

# GPSMAP<sup>®</sup> 76

chartplotting receiver

owner's manual



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### INTRODUCTION

Thank you for choosing the Garmin GPSMAP 76. The GPSMAP 76 utilizes the proven performance of Garmin GPS and full-featured mapping to create an unsurpassed portable GPS receiver. Take a moment now to compare the contents of this package with the packing list on the box. If any pieces are missing, contact your Garmin dealer immediately.

### **About This Manual**

To get the most out of your new navigation system, take time to read this manual and learn the operating procedures for your unit in detail. This manual is organized into the following chapters.

The Introduction chapter contains the Table of Contents as well as GPSMAP 76 care information.

The Getting Started chapter provides information such as an overview of unit features and how to turn the unit on and adjust the backlight. It also contains a simulation to help you get acquainted with your new GPSMAP 76.

The Basic Operation chapter provides you with information about features such as using the Find Menu, navigating a route, and using waypoints. There are also step-by-step directions to assist you in these operations.

The Main Pages chapter provides detailed explanations about each page in the GPSMAP 76 and step-by-step directions on using the pages. The Main Menu chapter provides detailed explanations about the Main Menu and how to use it to configure your unit.

The Appendix contains information such as specifications, optional accessories, and maintenance information. You can also find warranty and FCC information in the Appendix. Read the Safety Information to learn how to install and use your Garmin GPSMAP 76 safely and responsibly. An Index is provided at the end of the manual for

reference. Simply look up the topic you wish to learn about and read the page or pages listed.

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# **Care Information**

# **Cleaning the Unit**

The GPSMAP 76 is constructed of high quality materials and does not require user maintenance other than cleaning. Clean the unit using a cloth dampened with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

# **Storing the GPSMAP 76**

Do not store the GPSMAP 76 where prolonged exposure to temperature extremes may occur (such as in the trunk of a car) as permanent damage may result. User information, such as waypoints and routes are retained in the unit's memory without the need for external power. It is always a good practice to back up important user data by manually recording it or downloading it to a PC (transferring it to MapSource).

# Immersing the Unit in Water

The GPSMAP 76 is waterproof to IEC Standard 60529 IPX7. It can withstand immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the unit. After submersion, be certain to wipe and air dry the unit before reuse or charging.

To resolve problems that cannot be remedied using this guide, contact Garmin Product Support in the U.S. at 800/800.1020 or Garmin Europe at 44/0870.8501241.

# **GETTING STARTED**

### **Unit Basics**







#### To Install the batteries:

- Remove the Battery Cover by turning the D-ring 1/4 turn counter clockwise and pulling the cover loose.
- Check the battery polarity with the molded diagram in the battery compartment and install the batteries inserting the end toward the spring first.
- Re-install the Battery Cover by aligning the back cover with the Unit and turning the D-ring clockwise.

Remove the batteries from your GPSMAP 76 when you do not expect to use the unit for several months. Be sure to observe the proper polarity when inserting the batteries. Follow the battery manufacturer's instructions on the proper care and handling of the batteries



### To install the Lanyard:

- 1. Place the loop of the Lanyard through the slot at the bottom of the unit.
- 2. Route the strap through the loop and pull tight.

# **Interface Keys**

### IN/OUT Zoom Keys

- From the Map page, press to zoom in or out
- From any other page, press to scroll up or down a list

### NAV/MOB Key

- Press and release at any time to view the Find Menu page
- · Press and hold for MOB

### POWER Key -

- Press and hold to turn unit On/Off
- Press and release to adjust backlighting

### QUIT Key

 Press and release to cancel data entry or exit a page



### ROCKER Key

 Move Up/Down or Right/Left to move through lists, highlight fields, on-screen buttons, icons, enter data or move the map panning arrow

### PAGE Key

- Press to cycle through the main pages
- Press when using the on-screen keyboard to close
- Press to end an operation in progress and return to the main page.

### MENU Key

- Press and release to view options for a page
- Press twice to view the Main Menu

### ENTER/MARK Key

- Press and release to enter highlighted options, data, or confirm on-screen messages
- Press and release at any time to mark your current location as a waypoint

# Basic Operation

# **Turning on the GPSMAP 76**

When the GPSMAP 76 is turned on, the Welcome page is displayed, followed by the Information and Warning pages. Acknowledge each of these pages by pressing the PAGE key. The GPS Information page is now displayed. The unit must now collect satellite data and establish its present position. To ensure proper initialization, the GPSMAP 76 is shipped from the factory in AutoLocate mode, which allows the receiver to "find itself" anywhere in the world. Before you turn on the unit to start initialization, be sure the antenna has a clear and unobstructed view of the sky to receive satellite signals.

#### To turn On and Off the GPSMAP 76:

- Press and hold the red **POWER** key. When the unit powers on, a tone sounds and the Warning and Information pages are displayed.
- To acknowledge that you have read and understand the Information and Warning pages, press PAGE. You will now see the Satellite Information page.
- To turn off the GPSMAP 76, press and hold the red **POWER** key again.

## **Adjusting Backlight and Contrast**

You may want to adjust the backlight/contrast to see the display better.

### To adjust the backlight/contrast level:

- 1. Press and quickly release the **POWER** key.
- Press the ROCKER key UP to increase the brightness or DOWN to decrease the brightness.
- Press the ROCKER key RIGHT to increase the contrast or LEFT to decrease the contrast
- Press ENTER or QUIT to close the Backlight/ Contrast adjustment window.

# **Selecting and Entering Data**

As we progress through this *Owner's Manual* you will often be directed to press a specified Interface key or highlight a field. When you are directed to press a key, you should press, then release the key. If the key needs to be held down for a period of time, the instructions will tell you. The position of the highlight is controlled by the **ROCKER** key. When a field is highlighted, a dark strip encompasses the field.

#### Simulator Mode

The Simulator Mode is great for practicing with the unit while inside and satellite signals are not available. When the GPSMAP 76 is in Simulator Mode, the GPS receiver is turned off, conserving battery power. The unit cannot be used for actual navigation.



**NOTE:** Do not try to navigate in Simulator Mode. While in the Simulator Mode, the GPS receiver is turned off. Any Satellite Signal Strength Indicators displayed are only simulations and do not indicate the strength of actual satellite signals.



GPS Information Page
Menu

#### To put the GPSMAP 76 in Simulator Mode:

- 1. With the GPS Information page displayed, press the **MENU** key.
- 2. Using the **ROCKER** key, highlight **Start Simulator** then press the **ENTER** key.

When the Simulator Mode is active, the message "Simulating GPS" is displayed along the top of the GPS Information page.

#### To turn off the simulator:

- With the GPS Information page displayed, press the MENU key.
- 2. Select Stop Simulator then press ENTER.

To simulate movement, press **PAGE** until the pointer page is displayed. Press the **ROCKER** key LEFT or RIGHT changes the Track. Press the **ROCKER** key RIGHT until your Track has changed about 40°. This simulates the direction change to the right. The Pointer should now be pointed toward the left of the display indicating that you need to turn to the left to head toward the waypoint.

Press the **ROCKER** key to the LEFT, simulating a left turn, until the Pointer is realigned with the vertical line in the Compass Ring indicating the GPS is on track to the destination.

# Initializing the GPS Receiver

The GPSMAP 76 needs to be initialized the first time the unit is used, if it has been stored several months, or if it has been moved over 600 miles. The Almanac within unit stores each satellite's orbital data that is supplied in the satellite signals. The GPSMAP 76 uses the Almanac to know which satellites to search for and automatically updates each time the unit aguires satellites. If you do not use your GPS for several months or move the unit over 600 miles between uses, the Almanac can become "cold" and the orbital information is no longer valid. Your unit may have trouble locking on to satellite signals using a "cold" Almanac. If the unit is unable to receive enough satellite signals to determine its location and update the Almanac, it displays an options menu.

#### Initializing the GPS Receiver:

- With fresh batteries installed, take the unit outside for a clear 360° view of the sky.
- Turn the unit on and hold it in front of you with the top of the unit tilted upward. Follow the screen prompts, pressing PAGE to display the GPS Information page.
- The initialization process is automatic. It should take the GPSMAP 76 no longer than five minutes to acquire enough satellite signals to become operational. When the unit is able to navigate, it displays either 2D GPS Location or 3D GPS Location in the Receiver Status field.

# **Initialization Options**

If the GPSMAP 76 is unable to determine its location, an options menu is displayed. Select the appropriate option to help the unit acquire satellites. Highlight the option and then press **ENTER** to select.

**Start Simulator**—is used for practicing with the unit while inside and satellite signals are not available. When you select Simulator, the GPS receiver is turned off saving battery power.

**New Location**—is used when you have moved the unit over 600 miles and are having trouble locking onto satellite signals.

When you select **New Location**, another menu is displayed. This menu contains the options **Automatic** or **Use Map**. If you select **Automatic**, the unit switches to the AutoLocate mode and begin searching for satellites. This process may take longer to acquire satellites. **Use Map** utilizes the pointer on the Map page to select your approximate location. Then the unit continues to acquire satellites normally.

Stored w/o Batteries—is used when the date stored in the unit may be incorrect due to storage without batteries. To check the date, highlight Stored w/o Batteries and verify the date displayed. If the date is incorrect, select Stored w/o Batteries to search for satellites.

**Continue Acquiring**—is used when in an area where the satellite signals are being temporarily blocked.



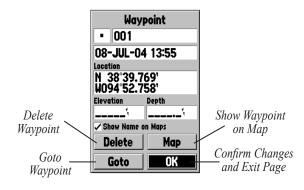
When initializing the receiver or trying to receive satellite signals, orient the GPSMAP 76 so the top of the unit points toward the sky. If the unit is held with the top of the unit pointed toward the horizon, satellite reception may be severly degraded.

# **Creating a Waypoint**

The term Waypoint may be new to you, but is frequently used when discussing navigation. A Waypoint is a position stored in the unit's memory used for direct navigation or to build a Route.

The unit has to be turned on and receiving at least three satellites (or simulating navigation) to mark a waypoint. There are three methods for creating waypoints in the GPSMAP 76. You can press the ENTER/MARK key while at a location, create a waypoint on the Map page, or enter coordinates for a waypoint manually.

Creating a waypoint using the ENTER/MARK key—Press and hold ENTER/MARK key until the Mark Waypoint page is displayed. At this point, you can edit the waypoint name, symbol, date/time, elevation, and depth. Highlight the **OK** button and press **ENTER** to save the waypoint.



Creating a waypoint on the Map Page—Using the ROCKER key, move the Map Pointer to the desired location on the Map page and press ENTER. If the Map Pointer is not on a map feature or road, the New Waypoint page is displayed. You can edit the waypoint name, symbol, date/time, elevation, and depth. See page 11 for information on editing waypoints. Highlight the OK button and press ENTER to save the waypoint.

Creating a waypoint manually using existing coordinates—Press and hold ENTER/MARK until the Mark Waypoint page is displayed. The unit captures its current location. Highlight the Location field, press ENTER, and change the coordinates to the new location using the ROCKER. Press ENTER to confirm the change. At this point, you can edit the waypoint name, symbol, date/time, elevation, and depth. Highlight the OK button and press ENTER to save the waypoint.

