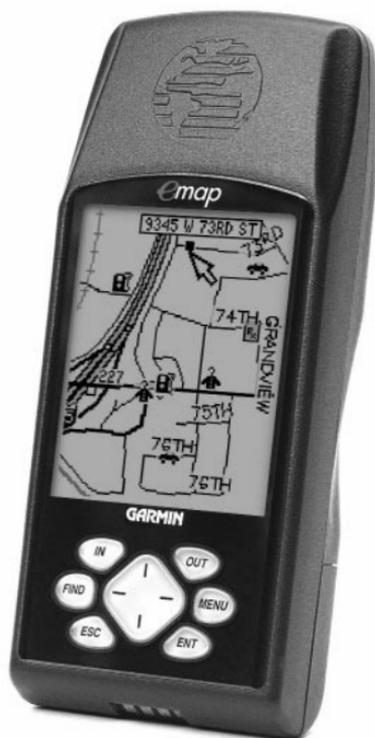




eMap

portable electronic map

owner's
manual
and
reference
guide



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About This Manual

Thank you for choosing the GARMIN eMap. To get the most from your new eMap, take time to read through this owner's manual in order to understand all of the operating features. This manual is organized into three sections.

The **Introduction to eMap Features** section gives you an overview of GPS and electronic map features.

The **Reference** section provides details about using the features of the eMap according to topic.

The **Appendices** contain information on items such as Accessories, Specifications, a Troubleshooting Guide and an Index by Subject.

Standard Package Contents:

- eMap Unit
- Lanyard
- Owner's Manual
- Quick Start Guide

FCC Compliance Statement

This device complies with Part 15 of the FCC limits for Class B digital devices. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular instance. If this equipment does cause harmful interference to other equipment, try to correct the problem by relocating the equipment.

Consult an authorized GARMIN dealer or other qualified service technician if the problem cannot be corrected. Operation is subject to the following conditions: (1) This device cannot cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The eMap does not contain any user-serviceable parts. Repairs should be made only by an authorized GARMIN service center. Unauthorized repairs can void the warranty.

Warnings and Precautions

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

Warnings and Precautions

WARNING: For vehicular applications, it's the sole responsibility of the owner/operator of the eMap to secure the GPS unit so that it will not cause damage or personal injury in the event of an accident. Do not mount the eMap over airbag panels or in a place where the driver or passengers are likely to have an impact with it in an accident or collision. The mounting hardware provided by GARMIN is not warranted against collision damage or the consequences thereof.

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

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

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

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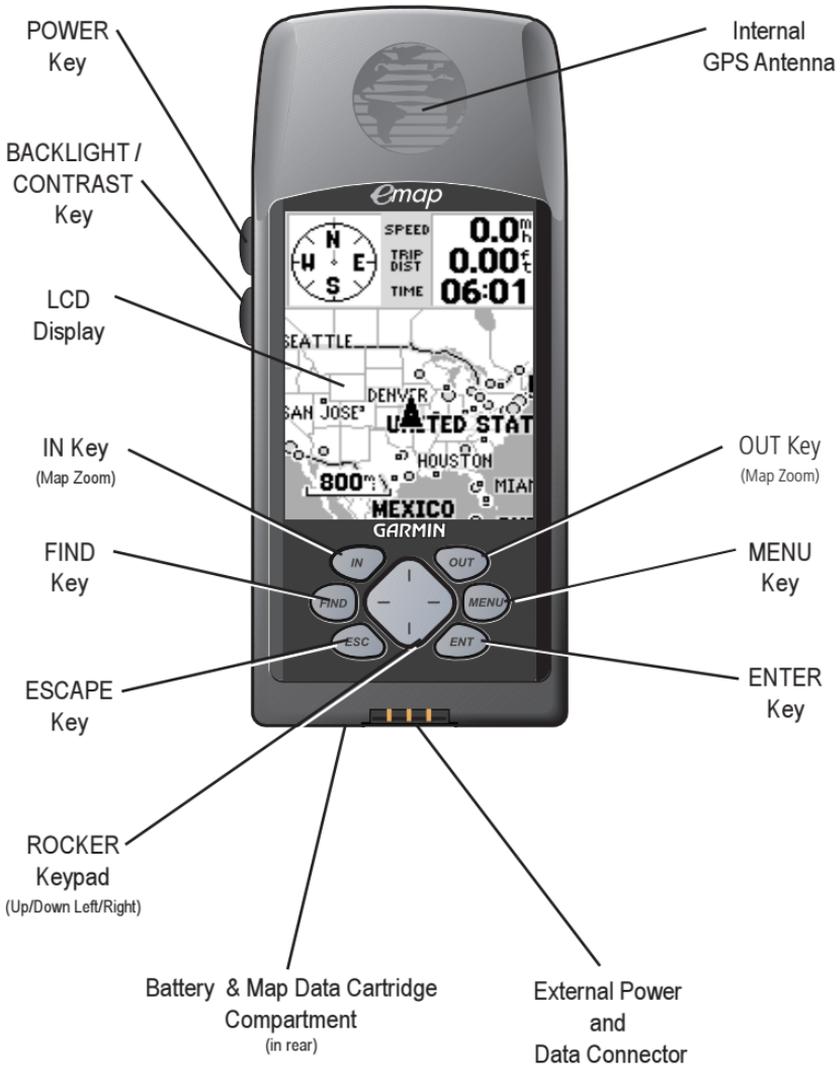
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“How To” Index

