



Tracking System

P/N 012-01097-00 Receiver

P/N 012-01113-00 Transmitter

owner's manual

DRAFT
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INTRODUCTION

Thank you for choosing the Garmin® 010-001097-00 Receiver/010-01113-00 Transmitter Tracking System. This system uses the proven performance of Garmin GPS and full-featured mapping to create an unsurpassed portable GPS receiver. When the receiver is in communication with the transmitter it becomes a highly accurate tracking device, capable of monitoring up to ten transmitters at a time.

Compare the contents of this package with the packing list on the box. If any pieces are missing, contact your Garmin dealer immediately.

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

The **Introduction** contains manual conventions, the Table of Contents, the software license agreement, product registration, and product care information.

The **Getting Started** section provides an overview of the unit, how to turn the unit on, and acquire satellites.

The **Basic Operation** section provides information

about setting up waypoints, routes, and tracks.

The **Main Pages** section contains an overview of the Satellite, Trip Computer, Map, Compass and Altimeter Pages.

The **Main Menu** section describes features found on the Main Menu and information about settings.

The **Appendix** contains information such as specifications, optional accessories, and maintenance information. You can also find warranty and FCC information in the Appendix.

An **Index** is provided at the end of the manual.

Manual Conventions

This manual uses the term **Warning** to indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

This manual uses the term **Caution** to indicate a potentially hazardous situation, which, if not avoided, may result in minor injury or property damage. It may also be used without the symbol to alert you to avoid unsafe practices.



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Software License Agreement

BY USING THE 010-01097-00/010-01113-00 TRACKING SYSTEM, 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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Product Registration

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

Use this area to record the serial number in case your Receiver is lost, stolen, or needs service. Be sure to keep your original sales receipt in a safe place or attach a photocopy inside the manual.

Serial Number: _____

Contact Garmin

If you encounter any difficulty while using your Receiver, or if you have any questions, in the U.S.A. contact Garmin Product Support by phone: 913/397.8200 or 800/800.1020, Monday–Friday, 8 AM–5 PM Central Time; or go to www.garmin.com and select **Technical Support**.

In Europe, contact Garmin (Europe) Ltd. at 44/0870.8501241.



IMPORTANT: READ THIS INFORMATION BEFORE USING YOUR 010-01097-00/010-01113-00 System:

Exposure to Radio Frequency Signals—Your wireless handheld tracking system is a low power radio transmitter and receiver. When it is on, it receives and also sends out radio frequency (RF) signals. In August 1996, The Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless radios. Those guidelines are consistent with safety standards previously set by both U.S. and international standards bodies: American National Standards Institute (ANSI) IEEE. C95.1-1992; National Council on Radiation Protection and Measurements (NCRP) Report 86; International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1996. Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 130 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1). The design of your radio complies with the FCC guidelines (and those standards).

For body-worn and face-held operation, this radio demonstrates compliance and meets the FCC RF exposure guidelines for uncontrolled exposure (general population) when used with approved accessories supplied with or designed for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

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Antenna Care—Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the radio and may violate FCC regulations. **Do not use any radio that has a damaged antenna, because if it comes into contact with your skin, a minor burn can result.**

Electronic Devices—Most modern electronic equipment is shielded from RF signals. However, certain equipment may not be shielded against the RF signals from your wireless radio.

Pacemakers—The Health Industry Manufacturers Association (HIMA) recommends that a minimum separation of six inches (6”) be maintained between a handheld wireless radio and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should ALWAYS keep the radio more than six inches from their pacemaker when the radio is turned on, should not carry the radio in a breast pocket, should use the ear opposite the pacemaker to minimize the potential for interference, and should turn the radio off immediately if you have any reason to suspect that interference is taking place.

Hearing Aids—Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

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Other Medical Devices—If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your radio OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles—RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities—Turn your radio OFF in any facility where posted notices so require.

Commercial Aircraft—Many commercial airlines prohibit the use of radios on board. Switch OFF your radio before boarding an aircraft or check the airline rules.

Blasting Areas—To avoid interfering with blasting operations, turn your radio OFF when in a “blasting area” or in areas posted: “Turn off two-way radio.” Obey all signs and instructions.

Potentially Explosive Atmospheres—Turn your radio OFF and do not remove your battery when you are in any area with a potentially explosive atmosphere. Obey all signs and instructions. Sparks from your battery in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always clearly marked. They include fueling areas such as gasoline stations, below deck on boats, fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.



Caring for the Tracking System

The cases are constructed of high-quality materials and does not require user maintenance except cleaning.

Cleaning the Cases

Clean both unit's outer casing (except for the receiver's screen) using a cloth dampened with a mild detergent solution and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

Cleaning the Screen

Clean the Receiver's screen using a soft, clean, lint-free cloth. Use water, isopropyl alcohol, or eyeglass cleaner if needed. If these are used, apply the liquid to the cloth, and then gently wipe the screen with the moistened cloth.

Storage

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

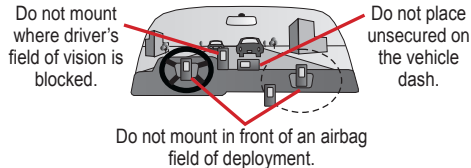
Water Immersion

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

Warning

Failure to avoid the following potentially hazardous situations could result in an accident or collision resulting in death or serious injury.

When installing the Receiver in a vehicle, place the unit securely so that it does not interfere with vehicle operating controls or obstruct the driver's view of the road (see diagram).



Always operate the vehicle in a safe manner. Do not become distracted by the Receiver while driving, and always be fully aware of all driving conditions. Minimize the amount of time spent viewing the screen of the Receiver while driving and use voice prompts when possible. Do not enter destinations, change settings, or access any functions requiring prolonged use of the unit's controls while driving. Pull over in a safe and legal manner before attempting such operations.

When navigating, carefully compare information shown on the Receiver to all available navigation sources, including information from street signs, visual sightings, and maps.

For safety, always resolve any discrepancies or questions before continuing navigation. The Transmitter contains a replaceable, rechargeable lithium-ion battery. The battery may present a risk of fire or chemical burn if mistreated.

- Do not disassemble, heat above 140°F (60°C), or incinerate.
- Keep used battery away from children.
- Only replace with Garmin Lithium-ion Battery Pack (Garmin Part Number 010-10XXX-00). No other lithium-ion battery is compatible with the unit.
- Dispose of used battery or unit properly. Contact your local waste disposal department for information on properly disposing of lithium-ion batteries.

Use the electronic chart in the Receiver only to facilitate, not to replace, the use of authorized government charts. Official government charts and notices to mariners contain all information needed to navigate safely.

When navigating in an aircraft, use the Receiver only as an aid for VFR navigation. Use terrain and obstacle data only as an aid to situational awareness.



Caution

Failure to avoid the following potentially hazardous situations may result in injury or property damage.

Use the GPS functionality of the Receiver only as a navigational aid. Do not attempt to use the Receiver for any purpose requiring precise measurement of direction, distance, location, or topography. This product should not be used to determine ground proximity for aircraft navigation.

The Global Positioning System (GPS) is operated by the United States government, which is solely responsible for its accuracy and maintenance. The government's system is subject to changes which could affect the accuracy and performance of all GPS equipment, including the Receiver. Although the Receiver is a precision navigation device, any navigation device can be misused or misinterpreted and, therefore, become unsafe.

Map Data Information: One of the goals of Garmin is to provide customers with the most complete and accurate cartography that is available to us at a reasonable cost. We use a combination of governmental and private data sources, which we identify in product literature and copyright messages displayed to the consumer. Virtually all data sources contain inaccurate or incomplete data to some extent. This is particularly true outside the United States, where complete and accurate digital data is either not available or prohibitively expensive.

NOTICE TO DRIVERS IN CALIFORNIA AND MINNESOTA: State law prohibits drivers in California and Minnesota from using suction mounts on their windshields while operating motor vehicles. Other Garmin dashboard or friction mounting options should be used. Garmin does not take any responsibility for any fines, penalties, or damages that may be incurred as a result of disregarding this notice. (See California Vehicle Code Section 26708(a); Minnesota Statutes 2005, Section 169.71.)

The **California Electronic Waste Recycling Act of 2003** requires recycling. Refer to www.ecycle.org.

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





GETTING STARTED

Receiver Overview





GETTING STARTED >

Installing the Batteries

The Receiver operates on two AA batteries (not included), which are located in the back of the unit. You can use Alkaline or NiMH batteries. See page 67 for information on setting the battery type.

To install the batteries:



1. Remove the battery cover by turning the D-Ring 1/4 turn counter-clockwise and pulling the cover loose.
2. Insert the batteries, observing the proper polarity. A polarity diagram is molded into the battery compartment.
3. Reinstall the battery cover by aligning the back cover with the unit and turning the D-Ring 1/4 turn clockwise.

Remove the batteries from the Receiver when you do not expect to use the unit for several months. Stored data is not lost when batteries are removed.

2

To install the Lanyard:

1. Place the loop of the Lanyard through the slot at the upper left side on the back of the unit.
2. Route the strap through the loop and pull tight.



Refer to page 9 for information on accessing the microSD data card in the battery compartment.

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Using the Keypad

POWER Key

- Press and hold to turn the unit on or off.
- Press and release to adjust the backlighting.