Creating a waypoint by projecting its location—
A waypoint may also be created by "projecting" the distance and bearing from a specific location to a new location. Create a waypoint using your favorite method previously discussed. Press MENU to open the New Waypoint Page Options menu, highlight Project Location, and press ENTER. Highlight the From field and press Enter to open the Find menu. Select the point from which you wish to project your new waypoint just as you would select a waypoint or point of interest.

Highlight the **Distance** field and press **Enter**. Use the **ROCKER** to adjust the distance from the selected location that the new waypoint is to be marked. Press **ENTER**. Repeat the process to adjust the bearing. When you have adjusted all elements of the projected location, highlight **Save** and press **Enter**.

Make any other desired changes to the new waypoint data such as name, symbol, and date. Highlight **OK** and then press **ENTER**.

# New, Mark, and Waypoint Page Options

The New Waypoint page has a secondary menu containing three options: Average Location, Project Location, and Append to Route. Access this menu by pressing the **MENU** key when the New, Mark, or Waypoint page is displayed.

Average Location—collects and averages location readings. The Location, Estimated Accuracy, Elevation, and Measurement Count are displayed on the Average Location page. When you are ready to save the waypoint, highlight the Save button and press ENTER.

**Project Location**—projects a waypoint from a specified location.

**Append To Route**—shows the available routes or a New Route selection is displayed. If you select an existing route, the waypoint is added to the end of the route. If you select **New Route**, a new route is created and the waypoint is added to the route.

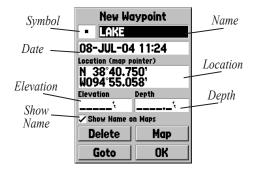
### **Editing Waypoints**

You can edit waypoints at the time they are created or at a later date. There are six items that can be changed: the symbol, name, location, date/time, elevation, and depth. You also have the option to show the waypoint name on the Map page.

Editing a Saved Waypoint—Press the MENU key twice to display the Main Menu. Highlight Points and press ENTER, highlight Waypoints and press ENTER again. Select the desired waypoint from the list and press ENTER to display the Waypoint page. When finished, highlight the OK button and press ENTER to accept the changes. See page 42 for more information on the waypoint list.

**Selecting a Symbol**—Highlight the symbol field and press **ENTER**. Use the **ROCKER** key to select a symbol from the list and press **ENTER**. The selected symbol is now displayed at the waypoint location on the Map page.

Changing the Name—Highlight the name field and press ENTER. Use the ROCKER key to scroll through the alpha-numeric list and make a selection. Press the ROCKER to the right to move the next placeholder. When finished, press ENTER to accept the changes.



Changing the Location, Date/Time, Elevation, or Depth—Highlight the desired field and press ENTER. Use the ROCKER key to scroll through the numeric list until the desired number is displayed. Press the ROCKER key to the right to move to the next character. When finished, press ENTER to accept the changes.

**Show Name on Maps**—Activating this option displays the waypoint name on the Map page. Highlight the box and press **ENTER** to check/uncheck the box.

These are the same steps that you use to **ENTER** names and change numbers and select options in all of the fields in the GPSMAP 76.

- If you press and hold the **ROCKER** key while scrolling through the alpha-numeric list, it increases scrolling speed.
- You can scroll through the alpha-numeric list in either direction
- Do not press the ENTER key until you have finished entering the data. Remember, use the ROCKER key to move to the next placeholder.

We have already created a waypoint with the **ENTER** key. Let's create another waypoint on the Map page using the Map Pointer.

Press the **PAGE** key until the Map page is displayed. Press the **IN** key several times until the Zoom Range in the lower left corner of the Map page reads .5 mi or lower. The current GPS location is indicated by the triangle in the center of the map. Press the **ROCKER** key any direction to display the Map Pointer.

Using the **ROCKER** key, you can pan the Map Pointer around the map. As you move around the map, the direction and distance from the Map Pointer to the current GPS location is displayed at the top of the map.

Bearing and Distance from Pointer to current GPS location.



Map Pointer

With the Map Pointer at a location on the map about one mile from your current location and not on a road or map feature, press **ENTER**. The location of the Map Pointer is captured and the New Waypoint page is displayed. Change the waypoint name and store the waypoint in memory by highlighting **OK**, then pressing **ENTER**. Press the **QUIT** key to hide the Map Pointer and center the map on the current GPS location.

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### To go to a waypoint:

- 1. Press the NAV key.
- Highlight Go To Point and press ENTER.
- Highlight Waypoints and press ENTER.
- 4. Highlight the desired waypoint and press **ENTER**
- 5. Highlight the **Goto** Button and press **ENTER**.



The GPSMAP 76 is now navigating to the waypoint. For a GPS to navigate, it has to be moving. Fortunately, you can simulate movement in the GPSMAP 76. Press the **PAGE** key until the Pointer Page is displayed. Along the top of the Pointer page there are several data fields, one of which is the Speed field. To simulate

movement, press the **ROCKER** key up one time. This sets a speed of 10 miles per hour. If you continue to press or hold the **ROCKER** key, the speed increases in 10 mph increments.

The Pointer page displays a Pointer and Compass Ring. The Pointer always point toward your destination (Bearing) while the Compass Ring reflects the direction that you are traveling (Track). When you are headed directly toward your destination, the Pointer is pointing toward the top of the display, aligned with the vertical line on the Compass Ring. If you are no longer heading toward your destination, the Pointer turns away from the top of the display to point toward your destination. To get headed toward your destination again, turn until the Pointer is realigned with the vertical line in the Compass Ring and pointed toward the top of the display.



**NOTE:** Remember that while the GPS is very reliable, you should always have a backup means of navigation.

# **Creating a New Route**

There are several methods to create a route. Press MENU twice and select Routes. Highlight the New button on the Routes page and press ENTER. A blank Route page is displayed. Press MENU to display the Create Route Options. Place the points in the route in the order that you wish to navigate.

**Use Map**—displays the Map page with the Map Pointer active. You can now point at any location or point on the map and enter it into the route.

When using the map to create a route, you can select an existing User Waypoint/Map Feature, or you can create a new waypoint. New waypoints are created if you place the Map Pointer on a location that is not a Map Feature. A new waypoint is stored in the User Waypoint List and can be edited as any other User Waypoint. When placing a new waypoint in a route, you have to press ENTER to create the waypoint, ENTER to save the waypoint, and ENTER a final time to insert it into the route.

If you place the Map Pointer on a Map Feature, such as a road, park, or intersection, the GPSMAP 76 stores that location only to the route using the feature name as a reference. These points are not stored in the User Waypoint List. To save a Map Feature Point as a User Waypoint, highlight the point in the route and press ENTER. The Information page is now displayed. Press MENU and select Save as Waypoint.



New Route Menu

Add Waypoint—displays the Points Menu (see page 42 for information on the Points Menu). Highlighting the dashed line in the waypoint field on the Route page and pressing ENTER it is the same as making this selection. Use the Points Menu to display an Information page, highlight the OK Button, and press ENTER.



**New Route Menu** 

### Using a combination of the Map Page and

Route Page—enables you to create a route using a combination of the methods described above. Start with a blank Route page. Enter a waypoint manually or press the MENU key and select Use Map. You can select Use Map at any time while creating a route. Press QUIT to display the Route page after you have finished using the map. You can continue entering waypoints manually.

Naming the Route—automatically names the route using the first and last waypoint names as a reference. To change the Route Name, highlight the Name field, press ENTER, and use the ROCKER key to scroll through the alphanumeric list and enter the new name. Press ENTER to accept the changes.

## **Editing a Route**

The Route page has a secondary menu containing seven options: Use Map, Insert Waypoint, Remove Waypoint, Reverse Route, Plan Route, Delete the Route, and Start Navigation. To display the **Route Edit** Options, select the Route page and press **MENU**.

**Use Map**—displays the Map page with the Route Line active and the Map Pointer located on the waypoint previously highlighted on the Route page.

Review Route Waypoint—displays the waypoint information. To review information on a route waypoint, place the Map Pointer on the waypoint then press ENTER. This displays an options menu. Highlight Review and press ENTER.

**Inserting a New waypoint**—There are two methods that can be used to insert a new waypoint into a route.

- 1. Highlight and select Use Map. Place the Map Pointer on the route leg that you want to insert the new point into. When the solid line turns to a small dashed line, press ENTER. The Map Pointer now displays "Ins" under it. Move the Map Pointer, dragging the Route Line to the new location, then press ENTER. If the new location is a Map Feature, the point is inserted in the leg. If the location is not on a Map Feature, the New Waypoint page is displayed. Press ENTER to save the new waypoint, then ENTER again to insert the new waypoint in the route.
- Place the Map Pointer over a location that is not a Map Feature, then press ENTER. The New Waypoint page is displayed. Press ENTER to save the new waypoint. Place the Map Pointer over the route leg that you want to insert the waypoint into, then press ENTER.

Remove a Point or Waypoint—by placing the Map Pointer over the point or waypoint you want to remove and press ENTER. An options menu is displayed. Highlight Remove then press ENTER. The point or waypoint is removed and the Map Pointer moves to the next point in the route.

Move a Waypoint—Only User Waypoints can be moved. To move a waypoint, place the Map Pointer on the waypoint and press ENTER. This displays an options menu. Highlight Move, then press ENTER. Place the Map Pointer at the desired new location and press ENTER to move the waypoint.

Next Point in Route—moves the Map Pointer to the next point in the route, place the Map Pointer on a route point or waypoint and press ENTER. This displays an options menu. Highlight Next, press ENTER, and the Map Pointer moves to the next point or waypoint in the route.

**Insert Waypoint**—displays the Points Menu (see page 42 for more information on the Points Menu). Select a point from the menu to insert into the route. The new point is inserted into the route above the waypoint highlighted on the Route page.

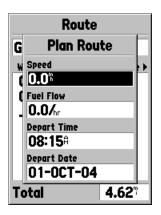
Remove Waypoint—removes the waypoint that is highlighted on the Route page. With a waypoint highlighted, press MENU. Highlight Yes and press ENTER to remove the waypoint.

**Reverse Route**—reverses the direction of the route placing the last waypoint at the top of the list.

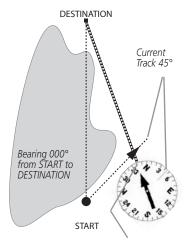
**Plan Route**—plans a route with a Speed, Fuel Flow, Depart Time, and Depart Date. Fuel Flow is measured in "units per hour." Please consult your vehicle's Owner's Manual for performance specifications.

The Active Route page and Route page display tripplanning information for each leg or the entire route. Available information includes Course, ETA, Fuel to point, Leg Fuel, Leg Time, Sunrise & Sunset at point location, Time to Point, and Leg Distance. To show a specific field, with the Active Route or Route page displayed, press the **ROCKER** key right or left to cycle through the fields.

**Delete Route**—removes the selected route from the Routes page.



**Plan Route Option** 



Bearing 340° from current location to DESTINATION

The GPS provides a straight line, direct navigation course to your destination. Since it is not always possible to follow a straight line from start to finish, as you move, the Pointer always points toward your destination and the Compass Ring always shows your current track.