The list below is provided to help you quickly find some of the more important procedures you will use on your new **eMap**.

TO DO THIS:	SEE PAGE(S):
Install batteries.....	1
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eMap Unit Features



Installing the Batteries

The eMap operates on two AA batteries, which are installed by removing the cover on the back of the unit. These batteries will provide more than 10 hours of continuous use. Rechargeable NiCad or lithium batteries may be also used. Stored data will not be lost when the batteries are removed.

To install the batteries:

1. Open the battery compartment on the back of the unit by pressing the two arrows on the cover. Slide it back and then lift up to remove.
2. Install the batteries according to the polarity markings in the battery compartment.
3. Press the cover onto the compartment then slide forward until it clicks back in place.

Installing GARMIN Map Data Cartridges

GARMIN map data cartridges allow your unit to display detailed mapping data. Data can be downloaded from a GARMIN MapSource® CD-ROM (a collection of data for a specific area, USA, World Map, etc.) using a PC and interface cable. MetroGuide® cartridges are also available for all major US cities. Refer to Appendix A for MapSource and MetroGuide ordering information.

To install map data cartridges:

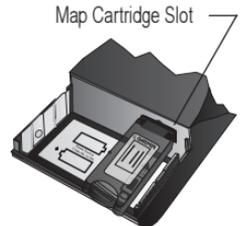
1. Open the battery compartment cover on the back of the unit by pressing the arrows, sliding back, then lifting up.
2. Remove the batteries to expose the cartridge slot at the back of the compartment.
3. Insert the cartridge in the slot with the label facing you. Be certain the connector end is inserted into the slot and not the end with the extractor handle. Press the cartridge completely in place until the handle is in place and is flush with the side of the compartment.
4. To remove the cartridge, use a fingernail to pull out the extractor handle and then slide the cartridge free of the slot.
5. Reinstall the batteries and close the cover.

Battery Installation



Remove battery compartment cover, observe polarity markings, install batteries and reinstall cover.

Map Data Cartridge Installation

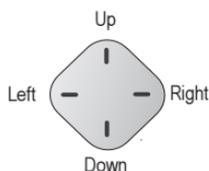


Install the map data cartridge in the indexed slot at the back of the battery compartment. Push in carefully, until it is completely in place.



Pull out the extractor handle to remove the map data cartridge from the eMap battery compartment.

Keypad Usage



The POWER Key

The POWER key turns the unit off and on.

The BACKLIGHT /CONTRAST Key

The BACKLIGHT/CONTRAST key turns on the display illumination. When pressed held for more than one second it allows contrast adjustment.

The MENU Key

The MENU key displays a menu of available options for the current page. Press twice to display the Main Menu.

The FIND Key

The FIND key searches the database for cities, Interstate exits, and personal waypoints (also points of interest, addresses and intersections when using a MetroGuide map cartridge).