IN/OUT Zoom Keys

- Press to zoom in or out on the Map Page.
- Press to scroll up or down a list on any other page.

Track Key

- Press and release at any time to view the Tracker Page.

MARK Key

- Press and release at any time to mark your current location.

BACK Key

- Press and release to cancel data entry or exit a page.

ROCKER Key

- Press up, down, left, or right to highlight options and to enter data, or move the map panning arrow.

MAP Key

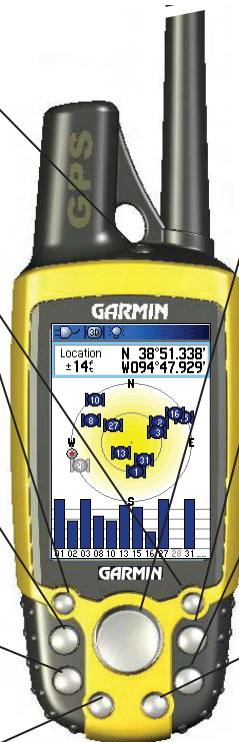
- Press and release to go directly to the Map Page.
- Press and hold to turn the compass on or off

MENU Key

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

ENTER Key

- Press and release to enter highlighted options, data or confirm on-screen messages.





Transmitter Overview



Charging the Transmitter battery

The Transmitter operates on a rechargeable Lithium-ion battery, which is located in the unit. The battery can be charged using either the AC or DC charging accessory. The battery has been partially charged at the factory, but should be fully charged before use.

To charge the battery:

1. Insert the small plug on the charger into the charging port on the Transmitter.
2. Connect the power plug on the charger to a 12 VDC cigarette lighter if using the DC charger or a 115-120 VAC wall outlet if using the AC charger.
3. Observe the flashing LED on the Transmitter indicating that charging is in process. When fully charged the LED remains steady. A fully charged Transmitter should provide approximately 10 hours of operation..



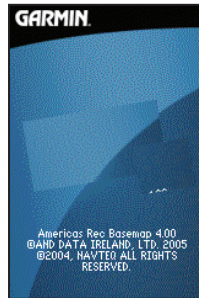


Turning on the Receiver

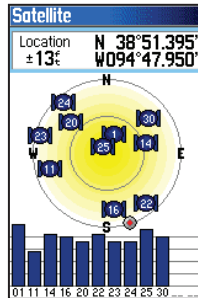
When the Receiver is turned on, the Introduction Page appears, followed by the Satellite Page. The unit must collect satellite data and establish its current location.

To turn the Receiver on and off:

1. Press and hold the **POWER** key. When the unit turns on, a tone sounds and the Introduction Page appears, followed by the Satellite Page.
2. To turn off the unit, press and hold the **POWER** key again.



Welcome Page



Satellite Page

Adjusting the Backlight

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

To adjust the backlight level:

1. Press and quickly release the **POWER** key.
2. Press up on the **ROCKER** to increase the brightness, or press down to decrease.
3. Press **ENTER** or **QUIT** to close the Backlight adjustment window.



Backlight Adjustment Slider



Initializing the GPS Receiver

The first time you turn on your Receiver, the GPS receiver must collect satellite data and establish its current location. To ensure proper initialization, the GPS receiver is shipped from the factory in AutoLocate mode, which allows the receiver to “find itself” anywhere on Earth. To receive satellite signals, you must be outdoors and have a clear view of the sky.

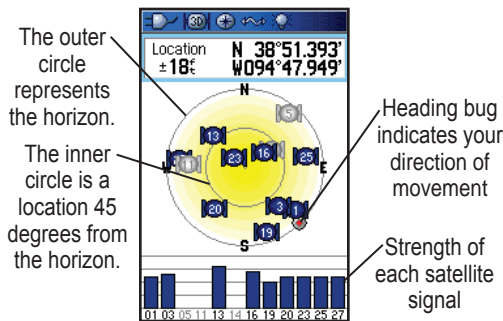
To initialize your Receiver:

1. Press and hold the **POWER** key to turn on the Receiver.
2. Hold the unit in front of you with the top tilted upward. While the GPS receiver is searching for the satellite signals, a “Locating Satellites” message is replaced by an “Acquiring Satellites” message until enough signals are acquired to fix its location.

When the receiver has signals from at least three satellites, the display at the top of the page changes to indicate position accuracy and location coordinates.

3. Press and release the **PAGE** key until the Map Page appears. You are now ready to begin GPS aided navigation.

You can also observe a sky view array of the satellites overhead with your location centered in the array. The outer circle represents the horizon and the inner circle a position 45 degrees from the horizon. The numbers shown indicate the number assigned to each satellite. A bar graph at the bottom of the page shows the strength of signals from each satellite.



If the unit cannot get a satellite fix, a list of solutions appears. Select an appropriate solution and press **ENTER** to continue.





Using the Receiver

This section explains how to enter and select information with the Receiver.

Understanding Terms

As you progress through this owner's manual, you are directed to press a specific key or highlight a field on the screen. When you are directed to press a key, you should press and quickly release the key. A key may need to be held down for a period of time to start a secondary function, when the instructions tell you to, do so. When a field is highlighted on the screen, it is highlighted in yellow. The position of the highlight is controlled by the **ROCKER**.

The following terms are used throughout this manual:

Highlight—move the highlighted area on the screen up, down, left, or right with the **ROCKER** to select individual fields.

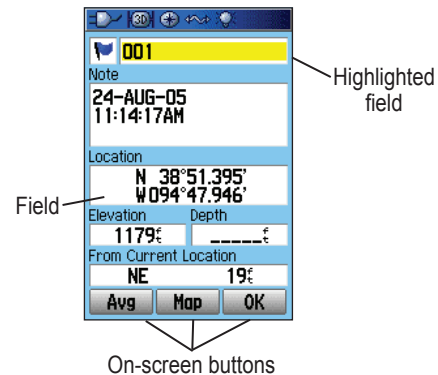
Field—the location on a page where data or an option can be shown and entered. Select (highlight) a field using the **ROCKER** to begin entering data or selecting options.

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On-screen button—use the **ROCKER** to highlight a button, and press **ENTER** to select the button.

Scroll bar—when viewing a list of items too long to appear on the screen, a scroll bar appears along the right side of the list. To scroll through a list, press up or down on the **ROCKER** or use **Zoom In** to scroll a set of items and **Zoom Out** to scroll the entire screen.

Default—the factory setting saved in the unit's memory. You can change the settings, but you can also revert to the factory (default) settings when you select **Restore Defaults** when offered as an option.





GETTING STARTED >

Selecting Options and Entering Data

To enter data and select options, use the **ROCKER** to highlight, select, or choose an item in a list or a field on the screen.

To select and activate an option:

1. From any page, press **MENU**. An Options Menu appears with a list of additional options for that page.
2. Use the **ROCKER** to move the highlight up, down, right, or left on the menu to highlight the option you want, and press **ENTER** to select it.

To exit a menu or return to the previous setting:









Press **QUIT**. The **QUIT** key moves backward through your steps. Press **QUIT** repeatedly to return to the starting page.

Using the Status Bar

At the top of each page, the status bar provides status information for several unit features.

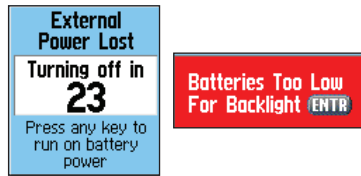


Status Bar

- Power to the unit is provided by either batteries or from an auxiliary source (AC, DC or USB Adapter). The Battery Power icon () shows the remaining power as the battery is depleted.
- The Auxiliary Power icon () appears when the unit is powered by an external source such as the USB Data Cable provided with the unit or optional Serial Port Data/Power Cable or Cigarette Lighter Adapter.
- Satellite signal status is shown when searching for or acquiring satellites () , when a 2D fix () is attained and when a 3D fix () is attained (four or more satellites are received.)
- The Backlight icon () appears when the backlight is on. Backlighting is off when you turn the unit on. The Backlight uses a significant amount of battery power.
- The USB Cable Connection icon () appears when the unit is in communication with a PC Universal Serial Bus.
- Electronic compass icon () appears when the electronic compass is turned on.

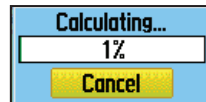
On-Screen Messages

When a significant event in the operation of the unit occurs, an on-screen message appears to advise you of the occurrence. In each case the condition is described and often a remedy provided. Press **ENTER** to acknowledge the message and close the window.



On-Screen Messages

In some instances the message may indicate a temporary condition such as the “Calculating Route” message and close as soon as calculation is completed.



Calculating Route Message

Using the Mapping Databases

Many of the Receiver features require detailed mapping data in order to be fully operational, so you may want to transfer maps before using the unit. The microSD card (provided with some units) can be loaded with detailed maps from optional MapSource disks for your PC to enhance the versatility of your unit. With selected MapSource detailed mapping data, you can view listings of nearby restaurants, lodging, shopping centers, attractions and entertainment, and even retrieve addresses and phone numbers for any listed location. The amount of data transferable is limited to the capacity printed on the microSD card.

Map data transfer requires the USB Interface Cable provided with the unit to transfer MapSource data from a PC to the microSD card in the Receiver. To transfer data to the microSD card you can also use the USB Mass Storage feature on page 69.