# **Starting to Navigate**

With the unit on and displaying 3D GPS Location on the GPS Information page, mark a waypoint at your current location. Name this waypoint HOME, assign the Residence Symbol, and store the waypoint.

Before starting to navigate, let's clear the Track Log. The Track Log is the bread crumb trail left on the Map page and Highway page.

### To clear the Track Log:

- Press MENU twice to display the Main Menu.
- 2. Highlight TRACKS then press the ENTER key.
- 3. Highlight **CLEAR**, then press **ENTER**.
- 4. Highlight the YES button then press ENTER.
- 4. Press PAGE until the Map page is displayed.

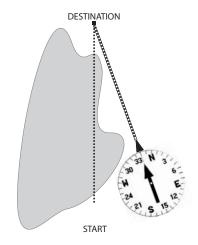
Begin walking holding the GPSMAP 76 in front of you with the top of the unit pointed toward the sky. As you move, you see that the unit leaves a bread crumb trail on the map indicating where you have been. Walk at least a two minutes in one direction and then make either a right or left turn. Continue walking in this new direction for approximately another two minutes.

When starting to navigate, remember that GPS provides you with direct, straight line navigation. It is not always possible to navigate using the most direct route, so the GPSMAP 76 continuously updates your Track and Bearing, always pointing out the shortest route to your destination.

### To begin navigation:

- 1. Press NAV.
- 2. Select **Go To Point** and press **ENTER**.
- 3. Select Waypoints and press ENTER.
- 4. Select HOME and press ENTER.
- 5. With Goto highlighted, press ENTER.

As you start walking, the Pointer is pointed at your destination. As soon as you are able, turn toward the Pointer until it is aligned with the vertical line in the Compass Ring. As you continue walking, and approach your HOME waypoint, a message is displayed alerting you that you have arrived.



When you are able to turn toward the destination, follow the Pointer until it points toward the top of the display and aligns with the line in the Compass Ring. When the Pointer and Line are aligned, your Track and Bearing are equal and you are headed toward your destination. When you are near your destination, Arriving at Destination is displayed.

# MAIN PAGES

There are five main display pages: the GPS Information page, Map page, Pointer page, Highway page, and the Active Route page. You can cycle through these pages by pressing either the **PAGE** or **QUIT** keys.

With the GPS Information page displayed, press **PAGE** several times. Notice that each time you press **PAGE** the next main page is displayed. Do the same with the **QUIT** key. Notice **QUIT** acts the same as **PAGE**, except the pages are displayed in a reverse sequence. Press **PAGE** until the Map page is displayed.

Each main page has an Options Menu. This Options Menu contains the setup options and functions that apply to that page. Press the **MENU** key to display the Options Menu. Use the **ROCKER** key to select and item from the options menu and press **ENTER**. Many of the menus in the GPSMAP 76 are arranged in a tab layout. Use the Left/Right **ROCKER** key to move from tab to tab.

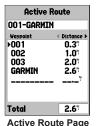
Notice that either the **PAGE** or **QUIT** keys stops the current function and returns you to the main page. If you find yourself lost in a menu or you accidentaly start a function you do not want, just press the **PAGE** or **QUIT** key.









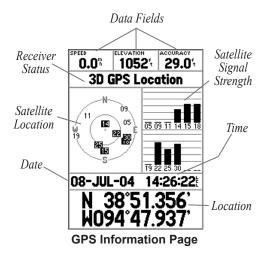


**Highway Page** 

GPSMAP 76 Owner's Manual

# **GPS Information Page**

The GPS Information page displays your speed, estimated accuracy, receiver status, satellite locations, satellite signal strength, date, time, and the receiver's current location when the unit receives signals from at least three satellites. The unit must receive at least four satellite signals to report elevation.



### **Current GPS Receiver Status**

The current status of the GPS receiver always is displayed.

**Autolocate**—forces the receiver to search for each satellite individually.

Acquiring Satellites—begins searching for satellites. The unit starts in this mode each time the unit is turned on. The GPS receiver remains in this mode until it has acquired at least three satellite signals.

**2D GPS Location**—indicates the receiver is only using three satellite signals. The GPS displays your current position but is incapable of providing an altitude reading.

**3D GPS Location**—indicates the receiver is currently using at least four satellite signals and is capable of providing your current position and altitude.

**2D Differential Location**—indicates the receiver is using DGPS or WAAS differential data on three satellites.

**3D Differential Location**—indicates the receiver is using DGPS or WAAS differential data on at least four satellites.

**Lost Satellite Reception**—indicates that the GPS receiver has lost satellite reception.

**Simulating GPS**—indicates the GPSMAP 76 is running in Simulator Mode and the GPS receiver is turned off. It is important to remember when using the Simulator, the GPSMAP 76 cannot be used for actual navigation.

# **GPS Information Page Options Menu**

Press the **MENU** key to activate the Options Menu from the GPS Information page. To select an option, highlight the desired item and then press **ENTER**.

**Start/Stop Simulator**— Starts or Stops the Simulator.

**Track Up/North Up**—determines if the satellites are displayed with the rings oriented with North toward the top of the display or your current track toward the top of the display.

**New Elevation**—is used to enter a different elevation. If the GPS has a 2D GPS Location, entering a known elevation can increase the GPS accuracy.

**New Location**—is used if you have moved the unit over 600 miles and are having trouble locking onto satellite signals select New Location.

When you select New Location, a second options menu is displayed. If you select **Automatic**, the unit switches to AutoLocate and begins searching for satellites. This method can take up to five minutes for the unit to begin navigation.

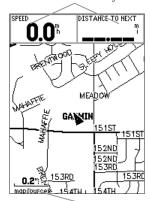
If **Use Map** is selected, use the Pointer on the Map page to indicate your approximate location and the unit continues to acquire satellites normally using the almanac for satellite reference. This method does not require the unit to reinitalize and should receive satellite signals quickly.

If the unit is in the Simulator mode, the **Use Map** feature allows you to choose the location from which to simulate.

# **Map Page**

The GPSMAP 76 comes with a built-in basemap that includes a database of Cities, Interstates, State and County Highways, Exit information, Lake and River outlines, and Railway Lines. The standard basemap can be enhanced using Garmin's MapSource products.

User Selectable Data fields



Zoom Scale

## **Using Additional Map Data**

Optional MapSource CD-ROMs enhance the versatility of your GPSMAP 76. With MapSource CD-ROMs, you can view listings of nearby restaurants, lodging, shopping centers, attractions and entertainment, and even retrieve addresses and phone numbers for any listed location. With optional BlueChart data, you can access information such as marine navaids, wrecks, obstructions, and anchorage locations.

# **Changing the Zoom Range**

You can change the Zoom Range on the Map page allowing you to either view a smaller area in greater detail or a larger area with less detail. Pressing the IN key decreases the Zoom Range displaying a smaller area with greater detail. Conversely, pressing the OUT key increases the Zoom Range displaying a larger area with less detail. The current Zoom Range setting is displayed in the lower left corner of the Map page. If Overzoom is displayed under the range, no further map information is available. MapSource displayed under the range indicates MapSource information is loaded onto the unit

# **Map Page Options**

To access the Map page Options, select the Map page and press the **MENU** key. To select an option, highlight the desired menu item and press **ENTER**.



Full Screen Map/Show Data Fields—hides the data fields and expands the map to include the entire display. When Full Screen Map is selected, the option changes to Show Data Fields.

Measure Distance—allows you to measure the distance between two points. Distance, Bearing, and Location of the Pointer are displayed at the top of the map as you move the Map Pointer. To measure the

distance between to map points, press **ENTER** to set a reference, then move the Map Pointer to the other location. The Bearing and Distance are displayed below the data fields.

**Show Next Street**—adds a window below the Data Fields that displays the name of the next cross street. This only functions if **Lock to Road** is set to **On** (see Setup Map—Other tab on page 33) and a MapSource street mapping product, such as MetroGuide, is loaded in the unit

**Setup Page Layout**—allows you to select the number of data fields rows and the size of text used in the fields. To select an option, highlight the desired selection and press **ENTER**. The new configuration is now displayed on the map.

Change Data Fields—allows you to select the type of data you want displayed in the data fields. To change a data type, highlight the desired data field and press ENTER. Use the ROCKER key to scroll through the available selections. With the data type highlighted, press ENTER to accept the selection.

## **Setup Map**

Setup map contains the Map page Setup features. The features are arranged on a tab menu making it easy to locate the different setup items.

The General, Map, Waypoint, Point, Marine, Line, Area, Topo, City, Road, and Other tabs have setting for **Text** or **Zoom**. Read the description of these settings to understand how they affect the display characteristics of the options on the Map page. To change a setting, highlight the appropriate field, press **ENTER**, highlight the new setting and press **ENTER** a second time.

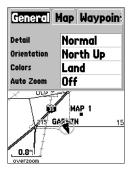
• Text Setting—allows you to determine the size of text used when displaying a name or label for an item on the Map page. If you select Off, the item is displayed on the map without a name or label. Otherwise, the item is displayed with a name in the text size selected.

• Zoom Setting—determines when items are displayed on the map. Use the Off setting to keep items from display on the Map page. Selecting Auto, automatically determines the zoom level to display the selected items. Selecting a range setting displays the items on the map only when the Map Zoom Range is at or less than the selected range.

For example, if you select 500 ft as the **Zoom Range** setting, the selected items are only displayed when the Map Zoom Range is at 500 ft or less.

#### General Tab

The General tab contains the settings for Detail, Orientation, Colors, and Auto Zoom. Below is a description of each feature.



**Detail**—allows you to control the amount of map data displayed on the unit. If you select a setting with high detail, the screen redraw times are slower.

Orientation—allows you to determine how the map is displayed. North Up always displays North at the top of the page. Track Up displays your current track toward the top of the page. Course Up displays the active course line toward the top of the display. If you have Course Up selected and do not have an active course, your current track is displayed toward the top.

Colors—gives you the ability to configure the map to display either land or water as white. If you select Land, the land portion of the display is lighter in color than the water. If you select Water, the water portion of the display is lighter in color than the land.

**Auto Zoom**—allows you to have the map automatically zoom in on a waypoint as you approach.

### Map Tab

The Map tab contains settings for the Basemap, MapSource, Lat Lon Grids, and Grid Labels.

**Basemap**—allows you to turn the Basemap data **On** or **Off**. Selecting **Off** no longer displays the Basemap.

MapSource—is only available if MapSource CD data has been loaded into the unit. If MapSource data is available, you can choose whether to display the data on the map by selecting either **On** or **Off**. By selecting **Off**, the MapSource data is not be displayed on the Map page.

Lat Lon Grid—is a latitude longitude grid displayed in smaller increments as the Zoom Range on the Map is decreased. The Zoom setting for this option determines when the grids begin displaying on the map. The Auto setting does not display a Lat Lon Grid with the Basemap or MapSource options set to On.

Grid Labels—displays the coordinates on the Lat Lon grid on the map. The Lat Lon Grid must be set to Auto or a Zoom Range for the Grid Labels to appear. The Auto setting does not display Grid Labels if the Basemap or MapSource options set to On.

