



GPSMAP 76S

chartplotting receiver

owner's
manual
and
reference
guide

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Help us better support you by completing your on-line registration today!

Why should you register your GPSMAP 76S?

- Notification of Product Updates
- Notification of New Products
- Lost or Stolen unit Tracking

Connect to our website (www.garmin.com) and look for the Product Registration link on the home page.

Thanks for choosing the GARMIN GPSMAP 76S. If you have any questions or comments regarding the use of the GPSMAP 76S you can visit our website or contact our Customer Service Department M-F, 8:00-5:00 CST (except holidays) at 1-800-800-1020.

If you have previously registered a GARMIN product purchase using a mail-in registration card, we invite you to reregister that product using our NEW on-line system.

Introduction

Registration



Warnings and Cautions

WARNING: If you choose to use the GPSMAP 76S in a vehicle, it is the sole responsibility of the owner/operator of the GPSMAP 76S to secure the GPS unit so that it will not cause damage or personal injury in the event of an accident. Do not mount the GPSMAP 76S over airbag panels or in a place where the driver or passengers are likely to have an impact with it in an accident or collision.

WARNING: If you choose to use the GPSMAP 76S in a vehicle, it is the sole responsibility of the operator of the vehicle to operate the vehicle in a safe manner, maintain full surveillance of all driving conditions at all times, and never become distracted by the GPSMAP 76S to the exclusion of safe operating practices. It is unsafe to operate the GPSMAP 76S while you are driving. Failure by the operator of a vehicle equipped with an GPSMAP 76S to pay full attention to operating the vehicle and road conditions while the vehicle is in motion could result in an accident or collision with property damage and personal injury.

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

CAUTION: The Global Positioning System (GPS) is operated by the government of the United States, 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 GPSMAP 76S is a precision electronic NAVigation AID (NAVAID), any NAVAIID can be misused or misinterpreted and, therefore, become unsafe.

NOTE: This device complies with Part 15 of the FCC interference limits for Class B digital devices FOR HOME OR OFFICE USE (“home or office” interference requirements 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.

The GPSMAP 76S 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.

Introduction

FCC Compliance Statement



Software License Agreement

Software License Agreement

BY USING THE GPSMAP 76S, 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 re-export the Software to any country in violation of the export control laws of the United States of America.

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Introduction

Features



NOTE: You should always be prepared and capable of navigating without the GPSMAP 76S. It is designed to compliment other forms of basic navigation, not entirely replace them.

The GPSMAP 76S is a 7.5 ounce, 12 channel, hand held GPS receiver with a built-in Quad Helix antenna. The GPSMAP 76S has nine keys located on the front of the unit, that allow the user to quickly access all of the units functions. The GPSMAP 76S has a large 180 X 240 pixel, 4 level gray monochrome display for easy viewing.

The GPSMAP 76S is a full function GPS with a built-in Electronic Compass and Barometer. Built-in cartography of a North American base map that includes Interstate and State Highways and Exit Information. Using MapSource™, GARMIN's map data software (not included), you could choose to have the GPSMAP 76S display a variety of different map information. We currently offer several mapping options including our Metroguide™, Topo, Fishing Hot Spots, and BlueChart data. Check your local dealer or our web site (www.garmin.com) for a complete listing of MapSource products.

GARMIN designed your GPSMAP 76S with the user in mind. The GPSMAP 76S is waterproof to IPX 7 standards, floats and is rugged enough to endure the most trying use, and GARMIN's friendly user interface will allow you to be navigating with your new GPS in no time. Your GPSMAP 76S can provide one more critical benefit, peace of mind. With your GPSMAP 76S you will know where you are, where you've been and where you're going. And since you'll always know the way back home, you can concentrate on what you set out to do, explore the great outdoors.

Thank you for choosing GARMIN!

Other features include:

Waypoints: 500 with name and graphic symbol.

Tracks: Automatic Track Log; 10 saved Tracks.

Routes: 50 Routes that let you navigate through a set of 50 waypoints.

Trip Computer: Trip Odometer, Stopped Time, Moving Average Speed, Moving Time, Overall Average Speed, Total Time, Max Speed and Odometer.

Celestial Data: Includes Tides, Sun and Moon, and Hunt and Fish times.

The Reference Manual will describe the Main Display Pages and their options in detail. The Quick Start Guide described the process of navigating the Main Display Pages and the Option Menus. While the Reference Manual will provide some direction on how to select an item, its main intention is to describe each Main Page and its Option Menu in detail.

Initializing the GPS Receiver

Before the GPSMAP 76S can be used for GPS navigation, the GPS receiver must be initialized. The GPS receiver should only need to be initialized the first time the unit is used, or if it has been stored several months.

The GPSMAP 76S stores orbital data for each satellite in an Almanac. The orbital data is supplied in the satellite signals. Each time the unit receives satellite signals, the Almanac is updated. This is how the GPSMAP 76S knows which satellites to search for. If you do not use your GPS for several months, or move the unit several hundred miles between uses, the Almanac can become “cold”, that is to say that the orbital information is no longer valid. If the Almanac is “cold”, your unit may have trouble locking on to satellite signals. If the unit is unable to receive enough satellite signals to determine its location, it will display an options menu.

Initializing the GPS Receiver:

1. With fresh batteries installed, take the unit outside where a clear 360° view of the sky can be obtained.
2. 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.
3. The initialization process is automatic. It should take the GPSMAP 76S no longer than five minutes to acquire enough satellite signals to become operational. When the unit is able to navigate, it will display either “2D GPS Location” or “3D GPS Location” in the Receiver Status Field.

Initializing the GPS Receiver

Point top of unit toward sky



When initializing the receiver or trying to receive satellite signals, orient the GPSMAP 76S 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 severely degraded.

Initializing the GPS Receiver



Initialization Options

Initialization Options

If the GPSMAP 76S is unable to determine its location, an options menu will be displayed. Depending on the situation, select the appropriate option to help the unit acquire satellites.

Use With GPS Off — This option will turn the GPS receiver Off. Select this option if you are indoors and can not receive satellite signals, or if you wish to use only the sensors. If this option is selected, it will save battery power and allow the map to redraw faster.

New Location — If you have moved the unit to another state, province, or country, and having trouble locking onto satellites, select 'New Location'. When you select 'New Location', another menu will be displayed. This menu contains the options 'Automatic' or 'Use Map'. If 'Automatic' is selected, the unit will switch to AutoLocate mode and begin searching for satellites. If 'Use Map' is selected, the Pointer on the Map Page can be used to select your approximate location and the unit will continue to acquire satellites normally. 'Automatic' may take longer to acquire satellites.

Stored w/o Batteries — If you have stored the unit without batteries the date stored in the GPS may be incorrect. 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 — Select this option if you are in an area where the satellite signals are being temporarily blocked.

GPS Information Page

The GPS Information Page displays your speed, GPS elevation, the estimated accuracy, receiver status, satellite locations, satellite signal strength, the date, time and the GPS receiver's current location. If you have a Location Format other than the default (hddd° mm.mmm) selected, pressing the **ROCKER** key in any direction will toggle the current location at the bottom of the page between the two Location Formats.

Speed, GPS Elevation and Estimated Accuracy

When the GPS is receiving at least three satellite signals, it will provide you with the current GPS Speed, DGPS Status, and the estimated Accuracy of the GPS Location. The GPS must be receiving at least four satellite signals to report GPS Elevation.

Current GPS Receiver Status

The current status of the GPS receiver will always be displayed.

Autolocate — Forces the receiver to search for each satellite individually.

Acquiring Satellites — The receiver will begin in this mode each time the unit is turned on. The GPS receiver will remain in this mode until it has acquired at least 3 satellite signals.

2D GPS Location — Indicates that the receiver is only using three satellite signals. When a 2D GPS Location is achieved, the GPS will display 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.

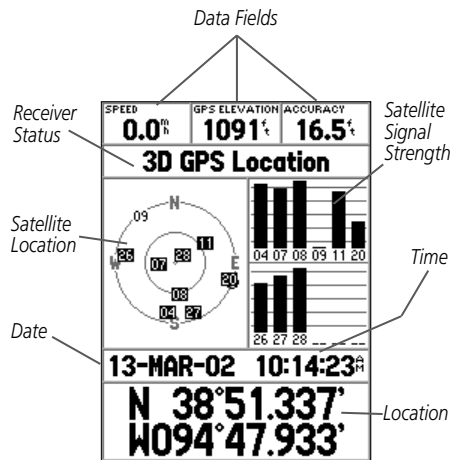
Lost Satellite Reception — Indicates that the GPS has lost satellite reception.

Simulating GPS — Indicates the GPSMAP 76S is running in Simulator Mode and the GPS receiver is turned off. It is important to remember when you are using the Simulator, the GPSMAP 76S can not be used for actual navigation.

GPS Off — Indicates that the GPS receiver is turned off.

Reference

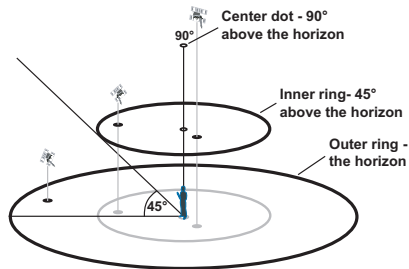
GPS Information Page



GPS Information Page

Reference

GPS Information Page



Satellite Sky View

Satellite Location

The location of each available satellite is displayed over two location rings. 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 will become 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 will be either shaded with a light grey, or filled with solid black. If the bar is grey, it means that the GPS is receiving a signal from the satellite and is in the process of storing orbital data provided in the GPS 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 are being applied to that satellite.

Date, Time and Current Location

The GPS gets date and time information from the satellites. The satellites are equipped with an atomic clock that is very accurate. Since the GPS clock is derived from timing information sent from the satellite, the GPS clock is also very accurate.

When the GPS receiver has achieved a 2D or 3D GPS Location, the current location will be displayed in the selected Location Format.

GPS Information Page Options Menu

To activate the Options Menu from the GPS Information Page, press the **MENU** Key. To select an option, highlight the desired selection then press **ENTER**.

Use With GPS On/Off — This option turn the GPS receiver On of Off. Select this option if you are indoors and can not receive satellite signals, or if you wish to use only the sensors. If this option is selected, it will save battery power and allow the map to redraw faster.

Start/Stop Simulator — This option is used to Start or Stop the Simulator.

Track Up/North Up — This option 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 Location — if you have moved the unit to another state, province, or country, and you are having trouble locking onto satellite signals select 'New Location'.

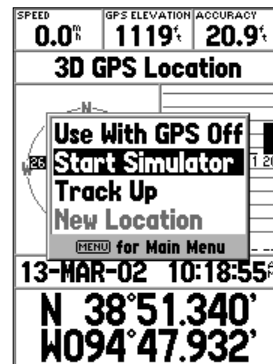
When you select 'New Location', an options menu will be displayed. This menu contains the options 'Automatic' or 'Use Map'. If you select 'Automatic' the unit will switch to AutoLocate and begin searching for satellites. This method can take up to five minutes for the unit to begin navigation.

If you select 'Use Map' you can use the Pointer on the Map Page to select your approximate location and the unit will continue to acquire satellites normally using the almanac for satellite reference. Using this method, the unit does not need to reinitialize and should receive satellite signals quickly.

If the unit is in the 'Simulator' mode, the 'Use Map' feature will allow you to move the simulated current location.

