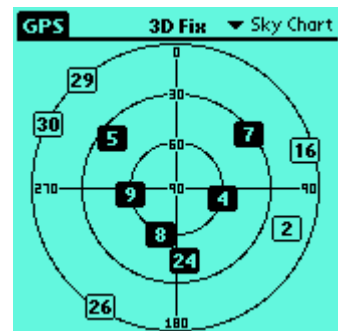
CH	SV	AZ	EL	SN	UP
1	4	95	62	45	✓
2	9	254	61	34	✓
3	8	197	55	36	✓
4	24	172	48	43	✓
5	5	310	42	28	
6	7	55	30	34	✓
7	2	112	14	27	✓
8	16	70	8	0	
9	30	299	4	0	
10	29	316	2	0	
11	26	211	0	0	

5.4.5 The Sky Chart Screen

The *Sky Chart* screen simply display the satellite positions in the sky with respect to you as well as indicating which are used to track you and which aren't.

Your position is represented by the center of the concentric circles. The circles indicate the 0, 30, 60 and 90 degree horizon levels. The outermost circle also represents the satellite azimuth angle, where 0 degrees indicates true North. Thus, in the example shown here, satellite 9 would lie directly West of your position at a 60 degree horizon angle above ground.

Satellites drawn in black are used to compute your position (equivalent to being check-marked in the UP column in the Satellites screen). White ones are not due to low signal strength.



6 Getting Help

If after reviewing this User Manual, any Read Me files, the online FAQ, and the individual help screens available within the software itself you still need help, contact the our Technical Support staff. We will try to resolve conflicts, troubleshoot problems, and answer your questions as thoroughly as possible. If we do not have an immediate answer we will contact you within a reasonable period of time.

Before contacting us, and to expedite your requests, please take the time to recreate the problem and think of the steps involved in doing so. Please have your organizer handy when you call in case we need to walk you through some steps.

Telephone technical support is available Monday through Friday from 9am to 5pm PST. However, our preferred method of support is via e-mail. Support requests sent via e-mail are not subject to the hours of operation for telephone support and will receive replies usually within 24 hours.

Telephone support: (650) 326-4727

Fax support: (650) 328-9807

E-mail support: support@marcosoft.com

7 Appendix

7.1 Map Symbols

	Interstate Highway		U.S. Highway		State Highway
	Office Center / Industrial Park		Golf Course		Shopping Center
	Airport or Airfield		Bus Terminal		Train Station
	School / University		Hospital		Lodging

7.2 GPS Receiver Compatibility Table

This table lists some of the GPS receivers that can or cannot be used with Quo Vadis, and the settings which are typically needed to connect to them. Special thanks to Frank Ramage, Dan Royea, Bill Melody, Peter Simpson, Tim Heflin, and David Cook for contributing to this table.

GPS Receiver Type	Compatible	Receiver Setting
Ashtech G8 Development Kit	Yes	NMEA Compatible
Axiom Sandpiper	Yes	NMEA Compatible
DeLorme Earthmate	Yes	DeLorme Earthmate
DeLorme Tripmate	Yes	DeLorme Tripmate
Eagle AccuNav	No	
Eagle Explorer v1.1 to v1.3	No	
Eagle Explorer v1.4	Probably	NMEA Compatible
Eagle Explorer v1.9	Yes	NMEA Compatible
Garmin 12	Yes	NMEA Compatible
Garmin 12XL	Yes	NMEA Compatible
Garmin 45	Yes	NMEA Compatible
Garmin eTrex	Yes	NMEA Compatible
Garmin GPS-II Plus	Yes	NMEA Compatible
Garmin GPS-III	Yes	NMEA Compatible
Garmin GPS-III Plus	Yes	NMEA Compatible
Lowrance Global Map Sport	Probably	NMEA Compatible
Magellan 315	Yes	NMEA Compatible
Magellan 4000 (mode "C")	Probably	NMEA Compatible
Magellan 5000 (mode "D")	Probably	NMEA Compatible
Magellan ColorTrak	Yes	NMEA Compatible
Magellan GPS Companion	Yes	NMEA Compatible
Magellan Meridian XL	Yes	NMEA Compatible
Magellan Trailblazer	Probably	NMEA Compatible
RandMcNally Streetfinder	Yes	NMEA Compatible
Trimble ScoutMaster	Yes	NMEA Compatible

Most of the GPS connections in the above table can be accomplished with these simple components (available in most electronics stores) as shown in the photo:

- Palm III organizer
- output cable from your GPS (DB-9 pinout) at top of picture
- gender-changer adaptor (DB9 pinout) in center of picture
- null-modem adaptor (DB9 pinout) in center of picture
- HotSync cable at bottom of picture

Here, the Palm III connects to a HotSync cable, which connects to a null-modem adaptor, which connects to a gender changer, which connects to an output cable from a GPS receiver. Make sure you buy the right male or female adaptors.

Alternatively, it should be possible to use a Palm modem cable which eliminates the need for a null-modem adaptor (and maybe the gender changer) but adds the need for the DB-25 to DB-9 adaptor which came with your PDA since the modem cable ends with a DB-25 pinout.



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