You can purchase high capacity microSD cards at your local electronics supplier. See the Garmin Web site (<http://www.garmin.com/cartography/>) for compatible MapSource products.



GETTING STARTED >

Transferring Data to a microSD Card

Some units are equipped with a pre-installed microSD card.

To install or remove the microSD card:

1. Remove the Battery Compartment Cover from the back of the unit and remove the two batteries.
2. Locate the card tray at the center of the battery tray and check to be certain the card is installed in the tray.
3. If you desire to remove the card, slide the tray cover up, then lift it toward you to remove the card from the tray.
4. To re-insert the card, lay the card in the tray, close the tray, and replace the batteries and cover when finished.

To transfer map data to the microSD card:

1. Lift the weather cover from the USB port on the upper back of the unit. It is recommended that you use the USB port rather than the Serial Connection port for faster data transfer.

2. Connect the USB cable provided with the unit to the USB port on your PC and to the mini-USB port on the back of the unit.
3. Follow instructions for selecting and downloading maps provided with the MapSource map data disk.





Overview of the Main Pages

The Receiver has three main pages: the Home Page (Main Menu), the Map Page and the Tracker Page. You can cycle through these pages by pressing the **Back** key. An Active Route Page appears only when you are navigating a route.

Each page (except the Home Page) has an options menu, which contains the page setup options and features that apply to that page. To view the options menu for a page, press the **Menu** key, then use the **Rocker** key to scroll the list and press **Enter** to select the desired option.

The Home Page

The Home Page or Main Menu is the directory to accessing the unit features. The Main Menu lists the pages for:

- The Find Feature
- The Accessories Menu
- The Setup Menu
- The Navigation Utilities Page

- The Hunt & Fish Page
- The Sun & Moon Page
- The Satellite Page
- The Transmitter List

The Find Menu

The Find Menu is a list of categories for item locations. The list contains items marked and recorded by the user such as waypoints and geocaches, Transmitter locations which are updated each time the transmitter communicates with the Receiver, and cities, interstate exits, and points of interest contained in the map database or in downloaded Garmin MapSource detailed mapping data.

The Accessories Menu

This page lists the operating system features that accent the main functional software of the unit. These consist of items such as a calendar, calculator, stopwatch, etc.



The Setup Menu

This Setup Menu provides a method for customizing the Tracking System to meet your personal needs. You can setup the System, Display, Alert Tones, the page sequence, the Map Page, Routes, Time, Units of Measure, etc.

The Navigation Utilities Page

This page allows to access utilities used to enhance navigation capabilities. They include; Trip Computer, Compass, Altimeter, Tracks, Routes, Highway, Proximity Alarms, Turn Previews, and Active Routes.

The Hunt & Fish Page

The Hunt & Fish page is an almanac of the best times for hunting or fishing for any given location.

The Sun & Moon Page

The Sun & Moon page provides a graphic representation of sun and moon positions for any time., annual date, and location on Earth. It also shows sunrise, sunset, moonrise and moonset times for a selected time, date, and location.

The Satellite Page

The Satellite page shows the GPS receiver status, satellite locations, satellite signal strength and receiver's current location.

The Transmitter List

The Transmitter List keeps track of all transmitters being monitored by the Receiver. Data pages for each transmitter can be accessed from this list.

The Map Page

The Map Page is the main navigation page. This page consists of a map defining the area around your current location. The map displays your current location as a triangular arrow point and the location of transmitters as a named or numbered point with a dotted track line to indicate its path of travel. The Map Page also indicates direction of travel and moves the map with you as you travel.



The Tracker Page

The Tracker Page provides distance and direction information for each transmitter being tracked. Up to three transmitters can be displayed on the Tracker page at one time with a compass indicating the direction of each and a scrollable list indicating the distance from the receiver.

The first time you use the Receiver and Transmitter together you must setup the Tracker Page. The Tracking System uses a low-power, 2.4 GHz, wireless link for short range (approx. 20 feet) two-way communication to set Transmitter identity configuration. It uses radio one-way communication allowing the Transmitter to report GPS position data to the Receiver. You can track up to ten different transmitters using one Receiver.

Touching the Receiver to the Transmitter ensures a clear path of wireless communication and allows the Receiver to communicate with the Transmitter.

Once recognized by the Receiver, the Transmitter is placed on the Transmitter List where it can be viewed on an Info page where it can be renamed and data

about its current state, distance, distance traveled, and average speed can be viewed. Update rates for position reporting can be set, battery capacity, communication and GPS signal strength can also be viewed.

Each additional transmitter added to the Transmitter list must be synched to the receiver and given a specific identity to avoid conflicts in position and data reporting.



GPS OPERATION

This section explains some of the more common operations you can perform with your Receiver including creating and using waypoints, using the Find Menu, and how to create and use tracks and routes.

Creating and Using Waypoints

Waypoints are locations or landmarks you record and store in your GPS. They are locations you might want to return to later. You can add waypoints to routes and even create a Go To directly to the selected waypoint.

Waypoints can be created using three methods. You can press the **MARK** key while at a location, create a waypoint on the Map Page, or enter coordinates for a waypoint manually.

Marking Your Current Location

Use the **MARK** key to quickly capture your current location to create a new waypoint. You must have a valid position (2D or 3D) fix to mark your current location.

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Creating Waypoints Using the Map

You can quickly create a waypoint using the Map Page. When you pan the map and move the arrow over a map item, you see a highlighted description of the item.

Creating a Waypoint Using Coordinates

You can manually enter location coordinates to create a waypoint. This method is useful for creating a waypoint at a specific latitude/longitude position from a chart.

Editing Waypoints

You can edit waypoints when created or at a later date. You can change the symbol, name, note, location, elevation, and depth.

Deleting Waypoints

You can delete waypoints from the Waypoint Page.

Averaging the Waypoint's Location

You can average a new waypoint location over time to produce a more accurate location.



NOTE: You must have a GPS Satellite fix before you can average a waypoint's location. You cannot average a waypoint after it has been saved to the waypoints list and Mark Waypoint page closed.

Projecting a Waypoint

You can create a new waypoint by projecting the distance and bearing from a specific location to a new location.

Proximity Waypoints

Use the Proximity Waypoints Page to define an alarm circle around a stored waypoint location.

Use Proximity Waypoints to define the boundaries of a hunting area.

Prior to hunting a parcel of land, mark the a perimeter boundary with proximity waypoints on the Map Page. Set the alarm to sound when you near the boundary to prevent encroachment onto to posted land. Use the Map Page panning arrow to scroll to the general area you plan to hunt, then zoom in to view the area in detail. Place the panning arrow on a boundary and

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press **ENTER** to mark it as a waypoint. Continue placing boundary markers (waypoints) until you have defined a perimeter. Use the Set Proximity option from each waypoint to activate the boundary alarm.

Using the Find Menu

Use the Find Menu to search for waypoints, cities, and exits included in the Receiver basemap. You can also find saved waypoint and geocache points. Additional icons appear depending on the optional BlueChart or MapSource data loaded to the unit. Press **FIND** to open the Find Menu.

When you access a Find group list, it contains only those items near your current location or the pointer (if active).

The options menu for each category contains a submenu of search options, such as Find By Name, Find Nearest (near your current location), Select Symbol (for waypoints), Change Reference (by moving the pointer to a new location), Nearest Containing (a keyword you enter), Select Category (for those groups, such as **Food & Drink** and **Lodging**). Use these options to shorten your search.



Recent Finds

The Recent Finds Page shows a list of the last 50 items you have searched for or gone to recently.

Using the Find Item Information Page

When you select an item from the Find item list and press **ENTER**, an information page shows detailed information about the item. Each information page contains three on-screen buttons. Different buttons appear depending on whether you are selecting a Find item to navigate to or adding a Find item to a route list.

Find Information Page Options Menu

The Options Menu for each information page contains options for using a Find item as a tool for navigation.

Finding a Waypoint

The Waypoints Page contains a list of all saved waypoints. Waypoints are stored in alphanumeric order and are also identified by a symbol assigned from a list of symbol types.

Finding a Geocache

Use the **Geocache** icon to view the list of geocache

locations created using your Receiver or downloaded from your computer. A geocache location is a waypoint with a special geocache symbol assigned to give special significance and to allow it to be separated from others on the waypoints list.

For more information about creating a geocache point, see Geocache Setup instructions on page 72 and www.garmin.com/products/gpsmap60csx/.

When a geocache is found, the unit marks the cache as found, logs an entry into the calendar, and provide an option that, when activated, shows the nearest cache.

Finding a City

Use the **Cities** icon on the Find Menu to find any city listed in the mapping database (either in the basemap or from downloaded detailed mapping data).

Finding an Interstate Exit

Use the **Exits** icon on the Find Menu to find an interstate exit.



Finding an Address

If you downloaded detailed mapping data, use the **Addresses** icon on the Find Menu to find an address. When you enter the street number, street name, and city, the find feature matches that data with addresses in the map database.

Finding an Intersection

If you downloaded detailed mapping data, use the **Intersections** icon on the Find Menu to search for an intersection. When you enter the two street names and a city, the Find feature matches them with intersections in the map database.