Reference

GPS Information Page

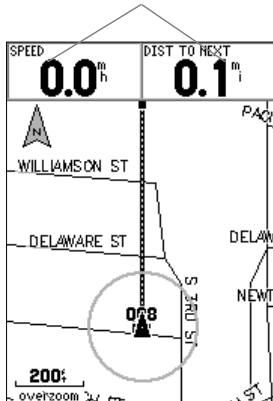


GPS Information Page Options

Reference

Map Page

User Selectable Data Fields



Zoom Scale

Map Page

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

Changing the Zoom Scale

You can change the Zoom Scale on the Map Page allowing you to either view a smaller area in greater detail or a larger area with less detail. As referred to in this manual, when you decrease the Zoom Scale you will view a smaller area with greater detail. The current Zoom Scale setting is displayed in the lower left corner of the Map Page. If 'Overzoom' is displayed under the scale, no further map information is available.

To change the Zoom Scale:

1. Press the IN Key to decrease the Zoom Scale.
2. Press the OUT Key to increase the Zoom Scale.

Map Page Options

To access the Map Page Options, with the Map Page displayed, press the **MENU** Key. To select an option from the Menu, highlight the desired selection then press **ENTER**.

Full Screen Map — This option hides the data fields and expands the map to include the entire display. When 'Full Screen Map' is selected the option will change to 'Show Data Fields'.

Measure Distance — This option will allow you to measure the distance between two points. As you move the Map Pointer, the Distance, Bearing and Location of the Pointer are displayed at the top of the map. 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 — This option adds a window below the Data Fields that will display the name of the next cross street. This will only function if 'Lock to Road' is 'On' (see Setup Map — 'Other' Tab on page 33) and MapSource Metroguide or City Navigator data is loaded in the unit.

Setup Page Layout — This option allows you to select the number of data fields rows and the size of text used in the fields. You have the option of displaying, None, Small (1 Row), Small (2 Rows), Small (3 Rows), Medium (1 Row), Medium (2 Rows), Medium (3 Rows), Large (1 Row), or Large (2 Rows). To select an option, highlight the desired selection then press **ENTER**. The new configuration will be displayed on the map.

Change Data Fields — This option allow you to select the type of data that you want displayed in the data fields. To change a data type, place the highlight over the desired data field, then press **ENTER**. Using the **ROCKER**, scroll through the available selections. With the data type highlighted, press **ENTER** to accept the selection.

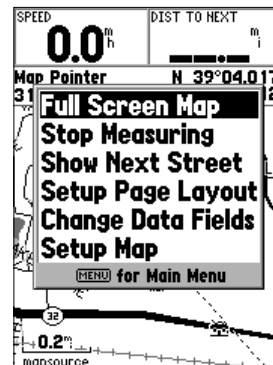
Setup Map — This option contains the Map Page Setup features. The features are arranged on a tab menu making it easy to locate the different setup items.

The 'General', 'Map', 'Waypoint', 'Point', 'Marine', 'Line', 'Area', 'Topo', 'City', 'Road', and 'Other' Tabs have setting for 'Text', 'Zoom' or both. Please read the description of these settings to understand how they affect the display characteristics of the options on the Map Page.

- **Text Setting** — The 'Text' setting allows you to determine the size of text used when displaying a name or label for an item on the Map Page. There are four options for the 'Text' setting, Off, Small, Med, and Large. If you select 'Off', the item will be displayed on the map without a name or label. If you select 'Small', 'Med' or 'Large', the name, the item will be displayed with a name or label in the text size selected.

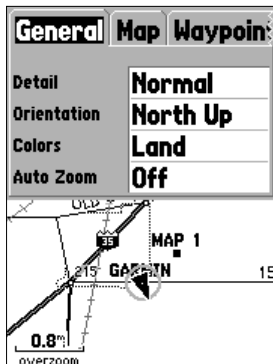
Reference

Map Page



Map Page Options

Map Page Options



Setup Map — 'General' Tab

- **Zoom Setting** — This setting determines when items will be displayed on the map. You have the option of selecting 'Off', 'Auto' or a 'Zoom' Scale that coincides with the Zoom Scales for the map.

If you select 'Off', the items for that option will not be displayed on the Map Page. If you select 'Auto', the GPSMAP 76S will automatically determine the zoom level at which to display the selected items. If you select a scale setting, the items will be displayed on the map only when the Map Zoom Scale is at or less than the selected scale .

As an example, if you select 500ft as 'Zoom' Scale setting, the selected items will only be displayed when the Map Zoom Scale is at 500ft or less.

Setup Map — 'General' Tab

The 'General' Tab contains the settings for Detail, Orientation, Colors, and Auto Zoom. Below is a description of each feature. To change a setting, highlight the appropriate field then press **ENTER**. Make your selection, then press **ENTER** to accept the new selection.

Detail — Settings: Most, More, Normal, Less, and Least. The Detail settings allow you to control the amount of map data displayed on the unit. If you select a setting with high detail, the screen redraw times will be slower.

Map Orientation — Settings: North Up, Track Up, and Course Up. This options allows you to determine how the map is displayed. If 'North Up' is selected, North will always be at the top of the display. If 'Track Up' is selected, your current track will always be toward the top of the display. If 'Course Up' is selected, the active course line will always be toward the top of the display. If you have 'Course Up' selected and do not have an active course, your current track will be toward the top of the display.

Map Page Options

Colors — This option 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 will be lighter in color than the water. If you select 'Water' the water portion of the display will be lighter in color than the land.

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

Setup Map — 'Map' Tab

The 'Map' Tab contains settings for the Basemap, MapSource, Lat Lon Grids, and Grid Labels. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection then press **ENTER** to accept the selection.

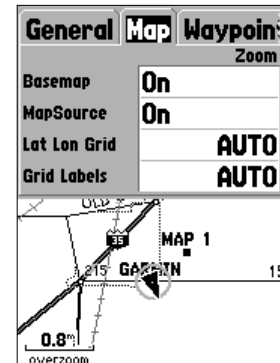
Basemap — This option allow you to turn the Basemap data 'On' or 'Off'. If you select 'Off', the Basemap will no longer be displayed.

MapSource — This option is only available if Mapsource CD data has been loaded into the unit. If MapSource data is available, you can choose whether or not to display the data on the map by selecting either 'On' or 'Off'. If you select 'Off', the MapSource data will not be displayed on the Map Page.

Lat Lon Grid — Lat Lon Grids will be displayed in smaller increments as the Zoom Level on the Map Page is decreased. The 'Zoom' setting for this option determines when the grids will begin displaying on the Map Page.

If you select 'Auto', and have the Basemap or MapSource options set to 'ON', the unit will not display a Lat Lon Grid.

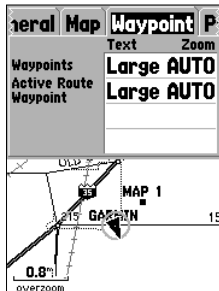
Grid Labels — This option allows you to display the coordinates on the grid. You must have the 'Lat Lon Grid' displayed for 'Grid Labels' to be displayed. If you select 'Auto', and have the Basemap or MapSource options set to 'ON', the unit will not display Grid Labels.



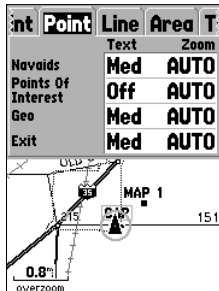
Setup Map — 'Map' Tab

Reference

Map Page Options



Setup Map — 'Waypoint' Tab



Setup Map — 'Point' Tab

Setup Map — 'Waypoint' Tab

The 'Waypoint' Tab contains the Waypoint, and Active Route Waypoint option settings. Each of the options has a 'Text' and 'Zoom' setting. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

Waypoints — This option sets the display parameters for all waypoints.

Active Route Waypoint — This option sets the display parameters for waypoints that are in an Active Route. As an 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 will be displayed with large text on the Map Page.

Setup Map — 'Point' Tab

The 'Point' Tab contains the Nav aids, Points of Interest, Geo, and Exit option settings. Each of the options has a 'Text' and 'Zoom' setting. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

Nav aids — are items displayed on the Map that aid navigation. Nav aids can be landmarks, milemarkers, hazards, light houses, buoys etc.

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

Geo — include points such as schools, cemeteries, churches, towers, glaciers, parks, etc.

Exit — includes exit information for the US and Canada.

Setup Map — 'Marine' Tab

The 'Marine' Tab contains 'Text' settings for Spot Soundings, Nav aids, Tide Stations, and Services and 'Zoom' settings for Nav aids, Tide Stations and Services.

Spot Soundings — are depth readings shown in MapSource BlueChart data.

Nav aids — are aids to navigation such as buoys and lighthouses.

Tide Stations — are stations where Tide information is gathered.

Services — include Marinas, Gas Stations ect.

Setup Map — 'Line' Tab

The 'Line' Tab contains the 'Zoom' scale settings for Track Log, Saved Tracks, Course Lines, and the Bearing Line. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

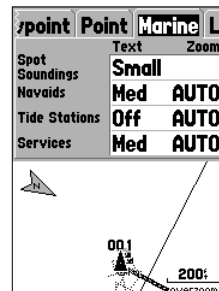
Track Log — the Track Log is the bread crumb trail that is left behind as your position changes on the Map Page.

Course Lines — shows a line from the point navigation was initiated to a destination waypoint.

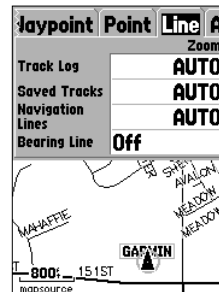
Bearing Line — the Bearing Line will show the bearing from your current location to the active waypoint. This can be used to steer the shortest path to the waypoint.

Reference

Map Page Options



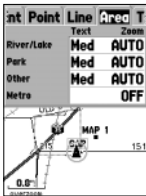
Setup Map — 'Marine' Tab



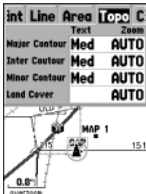
Setup Map — 'Line' Tab

Reference

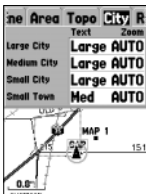
Map Page Options



Setup Map — 'Area' Tab



Setup Map — 'Topo' Tab



Setup Map — 'City' Tab

Setup Map — 'Area' Tab

The 'Area' Tab contains the 'Text' and 'Zoom' settings for River/Lakes, Parks, Other, and Metro. To change a setting, highlight the field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

River/Lake — Rivers and Lakes will appear shaded on the map.

Park — Area Parks will appear as a shaded area.

Other — Geographical areas such as shopping centers and university campuses will appear as a shaded area.

Metro — Metropolitan areas will appear as a shaded area.

Setup Map — 'Topo' Tab

The 'Topo' Tab contains the 'Text' and 'Zoom' settings for Major Contour, Intermediate Contour, and Minor Contour Lines. The Land Cover option has a 'Zoom' setting. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

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

Setup Map — 'City' Tab

The 'City' Tab contains the 'Text' and 'Zoom' settings for Large City, Medium City, Small City and Small Towns. To change a setting, highlight the field then press **ENTER**. Make your selection, then press **ENTER** to accept.

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

Reference

Map Page Options

Setup Map — 'Road' Tab

The 'Road' Tab contains the 'Text' and 'Zoom' settings for Local Road Names and 'Zoom' settings for Freeway, Highway, and Local Roads. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

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

Setup Map — 'Other' Tab

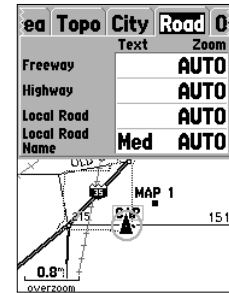
The 'Other' Tab contains the 'Text' and 'Zoom' settings for Railroad and an On/Off setting for the Accuracy Circle. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

Railroad — controls the display of railways lines on the Map Page.