### Waypoint Tab

The Waypoint tab contains the Waypoint and Active Route Waypoint settings. Each of the options has a **Text** and **Zoom** setting.

**Waypoints**—sets the display parameters for all waypoints.

Active Route Waypoint—This option sets the display parameters for waypoints in an Active Route. For example, if you have selected Small as the text option for all waypoints, but selected Large as the setting for Active Route Waypoints, the waypoints included in an Active Route are displayed with large text on the Map page, while the waypoints around the route are displayed as small.

#### Point Tab

The Point tab contains the Points of Interest, Geo, and Exit option settings. Each of the options has a **Text** and **Zoom** setting.

**Points of Interest**—include general business listings such as restaurants, hotels, and gas stations.

**Geo**—include points such as schools, cemeteries, churches, towers, lakes, and parks.

**Exit**—includes exit information for the US and Canada.



#### Marine Tab

The Marine tab contains text settings for spot sounding and text and zoom settings for navaids, tide stations, and services

**Spot Soundings**—are depth readings shown in MapSource software designed for water navigation such as BlueChart.

**Navaids**—are aids to navigation such as landmarks, mile markers, hazards, light houses, and buoys.

**Tide Stations**—are stations where tide information is gathered.

Services—include Marinas, Gas Stations, etc.

#### Line Tab

The Line tab contains the Zoom scale settings for Track Log, Saved Tracks, Course Lines, and the Bearing Line.

**Track Log**—is the bread crumb trail that is left behind as your position changes on the Map page.

**Saved Tracks**—are Track Logs that are saved in the unit's memory.

**Navigation Lines**—controls the display of the Route Line and Course Line.

**Bearing Line**—shows the bearing from your current location to the active waypoint.

#### Area Tab

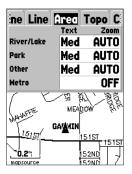
The Area tab contains the **Text** and **Zoom** settings for defined areas to appear shaded on the map.

River/Lake—Rivers and Lakes

Park—National, State, and County Parks

**Other**—Geographical areas such as shopping centers and university campuses

Metro—Metropolitan Areas



### Topo Tab

The Topo tab contains the **Text** and **Zoom** settings for Major Contour, Intermediate Contour, and Minor Contour Lines. The Land Cover option contains a Zoom setting.

The Contour Line settings are used to de-clutter the map. If **Auto** is the selected Zoom setting, the Major and Minor Contour Lines are displayed at higher Map Zoom Range setting.

## City Tab

The City tab contains the **Text** and **Zoom** settings for Large City, Medium City, Small City, and Small Town.

The City settings are used to de-clutter the map. If Auto is the selected Zoom setting, the Large and Medium cities are displayed at a higher Map Zoom Range setting.

#### Road Tab

The Road tab contains the **Text** and **Zoom** settings for **Local Road Names** and **Zoom** settings for **Freeway**, **Highway**, and **Local Roads**.

Freeway—Interstate and U.S. Highways

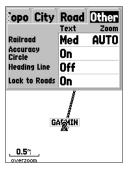
**Highway**—State Highways and Local Highways

Local Roads—All Other Roads

Local Road Names—Name Labels for Local Roads

#### Other Tab

The Other tab contains the **Text** and **Zoom** settings for **Railroad** and **Text** setting for the **Accuracy Circle**, **Heading Line**, and **Lock to Roads**.



**Railroad**—controls the display of railways lines.

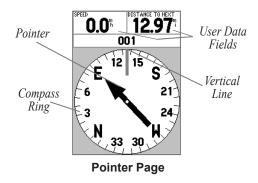
Accuracy Circle—is displayed around the Location Triangle on the Map page. The Accuracy Circle depicts the estimated accuracy of the location. If your current location is matched to a road, the Accuracy Circle is not displayed.

**Heading Line**—If the Heading line is **On**, a line showing your current heading is projected on the map from the current location. The Heading line appears as a thin black line.

**Lock to Roads**—If Lock to Roads is **On**, the unit attempts to match your location to a road.

# **Pointer Page**

The Pointer page is best used for navigation when a straight line course cannot be followed. The Pointer page contains user-selectable data fields along the top, Status Bar, Compass Ring, and Pointer.



The Compass Ring is a graphic display of your current track. As you change direction, the Compass Ring rotates, aligning your track with the vertical line. Regardless of your direction, the Pointer always point toward the active waypoint. The Pointer is aligned with the vertical line in the Compass Ring when you are

going directly toward the active waypoint. Arriving at Destination is displayed when the selected waypoint is reached. It is important to note the Compass Ring does not act as a true compass. You must be moving for the Pointer to correctly point towards your destination.

## **Pointer Page Options**

On the Pointer page, press the **MENU** key to access the Pointer page options.

**Setup Page Layout**—allows you to select the number of data field rows and the size of text used in the fields. To select an option, highlight the desired selection and press **ENTER**. The new configuration is displayed on the map. Press **QUIT** to exit the option.

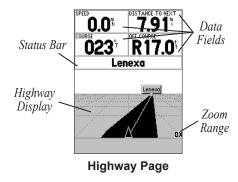
Change Data Fields—allows you to select the type of data that you want displayed in the data fields. To change a data type, highlight the desired data field and press ENTER. Use the ROCKER key to scroll through the available selections. Highlight the desired item and press ENTER to accept.

# **Highway Page**

The Highway page is best used for navigation when a straight line course can be followed. The Highway page has user-selectable data fields along the top, a Status Bar, and the Highway Display.

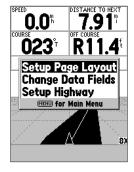
The Highway page shares many features with the Map page. Any active tracks, saved tracks, and/or waypoints within the display area are shown. The Zoom Level can be changed using the **IN** and **OUT** keys. The Triangle represents your current location. The graphic highway is only displayed when a route or Goto is active.

To navigate using the Highway page, just follow the road. If the highway moves to the right, turn right until the triangle is aligned with the white line in the middle of the highway and the highway is pointed toward the top of the display.



## **Highway Page Options**

Select the Highway page and press **MENU** to access the Highway page options. To select an option from the Menu, highlight the desired selection and press **ENTER**.



**Setup Page Layout**—allows you to select the text size and the number of data fields rows. To select an option, highlight the desired selection and press **ENTER**.

Change Data Fields—allows you to select the type of data you want displayed in the data fields. To change a data type, highlight the desired data field and press ENTER. Using the ROCKER, scroll through the available selections. Press ENTER to accept the selection.

**Setup Highway**—contains the Highway Setup features. The features are arranged on two tab menus, Line and Waypoint.

#### Line Tab

The Line tab contains the On/Off settings for Active Leg, Active Route, Track Log, and Saved Tracks.

**Active Leg**—determines if the Active Leg is displayed on the Graphic Highway.

**Active Route**—determines if the Graphic Highway is displayed. The graphic highway is only displayed when a route or Goto is active.

**Track Log**—determines if the Track Log is displayed.

**Saved Tracks**—determines if Saved Tracks are displayed.

## Waypoint Tab

The Waypoint tab contains the On/Off settings for Next, Route, and Other.

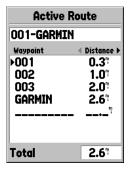
**Next**—determines if the next waypoint in a route is displayed. If **On** is selected, the next waypoint in the route is displayed. If **On** is selected and the route option is set to **Off**, only the next waypoint in the route is displayed.

**Route**—determines if the waypoints in a route are displayed. If this selection is set to **Off**, route waypoints are not displayed on the graphic highway.

**Other**—determines if nearby waypoints are displayed.

## **Active Route/Goto Page**

The Active Route/Goto page shows the waypoints in current use for navigation. If you are navigating using a Goto, the active waypoint is shown with the distance remaining displayed on the right side of the screen. If you are navigating a route, the list of route waypoints is displayed with the distance of each leg displayed on the right side of the screen. Pressing the ROCKER key to the right or left scrolls the data field on the right side of the display. Pressing MENU displays the options available for current navigation.



## MAIN MENU

The Main Menu page contains settings and features that are not contained on the Main Pages and submenus. The Main Menu is accessed from any of the Main Pages by pressing **MENU** twice. To select an item on the Main Menu, highlight the menu item and press **ENTER**.



**NOTE:** The power indicator is calibrated for Alkaline batteries. If you choose to use another type of battery, the gauge may not reflect the actual energy level of those batteries.



Main Menu Page

# **Trip Computer**

The Trip Computer has eight selectable data fields.

Trip Computer					
Trip Odom	Stopped Time				
18.27	0103:55				
Moving Avg	Moving Time				
9.9%	01:50:48				
Overall Avg	Total Time				
0.2%	0105:45				
Max Speed	Odometer				
289.4	18.27				
0.2%	0105:45				

**Trip Odom**—displays the total distance traveled since the Trip Computer was last reset.

**Stopped Time**—displays the total time that the unit was not moving since the Trip Computer was last reset.

**Moving Avg (Speed)**—displays an average based on the time the unit was in motion since the Trip Computer was last reset.

**Moving Time**—displays the total time the unit was in motion since the Trip Computer was last reset.

**Overall Avg (Speed)**—displays the average speed of the unit since the Trip Computer was last reset.

**Total Time**—displays the Total Time that the unit has been turned on since the Trip Computer was last reset.

**Max Speed**—displays the maximum speed the unit traveled since the Trip Computer was last reset.

**Odometer**—displays the total distance traveled since it was last reset

## **Trip Computer Options**

To access the Trip Computer Options, select the Trip Computer page and press the **MENU** key. To select an option, highlight the desired item and press **ENTER**.

**Reset Trip**—resets all data fields except max speed and odometer to zero.

**Reset Max Speed**—resets the Max Speed to zero.

**Reset Odometer**—resets the Odometer to zero.

## **Tracks**

The Track page displays the amount of Track Memory used and allows you to **Save** or **Clear** the current Track Log, and displays a list of any Saved Tracks.



**Save**—allows you to choose how far back in the log you wish to save. Select the appropriate choice and press **ENTER** to save the selection.

**Clear**—allows you to clear the Track Log. Clearing the Track Log clears the Map page of all active tracks.



**NOTE:** Tracks cannot be recovered once they are cleared.

## **Track Page Options**

To access the Track Options, select the Track page and press the **MENU** key.

**Delete Saved Track**—deletes the saved track.

**Delete All Tracks**—deletes all saved tracks.

**Setup Track Log**—displays the Track Log Setup menu:

- Record—Select Wrap When Full to delete the oldest track point and create a new point added at the end when track memory is full.
- Record Method—set to Auto, Time, or Distance
- Interval—is used to either select or enter an interval for the selected Record Method.



**NOTE:** If you know that you are going to want to use the TracBack feature for a return trip, clear the Track Log before you start the trip. This ensures that you are only navigating along the most recent track.

## **Track Information Page**

To access information on a Saved Track, highlight the desired track. Press **ENTER** to display the Track Information page.



Name—allows you to change the Saved Track Name. When tracks are saved, the GPSMAP 76 uses the a date as the default track name.

**Distance**—shows the total distance of the Saved Track.

**Points**—shows the number of track log points in a Saved Track.

**Area**—shows the calculated acreage within the track. The end points of the track are connected with a straight line when calculating the area. If the track crosses itself, it is not accurate.