Searching for a Point of Interest

If you downloaded MapSource detailed mapping, you can use the **All Points of Interest** icon on the Find Menu to locate a nearby restaurant, lodging, landmark, public building, and so on.

If you are searching for a restaurant that is part of a national chain, only the restaurant nearest to your location is shown when you search using the Find Nearest option. If you search using the By Name option, all of the locations for that chain in the

mapping database are shown with the closest to your current location listed first.

Custom Points of Interest

You can create your own category for points of interest by using the Garmin POI Loader utility available from the Garmin Web site:
www.garmin.com/products/poiloader/. Follow the instructions for use on the Web site.

Using Tracks

The Tracks feature creates an electronic breadcrumb trail or “track log” on the Map Page as you travel. The track log contains information about points along its path, including time, location, elevation, and depth for each point (depth requires NMEA input, see page 92).

The track log starts recording as soon as the unit gets a location fix. The percentage of memory used by the current track log appears at the top of the Tracks Page. After you clear the track log, it shows 0%.

Use the Saved Track page to rename the track, view the track distance and calculated area, and specify a color for the track on the Map Page.



Track Profiles

After you save a track, you have a record of the path you traveled and a track altitude profile.

You can create a Track Elevation Profile from Digital Elevation Models (DEM) maps from MapSource U.S. Topo 24K, which include elevation data contained in the map. When these types of maps are available, a **Use Map Data - Use Track Data** option menu appears when you select **Profile**. Refer to the Garmin Web site, www.garmin.com/cartography/ontheTrail/, for more information about MapSource U.S. Topo 24K maps.

Navigating a Saved Track

You can save your track log to use later as a TracBack. When initiated, a TracBack route takes you back to the oldest stored track log point.

Creating and Using Routes

Route navigation allows you to create a sequence of intermediate waypoints that lead you to your final destination. The Receiver lets you store 50 routes with up to 250 points each.

Creating a Route

You can create or modify a route using the Routes Page, and you can add waypoints to a route from the Find Menu. You can create more complex routes using a PC and MapSource mapping programs and then transfer them to the unit memory. Auto-Routes, which are generated when you select Go To for a Find item, map item, or waypoint, cannot be saved. Saved routes with more than 50 waypoints cannot be navigated using the Follow Roads option.

Methods of navigating to a destination

- If you select the **Go To** button on the Waypoint Page or other Find Menu items, the Receiver creates a straight path (point to point) from your current location to that location.
- If you select the **Navigate** button on a Route



Page, the Receiver creates a route composed of several user waypoints or Find Menu items, with the last being your destination. It navigates directly from point to point. Before each turn in the route, a turn page shows a guidance message and graphic of the turn. You can view the turns at any time by pressing up or down on the **ROCKER** while the route is active.

- Both navigation methods change when you select the Follow Roads option on the Routing Setup Page. Both Go To navigation and point to point routing become routes that allow you to navigate using roads.

The routes use existing roadways (either those in the basemap or from downloaded detailed mapping) to automatically calculate a route to your destination. Turns on roadways are added to the Active Route Page and are preceded by a guidance message with a graphic of the turn. If there are not enough roads at your location to calculate a route, a message appears.

Navigating a Route

After you create a route, you can begin navigation immediately or save it to the Saved Routes list.

When navigating a route, a guidance message and a graphic view of turns in the route appear as you approach each one. Using the **Follow Roads** option on the Routing Setup Page increases the number of turns and shows an Active Route Page with a list of turns. If you selected the **Off Road** option, you can view only the list of points for a route from the Active Route Page. See Routing Setup on page 71.

Editing a Route

After you create a route, use the Route Page to edit, change the route name, and review route points.

Select **Distance** to enter a radius so that when you are within the entered distance, the Receiver leads you to the next point on your route.

Select **Manual** to transition to the next waypoint anytime while navigating a route.



Using the Route Page Options

The Route Page shows all points stored in memory for the route selected on the Routes Page. Press **MENU** to open the Route Page Options Menu.

- **Remove All**—removes all waypoints from the saved route.
- **Route**—reverses the order of the route points in the saved route.
- **Profile**—creates a vertical profile of the route when MapSource U.S. Topo 24k map data is used.
- **Copy Route**—makes a copy of the saved route with the same name followed by a number.
- **Delete Route**—deletes the saved route.
- **Change Data Fields**—select different values for the two data fields at the bottom of the page.
- **Restore Defaults**—restore route settings to the factory default setting

MAIN PAGES

The Tracking System has six main pages: Satellite Page, Trip Computer Page, Map Page, Compass Page, Altimeter Page, and the Main Menu. You can cycle through these pages by pressing the **PAGE** key to move forward or pressing the **QUIT** key to reverse. Add more pages using the Page Sequence option on the Main Menu. The Active Route Page appears only when you are actively navigating.

Each page has an Options Menu, which contains the setup options and functions that apply to the page. To view the Options Menu for a page, press the **MENU** key.

Satellite Page

The Satellite Page shows the receiver status, satellite locations, satellite signal strength, and the receiver's current location when the unit receives signals from at least three satellites.



Using the Satellite Page Options Menu-

Press **MENU** to open the Options Menu.

Use With GPS Off/On—enables you to turn the GPS receiver on or off.

Track Up/North Up—indicates whether satellites are shown with the rings oriented with North toward the top of the display or your current track toward the top of the display

Multicolor/Single Color—indicates whether each satellite is shown in a different color or the same color.

New Location—use if you have moved the unit more than 600 miles and you are having trouble locking onto satellite signals.

GPS Elevation— your GPS determined elevation.

Map Page

The Receiver comes with a built-in basemap that includes a database of cities, interstates, state and county highways, exit information, and lake and river outlines. The standard basemap can be enhanced

using MapSource or BlueChart data.

Two map operating modes, position mode and pan mode, determine what cartography is shown on the map display. Position mode pans the map to keep your present location in the display area. The position marker ▲ shows your travel on the Map Page. When you press the **ROCKER**, the Receiver enters pan mode, which moves the map to keep the white arrow ↖ (map pointer) within the display area.

When you are in panning mode, you can move the map pointer about the page to highlight and identify map items. If there is more than one map item under the pointer, a list appears with the item highlighted on the map, also highlighted on the list.





You can add and configure up to four optional data fields to the top of the page to provide a variety of travel and navigational information.

Using Additional Map Data

Optional MapSource mapping data disks enhance the versatility of your Tracking System. With MapSource data, you can view listings of nearby restaurants, lodging, shopping centers, attractions, and entertainment, and you can retrieve addresses and phone numbers for any listed location. With additional BlueChart data, you can access information, such as marine nav aids, wrecks, obstructions, and anchorage locations.

You can view the data currently loaded on your unit and microSD card.

Changing the Zoom Range

You can change the zoom range on the Map Page to view a smaller area in greater detail or view a larger area with less detail. Press **IN** to decrease the zoom range and show an area with greater detail; press **OUT** to increase the zoom range and show a larger area with less detail.

The current zoom range setting is shown in the lower-left corner of the Map Page. If no further map information is available, “overzoom” appears under the zoom range. When using MapSource maps, “mapsource” appears below the scale.





Map Orientation

There are two map orientation options: North Up orients the map like a paper map. Track Up orients the map in the direction of travel. When using Track Up, the North arrow indicates the orientation. Set the map orientation using the Setup Map option.

Map Page Options

Use the Map Page Options Menu to customize the Map Page. With the Map Page open, press **MENU**. To select an option, highlight it, and press **ENTER**.

The following options are available:

- **Stop (Resume) Navigation**—stops navigation and is disabled when there is no active navigation.
- **Recalculate**—recalculates a route and is disabled when there is no active navigation.
- **Data Fields**—opens the Show sub-menu so you can select the number of data fields to show at the top of the Map Page: Map Only, 2, 3, or 4 data fields.
- **Change Data Fields**—allows you to select the type of data you want to show in the data fields.

This option is available only if the 2, 3, or 4 data fields option have been selected.

- **Guidance Text**—shows messages on the screen advising you of your next navigation move when navigating to a destination.
- **Setup Map**—accesses six pages of Map display settings so you can customize the map to your preferences.
- **Measure Distance (Stop Measuring)**—measures the distance from your current location to the map pointer.
- **Turn Declutter On (Off)**—eliminates the display of items on the map that can block road details when the map is zoomed out.
- **Restore Defaults**—returns the map display to the factory set defaults.

Guidance Text

When navigating, guidance text appears above the map. Guidance Text shows useful information when navigating to a destination.



If you select **Always Show**, a guidance message always appears whether or not you are navigating.

If you select **Show When Navigating**, a guidance message appears until you select **Stop Navigation** from the Options Menu.

Setting up the Map Page

Use the Setup Map option to adjust how items are shown on the Map Page.

Map Setup – General Page

The Map Setup – General Page contains the settings for Orientation, Below, Auto Zoom, Detail, and Lock On Road.

- **Orientation**—selects how the map is shown. **North Up** always shows north at the top of the page. **Track Up** shows your current track toward the top of the page.
- **Below**—sets the map scale at which the Track Up feature displays. All scales above that revert to the North Up map orientation.
- **Auto Zoom**—zooms the map scale to include

the beginning and ending points of a route.

- **Detail**—selects the degree of map detail shown.
- **Lock On Road**—locks the current position pointer to show on the nearest road, compensating for variances in map position accuracy.