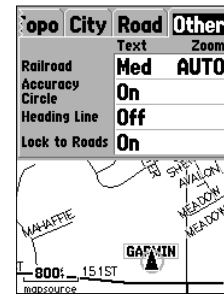
Accuracy Circle — The Accuracy Circle is displayed around the Location Triangle on the Map Page. The Accuracy Circle depicts the estimated accuracy of the location. If your current location is matched to a road, no Accuracy Circle will be displayed.

Heading Line — If the Heading line is 'On', a line showing your current heading will be projected on the map from the current location. The Heading line is a thin black line.

Lock to Roads — If 'Lock to Roads' is 'On', the unit will try to match your location to a road.



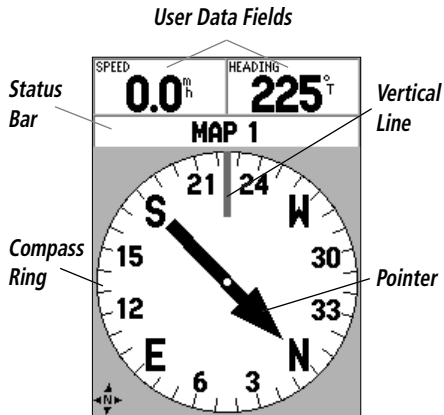
Setup Map — 'Road' Tab




Setup Map — 'Other' Tab

Reference

Compass Page



When the Electronic Compass is "ON", the compass icon  will be displayed on the Map, Compass, and Highway Pages.

Compass Page

The Compass Page is best used for navigation when a straight line course can not be followed. The Compass Page has User Selectable Data Fields along the top, a Status Bar, Compass Ring and a Pointer.

The Compass Page can navigate using the Electronic Compass or the GPS receiver. From the factory the unit will navigate below 10 mph using the Electronic Compass. If the unit's speed exceeds 10 mph, the unit will automatically switch to the GPS receiver for navigation. When the unit's speed drops below 10 mph for more than 90 seconds, the unit will revert to using the Electronic Compass for navigation. These settings can be changed on the Main Menu 'Compass' Tab (see pages 47-48).

The Electronic Compass can easily be toggled On/Off by pressing and holding the **PAGE** key. A message will be displayed along the bottom of the screen indicating the state of the Electronic Compass. Press the **ENTER** key to acknowledge the message. If you would like to save battery power, it is recommended that you only turn the Electronic Compass on to take a reading then turn it back off. If the Electronic Compass is turned off, the unit will automatically use the GPS receiver for navigation.

The Compass Ring is a graphic display of your current heading. As you change direction, the Compass Ring will rotate, your current heading will always be at the top of the compass. The Pointer will always point toward the active destination waypoint. When you are going directly toward the waypoint, the Pointer will align with the vertical line in the Compass Ring. When you arrive at the waypoint, a message 'Arriving at Destination' will be displayed. It is important to note that while using the GPS receiver for navigation, the Compass Ring does not act as a true compass. You must be moving for the Compass Ring and Pointer to update and correctly point towards your destination. When using the Electronic Compass for navigation, the unit must be held level or the compass reading may be inaccurate. If the unit is not being held level, a message "Hold Level" will be displayed.

Compass Page Options

To access the Compass Page Options, with the Compass Page displayed press the **MENU** Key.

Setup Page Layout — This option allows you to select the number of data field rows and the size of text used in the fields. You have the option of displaying, None, Small (1 Row), Small (2 Rows), Small (3 Rows), Medium (1 Row), Medium (2 Rows), Medium (3 Rows), Large (1 Row), or Large (2 Rows). To select an option, highlight the desired selection then press **ENTER**. The new configuration will be displayed on the map. Press **QUIT** to exit the option.

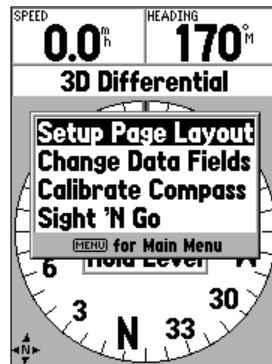
Change Data Fields — This option allows you to select the type of data you want displayed in the data fields. To change a data type, place the highlight over the desired data field, then press **ENTER**. Using the **ROCKER**, scroll through the available selections. With a data type highlighted, press **ENTER** to accept the selection. For a list of available data fields, see appendix ?.

Calibrate Compass — The Electronic Compass will need to be calibrated the first time batteries are installed and whenever batteries are changed. To calibrate the compass, with 'Start' on the Calibrate Compass Page highlighted press **ENTER**. With the unit held level, slowly turn the unit through at least two revolutions in the same direction. There will be a prompt indicating if you are turning the unit 'Too Fast', 'Just Right', or 'Too Slowly'. When finished, the unit will display a message indicating if the calibration was successful or failed. If the calibration was successful, press **ENTER** to continue, if the calibration failed, press **ENTER** to try the calibration again.

Sight 'N Go — This feature allows the user to visually locate a landmark and lock in a magnetic heading to it. Once a heading is locked, the unit will begin navigation along that heading.

Reference

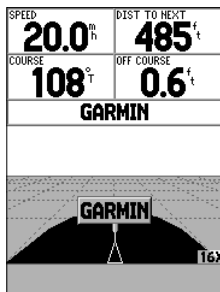
Compass Page Options



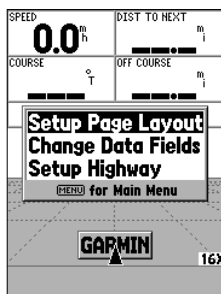
Compass Page Options

Reference

Highway Page



Highway Page



Highway Page Options

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 tracks, saved tracks or waypoints that are within the display area will be shown, the Zoom Level can be changed using the **IN** and **OUT** Keys, and the Triangle represents your current location.

To navigate using the Highway, 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. When you are approaching a turn, a message “Approaching Turn” will be displayed. As you approach your destination, a message ‘Arriving at Destination’ will be displayed. If using the Electronic Compass for navigation, the unit will need to be held level. If the unit is not level, a message ‘Hold Level’ will be displayed.

Highway Page Options

To access the Highway Page Options, with the Highway Page displayed press the **MENU** Key. To select an option from the Menu, highlight the desired selection then press **ENTER**.

Setup Page Layout — This option allows you to select the text size and the number of data fields rows. You have the option of displaying: None, Small (1 Row), Small (2 Rows), Small (3 Rows), Medium (1 Row), Medium (2 Rows), Medium (3 Rows), Large (1 Row), or Large (2 Rows). To select an option, highlight the desired selection then press **ENTER**. The new configuration will be displayed on the map.

Change Data Fields — This option allow you to select the type of data you want displayed in the data fields. To change a data type, place the highlight over the desired data field, then press **ENTER**. Using the **ROCKER**, scroll through the available selections. With the data type highlighted, press **ENTER** to accept the selection.

Setup Highway — This option contains the Highway Setup features. The features are arranged on a tab menu making it easy to locate the different setup items. To select an option from a Menu Tab, highlight the desired selection then press **ENTER**.

Setup Highway — 'Line' Tab

The 'Line' Tab contains the On/Off settings for Active Log, Active Route, Track Log and Saved Tracks. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

Active Leg — If 'Off' is selected, the Active Leg of the Graphic Highway will not be displayed.

Active Route — If 'Off' is selected, the Graphic Highway will not be displayed.

Track Log — If 'Off' is selected, the Track Log will not be displayed.

Saved Tracks — If 'Off' is selected, Saved Tracks will not be displayed.

Setup Highway — 'Waypoint' Tab

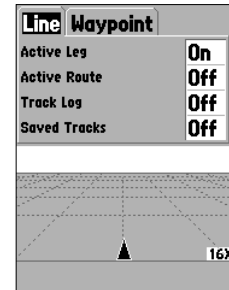
The 'Waypoint' Tab contains the On/Off settings for Next, Route, and Other. To change a setting, highlight the appropriate field then press **ENTER**. Make your new selection, then press **ENTER** to accept the selection.

Next — This setting determines if the next waypoint in a Route will be displayed. If 'On' is selected, you will see the next waypoint in the Route. If 'On' is selected and the Route option is set to 'Off' only the Next Waypoint in the Route will be displayed.

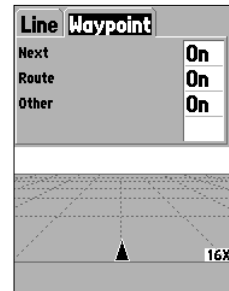
Route — This setting determines if the waypoints in a Route will be displayed. If this selection is set to 'Off', Route Waypoints will not be on the Graphic Highway.

Other — This setting determines if nearby waypoints are displayed.

Highway Page Options



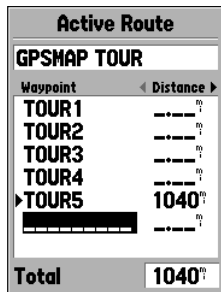
Setup Highway — 'Line' Tab



Setup Highway — 'Waypoint' Tab

Reference

Active Route — Plot Page



Active Route Page



Plot Page

Active Route/Goto Page

The Active Route/Goto Page will show the waypoint(s) that are currently being used for navigation. If you are navigating using a 'Go To', then the active waypoint will be displayed with the distance remaining displayed on the right side of the display. 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 display. Pressing the **ROCKER** to the right or left will cycle the data field on the right side of the display through a variety of data. Pressing **MENU** will display the options that are available for current navigation.

Plot Page

The Plot Page is used to view data provided by the Altimeter. The unit can be set to plot Pressure or Elevation changes. Either Barometric Pressure or Ambient Pressure can be plotted over time. Elevation changes can be plotted over time or distance. The Elevation Plot data is contained in the track log. If you clear the track log the current elevation plot will also be cleared. Clearing the track log will not clear a current Pressure Plot.

The Plot Page has configurable data fields at the top. A data field at the bottom of the page will show current information that relates to the type of data shown on the plot.

Pressing the **ROCKER** Up or Down will change the vertical scale of the plot. Pressing the **ROCKER** key Up, increases the vertical scale showing less vertical detail on the plot. Pressing the **ROCKER** key Down decreases the vertical scale, showing more vertical detail.

Pressing the 'Zoom' **IN** or **OUT** key will change the horizontal scale, and allows you to view a larger area of the plot in less detail, or a smaller area in greater detail. Zooming **OUT** increases the horizontal scale, showing more data, Zooming **IN** decreases the vertical scale, showing less data. When zooming **OUT**, the vertical scale will be increased if needed to accommodate all of the vertical detail of the data.

To pan along the length of the plot, press the **ROCKER** key to the Left or Right. This will display a crosshair that will track along the plot. Data for the selected plot point will be shown in labels along the vertical and horizontal scales. To exit the panning mode, press the **QUIT** key.

Plot Page Options

Plot Barometer/Plot Ambient Pressure — Sets the Plot Page to show either Barometric or Ambient pressure over time. These options will only be available when the unit is plotting pressure.

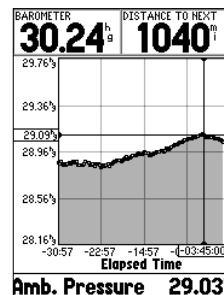
Plot Over Time/ Plot Over Distance — These options will only be available when the unit is plotting elevation. Selecting 'Plot Over Distance' sets the horizontal scale of the plot to show distance. Selecting 'Plot Over Time' sets the horizontal scale of the plot to show time. The plot will be able to show data stored for the last 72 hours or the last 80 miles/120 kilometers traveled.