**Show on Map and Highway**—when checked, the Saved Track is displayed on the Map and Highway pages.

**Delete Button**—shows a pop-up window verifying you want to delete the Saved Track

**TracBack Button**—initiates TracBack Navigation.

TracBack Navigation uses Track Points in a saved track to automatically create a route. You have the option of navigating the route in the **Original** or **Reverse** direction.

**Map Button**—displays the Saved Track on the Map page.

**OK Button**—saves any changes and returns the display to the Tracks page.

## **Points**

The Points page allows you to search for Waypoints, Points of Interest, Cities, Exits, Addresses, and Intersections using your current location or a location on the map. Addresses and Intersections are only available with MapSource software. To select a Point item, highlight the desired item and press ENTER.



When creating a waypoint on the Map page with the pointer on a map feature, pressing **ENTER** displays an information page describing the feature. If you wish

to create a waypoint, from the information page press **MENU** and with **Save As Waypoint** selected press **ENTER**. The New Waypoint page is displayed and you can edit and save the waypoint.

## **Waypoints**

The Waypoints option displays a user waypoint list. The list displays **Waypoints by Name**, or by **Nearest Waypoints**. With the waypoint list displayed, press **MENU** to display the Options Menu.

## Waypoint Options Menu

**Find By Name / Find Nearest**—selects how the Waypoint List is displayed.

**Find Nearest**—displays a list containing the nearest waypoints within a 100-mile radius. The waypoints are listed with the nearest waypoint at the top of the list.

**Find By Name**—displays a list containing all User Waypoints. Waypoints are selected by entering the waypoint name in the data field or scrolling through the Waypoint List.

As you enter a waypoint name, the GPSMAP 76 updates the waypoint list to show waypoint names that coincide with the letters entered. When the desired name appears, press **ENTER** to select.

**Delete Waypoint**—deletes the selected waypoint.

**Delete By Symbol**—deletes all waypoints with the same symbol as the selected waypoint.

**Delete All**—deletes all of the user waypoints.

### **Points Of Interest**

Points of Interest (POI) are only available when MapSource CD data that contains Points of Interest information is loaded in the unit. The different Points of Interest displayed depends on the MapSource data that is loaded. When **Points of Interest** is selected, the Points of Interest Selection page is displayed. Highlight the desired item then press **ENTER** to select a **Points of Interest** item.



After an item is selected, either a list or selection menu is displayed. Highlight the desired item and press **ENTER**. When a list is displayed, press **MENU** to give you the option of searching the list by name or by the nearest item.

To view information about an item in the list, highlight the desired selection then press **ENTER**. An Information window is displayed showing the name, address, and phone number. To save the item as a waypoint, press the **MENU** key, highlight **Save as Waypoint**, and press **ENTER**.

Along the bottom of the list or Information page are three buttons. **GoTo** begins direct navigation to the point. **Map** displays the item on the Map page. **OK** returns the display to the list.

### Cities

The Cities option displays a list of nearest cities or cities by name. Press **MENU** to switch between a city by name or the nearest cities. Highlight the city and press **ENTER** to view information about a city on the list. An Information window is displayed showing the city size (small, medium, or large), name, country of the city, and the bearing/distance of the city from your current location. Press **MENU**, highlight **Save as Waypoint**, and press **ENTER** to save the city as a waypoint.

#### **Exits**

The Exits option displays a list of exit options. To select a exit option from the list, highlight the selection and press **ENTER**. When the exit option is selected, a list containing the selected data is displayed.

## **Exit Options**

**All Types**—displays a list with data for Services, Rest Areas and Other.

**Services**—displays exits with services such as Filling Stations, Restaurants, Hotels, Auto Dealerships, Parts Suppliers, Hospitals, Banks, and Shopping Areas.

**Rest Areas**—displays a list of Rest Areas closest to your location.

After you have selected an Exit Option, a list is displayed. Highlight the item then press **ENTER** to view information about a specific item. A page containing information about the item is displayed. To begin direct navigation to the item, highlight **Goto** then press **ENTER**.

To select a different road for exit information, press MENU, highlight Select Exit Road, and press ENTER. A list of roads is displayed. Highlight the road name, then press ENTER to accept the selection. With a list of exit options displayed, press MENU, highlight Select Map, then press ENTER. You can now select from the available options.

#### **Addresses**

This option is only available when MapSource CD data that contains addresses is loaded in the unit. When **Addresses** is selected, the **Find Address** page is displayed. To find an address, enter the Number and Street. You can also enter the City and Postal Code to shorten the search time

After you have entered the search data, highlight **Find** and press **ENTER**. The unit displays the Select Address page. The **Select Address** page shows the addresses that closely match your entry. Highlight the correct address then press **ENTER**. The Address Information page is now displayed.

To begin direct navigation to the address, highlight **Goto** and press **ENTER**. Highlight the **Map** button then press **ENTER** to view the address on the map. Highlight **OK** then press **ENTER** to exit the page. To save the address as a waypoint, press **MENU**, highlight **Save as Waypoint** and press **ENTER**.

#### Intersections

This option is only available when MapSource CD data containing road information is loaded in the unit. When Intersection is selected, the Find Intersection page is displayed. To find an Intersection, you must enter the First and Second street names. You may also enter the City and Postal Code to shorten the search time.

To enter a data in one of the fields, highlight the field and press ENTER. Use the ROCKER key to scroll thought the alphanumeric list. When you have finished, press ENTER to exit the field. Repeat for the rest of the fields. When you are ready to search for the Intersection, highlight Find and press ENTER. The unit displays the Select Intersection page.

The Select Intersection page shows Intersections that closely match your entry. Highlight the correct Intersection and press **ENTER**. The Intersection Information page is now displayed.

To begin direct navigation, highlight **Goto** and press **ENTER**. To view the intersection on the map, highlight **Map** and press **ENTER**. Highlight **OK** and press **ENTER** to exit the page. You also have the option of saving the intersection as a waypoint by pressing the **MENU** key, highlighting **Save as Waypoint**, and pressing **ENTER**.



**Find Intersection Page** 

## **Routes**

A route is a series of waypoints used for point-to-point navigation. A route must have at least two waypoints, but can contain as many as 50 waypoints. The GPSMAP 76 can store 50 routes.

On the Routes page, you can create new routes, determine how many empty routes you have left, and review a list of existing routes. To display the Routes page, highlight **Routes** on the Main Menu and press **ENTER**.



**Routes Page** 

## **Routes Page Options**

With the Routes page displayed, press **MENU** to view the available options.

**Start/Stop Navigation**—starts navigation of a highlighted route and stops navigation of an Active Route.

**Copy Route**—makes a copy of a highlighted route.

**Delete Route**—removes the highlighted route.

**Delete All Routes**—removes all routes from the Routes page.

# **Proximity**

Proximity waypoints can be used to alert you when you are approaching a predetermined area. When you place a waypoint in the Proximity List, you enter a Radius that determines when a Proximity Alarm is displayed. You can turn the Proximity Alarm **On** or **Off** for your convenience.



**Proximity Page** 

## **Proximity Options**

To view the available options for the Proximity page, press **MENU**.

Add Waypoint—When Add Waypoint is selected, the Points Menu is displayed (see page 42 for more information on the Points Menu). Select a point from the menu to insert it into the Proximity List. With the Radius field highlighted, press ENTER. Enter a radius for an alert displayed. A waypoint is added by highlighting the dashed entry line and pressing ENTER.

**Remove Point**—Removes the highlighted waypoint from the Proximity List.

**Remove All**—Removes all waypoints from the Proximity List.

## Celestial

The Celestial Menu lets you view information for Tides, Sun and Moon, or Hunt and Fish.

Local Time

Max Level

Current Tide Level

Low Tide

Curve

Station Time

Min Level

#### Tides

The Tides page displays a graphical chart which displays tide station information in a 24-hour span starting at midnight station time You can choose from different dates and over 3,000 tide stations around the U.S. coastline, Alaska, Hawaii, western Canada, and several of the Caribbean Islands

Along the top of the page are the Date and Tide Station that are being referenced. The top of the chart shows a 24-hour block of local time (LCL) for your position, with the reported station time (STA) appearing at the bottom

Daylight (light bar) and night (dark bar) show across the time scale, with the time progressing from left to right. (Local time scales and sunrise/sunset information may not be available for a few stations). The solid, light vertical lines are in 4-hour increments,

Date.

Station Name

Current

Time

Day

Night

Event Times

MLLW

**Tides** 

03:26%

10:135

0.75

0.0

1.05

14-JUL-04

Kev West

1.15

with the light, dotted vertical lined in 1-hour increments. A dark at the ends of the line) indicates the time of day when using current date and intersects the tide graph to show their relation.

vertical line (with arrows

The tide curve shows as

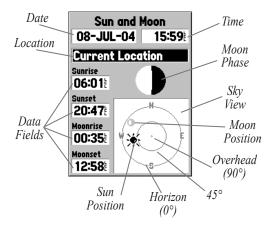
a shaded area, with higher tides being taller and lower tides shorter. The dark horizontal line (with arrows at the ends of the line) indicates the current tide height. The figure to the left of the line shows the current tide level in feet. The Mean Lower Low Water (MLLW) appears as a solid vertical line near the bottom of the chart. This line only appears if the tide ranges to the

zero value or below. The top and bottom numbers to the left of the chart, LCL and STA indicate the maximum/minimum levels, respectively. The four data fields below the chart, indicate event times and levels at which the tide changes starting in the upper left field, going downward, then to the upper right and down again.

#### Sun and Moon

50

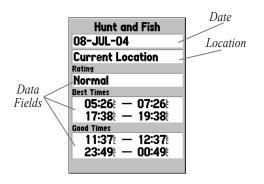
Sun and Moon displays data for Sunrise/Sunset, Moonrise/Moonset, and the approximate location of the Sun and Moon on a sky view. The moon phase displays the current visible portion of the moon in a light color. This information is displayed for your current location or a new location can be selected from the Map or Points Menu. To display the location options and highlight the Location field press **ENTER**. The unit defaults to the current date and time, or enter a date and time of your choice.



### **Hunt and Fish**

Hunt and Fish displays data for Good and Best times for hunting and fishing at the selected location. There is also a Rating (excellent, good, normal, poor) displayed, that reflects the productivity of the day. You may display this information for your current location or you can use the **Map** or **Points** Menu to select a location.

To display the location options, press **ENTER** with **Location** field highlighted. You can also use the current date and time or enter a date and time of your choice.



## **MapSource and System Info**

The MapSource Info page displays a list of the MapSource data stored in the unit and description of the highlighted list item. You can choose to Show the data on the map, by placing a check mark in the Show Box. To select/deselect a box, highlight the MapSource item then and press **ENTER**.

The System Info page shows your software version number and the unit ID number.





# Setup Menu

The Setup Menu is arranged in a tab format. Each tab (General, Time, Units, Location, Alarms, Interface) contains the settings that determines how the unit functions. To select a tab, highlight the tab name using the **ROCKER** key (right/left). To select a data field on a tab, use the **ROCKER** key (up/down) to highlight the selection and press **ENTER**. To restore the GPSMAP 76 setup menu to the factory settings, press **MENU** and with Restore Defaults highlighted press **ENTER**.