Map Setup – Tracks Page

The Map Setup – Tracks Page contains settings for Saved Tracks, Track Log, Track Points, and the Go To Line.

- **Saved Tracks**—sets the maximum zoom range at which saved tracks are shown on the map.
- **Track Log**—sets the maximum zoom range at which active track logs are shown.
- **Track Points**—sets the maximum number of track points used to record a track.
- **Go To Line**—selects either a bearing or course line for navigating a track.



Map Setup – Points Page

Use the Map Setup – Points Page to set the map scale at which Map Points, User Waypoints, Street Label, and Land Cover appear on the Map Page. Select **Auto**, **Off**, or a specific zoom level.

Map Setup – Text Page

Use the Map Setup – Text Page to select the text size for descriptions of map items on the Map Page. You can select from **None**, **Small**, **Medium**, or **Large**.

Map Setup – Information Page

The Map Setup – Text Page shows a list of downloaded detailed maps such as topographic, marine charts, and MapSource maps with auto-routing capability. Use the **ROCKER** to highlight a map, and press **ENTER** to show it on the map display or turn it off.

Press **MENU** to view the options for displaying maps.

Map Setup – Marine Page

Use the Map Setup – Marine Page to customize settings for marine colors, spot soundings, light sectors, and symbol sets when using downloaded marine charts

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(MapSource BlueChart marine mapping data).

- **Marine Colors**—toggles marine colors on or off on the Map Page.
- **Spot Soundings**—toggles spot soundings on or off on the Map Page. (Depth measurements shown on the map)
- **Light Sectors**—select **Off**, **Auto**, or **ON**. (Navigational light locations)
- **Symbol Set**—select the symbol set to use (**Auto**, **GARMIN**, **NOAA**, **International**).

Measuring Distance

You can measure the distance between two map items.

Turning Declutter On or Off You can remove unwanted items from the Map Page display (declutter the display) such as map item titles and icons. This is useful when the map is zoomed to a scale that is partially obscured by titles and icons that remain the same size regardless of the map scale.



Restoring Defaults


Use the **Restore Defaults** option to return the map settings to factory settings.

Compass Page

During active navigation, the Compass Page guides you to your destination with a graphic compass display and a bearing or course pointer.

When navigating, the Compass Page provides navigation data and directions. It uses a graphic compass ring, a bearing or course pointer and digital data fields to show information such as current speed, distance to the next point on the route, and estimated arrival time.

The rotating compass ring indicates the direction you are heading. The Bearing and Course Pointer indicate the direction (bearing) to your destination, relative to your current heading direction. The compass ring and bearing or course pointer work independently to show your direction of movement and the direction to your destination. You can choose the Bearing Pointer or Course Pointer for guidance.


The compass ring is an electronic compass that functions like a magnetic compass when you are stationary. When you are moving and reach a pre-set speed, it uses data from the GPS receiver to maintain your heading. When you stop (after a pre-set time), it again operates like a magnetic compass. The compass ring is especially helpful when using a paper map or chart with your Receiver for navigation. When the electronic compass is on, a compass icon  appears in the status bar.

Using the Electronic Compass

When you turn the electronic compass off, it stays off until you turn it on again. However, sometimes when you turn the electronic compass on, the Receiver overrides the compass and uses the GPS receiver to track your heading. In fact, when you are moving at a steady rate, the GPS receiver operates the compass. When stationary, the electronic compass is active to provide you accurate headings. You can customize the criteria for switching between the electronic compass and the GPS as explained in the Heading setup section on page 75.



To turn the electronic compass on or off:

1. Press and hold the **PAGE** key to turn the electronic compass on or off. The Compass Icon  appears in the status bar when the electronic compass is on. When you are not using the electronic compass, turn it off to conserve batteries. When it is turned off, the unit uses the GPS receiver for navigation.
2. Hold the Receiver level to get an accurate electronic compass reading. You can obtain the most accurate reading if it is calibrated. (See the following page for calibration instructions.)

Calibrating the Electronic Compass

When you first use the Receiver or after you install new batteries, you have to calibrate the electronic compass outdoors. The accuracy of the electronic compass is adversely affected if the unit is not held level or you are near objects that generate magnetic fields, such as cars or buildings.

Compass Page Options

Use the options menu to customize the Compass Page. With the Compass Page open, press **MENU**. To select an option, highlight it, and press **ENTER**.

The following options are available:

- **Sight 'N Go**—allows you to navigate to an object within your sight by pointing the unit at it.
- **Stop or Resume Navigation**—turns active navigation for a route or a Go To on or off.
- **Recalculate**—recalculates the path to a destination.
- **Course or Bearing Pointer**—toggles between the course pointer and the bearing pointer.
- **Data Fields**—allows you to select the number of data fields that appear on the Compass Page.
- **Change Data Fields**—allows you to select the type of data you want to show in the data fields. See page 93 for definitions of each option.
- **Calibrate Compass**—accesses the Compass Calibration Page for calibrating the compass.
- **Restore Defaults**—returns to the factory settings.



Sight 'N Go Navigation

Sight 'N Go allows you to set a course to a point you can see in the distance.

Using the Course Pointer or Bearing Pointer

The bearing pointer and course pointer work independently of each other. The bearing pointer indicates the direction to your destination, and the course pointer indicates your relationship to a course line leading to the destination.

If the bearing pointer arrow is pointing straight up, for example, you are going directly to your destination. If it points any direction other than up, turn toward that direction until the arrow is pointing up and then continue in that direction. The bearing pointer always points to the destination, regardless of the direction you are moving. Most efficient if you must move around obstacles (lakes, private property, etc.) in your path.

If you are using the course pointer option, and you drift away from the line of travel from your original location to your destination, the course deviation

indicator (an arrow with horizontal dotted line) provides graphic indication of drift (right or left) according to the scale shown at the edge of the compass ring.

Move to the right or left to get back on course. This is most efficient if you are navigating on water or where there are no major obstacles in your path. It also helps you avoid hazards to either side of the course, such as shoals or submerged rocks.

Data Fields

You can show 3 or 4 data fields on the Compass Page.

Altimeter Page

The Altimeter Page shows you the current elevation, rate of ascent or descent, a profile of elevation changes over distance or time, or a profile of pressure changes over time.

The Status field at the bottom of the page shows the current elevation and your current rate of ascent or descent when moving. It can also show the ambient pressure and time of measurement.



You can configure the Profile field in the center of the page to show either elevation or ambient pressure plots as selected from the Altimeter Page Options Menu.

Data fields at the top of the page are user selectable and show a variety of recorded or current data.

Altimeter Page Options

Use the Altimeter Page Options Menu to customize the Altimeter Page. With the Altimeter Page open, press **MENU** to open the Options Menu.

The following options are available:

- **Plot Over Time or Plot Over Distance**—plots the elevation over a period of time or plots the elevation over a distance.
- **View Elevation Plot (View Pressure Plot)**—shows the elevation or the pressure plot.
- **Zoom Ranges**—allows you to the Zoom Ranges for elevation, distance, or time when you show the View Elevation Plot over distance or time.
- **Reset**—allows you to reset the elevation data

and the maximum elevation data.

- **Calibrate Altimeter**—If you know the correct elevation for your location, you can increase the accuracy of the altimeter using the “Calibrate Altimeter” option.
- **Restore Defaults**—clears recorded data from the page and begins recording new data.

You can customize the “View” option displays using the “Zoom Ranges” option to determine time, distance, pressure, and elevation parameters.

Plot Over Time or Distance

These two measurement options (changes over a set period of time or changes over a set distance) apply only to the View Elevation Plot option. The View Pressure Plot option is measured by time and pressure only. When one option is active, the other is shown on the Altimeter Page Options menu.

View Pressure or Elevation Plots

Select the **View Elevation Plot** option to plot a profile of elevation changes that occur as you navigate over a set distance or period of time. Select **View Pressure**



Plot to view a record of changes in barometric pressure for a set period of time. When one option is active, the other option is shown on the Options Menu.

Zoom Ranges

You can set the zoom ranges for elevation, distance, or time when you show the View Elevation Plot.

- Ranges for vertical distance are shown as you press up or down on the **ROCKER**.
- Ranges for linear distance are shown as you press left or right on the **ROCKER**.
- Ranges for time are shown for a time plot when you press left or right on the **ROCKER**.

Ranges for View Pressure Plot pressure values are shown when you press up or down on the **ROCKER**. Values for time are shown in the same manner as for elevation plots.

View Points

You can scroll through a recorded elevation or pressure profile to view data for any point along the

profile. When the red vertical and horizontal cross hairs are stopped at a location along the profile, the screen shows the elevation or pressure, time of day, and date when the point was recorded.

View Points on Map

You can view the location of points on the Map Page.

Resetting Data

You can reset the elevation data and the maximum elevation data by selecting these options from the Reset Page.

Calibrating the Altimeter

Because the Receiver relies on the barometric pressure to determine the elevation and the pressure at any given elevation can fluctuate, you can calibrate the altimeter to increase its accuracy. You must know the elevation or pressure at your current location.

Changing the Data Fields

The Altimeter Page has two data fields that you can customize. (For definitions, see page 84.)