Show Elevation Plot/Show Pressure Plot — Sets the Plot Page to show either Elevation or Pressure.

Setup Page Layout — This option allows you to select the number of data field rows and the size of text used in the fields. You have the option of displaying, None, Small (1 Row), Small (2 Rows), Small (3 Rows), Medium (1 Row), Medium (2 Rows), Medium (3 Rows), Large (1 Row), or Large (2 Rows). To select an option, highlight the desired selection then press **ENTER**. The new configuration will be displayed on the page. Press **QUIT** to exit the option.

Reference

Plot Page Options



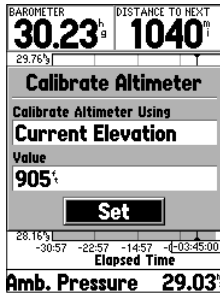
Panning the Plot Page



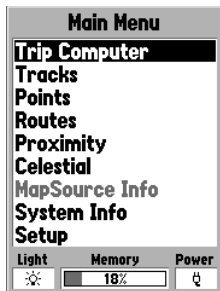
Plot Page Options

Reference

Plot Page Options — Main Menu



Calibrate Altimeter Page



Main Menu Page

Change Data Fields — This option allow you to select the type of data that you want displayed in the data fields. To change a data type, place the highlight over the desired data field, then press **ENTER**. Using the **ROCKER**, scroll through the available selections. With the data type highlighted, press **ENTER** to accept the selection.

Calibrate Altimeter — If necessary, the Altimeter can be calibrated. If Altimeter Auto Calibration is on, you may not need to calibrate the Altimeter. See page 47 for Altimeter Auto Calibration settings.

To calibrate the Altimeter, select 'Calibrate Altimeter' from the options menu and press **ENTER**. Select 'Current Elevation', 'Current Pressure' or 'GPS Elevation' from the 'Calibrate Altimeter Using' field. If available, a known good pressure or exact elevation is preferable. If these are not available, the GPS Elevation can be used for calibration. If 'Current Elevation' or 'Current Pressure' is selected, a value for the pressure or elevation will need to be entered into the 'Value' field. When finished, highlight the 'Set' button and press **ENTER** to accept the calibration settings.

Main Menu Page

The Main Menu Page contains settings and features that are not on the Main Pages. The Main Menu can be accessed from any of the Main Pages by pressing **MENU** twice. To select an item on the Main Menu, place the highlight over the menu item then press **ENTER**.

Along the bottom of the Main Menu are three fields, Backlight Status, Memory Status and a Power Indicator that will indicate if the unit is using battery or external power and the energy level of the batteries. The Battery Indicator is calibrated for Alkaline Batteries, if you choose to use another type of battery, the indicator may not be accurate.

Trip Computer

The Trip Computer Page has two tabs along the top, Horizontal and Vertical. Both the Horizontal and Vertical Tab have eight data fields. Pressing the **MENU** key will display the options for the selected tab.

Horizontal Tab Data Fields

Trip Odom — The Trip Odometer field will display the total distance traveled since the Trip Computer was last reset.

Stopped Time — The Stopped Time field will display the total time that the unit was not moving since the Trip Computer was last reset.

Moving Avg — The Moving Average (Speed) field will display an average based on the time the unit was in motion since the Trip Computer was last reset.

Moving Time — The Moving Time field will display the total time the unit was in motion since the Trip Computer was last reset.

Overall Avg — The Overall Average (Speed) field will display the average speed of the unit since the Trip Computer was last reset.

Total Time — The Total Time field will display the Total Time that the unit has been turned on since the Trip Computer was last reset.

Max Speed — The Maximum Speed field will display the maximum speed the unit traveled since the Trip Computer was last reset.

Odometer — Will display the total distance traveled since it was last reset.

Horizontal Tab Options

Reset Trip — This option will reset all fields except Max Speed and odometer to zero.

Reset Max Speed — This option will reset the Max Speed field to zero.

Reset Odometer — This option will reset the Odometer field to zero.

Reset All — This option will reset all of the Horizontal & Vertical Tab fields to zero.

Reference

Main Menu — Trip Computer

Trip Computer	
Horizontal	Vertical
Trip Odom	Stopped Time
8.73 ^m	0196:01
Moving Avg	Moving Time
3.0 ^s	02:56:05
Overall Avg	Total Time
0.0 ^s	0198:57
Max Speed	Odometer
190.9 ^s	8.73 ^m

Trip Computer — Horizontal Tab

Trip Computer	
Horizontal	Vertical
Total Ascent	Total Descent
615.1 ^{ft}	769.7 ^{ft}
Max Ascent	Max Descent
151.2 ^{ft}	-142.8 ^{ft}
Avg Ascent	Avg Descent
20.4 ^{ft}	-20.0 ^{ft}
Max Elevation	Min Elevation
1410 ^{ft}	832.7 ^{ft}

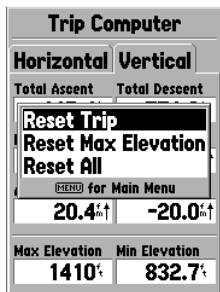
Trip Computer — Vertical Tab

Reference

Trip Computer Options — Tracks



Horizontal Tab Options



Vertical Tab Options

Vertical Tab Data Fields

Total Ascent — The Total Ascent field will show the Total Ascent of the trip in the units selected. This field indicates the total off all ascents.

Total Descent — The Total Descent field will show the Total Descent of the trip in the units selected. This field indicates the total off all descents.

As an example, if you ascend 100 ft, descend 20 ft, ascend 50 ft and descend 30 ft, the Total Ascent would be 150 ft and Total Descent would be 70 ft.

Max Ascent — The Max Ascent field shows the maximum rate of ascent.

Max Descent — The Max Descent field shows the maximum rate of descent.

Avg Ascent — The Avg Ascent field shows the average rate of ascent.

Avg Descent — The Avg Descent field shows the average rate of descent.

Max Elevation — The Max Elevation field shows the Maximum Elevation for the trip.

Min Elevation — The Min Elevation field shows the Minimum Elevation for the trip.

Vertical Tab Options

Reset Trip — This option will reset all fields except Max Elevation to zero.

Reset Max Elevation — This option will reset the Max Elevation field to zero.

Reset All — This option will reset all Vertical & Horizontal Tab fields to zero.

Tracks

The Tracks Page displays the amount of Track Memory used, will allow you to 'Save' or 'Clear' the current Track Log, shows how many Saved Tracks are unused and displays a list of any Saved Tracks.

Save — When 'Save' is selected, you can choose how much of the track log you wish to save. Make a selection, then press **ENTER** to save the selection.

Clear — The 'Clear' Button will clear the Track Log. If the Map Page is becoming cluttered with tracks, clearing the Track Log will clean up the map.

Track Page Options

To display the Track Options, from the Track Page, press the **MENU** Key.

Delete Saved Track — If you have saved tracks, this option will allow you to delete the saved track.

Delete All Tracks — This option will delete all saved tracks.

Setup Track Log — This selection displays the Track Log Setup menu. This menu contains options for Track Recording, Record Method, and Interval.

- Recording — 'Off', 'Wrap When Full' or 'Stop When Full'. If 'Wrap When Full' is selected, when track memory is full, the oldest track point will be deleted and a new point added at the end.
- Record Method — Can be set to 'Auto', 'Time' or 'Distance'.
- Interval — is used to select or enter an interval for the Record Method.

Track Information Page

To access information on a Saved Track, highlight the desired track then press **ENTER**. This will display the Track Information Page.

The Track Information Page contains data fields for the Name, Distance, and Points. There are four Option Buttons along the bottom of the page.

Name — this field will allow you to change the Saved Track Name. When tracks are saved the GPSMAP 76S will use a date as the default track name.

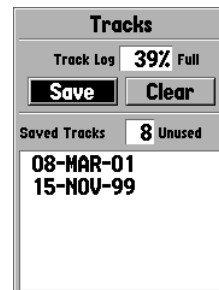
Distance — shows the total distance of the Saved Track.

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

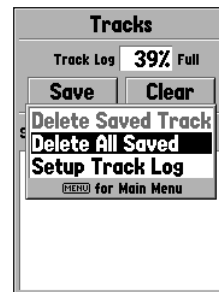
Area — shows calculated acreage within the track. The end points of the track will be connected with a straight line when calculating area. If a track crosses itself, the area calculation will not be accurate.

Reference

Track Page Options



Main Menu — Track Page



Track Page Options

Reference

Track Information Page Points Page

Track	
Name	
19-MAR-02	
Distance	Points
11.32 ^{mi}	239
Area	
0.327738 ac	
<input type="checkbox"/> Show on Map and Highway	
Elevation Plot	
Delete	Map
TracBack	OK

Track Information Page

TIP:

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 will ensure that you are only navigating along the most recent Track.

Show on Map and Highway — when checked, will allow the Saved Track to be displayed on the Map and Highway Pages.

Elevation Plot — the 'Elevation Plot' button will show the Elevation Plot for the saved track on the Plot Page.

Delete Button — if the 'Delete' Button is selected, you will be prompted to verify you want to delete the Saved Track.

Map Button — will display the Saved Track on the Map Page.

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

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

Points Page

The Points Page allow you to select Waypoints, Points of Interest, Cities, Exits, Addresses, and Intersections using your current location or a location on the map. To select a Point item, highlight the desired selection then press **ENTER**.

Waypoints

When 'Waypoints' is selected, a user waypoint list will displayed. This list can be displayed as 'Waypoints by Name', or by 'Nearest Waypoints'. With the waypoint list displayed, pressing the **MENU** Key will display an Options Menu.

Waypoint Options Menu

Find By Name / Find Nearest — This option allows you to select how the Waypoint List will be displayed. When 'Find Nearest' is currently selected, 'Find by Name' will be displayed in the options menu.

Find Nearest — will display a list containing the nearest waypoints within a 100 mile radius. The waypoints will be listed with the nearest waypoint at the top of the list.

Find By Name — will display a list containing all User Waypoints. You have the option of entering a waypoint name in the data field or scrolling through the Waypoint List.

As you enter a waypoint name, the GPSMAP 76S will update the waypoint list to show waypoint names that coincide with the letters that have been entered. You can continue to enter the name if you like, or you can press the **ENTER** Key and scroll through the list.

Delete Waypoint — Will delete the selected waypoint.

Delete By Symbol — Will delete all waypoints having the same symbol as the selected waypoint.

Delete All — Will delete all of the user waypoints.

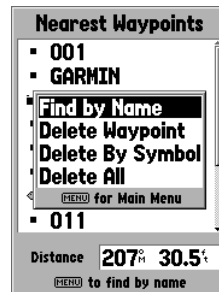
Creating Waypoints

There are three methods for creating waypoints in the GPSMAP 76S. You can press the **ENTER/MARK** key while at a location, you can create a waypoint on the Map Page, or you can enter coordinates for a waypoint manually. When a waypoint is created pressing the **MENU** key will display four options, 'Average Location', 'Project Location', 'Sight 'N Store' and 'Append to Route'.