### **General Tab**

The General tab contains settings for the Receiver Mode, WAAS, Backlight Time Out, Beeper, and language. To change a setting highlight the field and press **ENTER**. Make your selection using the **ROCKER** key and press **ENTER** to activate.

**Mode**—selections are Normal, Battery Saver, and Simulator

**Normal**—is the default mode set from the factory. Use this setting for the best performance.

**Battery Saver**—optimizes the receiver to save battery power. When in the Battery Saver mode, you may experience slower screen updates, but should notice a significant increase in battery life. The unit does not receive WAAS in Battery Saver Mode.

**Simulator**—turns the GPS receiver off and the unit simulates satellite reception. Use the Simulator mode to practice indoors with the unit.

WAAS—is an acronym for "Wide Area Augmentation System." The WAAS capability of the GPSMAP 76 increases the accuracy to approximately 3 meters. When enabled, the GPS receiver searches for WAAS satellites. The WAAS satellite sends data that helps correct differentials in the GPS signal. When the unit is using WAAS data, a "D" appears in the Satellite Strength Indicators on the GPS Information page, and the receiver status indicates a 2D or 3D Differential Location. See the section "WAAS and DGPS" in the Appendix for more information.

**Backlight Timeout**—determines how long the Backlight remains on once activated. There are five options: Stays On, 15 Seconds, 30 Seconds, 1 Minute, and 2 Minutes.

**Beeper**—determines when the Beeper is used. The options are Key and Message, Message Only, and Off.

### **Time Tab**

The Time tab contains settings for Time Format, Time Zone, Daylight Saving time, Current Date, and Current Time. To change a setting, highlight the field and press **ENTER**. Make your selection then press **ENTER** to activate the selection.



**Time Format**—displays time in a 12 or 24 hour format

**Time Zone**—allows you to select your time zone. The option **Other** creates the field **UTC Offset**. You can then customize the time zone with the UTC offset of your choice.

Daylight Savings Time—contains three options. The Auto setting automatically determines when Daylight Savings Time is displayed. Selecting Yes displays Daylight Savings Time for the current location. Selecting No, displays Standard Time. Daylight Savings Time is not offered when Other selected in the Time Zone field.

**Current Date**—shows the current date as determined by the unit. This option is not accessible by the user.

Current Time—shows the time at the current location. This field reflects any settings in the **Daylight Savings Time** field and is not accessible by the user.

#### **Units Tab**

The Units tab contains settings for Elevation, Depth, Distance and Speed, Temperature, Direction Display, and Speed Filter. These settings are used in related fields throughout the unit.

**Elevation**—displays in Feet or Meters.

**Depth**—displays in Feet, Fathoms, and Meters. The GPSMAP 76 cannot measure depth on its own. The depth input has to come from a NMEA device providing the "DPT" sentence.

**Distance and Speed**—displays in Nautical, Statute, or Metric

**Temperature**—displays in Fahrenheit or Celsius.

**Direction Display**—displays in Numeric Degrees or Cardinal Letters. The setting is used in all fields that relate to direction throughout the unit.

Speed Filter—allows the unit to average speed readings. Auto averages the speed readings automatically, while User displays a Seconds field. Highlight the Seconds field then press ENTER to

adjust the number of seconds the unit uses to average the speed and heading readings. With the desired number of seconds displayed, press **ENTER** to finish.

#### **Location Tab**

The Location tab contains the settings for Location Format, Map Datum, North Reference, and Magnetic Variation. The settings are used in related fields throughout the unit.



Location Format—contains 31 different formats, such as Loran TD, MGRS, and Maidenhead. You should not need to change the format unless you are using a chart or paper map for navigation. If so, find the format that most closely matches your chart. See Appendix "Loran TD" for for more information.

Map Datum—describes geographic positions for surveying, mapping, and navigation. Although there are over 100 datums available to choose from, you should only need to change the Map Datum if you using a chart or paper map that specifies a different datum in the legend. Refer to Appendix "Map Datums" for definitions.

**User Datum**— allows you to define a grid for a location format. You must have the Longitude Origin, Scale, False Easting, and False Northing to create the user grid.

For more information on grids and datums, we recommend that you visit the National Imagery and Mapping Agency at http://www.nima.mil



**WARNING:** Selecting the wrong map datum can result in substantial position errors. When in doubt, use the default WGS 84 datum for best overall performance.

North Reference—lets you select the reference used in calculating heading information. True provides headings based upon a true north reference. Grid provides headings based on a grid north reference. User allows you to specify the magnetic variation at your current location, and provides magnetic north heading references based on the value you entered.



WARNING: If User is selected, you must periodically update the magnetic variation at your present position. Failure to update this setting may result in substantial differences between the information displayed on your unit and external references, such as a magnetic compass.

Magnetic Variation—displays the magnetic variation at your current location. This field is only available if User is selected for the North Reference, and is used to enter the magnetic variance.

#### **Alarms Tab**

The Alarms tab contains settings for Anchor Drag, Approach and Arrival, Off Course, Shallow Water, and Deep Water. These settings determine if and when a warning beep is sounded and/or a message is displayed.

**Anchor Drag**—alerts you when the boat has drifted more than the user defined distance. The alarm continues until cleared by the user.

Approach and Arrival—alerts you when approaching a turn or arriving at your destination. Automatic alerts you between 15 and 90 seconds before depending on your speed. **Distance** and **Time** alert you at the specified distance or time.

Off Course—alerts you when you are off course more than the user defined distance. The Off Course alarm can be turned On or Off.

**Shallow Water**—requires input from a NMEA device supplying the "DPT" sentence. The **Shallow Water** alarm alerts you when the water depth is less than the depth set. **Deep Water**—requires input form a NMEA device supplying the "DPT" sentence. The Deep Water Alarm alerts you when the water is deeper than the depth set.

tion Alarms	Interface
Off	0.0
Approach and Arr Auto	ival
Off Course Off	0.00
Shallow Water Off	20.04
Deep Water Off	100.04

#### Interface Tab

The Interface tab contains one field: Serial Data Format. This field contains eight settings that allow the GPSMAP 76 to communicate with computer software and other electronic devices.

- GARMIN—allows the GPSMAP 76 to communicate with Garmin software and other Garmin GPS units.
- GARMIN DGPS—allows the GPSMAP 76
  to communicate with Garmin Differential
  Correction devices. The unit can have the beacon
  receiver scan for available DGPS beacon or can
  tune the beacon receiver to the frequency and bit
  rate of a nearby DGPS beacon.
- NMEA—causes the unit to transmit NMEA data. It also allows the GPSMAP 76 to accept NMEA data from another NMEA device, like a echo sounder. The baud (speed of communication in bits per second) is displayed in the Baud field.

- **Text Out**—allows the GPSMAP 76 to output simple text data that includes, date, time, position, and velocity information. The Baud can be set to 1200, 2400, 4800, or 9600 bps.
- RTCM In—allows the GPSMAP 76 to accept DGPS information from a device supplying RTCM data in a SC-104 format. The Baud can be set to 1200, 2400, 4800, or 9600 bps.
- RTCM In/NMEA Out—functions the same as the GARMIN DGPS setting except, the unit outputs NMEA 0183, version 2.3 sentences, GPRMC, GPGGA, GPGSA, GPGSV, GPGLL, GPBOD, GPRTE, and GPWPL.
- RTCM In/Text Out—functions the same as the RTCM In setting except the unit outputs simple text data that includes date, time, position, and velocity information. The Baud can be set to 1200, 2400, 4800, or 9600 bps.
- **None**—turns off all serial communication.

# **Specifications**

## **Physical**

Size: 1.2" x 2.7" x 6.2" (3.0cm x 6.9cm x 15.75cm)

Weight: 7.5 ozs (.21kg)

Display: 2.9" diagonal (6.0cm) high-contrast, 4-level

gray LCD with backlighting (180 x 240 pixels)

Case: Fully gasketed, floatable, high-impact plastic

alloy, waterproof to IEC GOS29-IPX-7

Temp. Range: 5°F to 158°F (-15°C to 70°C)

### **Performance**

Battery Life: 16 hours in Battery Saver Mode

Receiver: Differential-ready 12 parallel channel

receiver

Acquisition Times:

Warm Start: Approx. 15 seconds Cold Start: Approx. 45 seconds

First Time/AutoLocate<sup>TM</sup>: Approx. 5 minutes

Update Rate: 1/second, continuous

GPS Accuracy: < 15 meters (49 feet) RMS 95%

typical\*

DGPS (USCG) Accuracy: 3-5 meters (10-16 ft), 95%

typical

DGPS (WAAS) Accuracy: 3 meters (10ft) 95% typical

with DGPS corrections

Velocity Accuracy: 0.1 knot RMS steady state

Dynamics: 6g's

\* Subject to accuracy degradation to 100m 2DRMS under the U.S.A. DOD-imposed Selective Availability Program.

#### **Power**

Batteries: Two 1.5-volt AA batteries\*

Battery life: Up to 16 hours

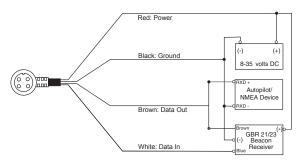
External: 8-35V DC

\*The temperature rating for the GPSMAP 76 may exceed the usable range of some batteries.

Alkaline batteries can rupture at high temperatures. Alkaline batteries lose a significant amount of their capacity as temperature decreases. Use lithium batteries when operating the GPSMAP 76 in below-freezing conditions. Extensive use of screen backlighting will significantly reduce battery life.

# **Connecting the Power/Data**

The power/data cable connects the GPSMAP 76 to a 8–35 volt DC system and provides interface capabilities for connecting external devices. The color code in the diagram below indicates the appropriate harness connections. Replacement fuse is a AGC/3AG - 1.5 Amp fuse.



# Interfacing

The following formats are supported for connection of external devices:

Garmin proprietary Differential GPS (DGPS), NMEA 0183 versions 2.3, ASCII Text Output, RTCM SC-104 input (version 2.0).

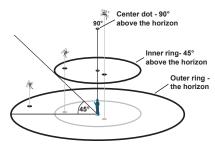
The following are the sentences for NMEA 0183, version 2.3 output:

Approved sentences—GPRMC, GPGGA, GPGSA, GPGSV, GPGLL, GPBOD, GPRTE, and GPWPL; Proprietary sentences—PGRME, PGRMZ, and PSLIB. The GPSMAP 76 will accept NMEA input with support for the DBT, DPT, MTW, and VHW sentences.

You can dowload a copy of Garmin's proprieatry communication protocol on the Help and Support section of our Web site at www.garmin.com

#### **Unit View** Data In Ground White Black Data Out Power Red Brown **Cable View** Data In Power White Red Ground Data Out Black Brown

## **Satellite Information**



**Satellite Sky View** 

### **Satellite Location**

The location of each available satellite is displayed over two location rings on the Satellite Information page. The outer ring represents the horizon, the inner ring represents 45° above the horizon, and the center represents directly overhead. When the unit is using a satellite for navigation, the satellite number becomes highlighted on the location rings. The unit can be set to display satellite location with North or your current track toward the top of the display.