Trip Computer Page

The Trip Computer Page provides you with a wide variety of travel data that can be useful when navigating a long distance. It indicates your current speed, average speed, trip odometer, and many other helpful statistics useful for navigation.

You can customize the trip computer screen to meet your personal requirements. Selecting the type of data to display is done in the same manner as for the similar data fields on the Map Page. (See page 40 for details.) This page can be added to the Main Page sequence using the Page Sequence Setup.

Trip Computer Page Options Menu

The following options are available:

- **Reset**—because you want to record new data for each trip, a Reset option is available. Reset the trip information by highlighting **Reset** and pressing **ENTER**.
The Reset Page offers options for resetting trip computer data, clearing the track log and deleting saved tracks, waypoints and routes. This

page allows you select individual items, select all and unselect all. When you make selections, highlight the **Apply** button and press **ENTER**. Answer **OK** to the “The Data You Have Selected Will Be Permanently Deleted” prompt and press **ENTER** to complete the reset.

- **Big Numbers**—allows you to view significant trip data at a glance by showing fewer data fields with larger numbers.
- **Change Data Fields**—allows you to select the type of data you want to show in the data fields.
- **Restore Defaults**—allows you to return the data fields to factory settings.





MAIN MENU

The Main Menu contains settings and features not found on the main pages and sub-menus. The time and date are shown at the bottom of this page. The Main Menu is accessible from any page by pressing **MENU** twice. To select an item on the Main Menu, highlight the menu item, and press **ENTER**.



***NOTE:** If a page from the menu is added to the Main Page sequence, the icon does not appear on the Main Menu. (See page sequence setup).*

Tracks

The Tracks Page shows the percentage of track memory used and a list of saved tracks. Use the Tracks Page to set up, clear, or save a track log, or enable the TracBack feature for the current track log. For more information, see page 31.

Track Page Options

The Track Log Setup Page contains the following options:

- **Wrap When Full**—sets the track log to record over the oldest data with new data when the track log is full
- **Record Method**—sets the method to use to record track points. **Distance** records track points after a specific distance is traveled. **Time** creates track points after the specified time has elapsed. **Auto** allows you to choose from five different intervals.
- **Interval**—records a track according to distance and time interval. Enter a specific distance or time. The interval field can be set to compliment **Auto**, **Distance**, or **Time** record methods. Auto allows for preset intervals of Most Often through Least Often. You must enter a value for Time or Distance when they are selected.
- **Color**—selects a color for the track when it appears on the map.



Route Page

Use the Routes page to create a route to a destination. For more information, see Routes on page 32.

Highway Page

When navigating a route, the Highway Page guides you to the destination using data fields and a graphic highway. Up to four user-selectable data fields show information such as speed, distance, time to next point on the route, etc. The list of data to display and the method of selection is the same as for the Compass Page and is explained in detail on page 30.

The Highway graphic provides visual guidance, taking you point by point to your final destination. Your course is represented by a center line down the middle of the graphic. As you move toward each point on your route, the graphic shows the direction you should move to stay on course to the next point. Use the In and Out keys to change the five scale settings for zooming in or out on the highway.

Setup Menu Page

Use the Setup Menu Page to customize your Receiver to your personal preferences.

Each feature is explained in the following pages.

System Setup

Use the System Setup Page to control settings for GPS, WAAS, battery type, language, external power, and proximity alarms.

- **GPS**—sets the unit to operate in **Normal** mode, **Battery Saver** mode, **GPS Off**, or **Demo Mode**.
- **WAAS**—allows you to enable or disable WAAS (see page 97 for WAAS information).
- **Battery Type**—allows you to select the battery type you are using (Alkaline, NiMH, or Lithium Ion).
- **Text Language**—sets the unit's on-screen language.
- **External Power Lost**—indicates whether the unit remains on (Stay On) or turns off (Turn



Off) when external power is removed from the unit.

- **Proximity Alarms**—indicates whether custom points of interest (POI's) proximity alarms are on or off.

System Setup Menu

The System Setup Menu contains **Restore Defaults** and **Software Version**. Use **Restore Defaults** to return the System Setup fields to their original values. **Software Version** shows the software version and unit identification number.

Display Setup

Use the Display Setup Page to select a screen display color scheme for day and night viewing. You can set the backlight timeout and the level of brightness by reducing the timeout to save on battery power.

Display Mode—sets the display to **Day**, **Night**, or **Auto** mode. Select **Auto** to automatically switch from day to night at sunset and change back at sunrise.

- **Daytime Color Scheme/Nighttime Color**

Scheme—sets the color scheme to use when operating in Day or Night mode.

- **Backlight Timeout**—sets the backlight to stay on when it is turned on, or to time out after a selected period of time has elapsed when using the battery. The backlight stays on regardless of this setting when external power is used.
- **Backlight Level**—turns the backlight up or down. Press up on the **ROCKER** to increase the intensity or down to decrease.

Interface Setup

Use the Interface Setup Page to control the input/output format used when connecting your unit to external devices.

Serial Data Format—sets the data format to one of the following:

- **GARMIN**—selects the proprietary format used to exchange waypoint, route, track log and MapSource data with a PC.
- **NMEA In/NMEA Out**—supports input and output of standard NMEA 0183 version 3.01 data.



- **TEXT OUT**—allows ASCII text output of location and velocity information. No input.
- **NONE**—provides no interfacing capabilities.

If you select NMEA In/NMEA Out or Text Out, additional fields appear. The baud rate for NMEA In/NMEA Out is locked at 4800. If selecting Text Out highlight the **Baud Rate** field, and press **ENTER**. Use the **ROCKER** key to highlight the desired setting and press **ENTER**.

USB Mass Storage—allows the microSD card to be used as a USB Mass Storage device. It also allows transfer of Track Log Data to Garmin MapSource.

Tones Setup

Use the Tones Setup Page to customize sound tones made by the unit for a variety of unit features.

Page Sequence Setup

Use the Page Sequence Setup Page to change the order of the main pages, or add additional pages to the main page sequence.



NOTE: *If you add a page to the main page sequence, it no longer appears on the Main Menu.*

Map Page Setup

The Map Page Setup information is located on page 43.

Routing Setup

Use the Routing Setup Page to customize the manner in which routing functions behave.

- **Guidance Method**—allows the unit to calculate routes using the preferences below:
 - Prompted**—prompts you to select a preference before the route is calculated.
 - Follow Road**—creates a route that overlays the roads shown on the map.
 - Off Road**—creates a direct line from your current location to your destination. This is useful when traveling outside of the detailed map coverage area or where no roads exist.
- **Follow Road Method**—sets how the unit calculates follow road routes based on one of the following preferences:
 - Prompted**—you are prompts you to select a preference before the route is calculated.



Faster Time—calculates routes that are faster to drive but might be longer in distance.

Shorter Distance—calculates routes that are shorter in distance but take more time to drive.

- **Next Turn Pop-up**—turns the Next Turn pop-up window on or off.

Follow Road Options

- **Off Route Recalculation**—allows you to set whether the unit prompts you when it is recalculating your route (Prompted) or recalculates automatically or Off.

- **Calculation Method**—sets how the unit searches for the route using the criteria below.

Quickest Calculation—calculates the route the quickest, but it might not produce the best route.

Quick Calculation—takes more time to calculate but generates a better quality route.

Better Route—generates an even better quality route but uses a longer calculation time.

Best Route—generates the optimal route but takes the longest time to calculate.

- **Calculate Routes For**—sets route calculation for the vehicle you are operating to optimize the route for your vehicle type, because some roads have vehicle-based restrictions.
- **Avoid**—allows you to avoid certain road types and maneuvers on your route.

Geocache Setup

Use the Geocache Setup Page to find and record items hidden at geographic locations. See the Garmin Web site (www.garmin.com) for details and how to download geocache locations from the Internet.



***NOTE:** Before setting up and placing physical geocache stations on public or private land, be certain you are not in violation of ordinances or laws governing use of these properties.*

Marine Setup

Use the Marine Setup Page to define alarm settings.

- **Anchor Drag Alarm**—sets an alarm to sound when you exceed a specified drift distance.



- **Off Course Alarm**—sets an alarm to sound when you are off your chosen course.
- **Deep Water Alarm/Shallow Water Alarm**—sets an alarm to sound when you enter an area of water that is too deep or too shallow.

Time Setup

Use the Time Setup Page to set the time format and zone and to set the unit to conform to Daylight Saving Time. The time and date appear at the base of the page.

- **Time Format**—sets 12 or 24 hour format.
- **Time Zone**—sets the time zone for your city so the Receiver shows the correct local time. Select **Other** to enter a Universal Time Coordinate offset in the field below.

Units Setup

Use the Units Setup to customize measurement units.

- **Position Format**—sets the coordinate system in which a particular location is shown. The default format is latitude and longitude in degrees, minutes, and thousandths of a minute (hddd°mm.mmm).

- **Map Datum**—sets the description for geographic location for surveying, mapping, and navigation and is not an actual map built into the unit. The default setting is WGS 84. The unit automatically chooses the best datum based on your chosen format.

For more information about selecting Position Formats and Map Datums, see page 99.