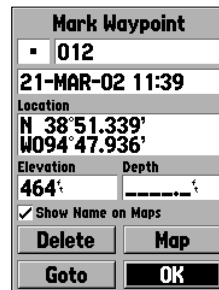
Creating a waypoint using the ENTER/MARK Key — When at a location that you want to save, press and hold **ENTER/MARK** until the Mark Waypoint Page is displayed. At this point you can edit the waypoint name, symbol, elevation and depth (see page 42 for information on editing waypoints). To save the waypoint to memory, highlight the 'OK' button and press **ENTER**.

Reference

Waypoint Options Menu Creating Waypoints

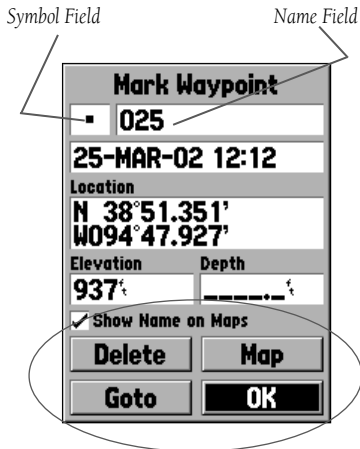


Point — Waypoint Option Menu



Mark Waypoint Page

Creating & Editing Waypoints



There are four buttons at the bottom of the 'Mark Waypoint' Page, 'Delete', 'Map', 'Goto' and 'OK'. If you wish to delete the waypoint, highlight the 'Delete' button and press **ENTER**. If you want to see the waypoint on the map, highlight the 'Map' button and press **ENTER**. To begin direct navigation to the waypoint, highlight the 'Goto' button and press **ENTER**. The 'OK' button is used to save any changes that you may have made or to exit the window.

Creating a waypoint on the Map Page — Using the **ROCKER**, move the Map Pointer to a location on the Map Page that you want to create a waypoint and press **ENTER**. If the Map Pointer is not on a Map Feature or Road, the New Waypoint Page will be displayed. At this point you can edit the waypoint name, symbol, elevation and depth (see page 42 for information on editing waypoints). To save the waypoint to memory, highlight the 'OK' button and press **ENTER**.

Creating a waypoint manually using existing coordinates — Press and hold **ENTER/MARK** until the Mark Waypoint Page is displayed. The unit will capture it's current location. Highlight the Location Field and press **ENTER**. Using the **ROCKER**, enter the new location. Press **ENTER** to accept the change. At this point you can edit the waypoint name, symbol, elevation and depth. To save the waypoint, highlight the 'OK' button and press **ENTER**.

Editing Waypoints

You can edit waypoints when they are created or after they have been saved. There are five items that can be changed, the symbol, name, location, elevation, depth. You can also choose to show the waypoint name on the Map Page.

To edit a saved waypoint — Press the **MENU** Key twice to display the Main Menu. Highlight 'Points' and press **ENTER**, then highlight 'Waypoints' and press **ENTER**. Select the desired waypoint from the list and press **ENTER** to display the Waypoint Page. Make any desired changes, when finished, highlight the 'OK' button and press **ENTER** to accept the changes.

Selecting a symbol — Place the highlight on the symbol field and press **ENTER**. Using the **ROCKER**, select a symbol from the list and press **ENTER**. The selected symbol will be displayed at the waypoint location on the Map Page.

Changing the Name — Place the highlight over the name field and press **ENTER**. Using the **ROCKER** (up/down) scroll through the alpha-numeric list and make a selection. To move the next placeholder press the **ROCKER** to the right. When finished, press **ENTER** to accept the changes.

Changing the Location, Elevation or Depth — Place the highlight on the desired field and press **ENTER**. Using the **ROCKER**, scroll through the numeric list until the desired number is displayed. Press the **ROCKER** to the right to move to the next character. When finished, press **ENTER** to accept the changes.

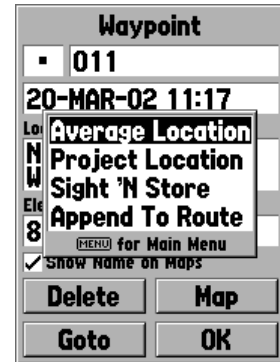
Show Name on Maps — When 'Show Name on Maps' is checked, the waypoint name will be displayed on the Map Page. To check/uncheck the box, place the highlight over that box and press **ENTER**.

New, Mark and Waypoint Page Options

When the New, Mark or Waypoint Page is displayed pressing the **MENU** key will display an options menu. This menu contains four options, 'Average Location', 'Project Location', 'Sight 'N Store', and 'Append to Route'.

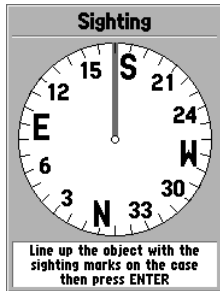
Average Location — When this option is selected, the Average Location Page will be displayed and the unit will begin to take and average location readings. The Location, Estimated Accuracy, Elevation and Measurement Count will be displayed on the Average Location Page. When you are ready to save the waypoint, with the 'Save' button highlighted, press **ENTER**.

Editing Waypoints Waypoint Pages Options



New, Mark, and Waypoint Page Options

Waypoint Pages Options



Sight 'N Store



Append to Route

Project Location — When this option is selected the Project Location Page will be displayed. The Project Location Page has four fields, 'Location', 'From', 'Distance', and 'Bearing'. The 'From' field allows the user to select where they would like to project a waypoint from, the choices are 'Current Location', 'Use Map' and 'Use Points Menu'. After making a selection in the 'From' field, a distance and bearing will need to be entered. When finished entering the data, highlight the 'Save' button and press **ENTER**. The data on the New Waypoint Page will now reflect the location of the projected waypoint. To save the new waypoint, highlight 'OK' and press **ENTER**.

Sight 'N Store — When 'Sight "N Store' is selected a Compass Page will be displayed. Line up the sighting marks on the case of the unit with an object then press **ENTER**. You will need to enter an estimated distance to the object from your current location. Selecting the 'Bearing' field will allow you to re-sight. To save the waypoint, press **ENTER**. The 'Sight 'N Store' data will now be reflected on the New Waypoint Page. To save the waypoint, highlight the 'OK' button and press **ENTER**.

Append To Route — When 'Append to Route' is selected, a list showing the available routes or a 'New Route' selection will be displayed. If you select an existing route, the waypoint will be added to the end of the route. If you select 'New Route', a new route will be created and the waypoint will be added to the route.

Points Of Interest

Will only be available when MapSource CD data that contains Points of Interest information is loaded in the unit. When 'Points of Interest' is selected, the Points of Interest Selection Page is displayed. To select a Points of Interest item, highlight the desired selection then press **ENTER**.

After an item is selected, either a list or selection menu will be displayed. If a selection menu is displayed, make another selection and press **ENTER**. When a list is displayed, pressing **MENU** will give you the option of searching the list by name or by showing the nearest item.

To view information about an item in the list, highlight the item then press **ENTER**. An Information window will be displayed showing the name, address and phone number of the item. To save the item as a waypoint, press the **MENU** Key and with 'Save as Waypoint' selected press **ENTER**.

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

Points of Interest Options

The options that are available will depend on the MapSource data that is loaded in the unit.

Reference

Points — Points of Interest



Points of Interest List

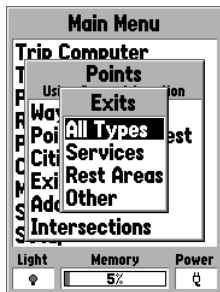


Nearest Cities List

Points — Cities & Exits



City Information Page



Exit Options

Cities

When 'Cities' is selected, a list of 'Nearest Cities' or 'Find by Name' list is displayed. The list can be switched by pressing the **MENU** key and selecting the alternate option. If you have MapSource CD map data loaded in the unit, choosing 'Select Map' from the options menu allows you to determine which map data is used for creating the Cities List. To view information about a city on the list, highlight the city then press **ENTER**. An Information window will be displayed showing the city size (small, medium or large) the name and country of the city, and the bearing/distance of the city from your current location. To save the city as a waypoint, press **MENU**, with 'Save as Waypoint' selected press **ENTER**.

Along the bottom of the Information Page are three buttons, 'GoTo', 'Map' and 'OK'. 'Goto' begins direct navigation to the point, 'Map' displays the city on the Map Page and 'OK' returns the display to the Cities List.

Exits

When 'Exits' is selected, a list of exit options is displayed. The included options are: All Types, Services, Rest Area, and Other. To select an exit option from the list, highlight the selection then press **ENTER**. When an exit option is selected a list containing the selected data will be displayed.

Exit Options

All Types — Will display a list with data for Services, Rest Areas and Other.

Services — Will display exits with services such as Filling Stations, Restaurants, Hotels, Auto Dealership and Parts Suppliers, Hospitals, Banks, ect.

Rest Areas — Will display a list of Rest Areas closest to your location.

After you have selected an Exit Option, a list will be displayed. To view information about a specific item, highlight the item then press **ENTER**. A Page containing information about the item will be displayed. To begin direct navigation to the item, highlight the 'Goto' Button then press **ENTER**.

If you would like to select a different road for exit information, press **MENU**, highlight 'Select Exit Road' then press **ENTER**. A list of roads is displayed, enter the road name then press **ENTER** to accept the selection. If you have MapSource CD map data loaded in the unit, you can choose which map data to use for creating the Exits List. 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 will only be 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. If you have MapSource CD map data loaded in the unit, choosing 'Select Map' from the options menu allows you to determine which map data is used for the address search. After you have entered the search data, highlight the 'Find' Button then press **ENTER**. The unit will display the Select Address Page.

The Select Address Page will show the addresses that closely match your entry. Highlight the correct address then press **ENTER**. This will display the Address Information Page.

To begin direct navigation to the address, highlight the 'Goto' Button then press **ENTER**. To view the address on the Map, highlight the 'Map' Button then press **ENTER**. To exit the page, highlight the 'OK' Button then press **ENTER**. You also have the option of saving the address as a waypoint. To save the address as a waypoint, press **MENU**, with 'Save as Waypoint' highlighted, press **ENTER**.

Reference

Points — Addresses

Find Address	
Number	1900
Street	151st St
City (optional)	Olathe, KS
Postal Code (optional)	66062
Find	

City Information Page

Select Address	
1900 E 151st St Olathe, KS 66062	
1900 W 151st Ter Olathe, KS 66062	
Match Quality	94%

Exit Options

Points — Intersections

Find Intersection	
First Street	
Second Street	151st St
City (optional)	Olathe, KS
Postal Code (optional)	66062
<input type="button" value="Find"/>	

Find Intersection Page

Intersections

This option will only be available when MapSource CD data that contains intersections 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 can also enter the City and Postal Code, these fields will shorten the search time.

To enter a data in one of the fields, highlight the field then press **ENTER**. When you have finished, press **ENTER** to exit the field. When you are ready to search for an Intersection, highlight the 'Find' Button then press **ENTER**. The unit will display the Select Intersection Page.

The Select Intersection Page will show Intersections that closely match your entry. Highlight the correct Intersection then press **ENTER**. This will display the Intersection Information Page. From this page you can Goto the Intersection, view the Intersection on the Map Page, save the Intersection as a waypoint or exit the page.

To begin direct navigation, highlight 'Goto' then press **ENTER**. To view the Intersection on the Map, highlight 'Map' then press **ENTER**. To exit the page, highlight 'OK' then press **ENTER**. You also have the option of saving the Intersection as a waypoint. To save the Intersection as a waypoint, press the **MENU** Key, with 'Save as Waypoint' highlighted, press **ENTER**.

Routes

A Route is a series of waypoints used for point to point navigation. A route must have at least two waypoints, a start and finish, but can contain as many as fifty. The GPSMAP 76S can store fifty routes.