## **Satellite Strength Indicator Bars**

The Satellite Strength Indicator Bars not only show the strength of the signal being received, they also show the status of the signal. The bars are either shaded with a light gray or filled with solid black. The gray bar represents the GPS is in the process of storing orbital data it is receiving from the satellite signal. When the bar turns solid black, the GPS is using the satellite signal for navigation. A "D" in or above the bar means that differential corrections (WAAS or DGPS) are being applied to that satellite.

## **Date, Time, and Current Location**

The GPS gets date and time information from the satellites on-board atomic clock. When the GPS receiver has achieved a 2D or 3D GPS Location, the current location is displayed in the selected Location Format.

## What is WAAS?

The Wide Area Augmentation System (WAAS) is an F.A.A. funded project to improve the overall integrity of the GPS signal. It is a space-based system that broadcasts integrity information and correction data as determined by ground reference stations. WAAS testing completed in September of 2003 confirmed an accuracy of 2 to 3 vertical meters throughout the majority of the continental U.S. and portions of Alaska. For more information, go to <a href="http://gps.faa.gov/Programs/WAAS/waas.htm">http://gps.faa.gov/Programs/WAAS/waas.htm</a>



**NOTE:** If you are using the GPSMAP 76 outside of the U.S., it is recommended that you turn off WAAS for the most accurate location fix.

# What is Differential GPS (DGPS)?

The U.S. and Canadian governments (among others) have set up Differential GPS (DGPS) stations to transmit correction signals. They are operational in coastal areas and on many navigable river systems. The DGPS system is available for use without a fee.

Please refer to the U.S. Coast Guard's Web site http://www.navcen.uscg.gov/ for locations and the status of the differential sites. Using DGPS requires additional equipment.

Map Datums		Carthage	Carthage- Tunisia	Hu-Tzu-Shan	Taiwan
Adindan	Adindan- Ethiopia, Mali, Senegal,	CH-1903	CH 1903- Switzerland	Indian Bngldsh	Indian- Bangladesh, India, Nepal
	Sudan	Chatham 1971	Chatham 1971- Chatham Island	Indian Thailand	Indian- Thailand, Vietnam
Afgooye	Afgooye- Somalia		(New Zealand)	Indonesia 74	Indonesia 1974- Indonesia
AIN EL ABD '70	AIN EL ANBD 1970- Bahrain	Chua Astro	Chua Astro- Paraguay	Ireland 1965	Ireland 1965- Ireland
	Island, Saudi Arabia	Corrego Alegr	Corrego Alegre- Brazil	ISTS 073 Astro	ISTS 073 ASTRO '69- Diego Garcia
Anna 1 Ast '65	Anna 1 Astro '65- Cocos I.	Croatia	Croatia	Johnston Island	Johnston Island NAD27 Central
ARC 1950	ARC 1950- Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia	Djakarta	Djakarta (Batavia)- Sumatra Island (Indonesia)	Kandawala	Kandawala- Sri Lanka
ARC 1960	Kenya, Tanzania	Dos 1968	Dos 1968- Gizo Island (New	Kergueln Islnd	Kerguelen Island
Ascnsn Isld '58	Ascension Island '58- Ascension		Georgia Islands)	Kertau 1948	West Malaysia, Singapore
	Island	Dutch	Dutch	L.C. 5 Astro	Cayman Brac Island
Astro Dos 71/4	Astro Dos 71/4- St. Helena	Easter Isld 67	Easter Island 1967	Liberia 1964	Liberia 1964- Liberia
Astro B4 Sorol	Sorol Atoll- Tern Island	European 1950	European 1950- Austria, Belgium,	Luzon Mindanao	Luzon- Mindanao Island
Astro Bcn "E"	Astro Beacon "E"- Iwo Jima		Denmark, Finland, France,		
Astr Stn '52	Astronomic Stn '52- Marcus Island		Germany, Gibraltar, Greece, Italy, Luxembourg, Netherlands,	Luzon Philippine	Luzon- Philippines (excluding Mindanao Isl.)
Aus Geod '66	Australian Geod '66- Australia, Tasmania Island		Norway, Portugal, Spain, Sweden, Switzerland	Mahe 1971	Mahe 1971- Mahe Island
Aus Geod '84	Australian Geod '84- Australia, Tasmania Island	European 1979	European 1979- Austria, Finland, Netherlands, Norway, Spain,	Marco Astro	Marco Astro- Salvage Isl.
				Massawa	Massawa- Eritrea (Ethiopia)
Austria	Austria		Sweden, Switzerland	Merchich	Merchich- Morocco
Bellevue (IGN)	Efate and Erromango Islands	Finland Hayfrd	Finland Hayford- Finland	Midway Ast '61	Midway Astro '61- Midway
Bermuda 1957	Bermuda 1957- Bermuda Islands	Gandajika Base	Gandajika Base- Republic of Maldives	Minna	Minna- Nigeria
Bogota Observ	Bogata Obsrvatry- Colombia	GDA	Geocentric Datum of Australia	NAD27 Alaska	North American 1927- Alaska
Campo Inchspe	Campo Inchauspe- Argentina	Geod Datm '49	Geodetic Datum '49- New Zealand	NAD27 Bahamas	North American 1927- Bahamas
Canton Ast '66	Canton Astro 1966- Phoenix Islands	Geod Datm 49 Guam 1963	Guam 1963- Guam Island	NAD27 Canada	North American 1927- Canada and Newfoundland
Cape	Cape- South Africa	Gux 1 Astro	Guadalcanal Island	NAD27 Canal Zn	North American 1927- Canal Zone
Cape Canavrl	Cape Canaveral- Florida, Bahama	Hjorsey 1955	Hjorsey 1955- Iceland		
1	Islands	Hong Kong '63	Hong Kong		

NAD27 Caribbn	North American 1927- Caribbean (Barbados, Caicos Islands, Cuba, Dominican Repuplic, Grand Cayman, Jamaica, Leeward and Turks Islands)	Ord Srvy GB  Pico De Las Nv	Old Survey Great Britain- England, Isle of Man, Scotland, Shetland Isl., Wales Canary Islands	SW Base Taiwan Timbalai 1948	Southwest Base- Faial, Graciosa, Pico, Sao Jorge and Terceira Taiwan Timbalai 1948- Brunei and E.
NAD27 Central	North American 1927- Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua)	Potsdam	Potsdam-Germany	1111000001 19 10	Malaysia (Sarawak and Sabah)
		Prov S Am '56	Prov So Amrico '56- Bolivia, Chile,Colombia, Ecuador, Guyana, Peru, Venezuela	Tokyo	Tokyo- Japan, Korea, Okinawa
				Tristan Ast '68	Tristan Astro 1968- Tristan da Cunha
NAD27 CONUS	North American 1927- Mean Value (CONUS)	Prov S Chln '63	So. Chilean '63- S. Chile	Viti Levu 1916	Viti Levu 1916- Viti Levu/Fiji Islands
		Ptcairn Ast '67	Pitcairn Astro '67- Pitcairn		
NAD27 Cuba	North American 1927- Cuba	Puerto Rico	Puerto Rico & Virgin Isl.	Wake-Eniwetok	Wake-Eniwetok- Marshall
NAD27 Grnland	North American 1927- Greenland	Qatar National	Qatar National- Qatar South	WGS 72	World Geodetic System 72
	(Hayes Peninsula)		Greenland	WGS 84	World Geodetic System 84
NAD27 Mexico	North American 1927- Mexico	Qornoq	Qornoq- South Greenland	Zanderij	Zanderij- Surinam (excluding San
NAD27 San Sal	North American 1927- San Salvador Island	Reunion	Reunion- Mascarene Island		Salvador Island)
NAD83	North American 1983- Alaska, Canada, Central America, CONUS, Mexico	Rome 1940	Rome 1940- Sardinia Isl.	User	User-defined custom datum
		RT 90	Sweden		
		Santo (Dos)	Santo (Dos)- Espirito Santo		
Naparima BWI	Naparima BWI- Trinidad and Tobago	Sao Braz	Sao Braz- Sao Miguel, Santa Maria Islands		
Nhrwn Masirah	Nahrwn- Masirah Island (Oman)	Sapper Hill '43	Sapper Hill 1943- East Falkland		
Nhrwn Saudi A	Nahrwn- Saudi Arabia		Island		
Nhrwn United A	Nahrwn- United Arab Emirates	Schwarzeck	Schwarzeck- Namibia		
Obsrvtorio '66	Observatorio 1966- Corvo and Flores Islands (Azores)	SE Base	Southeast Base- Porto Santo and Madiera Islands		
Old Egyptian	Old Egyptian- Egypt	South Asia	South Asia- Singapore		
Old Hawaiian	Old Hawaiian- Mean Value		S. American '69- Argentina, Bolivia,		
Oman	Oman- Oman		Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Venezuela, Trin/Tobago		

## **Navigation Terms**

**Avg Speed**—The average of all second-by-second speed readings since last reset.

**Bearing (BRG)**—The compass direction from your current location to a destination.

**Course**—The desired course between the active 'from' and 'to' waypoints.

**Distance (Dist)**—The 'great circle' distance from current location to a destination.

**Dist to Destination**—The 'great circle' distance from current location to a Goto destination, or the final waypoint in a route.

**Dist to Next**—The 'great circle' distance from current location to a Goto destination, or the next waypoint in a route.

Elevation—Height above mean sea level (MSL).

**ETA**—Estimate Time of Arrival. The estimated time you will reach your destination waypoint, based on current speed and track.

**ETA at Destination**—The estimated time you will reach a Goto destination, or the final waypoint in a route.

ETA at Next—The estimated time you will reach a Goto destination, or the next waypoint in a route.

**Fuel**—The fuel required to travel from current location to the indicated route waypoint.

**Leg Dist**—The distance between two route waypoints.

**Leg Fuel**—The fuel required to travel from a route waypoint to the next waypoint (in sequence) in the route.

**Leg Time**—The time required to travel from a route waypoint to the next waypoint (in sequence) in the route.

**Max Speed**—The maximum second-by-second speed recorded since last reset.

**Moving Average Speed**—Average speed while the unit is moving.

**Moving Trip Timer**—Total time the unit has been moving.

**Odometer**—A running tally of distance travelled, based upon the distance between second-by-second position readings.

**Off Course**—The distance you are off a desired course in either direction, left or right. Also referred to as 'cross-track error' or 'course error'

**Speed**—The current velocity at which you are travelling, relative to a ground position. Also referred to as 'ground speed.'

**Time To**—The estimated time required to reach a Goto destination, or the next waypoint in a route. Also referred to as 'estimated time en route.'

**Time to Dest**—The estimated time required to reach a Goto destination, or the final waypoint in a route.

**Time to Next**—The estimated time required to reach a Goto destination, or the next waypoint in a route.

**To Course**—The recommended direction to steer in order to reduce course error or stay on course. Provides the most efficient heading to get back to the desired course and proceed along your route.