- **Distance/Speed**—sets the unit of measurement to show your speed and distance traveled.
- **Elevation (Vert. Speed)**—sets the unit of measurement (**Feet (ft/min)**, **Meters (m/min)**, or **Meters (m/sec)**) to show your rate of ascent.
- **Depth**—sets the unit of measurement (**Feet**, **Fathoms**, or **Meters**) to show the depth.
- **Temperature**—sets the unit of measurement (**Fahrenheit** or **Celsius**) to show temperature.
- **Pressure**—sets the unit of measurement (**Inches**, **Millibars**, or **Hectopascals**) to show pressure.



Heading Setup

Use the Heading Setup Page to specify the type of heading display and the type of North reference used to calculate your heading.



***NOTE:** Unless you have a working knowledge of headings and North referencing, it is recommended that you use the default values.*

- **Display**—sets the value (Cardinal Letters, Degrees, or Mils) to show your heading.
- **North Reference**—provides headings based on a true, magnetic, grid, or specific user value north reference.
- **Switch to compass heading when below** (for more than)—sets speed and time delay for electronic compass switching. See page 49.

Calibration Setup

The Calibration Setup Page allows you to calibrate the compass and altimeter for increased accuracy in navigation.

Altimeter Setup

The Altimeter Setup Page allows you to setup the altimeter to self-calibrate each time you turn on the unit, to function as a barometer, or to manually calibrate when you have accurate elevation or pressure data.

Welcome Setup

Use the Welcome Setup Page to insert a message, such as ownership information, that appears when you turn on your Receiver.





Jumpmaster

Jumpmaster is an accessory designed for experienced skydivers. A jumpmaster is the individual in charge of a group of skydivers coordinating a group or cargo drop. A list of abbreviations and acronyms for Jumpmaster settings can be found on page 81.

The Jumpmaster follows military guidelines for calculating a jumpmaster's high altitude release point (HARP). This accessory can auto-detect when you have jumped to begin navigating toward the desired impact point (DIP) using the barometer and electronic compass.

You can set the Jumpmaster to one of three types of jumps: **HAHO**, **HALO**, or **Static**. The jump type selected determines what additional setup information is required. For all jump types, altitudes (drop or opening) are measured in feet above ground level (AGL).

A desired impact point (DIP) must be set for all jumps. This is a waypoint that you have previously marked or another location from the Find Menu where you want to land.

For HAHO and HALO jumps, wind speeds and directions can be entered for every 1,000 feet of canopy drift (CD) and every 2,000 feet of free fall drift (FFD). The wind setup must be completed before entering values for forward throw and course to HARP.



MAIN MENU >

The following is a list of abbreviations and acronyms commonly used and relate specifically to this feature:

AGL—(Above Ground Level) indicates the altitude measurement.

CD—(Canopy Drift) measured while the parachute is open.

DIP—(Desired Impact Point) describes the location where landing should occur.

Drop Altitude—measures the altitude when the jumpmaster exits the aircraft, measured in AGL.

DZ—(Drop Zone) describes the area where the landing should occur.

DZSTL—(Drop Zone Support Team Leader) defines the individual in charge at the drop zone.

FFD—(Free Fall Drift) defines the distance traveled before the parachute is open.

Forward Throw Horizontal—describes the distance traveled forward due to aircraft speed.

K values—defines the wind drag values for parachutes.

HAHO—(High Altitude High Opening) describes a type of jump.

HALO—(High Altitude Low Opening) describes a type of jump.

HARP—(High Altitude Release Point) describes the location at which the jumper exits from aircraft.

MSL—(Mean Sea Level) defines the basis for altitude measure.

Opening Altitude—describes the altitude when the jumpmaster opens his chute, measured in AGL.

PRP—(Primary Release Point) defines the combination of HARP plus the forward throw of aircraft.

Static Jump—describes a type of jump in which wind speed and direction are assumed constant for the duration of the jump.



Proximity Waypoints

Use the Proximity Waypoints Page to define an alarm circle around a stored waypoint location. The alarm circle can help you avoid restricted locations.

For more information on proximity waypoints, see the “Proximity Waypoints” section on page 15.

Calendar

Use the calendar to view sunrise and sunset times, moon phases, hunt and fish probabilities, and archived waypoints for activities you want to navigate to for any given day and location.

Calculator

Select the **Calculator** icon to use your Receiver as a calculator. You can select either a standard or scientific calculator and degrees or radians from the Options Menu.

Stopwatch

Select the **Stopwatch** icon to use the Receiver as a stopwatch, which includes a lap timer. You can also have the unit record the lap time based on distance.

Sun and Moon

The Sun and Moon Page provides you with a graphic depiction of the sun and moon relative to Earth. Sun and moon positions can be shown for any time, annual date, and location on Earth.

The Sun and Moon Page also shows sunrise, sunset, moonrise, and moonset times for a selected time, date, and location. Use the on-screen buttons to animate the movement of the sun and moon and to stop at a given time or date. The button to the left animates the display of the sun and moon. The center button animates more rapidly, showing the phases of the moon. The right button stops animation.





Hunt and Fish

The Hunt and Fish Tables provide you with a listing of predicted best times for hunting and fishing for a chosen date and location.

Games Menu

The Games Menu contains six games (Memory Race, Virtua Maze, GekoSmak, Nibbons, Gekoids, and Beast Hunt) for entertainment. Some games use GPS as a virtual component during play.



WARNING: *When playing any of the virtual games (where you are moving on a real playing field), use caution in selecting an area free of hazards, such as holes, obstructions, or proximity to vehicular traffic. Playing these games may distract your attention from observing objects in your path.*

APPENDIX

Radio Receiver Specifications

Physical

Size: 6.1" H x 2.4" W x 1.3" D

Weight: 7.5 ounces (213 g) w/batteries installed.

Display: 1.5" W x 2.2" H, 256-color, high resolution, transreflective (160 x 240 pixels) with backlighting.

Case: Rugged, fully gasketed, water resistant, IEC-529, IPX7

Temp Range: 5 to 158°F (-20 to 70°C)*

*The temperature rating of the Receiver may exceed the usable range of some batteries. Some batteries can rupture at high temperatures.

Radio Receiver Performance

- Channels:**
- 1) 151.82 MHz - Rx
 - 2) 151.88 MHz - Rx
 - 3) 151.94 MHz - Rx
 - 4) 154.51 MHz - Rx
 - 5) 154.60 MHz - Rx

State: "MURS Frequency Band"

Short Range Wireless Link: 2.4 GHz

Radio Antenna: Removeable helical spring

Power

Source: Two 1.5 volt AA batteries, USB Data Cable, 12 Volt DC Adapter Cable

Battery Life: Up to 18 hours (typical use)*

*Alkaline batteries lose a significant amount of their capacity as the temperature decreases. Use Lithium batteries when operating the Receiver in below-freezing conditions. Extensive use of screen backlighting, electronic compass, and audible tones significantly reduce battery life.

Radio Transmitter Specifications

Physical

Size: 1.5" H x 3.5" W x 1.5" D

Weight: 6.0 ounces (170 g)

Case: Rugged, fully gasketed, water resistant, IEC-529, IPX7

Temp Range: 5 to 158°F (-20 to 70°C)*

Radio Transmitter Performance

Channels: Identical to the Radio Receiver except - Tx

Radio Antenna: Removeable helical spring "

Radio Output Power: 2.0 W

Short Range Wireless Link: 2.4 GHz

Power

Source: Lithium-ion rechargeable battery, 12 Volt DC or 115-120 Volt AC Charger

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GPS Performance

(Applicable for both Receiver and Transmitter) with noted exceptions)

GPS Receiver: WAAS enabled

Acquisition Times*:

Approx. 1 second (warm start)

Approx. 38 seconds (cold start)

Approx. 45 seconds (factory reset)

*On average for a stationary receiver with an open sky view.

Update Rate: 1/second, continuous

GPS Antenna: Receiver -Built-in quad helix, remote antenna capability.

Transmitter - Built-in patch

Compass*: Accuracy; +/- 5 degrees**, resolution; 1 degree

Altimeter*: Accuracy; +/- 10 feet**, resolution; 1 ft.

* Available on Receiver only. **Subject to proper user calibration.

Accuracy

GPS: <10 meters (33 feet) 95% typical*

*Subject to accuracy degradation to 100m 2DRMS under the U.S. DoD imposed Selective Availability (SA) Program when activated.

DGPS: 3-5 meters (10-16 feet) 95% typical*

*WAAS accuracy in North America.

Velocity: 0.05 meter/sec steady state

Interfaces: NMEA 0183 version 2.3, and RS-232 and USB for PC interface

Data Storage Life: Indefinite; no memory battery required

Map Storage: Dependant on capacity of the microSD card.

(A small portion of the card capacity has been used in formatting the card for use.)



USB port under
weather cover

USB to RS232 Serial Port
Data Cable

Interfacing

The following formats are supported for connection of external devices.

Garmin Proprietary Sentences—PGRME (estimated error), PGRMM (datum string), and PGRMZ (altitude).

The NMEA 0183 version 3.01 interface format is supported by the Receiver and enables the unit to drive up to three NMEA devices.

The following are the sentences for NMEA 0183, version 3.01 output:

Approved sentences—GPGGA, GPGLL, GPGSA, GPGSV, GPRMB, GPRMC, GPRTE, GPVTG, GPWPL, GPBOD, and GPAPB.