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

Routes Page Options

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

Start/Stop Navigation — Will start navigation of a highlighted route. Will stop navigation of an Active Route.

Copy Route — Will make a copy of a highlighted route.

Delete Route — Will remove the highlighted route.

Delete All Routes — Will remove all routes from the Routes Page.

Creating a New Route

There are several methods that can be used to create a route. To begin creating a new route, highlight the 'New' Button on the Routes Page then press **ENTER**.

A blank Route Page will be displayed. To display the Create Route Options, press **MENU**. When you are creating a route, you should place the points in the route in the order that you wish to navigate them.

Create Route Options

Use Map — This 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.

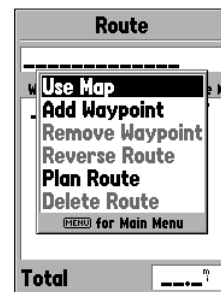
When using the Map to create a route, you can select an existing User Waypoint/Map Feature, or you can create a 'New' Waypoint. New Waypoints are created if you place the Map Pointer on a location that is not a Map Feature. A "New Waypoint" will be stored in the User Waypoint List and can be edited as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

Reference

Main Menu — Routes



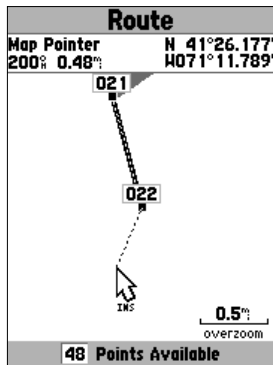
Route Page Options



Create Route Options

Reference

Main Menu — Routes



Creating a Route on the Map

If you place the Map Pointer on a Map Feature (road, park, intersection, etc.) the GPSMAP 76S will store that location only to the route using the feature name as a reference. These points are not stored in the User Waypoint List. If you would like to save a Map Feature Point as a User Waypoint, highlight the point in the route, press **ENTER**, this will display an Information Page. With the Information Page displayed, press **MENU** and select 'Save as Waypoint'.

Insert Waypoint — This will display the Points Menu (see page 40 for information on the Points Menu). As a note, if you highlight the dashed line in the waypoint field on the Route Page and press **ENTER** it is the same as making this selection. Use the Points Menu to display an Information Page, then highlight the 'OK' Button and press **ENTER**.

Using a combination of the Map Page and Route Page — You can create a route using a combination of the methods described above. Starting with a blank Route Page, either 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. After you have finished using the map, press **QUIT** to display the Route Page where you can continue entering waypoints manually.

Naming the Route — the GPSMAP 76S will automatically name the route using the first and last waypoint names as a reference. To change the Route Name, place the highlight over the Name field then press **ENTER**. When you have finished, press **ENTER** to save the new name.

Editing a Route

To edit a route the unit must be on the Route Page. When editing a route you can Insert a Waypoint, Remove a Waypoint, Reverse the Route, Delete the Route or choose to edit the route on the Map Page. To display the Route Edit Options, press the **MENU** Key.

Route Edit Options

Use Map — This will display the Map Page with the Route Line active and the Map Pointer located on the waypoint highlighted on the Route Page.

'Review' Route Waypoint — To review information on a route waypoint, place the Map Pointer on the waypoint then press **ENTER**. This will display an options menu, highlight 'Review' then press **ENTER** to display the waypoint information.

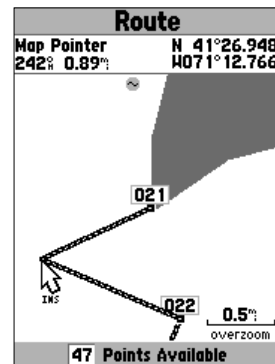
Inserting a New waypoint — There are two methods that can be used to insert a new waypoint into a route.

1. Place the Map Pointer on the route leg that you want to insert the new point in and the line will turn to a small dashed line. Press **ENTER**, the Map Pointer will display "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 will be inserted in the leg. If the location is not on a Map Feature, the New Waypoint Page will be displayed. Press **ENTER** to save the new waypoint, then **ENTER** again to insert the new waypoint in the route.
2. Place the Map Pointer over a location that is not a Map Feature then press **ENTER**. The New Waypoint Page will be 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 — To remove a point or waypoint from the route, place the Map Pointer over the point or waypoint that you want to remove, then press **ENTER**. This will display an options menu. Highlight 'Remove' then press **ENTER**. The point or waypoint will be removed and the Map Pointer will move to the next point in the route.

Reference

Main Menu — Routes



Editing a Route on the Map

Main Menu — Routes

Route	
0	Plan Route
W	Speed
(0.0 ^{mi}
(Fuel Flow
(0.0/hr
(Depart Time
-	03:49 ^{PM}
	Depart Date
	20-MAR-02
Total	2.50^{mi}

Plan Route Page

'Move' a Waypoint — Only User Waypoints can be moved. To move a waypoint, place the Map Pointer on the waypoint then press **ENTER**. This will display 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 — To move the Map Pointer to the next point in the route, with the Map Pointer on a route point or waypoint, press **ENTER**. This will display an options menu. Highlight 'Next', press **ENTER** and the Map Pointer will move to the next point or waypoint in the route.

Insert Waypoint — When 'Insert Waypoint' is selected, the Points Menu is displayed (see page 30 for more information on the Points Menu). Select a point from the menu to insert it into the route. The new point will be inserted into the route above the waypoint highlighted on the Route Page.

Remove Waypoint — Will remove 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 — Will reverse the direction of the route placing the last waypoint at the top of the list.

Plan Route — To plan a route, enter a Speed, Fuel Flow, Depart Time and Depart Date. Fuel Flow is measured in "units per hour" it may be necessary to consult your vehicles Owner's Manual for performance specifications.

The Active Route Page and Route Page display trip-planning information for each leg or the 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** right or left to cycle through the fields.

Delete Route — Will remove the selected route 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 will enter a 'Radius' that will determine when a Proximity Alarm will be displayed. You can turn the Proximity Alarm On or Off for your convenience.

Proximity Options

To view the available options with the Proximity Page displayed press **MENU**.

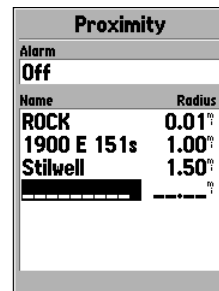
Add Waypoint — When 'Add Waypoint' is selected, the Points Menu is displayed (see page 40 for more information on the Points Menu). Select a point from the menu to insert it into the Proximity List. With the 'Radius' field highlighted, press **ENTER**. Enter a radius for an alert to be displayed. You can also add a waypoint by highlighting the dashed entry line and pressing **ENTER**.

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

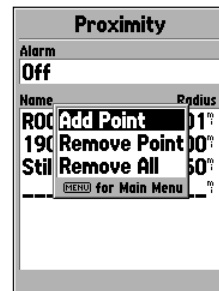
Remove All — Removes all waypoints from the Proximity List.

Reference

Main Menu — Proximity



Proximity Page



Proximity Options

Reference

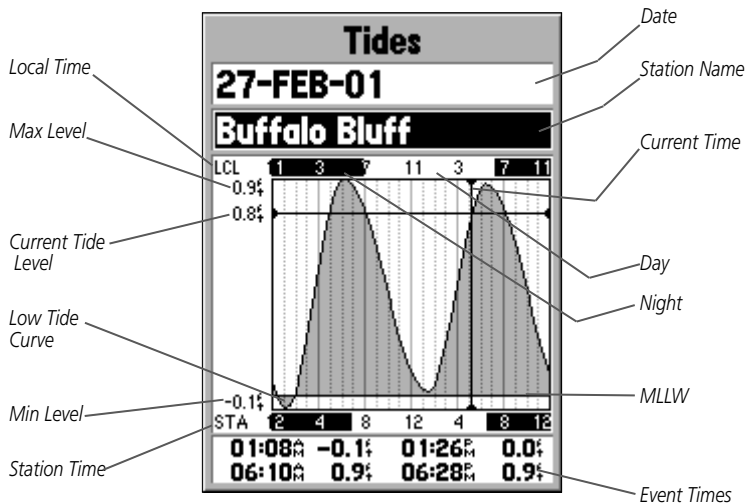
Main Menu — Celestial



Celestial Selections

Celestial

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



Tides — 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 3000 tide stations around the USA 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 will show 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) will show across the time scale, with the time progressing from left to right. (Local time scales and sunrise/sunset info may not be available for a few stations). The solid, light vertical lines are in 4-hour increments, with the light, dotted vertical lined in 1-hour increments. A dark vertical line (with arrows at the ends of the line) will indicate the time of day when using current date and will intersect the tide graph to show their relation.

The tide curve will show 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) will indicate the current tide height. The figure to the left of the line will show the current tide level in feet. The Mean Lower Low Water (MLLW) will appear as a solid vertical line near the bottom of the chart (This line will only appear 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.

Hunt and Fish — The Hunt and Fish Page 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 will reflect 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.

Reference

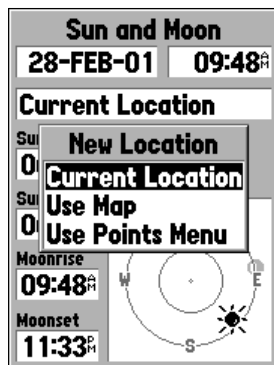
Main Menu — Celestial

Hunt and Fish	
28-FEB-01	
Current Location	
Rating	
Normal	
Best Times	
02:49 ^A	— 04:49 ^A
03:20 ^P	— 05:20 ^P
Good Times	
09:00 ^A	— 10:00 ^A
09:31 ^P	— 10:31 ^P

Hunt and Fish Page

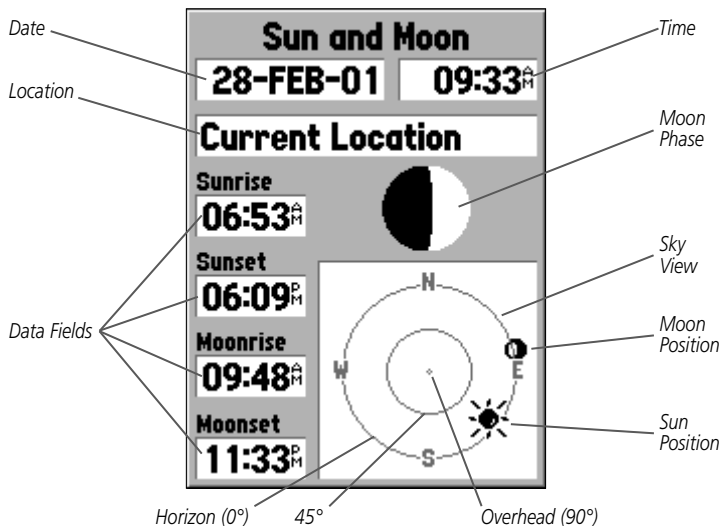
Reference

Main Menu — Celestial



Location Options

Sun and Moon — The Sun and Moon Page displays data for Sunrise/Sunset, Moonrise/Moonset, and the approximate location of the Sun and Moon on a skyview. The moon phase will display the current visible portion of the moon in a light color. 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 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 checkmark in the ‘Show’ Box. To select/deselect a box, place the highlight over the MapSource Item then press **ENTER**.

System Info

The System Info Page will show the software version and the unit ID number.