**Track**—The direction of movement relative to a ground position. Also referred to as 'ground track.'

**Trip Odometer**—A running tally of distance travelled since last reset. Also see 'Odometer.'

**Total Average Speed**—Average speed of unit for both moving and stopped speeds since last timer reset.

**Total Trip Timer**—Total time the unit has been in operation since last reset of the trip timers.

**Turn**—The angle difference between the bearing to your destination and your current track. 'L' indicates you should turn left, 'R' indicates you should turn right. The degrees indicate the angle you are off course.

**VMG**—Velocity Made Good. The speed you are closing in on a destination along a desired course. Also referred to as the 'vector velocity' to your destination.

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# Messages

**Approaching Turn**—is displayed when you are nearing a turn in a route.

**Arriving at Destination**—is displayed when you are nearing your destination.

**Batteries Low**—when displayed you have less than 10 minutes of battery left.

Can't Unlock Maps—No applicable unlock code for one or more maps was found.

Cannot display all found, use city or postal code— The unit found too many items to display. Narrow the search using the city or postal code.

**Database Error**—Internal problem with the unit. Contact your dealer or Garmin Product Support to have the unit repaired.

**Deep Water**—The water is deeper than the amount set in the Deep Water Alarm.

**Dragging Anchor**—The distance set in the Anchor Alarm is exceeded.

**Lost Satellite Reception**—The unit is unable to continue receiving satellite signals.

**Memory Full**—Unit memory is full, no further data can be saved.

**Near Proximity Point**—You have reached the distance set for a proximity waypoint.

**No Diff GPS Location**—RTCM is selected but no DGPS data is being received.

**No Tide Stations for that Area**—No tide stations within 100 miles of the area.

None Found—No data matched the search criteria.

**Off Course**—You are off course the distance set in the "Off Course" Alarm.

**Proximity Memory Full**—No additional proximity waypoints can be saved.

**Proximity Radius Overlaps**—The radius of two proximity waypoints overlap.

**Route Already Exists**—You have entered a route name that already exists.

**Route Memory Full**—No additional routes can be saved

**Route Truncated**—Uploaded route from another device has more than 50 waypoints.

**Route Waypoint Memory Full**—No additional route waypoints can be saved.

**Shallow Water**—The water is shallower than the depth set in the Shallow Water Alarm.

**Track Already Exists**—A saved track with the same name already exists.

**Track Memory Full**—No more track data can be stored without deleting old data.

**Track Log Full**—Indicates the track log is full and track recording has been turned off. To be able to record more track points you will need to clear the track log and turn track recording on. This will only be displayed when the track recording setting is set to "Stop When Full."

**Track Truncated**—A complete uploaded track will not fit in memory. The oldest track log points have been deleted.

**Transfer Complete**—Data transfer has been completed.

**Waypoint Already Exists**—A waypoint with the same name already exists.

**Waypoint Memory Full**—The unit has stored the maximum number of waypoints.

# Loran TD System

LORAN C is a radio navigation aid operated and maintained in the United States by the United States Coast Guard. The name LORAN is an acronym for "LOng RAnge Navigation." The LORAN system covers the entire United States and the U.S. Coastal Confluence Zone. From the perspective of a mariner, the system is used for ocean and coastal navigation. It can be used as a supplemental system for harbor and harbor approach navigation, and it is used for inland navigation by recreational vehicles.



### **LORAN TD Feature**

The LORAN TD (Time Delay) feature eases the transition from using LORAN to using GPS. The GPSMAP unit automatically converts GPS coordinates to LORAN TDs for those who have a collection of LORAN fixes for favorite fishing spots and other waypoints recorded as TDs. You can display your position as a TD or enter waypoints as TDs. The accuracy to be expected from this conversion is approximately thirty meters. When the unit is placed in the LORAN TD format mode, it simulates the operation of a LORAN receiver. Position coordinates may be displayed as TDs, and all navigation functions may be used as if the unit was actually receiving LORAN signals.

### **Using the LORAN TD Format**

When creating new waypoints using LORAN TD coordinates, you must set the correct LORAN chain number and secondary stations in the Setup TD field before storing the waypoint. After the waypoint is stored in unit memory, it will always reference the LORAN chain number and secondary stations

currently selected in the Setup TD field. If you enter a different LORAN chain number, change the secondary stations or offsets in the Setup TD field, the active waypoint information will reflect those changes. Since the GPSMAP 76 does not rely on the LORAN signal for navigation, it can reference a different GRI chain and/or secondary stations and still navigate to the location stored in memory.

The Location Format field is accessed in the Main Menu under the Setup option's Location tab. The 'LORAN TD Setup' window contains the fields to select the Loran GRI-Chain Number, Primary and Secondary Stations, and TD Offsets.

If the active GRI Chain, Secondary Stations, or Offsets are changed, all waypoints stored in the units memory will update and reference the the new settings when displayed as a LORAN TD. It is important to note that the saved coordinates of the waypoint are not being modified, they are only being displayed in reference to the different GRI Chain, Secondary Stations or Offsets. Remember that the GPS is not relying on the LORAN signal for navigation. The GPSMAP 76 converts the

TD coordinate to a LAT/LON coordinate before storing a waypoint to memory. The unit can navigate to a converted TD coordinate anywhere in the world.

### To setup Loran TD from the Main Menu:

- Using the ROCKER, highlight the Location Format field on the Location tab and press ENTER.
- Highlight Loran TD, press ENTER. This displays the LORAN TD Setup window.
- To change the settings of any of the five fields, highlight the field, press ENTER, select/enter the desired setting then press ENTER.
- 4. When done, press the **PAGE** key to return to the Main Menu.



### **Accessories**

### **Automotive Mounting Bracket**

Requires the Marine Mount Part No. 010-10300-00. This kit includes the mounting base, temporary and permanent adhesive pads and a new swivel bracket.

#### Marine Mount

The bracket can rotate 360° and tilt more than 45° backward or forward.

### **Carrying Case**

Protects the GPSMAP 76 when not in use.

### Lanyard

Provides convenient method for carrying the GPSMAP 76.

#### Power/Data Cable

Wiring harness can be used to hardwire the unit to auxiliary power and to interface with other NMEA devices.

#### PC Data Cable

Allows for serial data transfer with a PC.

### Cigarette Lighter Adapter

Allows the GPSMAP 76 to operate from external auto power.



**Marine Mount** 



**Automotive Mount** 



**PC Cable** 

# **FCC Compliance**

The GPSMAP 76 complies with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE. These limits are designed to provide more reasonable protection against harmful interference in a residential installation, and are more stringent than "outdoor" requirements.

Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The GPSMAP 76 does not contain any user-serviceable parts. Repairs should only be made by an authorized Garmin service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

## **Product Registration**

Help us better support you by completing our online registration today! Have the serial number of your GPSMAP 76 handy and connect to our Web site (http://www.garmin.com). Look for the Product Registration link on our Home page.

Use this area to record the serial number (8-digit number located on the back of the box) in case your GPS unit is lost, stolen, or needs service. Be sure to keep your original sales receipt in a safe place or attach a photocopy inside the manual.

Serial Number:				

### **Contact Garmin**

If you should encounter any difficulty while using your GPSMAP 76, or if you have any questions, in the U.S.A. contact Garmin Product Support by phone: 913/397-8200 or 800/800-1020, Monday–Friday, 8 am–5 pm Central Time; or by e-mail at *sales@garmin.com*.

In Europe, contact Garmin (Europe) Ltd. at 44/0870 8501241

# **Software License Agreement**

BY USING THE GPSMAP 76, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Garmin grants you a limited license to use the software embedded in this device (the "Software") in binary executable form in the normal operation of the product. Title, ownership rights, and intellectual property rights in and to the Software remain in Garmin.

You acknowledge that the Software is the property of Garmin and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and code of the Software are valuable trade secrets of Garmin and that the Software in source code form remains a valuable trade secret of Garmin. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or reexport the Software to any country in violation of the export control laws of the United States of America.

# **Limited Warranty**

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will at its sole option repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you.

Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

To obtain warranty service, contact your local Garmin authorized dealer or call Garmin Customer Service for shipping instructions and an RMA tracking number. The unit should be securely packed with the tracking number clearly written on the outside of the package. The unit should then be sent, freight charges prepaid, to any Garmin warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs.

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The Garmin GPSMAP 76 has no user-serviceable parts. Should you ever encounter a problem with your unit, please take it to an authorized Garmin dealer for repairs.

The GPSMAP 76 is fastened shut with screws. Any attempt to open the case to change or modify the unit in any way will void your warranty and may result in permanent damage to the equipment.

# **Safety Information**

CAUTION: Use the GPSMAP 76 at your own risk. To reduce the risk of unsafe operation, carefully review and understand all aspects of this Owner's Manual – and thoroughly practice operation using Simulator Mode prior to actual use. When in actual use, carefully compare indications from the GPSMAP 76 to all available navigation sources, including information from other NAVAIDs, visual sightings, charts, etc. For safety, always resolve any discrepancies before continuing navigation.

CAUTION: IT IS THE USER'S RESPONSIBILITY TO USE THIS PRODUCT PRUDENTLY. THIS PRODUCT IS INTENDED TO BE USED ONLY AS A NAVIGATIONAL AID AND MUST NOT BE USED FOR ANY PURPOSE REQUIRING PRECISE MEASUREMENT OF DIRECTION, DISTANCE, LOCATION OR TOPOGRAPHY. THIS PRODUCT SHOULD NOT BE USED TO DETERMINE GROUND PROXIMITY FOR AIRCRAFT NAVIGATION.

**CAUTION:** The electronic chart is an aid to navigation and is designed to facilitate the use of authorized government charts, not replace them. Only official government charts and notices to mariners contain all information needed for save navigation – and, as always, the user is responsible for their prudent use.

**MAP DATA INFORMATION:** One of the goals of Garmin is to provide customers with the most complete and accurate cartography that is available to us at a reasonable cost. We use

a combination of governmental and private data sources, which we identify as required in product literature and copyright messages displayed to the consumer. Virtually all data sources contain inaccurate or incomplete data to some degree. This is particularly true outside the United States, where complete and accurate digital data is either not available or prohibitively expensive.

WARNING: The Global Positioning System (GPS) is operated by the United States government, which is solely responsible for its accuracy and maintenance. The system is subject to changes which could affect the accuracy and performance of all GPS equipment. Although the Garmin GPSMAP 76 is a precision electronic NAVigation AID (NAVAID), any NAVAID can be misused or misinterpreted, and therefore become unsafe.

**WARNING:** This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our web site at <a href="http://www.garmin.com/prop65">http://www.garmin.com/prop65</a>

Because the Garmin GPSMAP 76 can be used for vehicular navigation, important safety considerations must be followed. Please read and observe the following instructions.

Do Not Mount Where Drivers Field of Vision is Blocked



Do Not Place Unsecured on the Vehicle Dash

Do Not Mount in Front of an Airbag Field of Deployment

**WARNING:** For use in vehicles, it is the sole responsibility of the owner/operator of a vehicle with the GPSMAP 76 installed to place and secure the device so it will not interfere with the vehicle operating controls and safety devices, obstruct the drivers view of driving conditions, or cause or personal injury in the event of an accident.

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