Data transfer is enabled by using the USB to RS232 Serial Port Cable accessory shown to the left.



Data Field Definitions

The following list provides a brief definition of each data field option.

Accuracy Of GPS—the current accuracy of your GPS-determined location.

Ambient Pressure—the uncalibrated current pressure.

Ascent - Average—the average vertical distance of ascent.

Ascent - Maximum—the maximum rate in feet per minute.

Ascent - Total—the total distance ascended.

Barometer—the calibrated current pressure.

Bearing—the compass direction from your current position to a destination point.

Course—the desired path of travel from your starting point to your destination point.

Descent - Average—the average vertical distance of descent.

Descent - Maximum—the maximum descent rate in feet per minute.

Descent - Total—the total distance descended.

Distance - To Next—the distance to the next point on a route.

Distance - To Destination—the entire distance to the end of a route.

ETA - At Next—the estimated time that you will arrive at the next point on your route, at current speed and course.

ETA - At Destination—the estimated time that you will arrive at your destination, at current speed and course.

Elevation—the distance above or below mean sea level.

Elevation - Maximum—the highest elevation reached.

Elevation - Minimum—the lowest elevation reached.

Glide Ratio—the ratio of horizontal distance traveled to vertical distance.

Glide Ratio To Dest—the glide ratio required to descend from your position and elevation to the destination's elevation.

Heading—your direction of travel as indicated by a compass, in degrees or cardinal letters (N, S, E, W).

Location (lat/lon)—your current location as latitude and longitude coordinates.

Location (selected)—your current location described in the selected units of measure (other than latitude and longitude).

Odometer—the total distance you have traveled for all trips.



APPENDIX >

Off Course—the distance off your direct course line.

Pointer—the arrow that indicates the direction to travel to the next point on a route.

Speed—your current vehicle speed measured in miles per hour, kilometers per hour, or knots.

Speed - Maximum—the maximum speed you have attained since the trip computer was reset.

Speed - Moving Avg.—the average speed while your vehicle was moving.

Speed—Overall Avg.—the average speed determined by both the moving and stopped time and speed.

Sunrise—the time of sunrise for the current date and location.

Sunset—the time of sunset for the current date and location.

Time To Destination—the estimated time enroute to your final destination, if you maintain your current speed and course.

Time To Next—the estimated time enroute to the next point on your route, if you maintain your current speed and course.

Time of Day—the current time and date. It can be displayed in 12- or 24-hour format in local time or universal (UTC) time.

To Course—your direction of travel to get back on course.

Trip Odometer—the running total of distance traveled since the Trip Computer was reset.

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Trip Time - Moving—the length of time your vehicle has been in motion, since the trip computer was reset.

Trip Time - Stopped—the length of time that the vehicle has been stopped (stationary) while the unit was powered on and tracking your location (since the trip computer was reset).

Trip Time - Total—the total time the unit has been tracking since the trip computer was reset.

Turn—the direction of, and distance to, the next turn on an active route.

Velocity Made Good—the rate of closure on a destination, based upon your current speed and course of travel.

Vertical Speed—the rate of altitude gain or loss over time.

Vertical Speed Dest—the measurement of your rate of ascent or descent to a predetermined altitude.

Water Speed—the measurement of speed over water from interfaced devices.

Water Temperature—the measurement of water temperature from interfaced devices.

Waypoint—At Destination—the last point on a route; your destination.

Waypoint—At Next—the next point on your route.

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Optional Accessories

Several optional accessories are available to enhance the operation of the Tracking System.

To obtain replacement parts and optional accessories, contact your Garmin Dealer, or Garmin Product Support in the U.S.A. at 800/800.1020, or Garmin Europe at 44/0870.8501241.



WARNING: *Garmin accessories are designed and tested specifically for use with Garmin products. Accessories offered by other manufacturers have not been tested or approved for use with Garmin products. Use of such accessories could cause damage to the Tracking System and void the terms of the warranty.*

Auto Navigation Kit—provides the accessories and map data for use in an automobile.

12 Volt DC Adapter—provides auxiliary power from an automobile cigarette lighter.

GA 25MCX Remote GPS Antenna—allows enhanced satellite acquisition. Includes magnetic mount and cable.

MapSource Software Data Disks and Pre-Loaded microSD Cards—offer several detailed mapping options that are compatible with the Tracking System. Visit to Garmin Web site at www.garmin.com for a list of compatible MapSource products.

Marine Mount Kit—allows installation on a boat.

Automotive Mount Kit—allows installation on an automobile dash. (Does not include mapping data).

Automotive Windshield Suction Mount Kit—allows installation on an automobile windshield.

For a complete list of available accessories for use with the Tracking System, refer to the Garmin Web site: <http://garmin.com/products/gpsmap60csx/>.



Connecting Your Receiver to a Computer

You can connect your Receiver to your computer using either a serial port or USB connector cable.



NOTE: Fully install the supplied MapSource Trip & Waypoint Manager software on your computer before connecting the USB cable to the computer. Follow the instructions for installation and operation provided with the software.

To connect your Receiver to your computer:

1. Lift the USB protective cover from the back of the Receiver, and insert the smaller connector on the USB cable into the matching port.
2. Connect the remaining cable end to your computer's USB port.

To connect to your computer using a Serial Port connector:

1. Lift the Serial Port protective cover from the back of the Receiver, and insert the round indexed connector on the cable into the matching port.
2. Connect the remaining cable end to your PC Serial port or other appropriate device.
3. Set your Receiver interface setting to the appropriate interface format. Refer to Interface Setup on page 68.

Information about USB Drivers

The USB drivers are automatically installed when you install the MapSource Trip and Waypoint Manager software that came with your Receiver. When you initially connect the Receiver to a USB port, your computer might prompt you to locate the destination of the drivers for the device. You only need to install the drivers once. After the drivers are installed, your computer always detects your Receiver when it is connected. USB drivers might be updated periodically. You can find updates at www.garmin.com.

What Is WAAS/EGNOS?

The Wide Area Augmentation System (WAAS) is an FAA funded service to improve the overall integrity of the GPS signal for users in North America. The European Geostationary Navigation Overlay Service (EGNOS) is the European version of WAAS and operates in the same manner.

WAAS is made up of satellites and ground reference stations positioned across the United States that monitor GPS satellite data. Master stations, located on either coast, collect data from the reference stations and create a GPS data correction message. Master station uplinks the correction message to the WAAS GEO satellites using a ground uplink station. Then WAAS GEO satellites broadcast the WAAS corrected signal to user in the service area.

According to the FAA's Web site, testing of WAAS in September 2002 confirmed an accuracy performance of 1-2 meters horizontal and 2-3 meters vertical throughout the majority of the continental United States and portions of Alaska.

WAAS and EGNOS are just two service providers that adhere to the MOPS (Minimum Operational Performance Standard) for global satellite based

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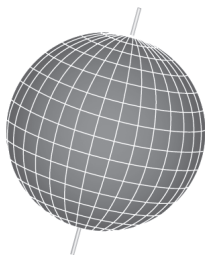
augmentation systems (SBAS). Eventually there are to be several more services of worldwide geostationary communication satellites that broadcast integrity information and differential correction data as transmitted by ground reference stations.

All SBAS systems use the same receiver frequency; therefore, any operational SBAS system should be capable of providing your GPS unit with increased accuracy at any location in the world.

Currently, enabling WAAS on your Receiver in regions that are not supported by ground stations, may not improve accuracy, even when receiving signals from an SBAS satellite. In fact, it can degrade the accuracy to less than that provided by GPS satellites alone. For this reason, when you enable WAAS on your Garmin GPS receiver, the receiver automatically uses the method that achieves the best accuracy. For more information, go to <http://gps.faa.gov/Programs/WAAS/waas.htm>.



Map Datums and Location Formats



Map Datums are based on a mathematical model of the Earth.

What Are Map Datums?

A datum is a mathematical model of the Earth that approximates the shape of the Earth, and enables calculations to be carried out in a consistent and accurate manner. The datum is physically represented by a framework of ground monuments whose positions have been accurately measured and calculated on this reference surface. Lines of latitude and longitude on a map or chart are referenced to a specific map datum. Every chart has a map datum reference and the Receiver can be set to match most

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of those commonly used.

If you are navigating and comparing the GPS coordinates to a map, chart, or other reference, set the map datum in the GPS unit to the same datum as the map to ensure the most accurate navigation.

What Is a Location Format?

Your current location is viewed on the GPS in the form of coordinates. Because different maps and charts use different location formats, Garmin GPS units allow you to choose the correct coordinate system for the type of map you are using. The most common format is latitude and longitude, which is used by all Garmin units.

You can choose to change the location format for other coordinate systems. UTM/UPS (Universal Transverse Mercator/Universal Polar Stereographic) projection formats are easy-to-use metric grids that are found on most USGS topographic quadrangle maps. You can also select one of several other grids, including a user-definable grid (for the advanced user).

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FCC Compliance



This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.



Limited Warranty

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

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

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

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

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

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

International Purchases: A separate warranty is provided by international distributors for units purchased outside the United States. This warranty is provided by the local in-country distributor and

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this distributor provides local service for your unit. Distributor warranties are only valid in the area of intended distribution. Units purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

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

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



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