Setup Menu

The Setup Menu is arranged in an easy to use tab format. Each tab (General, Altimeter, Compass, Time, Units, Location, Alarms, Interface) contains the settings that will determine how the unit functions. To select a tab place the highlight on the tab name. To select a data field on a tab, use the **ROCKER** Key (up/down) to highlight the field then press **ENTER**. To restore the GPSMAP 76S to the factory settings for items on the tab, press **MENU** and with ‘Restore Defaults’ highlighted press **ENTER**.

Setup Menu — ‘General’ Tab

The ‘General’ Tab contains settings for the Receiver Mode, WAAS, Backlight Time Out, and Beeper. To change a setting highlight the field then press **ENTER**. Make your selection then press **ENTER** to activate the selection.

Mode — The Mode selections are ‘Normal’, ‘Battery Saver’ and ‘Simulator’

‘Normal’ — Use this setting for best performance.

‘Battery Saver’ — When ‘Battery Saver’ is selected, the receiver is optimized 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.

‘Simulator’ — When in ‘Simulator’ mode the GPS receiver is turned off and the unit simulates satellite reception. Use the Simulator mode when the unit is indoors and you wish to practice with the unit.

Reference

Setup Menu — General Tab



MapSource Info Page



System Info Page

Setup Menu — General Tab



Setup Menu — 'General' Tab

'WAAS' — WAAS is an acronym for “Wide Area Augmentation System”. You can use the WAAS capability of the GPSMAP 76S to increase the accuracy to approximately 3 meters. When enabled the GPS receiver searches for a WAAS satellite, then receives data that will help correct differentials in the GPS signal. When the unit is using WAAS data, a “D” will be displayed in the Satellite Strength Indicators on the GPS Information Page, and the receiver status will indicate a 2D or 3D Differential Location.

Currently the WAAS system is not fully operational. There are two WAAS satellites in place, one over the Pacific Ocean and Atlantic Ocean. You must have a clear unobstructed view of the sky for the GPSMAP 76S to be able to receive a WAAS signal, even then, at times it may not be possible to receive a WAAS signal. WAAS satellites are not received in Battery Saver Mode.

For more information on the WAAS system visit the Federal Aviation Administration website at (gps.faa.gov).

'Backlight Timeout' — Sets the time that the Backlight will remain on once activated. The options are 'Stays On', '15 Seconds', '30 Seconds', '1 Minute' and '2 Minutes'.

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

'Language' — This setting will allow the GPSMAP 76S to display in fourteen different languages.

Setup Menu — 'Altimeter' Tab

The 'Altimeter' Tab contains settings for Altimeter Auto Calibration, Pressure Units and the Barometer Mode. To change a setting, highlight the field then press **ENTER**. Make your selection then press **ENTER** to activate the selection.

'Altimeter Auto Calibration' — This setting can be turned On or Off. If Altimeter Auto Calibration is On, the unit will use GPS elevation to continuously calibrate the Altimeter. The calibration is applied slowly except when the unit is first turned on. If you wish to have complete control of the Altimeter Calibration, the Altimeter Auto Calibration should be set to Off.

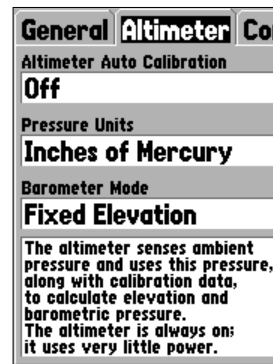
'Pressure Units' — Use this setting to select the units used for all pressure displays. The unit can be set to display in 'Inches of Mercury' or 'Millibars'.

'Barometer Mode' — The Barometer Mode can be set for 'Fixed' or 'Variable' elevations. Select 'Fixed' for greater accuracy if your elevation will remain constant, such as at camp or on the water. When 'Fixed' is selected, the unit will use the last calibrated elevation not GPS elevation as a reference for the barometer. If you know your exact elevation or have known good pressure, see Calibrate Altimeter on page 26 to further enhance the accuracy of the barometer.

If the elevation will be changing, select 'Variable' to use GPS elevation for barometer calibration. Selecting 'Variable' allows the unit to continuously calibrate the barometer providing more accurate readings when your elevation is changing.

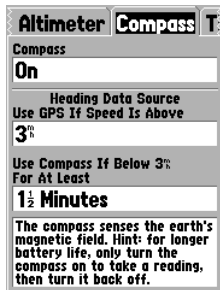
Reference

Setup Menu — Altimeter Tab



Setup Menu — 'Altimeter' Tab

Setup Menu — Compass Tab



Setup Menu — 'Compass' Tab



Setup Menu — 'Time' Tab

Setup Menu — 'Compass' Tab

The 'Compass' Tab has a setting to turn the Compass On or Off, and settings that allow the user to control when the Compass is used for navigation.

'Compass' — This setting is used to turn the Compass feature 'On' or 'Off'. The Compass can also be turned On and Off by pressing and holding the **PAGE** key. A message showing the status of the Compass will be shown at the bottom of the display when the **PAGE** key is used.

'Heading Data Source/Use GPS If Speed Is Above' — This setting controls when the unit uses the Compass or GPS for navigation. The default setting is 10 mh. When navigating, when the speed of the unit exceeds the setting, the unit will use the GPS for navigation. The unit can be set to switch at setting from 00 to 99 mph/kph.

'Use Compass If Below XX mh/kh For At Least' — If the Compass is 'On', this setting determines how long the unit will wait to switch back to compass heading after the unit speed drops below the value set to use GPS Speed. Settings range from '5 seconds' to '3 minutes'.

Setup Menu — 'Time' Tab

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

'Time Format' — Using this setting you can have the GPSMAP 765 display time in a 12 or 24 hour format.

'Time Zone' — The 'Time Zone' setting has nine options, Atlantic, Eastern, Central, Mountain, Pacific, Alaska, Hawaii, Samoa, and Other. If you choose 'Other' a new field "UTC Offset" will be displayed. Enter the correct offset for your Time Zone. You can find a chart with UTC Offsets in Appendix C.

Setup Menu — Units Tab

Compass		Time	Units	L
Elevation	Depth			
Feet	Feet			
Distance and Speed				
Statute				
Temperature				
Fahrenheit				
Direction Display				
Numeric Degrees				
Speed Filter				
Auto				

Setup Menu — 'Units' Tab

'Daylight Savings Time' — Has three options, 'Yes', 'No', and 'Auto'. If you select 'Auto' the unit will automatically determine when Daylight Savings Time should be displayed. If you select 'Yes' Daylight Savings Time for the current location will be displayed. If you select 'No', Daylight Savings Time will not be displayed. If you have 'Other' selected in the 'Time Zone' field, this option will not be available and Daylight Savings Time will be off.

'Current Date' — This field shows the current date as determined by the unit, it is not accessible by the user.

'Current Time' — This field 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.

Setup Menu — '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' — Can be set to show in 'Feet' or 'Meters'.

'Depth' — Can be set to display in 'Feet', 'Fathoms' and 'Meters'. The GPSMAP 76S cannot measure depth on its own. The depth input has to come from a NMEA device providing the "DPT" sentence.

'Distance and Speed' — Can be set to 'Nautical', 'Statute' or 'Metric'.

'Temperature' — Can be set to 'Fahrenheit' or 'Celsius'.

'Direction Display' — Can be set to 'Numeric Degrees' or 'Cardinal Letters'. The setting is used in all fields that relate to direction throughout the unit.

'Speed Filter' — Can be set to 'Auto' or a 'User' defined setting. If 'User' is selected, a Seconds field will be displayed. To enter a 'User' defined setting, highlight the Seconds field then press **ENTER**. When finished, press **ENTER** to save the entry. When using a 'User' defined setting, the unit will average the speed and heading at the rate specified in the time setting.

Reference

Setup Menu — Location Tab

Location Formats

hddd.dddd°	India Zone IVB
hddd°.mm.mmm'	Irish Grid
hddd°.mm'ss.s"	LORAN TD
British Grid	Maidenhead
Dutch Grid	MGRS
Finnish Grid	New Zealand
German Grid	QNG Grid
India Zone 0	RT 90
India Zone IA	Swedish Grid
India Zone IB	Swiss Grid
India Zone IIA	Taiwan Grid
India Zone IIB	UTM UPS
India Zone IIIA	W Malayan RSO
India Zone IIIB	User UTM Grid
India Zone IVA	

User UTM Grid

The 'User UTM Grid' will let the user define a grid for a location format. The user will have to know the Longitude Origin, Scale, False Easting, and False Northing to create the grid.

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

Setup Menu — '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' — There are 28 different formats to choose from. See the sidebar for a list of the formats. 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 or map.

'Map Datum' — Datums are used to describe geographic positions for surveying, mapping, and navigation and are not actual maps built in the unit. 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. A list of Map Datums can be found in Appendix D.

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' — Let's you select the reference used in calculating heading information. You can select from, 'Auto' 'True', 'Magnetic', 'Grid' or 'User'. 'Auto' provides magnetic north heading references which are automatically determined from your current location. 'True' provides headings based upon a true north reference. 'Grid' provides headings based on a grid north reference (used in conjunction with the grid location formats described on page 56). '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. If 'User' is selected for the 'North Reference', this field is used to enter the magnetic variance.

Setup Menu — 'Alarms' Tab

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

'Anchor Drag' — The Anchor Drag Alarm alerts you when the boat has drifted more than the set distance. The alarm can be turned 'On' or 'Off'.

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

'Off Course' — The Off Course Alarm will alert you when you are off course more than the distance set. The Off Course alarm can be turned 'On' or 'Off'.

'Shallow Water' — This alarm requires input from a NMEA device supplying the "DPT" sentence. The Shallow Water alarm will alert you when the water depth is less than the depth set.

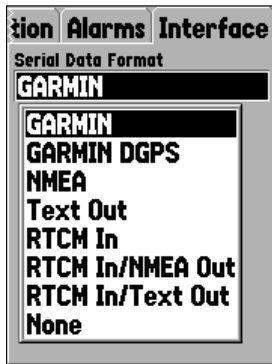
'Deep Water' — This alarm requires input from a NMEA device supplying the "DPT" sentence. The Deep Water Alarm will alert you when the water is deeper than the depth set.

Setup Menu — Alarms Tab

its	Location	Alarms	Ir
Anchor Drag			
	Off		0.0'
Approach and Arrival			
	Auto		
Off Course			
	Off		0.00 ^{mi}
Shallow Water			
	Off		20.0'
Deep Water			
	Off		100.0'

Setup Menu — 'Alarms' Tab

Setup Menu — Interface Tab



Setup Menu — 'Interface' Tab

Setup Menu — 'Interface' Tab

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

- **GARMIN** — Allows the GPSMAP 76S to communicate with GARMIN software and other GARMIN GPS units.
- **GARMIN DGPS** — Allows the GPSMAP 76S 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 76S to accept NMEA data from another NMEA device, like an echo sounder. The baud (speed of communication in bits per second) is displayed in the Baud field.
- **Text Out** — Allows the GPSMAP 76S 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 76S 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 will output 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 will output 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.

Physical Specifications

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 529-IPX-7
Temp. Range:	5°F to 158°F (-15°C to 70°C) ¹

Performance

Battery Life:	16 Hours in Battery Saver Mode
Receiver:	Differential-ready 12 parallel channel receiver
Acquisition Times:	Approx. 15 seconds (warm start) Approx. 45 seconds (cold start) Approx. 5 minutes (First Time/AutoLocate™)
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
Compass Accuracy:	± 5 degrees ²
Velocity Accuracy:	0.1 knot RMS steady state
Dynamics:	6g's

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

Power

Batteries:	Two 1.5-volt AA batteries ¹
Source:	8-35V DC
Fuse:	AGC/3AG - 2.0 Amp

¹The temperature rating for the GPSMAP 765 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 765 in below-freezing conditions. Extensive use of screen backlighting will significantly reduce battery life.

²Subject to proper user calibration

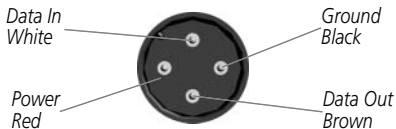
Appendix A

Specifications

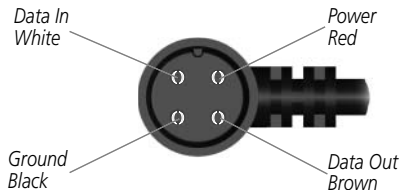
Appendix B

Wiring and Interfacing

Unit View

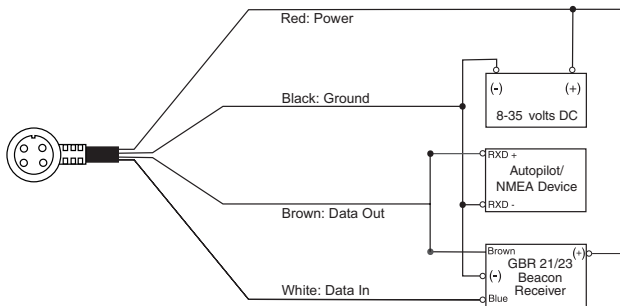


Cable View



Connecting the Power/Data

The power/data cable connects the GPSMAP 76S 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 - 2.0 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 76S will accept NMEA input with support for the DPT, MTW, and VHW sentences.

You can download a copy of GARMIN's propriety communication protocol on the Help and Support section of our website at www.garmin.com

The chart below gives an approximate UTC (Universal Time Coordinate) time offset for the various longitudinal zones. Check with local charts for more detailed information. If you are in daylight savings time, add one hour to the offset.

Appendix C

Time Offsets

Longitudinal Zone	Offset	Longitudinal Zone	Offset
W180.0° to W172.5°	-12	E007.5° to E022.5°	+1
W172.5° to W157.5°	-11	E022.5° to E037.5°	+2
W157.5° to W142.5°	-10	E037.5° to E052.5°	+3
W142.5° to W127.5°	-9	E052.5° to E067.5°	+4
W127.5° to W112.5°	-8	E067.5° to E082.5°	+5
W112.5° to W097.5°	-7	E082.5° to E097.5°	+6
W097.5° to W082.5°	-6	E097.5° to E112.5°	+7
W082.5° to W067.5°	-5	E112.5° to E127.5°	+8
W067.5° to W052.5°	-4	E127.5° to E142.5°	+9
W052.5° to W037.5°	-3	E142.5° to E157.5°	+10
W037.5° to W022.5°	-2	E157.5° to E172.5°	+11
W022.5° to W007.5°	-1	E172.5° to E180.0°	+12
W007.5° to E007.5°	0		

Appendix D

Map Datums

Adindan	Adindan- Ethiopia, Mali, Senegal, Sudan
Algooye	Algooye- Somalia
AIN EL ABD '70	AIN EL ANBD 1970- Bahrain Island, Saudi Arabia
Anna 1 Ast '65	Anna 1 Astro '65- Cocos I.
ARC 1950	ARC 1950- Botswana, Lesotho, Malawi, Swaziland, Zaire, Zambia RC 1960 Kenya, Tanzania
Ascnsn Isl'd '58	Ascension Island '58- Ascension Island
Astro B4 Sorol	Sorol Atoll- Tern Island
Astro Bcn "E"	Astro Beacon "E"- Iwo Jima
Astro Dos 71/4	Astro Dos 71/4- St. Helena
Astr Stn '52	Astronomic Stn '52- Marcus Island
Aus Geod '66	Australian Geod '66- Australia, Tasmania Island
Aus Geod '84	Australian Geod '84- Australia, Tasmania Island
Austria	Austria
Bellevue (IGN)	Efate and Erromango Islands
Bermuda 1957	Bermuda 1957- Bermuda Islands
Bogata Observ	Bogata Observatry- Colombia
Campo Inchspe	Campo Inchauspe- Argentina
Canton Ast '66	Canton Astro 1966- Phoenix Islands
Cape	Cape- South Africa
Cape Canavrl	Cape Canaveral- Florida, Bahama Islands
Carthage	Carthage- Tunisia
CH-1903	CH 1903- Switzerland
Chatham 1971	Chatham 1971- Chatham Island (New Zealand)Chua Astro Chua Astro- Paraguay
Corrego Alegr	Corrego Alegre- Brazil
Croatia	

Djakarta	Djakarta (Batavia)- Sumatra Island (Indonesia)
Dos 1968	Dos 1968- Gizo Island (New Georgia Islands)
Dutch	Dutch
Easter Isl'd 67	Easter Island 1967
European 1950	European 1950- Austria, Belgium, Denmark, Finland, France, Germany, Gibraltar, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland
European 1979	European 1979- Austria, Finland, Netherlands, Norway, Spain, Sweden, Switzerland
Finland Hayfrd	Finland Hayford- Finland
Gandajika Base	Gandajika Base- Republic of Maldives
GDA	Geocentric Datum of Australia
Geod Datm '49	Geodetic Datum '49-New Zealand
Guam 1963	Guam 1963- Guam Island
Gux 1 Astro	Guadalcanal Island
Hjorsey 1955	Hjorsey 1955- Iceland
Hong Kong '63	Hong Kong
Hu-Tzu-Shan	Taiwan
Indian Bngldsh	Indian- Bangladesh, India, Nepal
Indian Thailand	Indian- Thailand, Vietnam
Indonesia 74	Indonesia 1974-Indonesia
Ireland 1965	Ireland 1965- Ireland
ISTS 073 Astro	ISTS 073 ASTRO '69- Diego Garcia
Johnston Island	Johnston Island NAD27 Central
Kandawala	Kandawala- Sri Lanka
Kerguelen Islnd	Kerguelen Island
Kertau 1948	West Malaysia, Singapore
L. C. 5 Astro	Cayman Brac Island
Liberia 1964	Liberia 1964- Liberia
Luzon Mindanao	Luzon- Mindanao Island
Luzon Philippine	Luzon- Philippines (excluding Mindanao Isl.)
Mahe 1971	Mahe 1971- Mahe Island
Marco Astro	Marco Astro- Salvage Isl.
Massawa	Massawa- Eritrea (Ethiopia)
Merchich	Merchich- Morocco

Appendix D

Map Datums

Midway Ast '61	Midway Astro '61- Midway		
Minna	Minna- Nigeria		
NAD27 Alaska	North American 1927- Alaska		
NAD27 Bahamas	North American 1927- Bahamas		
NAD27 Canada	North American 1927- Canada and Newfoundland		
NAD27 Canal Zone	North Am. 1927- Canal Zone		
NAD27 Caribbn	North American 1927- Caribbean (Barbados, Caicos Islands, Cuba, Dom. Rep., Grd. Cayman, Jamaica, Leeward and Turks Islands)		
NAD27 Central	North American 1927-Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua)	Qatar National-	Qatar National
NAD27 CONUS	North Am. 1927- Mean Value (CONUS)	Qornoq	Qornog-South Greenland
NAD27 Cuba	North American 1927- Cuba	Reunion	Reunion- Mascarene Island
NAD27 Grnland	North American 1927- Greenland (Hayes Peninsula)	Rome 1940	Rome 1940- Sardinia Isl.
NAD27 Mexico	N. American 1927- Mexico	RT 90	Sweden
NAD27 San Sal	North American 1927- San Salvador Island	Santo (Dos)	Santo (Dos)- Espirito Santo
NAD83	North American 1983- Alaska, Canada, Central America, CONUS, Mexico	Sao Braz	Sao Braz- Sao Miguel, Santa Maria Islands
Nhrwn Masirah	Nahrwn- Masirah Island (Oman)	Sapper Hill '43	Sapper Hill 1943- East Falkland Island
Nhrwn Saudi A	Nahrwn- Saudi Arabia	Schwarzeck	Schwarzeck- Namibia
Nhrwn United A	Nahrwn- United Arab Emirates	Sth Amrcn '69	S. American '69- Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Venezuela, Trin/Tobago
Naparima BWI	Naparima BWI- Trinidad and Tobago	South Asia	South Asia- Singapore
Obsrvtorio '66	Observatorio 1966- Corvo and Flores Islands (Azores)	SE Base	Southeast Base- Porto Santo and Madiera Islands
Old Egyptian	Old Egyptian- Egypt	SW Base	Southwest Base- Faial, Graciosa, Pico, Sao Jorge and Terceira
Old Hawaiian	Old Hawaiian- Mean Value	Timbalai 1948	Timbalai 1948- Brunei and E. Malaysia (Sarawak and Sabah)
Oman	Oman- Oman	Tokyo	Tokyo- Japan, Korea, Okinawa
Ord Srvy GB Isl., Wales	Old Survey Grt Britn- England, Isle of Man, Scotland, Shetland	User	User-defined custom datum
Pico De Las Nv	Canary Islands	Tristan Ast '68	Tristan Astro 1968- Tristan da Cunha
Potsdam	Potsdam-Germany	Viti Levu 1916	Viti Levu 1916- Viti Levu/Fiji Islands
Pitcairn Ast '67	Pitcairn Astro '67- Pitcairn	Wake-Eniwetok	Wake-Eniwetok- Marshall
Prov S Am '56	Prov So Amrcin '56- Bolivia, Chile, Colombia, Ecuador, Guyana, Peru, Venezuela	WGS 72	World Geodetic System 72
Prov S Chln '63	So Chilean '63- S. Chile	WGS 84	World Geodetic System 84
Puerto Rico	Puerto Rico & Virgin Isl.	Zanderij	Zanderij- Surinam (excluding San Salvador Island)

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 Dest— 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 Dest— 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.

Navigation Terms

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.

Appendix F

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. All MapSource map are not accessible.

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 Customer Service to have the unit repaired.

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

Dragging Anchor — is the message displayed when 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.

Messages

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 amount 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.

Appendix G

Loran TD



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 76S 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 located under the Setup—Location tab in the Main Menu. The ‘LORAN TD Setup’ window contains the fields to select the Loran GRI-Chain Number, Primary and Secondary Stations, and TD Offsets.

To setup Loran TD from the Main Menu:

1. Using the **ROCKER**, highlight the “Location Format” field on the ‘Location Tab” and press **ENTER**.
2. Highlight ‘Loran TD’, press **ENTER**. This will display the LORAN TD Setup window.
3. 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.

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 765 converts the TD coordinate to a LAT/LON coordinate before storing a waypoint to memory. Because of this the unit can navigate to a converted TD coordinate anywhere in the world.

Loran TD

Time	Units	Location	A
LORAN TD Setup			
LORAN Chain Number			
GRI_5543			
TD Station 1		TD Offset 1	
W		0.0	
TD Station 2		TD Offset 2	
X		0.0	
Save			

Appendix H

Accessories



Marine Mount



Automotive Mount



PC Cable

Standard Accessories

- Owner's Manual
- Quick Reference Guide
- Lanyard

Provides convenient method for carrying the GPSMAP 76S.

Optional 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 76S when not in use.

- 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 76S to operate from external auto power.

- Remote Antenna

MapSource® Map Data CD-ROMs

Enhance the Basemap and Map Data, create waypoints and routes from your PC.

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Appendix I

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Notes

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