The ESCAPE Key

The ESCAPE key returns the display to the previous page and, when entering data, it restores the previous value (cancels data entry). It also returns to the Map Page when pressed and held.

The ENTER Key

The ENTER key selects a highlighted menu option. When entering data, it allows you to initiate entry, and then to accept the selected value(s). It also marks the current location of a waypoint on the Map Page when pressed and held for more than one second.

The ROCKER Keypad

The ROCKER keypad is used to select (Highlight) menu options and enter data. It also controls cursor movement on the Map Page.

The OUT Key

The OUT key adjusts the map scale to display a larger area with less detail. (Zooms out)

The IN Key

The IN key adjusts the map scale to display a smaller area with more detail. (Zooms in)

Always press and release a key to perform its primary function. Pressing and holding the Backlight/Contrast, Escape, and Enter keys will activate their secondary function.

The eMap screens are organized into three main sections: the Map Page, the Main Menu and the Find Menu. This introduction is designed to provide you with a general overview of the operating structure.

When you press the **POWER** key, the eMap turns ON and displays the Title and Information pages and then the Map Page with a map and navigation information.

Pressing the **MENU** key once will display the Map Page Options Menu. Here you can choose from a full screen map display or a smaller map with data fields at the top. You can choose use indoors or use outdoors which turns the GPS receiver on and off. You can also start or stop navigation, measure distance and customize items displayed on the map.

Pressing the **MENU** key twice displays the Main Menu where you have access to the Trip Computer, Route Page, Tracks Page, the GPS Information Page, the Setup Options, MapSource Information, and System Information.

The Trip Computer Page provides information such as distance traveled, average speed, elapsed time, etc.

The Route Page allows you to create and store a route for repeated use.

The Tracks Page provides access to saved tracks.

The GPS Information Page provides you with a display of satellites that the GPS receiver is tracking

The Setup options are organized into three tabs that allow programming for: General Features like operating mode, backlight timeout settings, beeper controls and units of measure, Time Features such as format, time zone and current date, and Interface Features for data input/output settings.

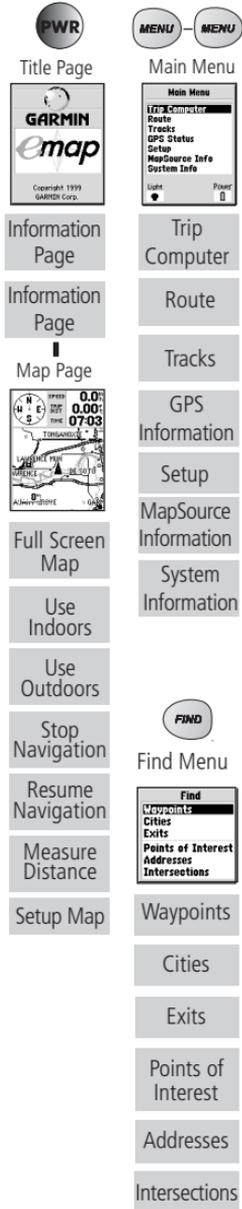
The MapSource Information Page gives you specific information concerning data on map cartridges.

The System Information Page lists operating software information.

Pressing the **FIND** key provides you with access to saved waypoints, cities, interstate exits, points of interest, addresses and intersections within the range of your map data.

Pressing the **ESCAPE** key allows you to return to the previous page, cancel data entry and return to the Map Page.

A Guide Through the Screen Displays



Selecting Options



Options Menu with highlighted option



Use the **ROCKER** keypad to highlight the next option. Press **ENTER** to activate.



Pop-up list of options for a highlighted field.



Function Buttons, highlight and press **ENTER** to activate.

How To Select Options and Enter Data

Before moving ahead into eMap features you will need to learn basic eMap operation. You can select and activate options and enter data to customize the eMap to fit your requirements. You can use the **ENTER** key and **ROCKER** keypad to select options, enter names and numbers in data fields, and activate your selections.

To select and activate an optional feature:

1. With any page displayed, press the **MENU** key to pop-up the options menu. The options menu will display a list of optional features which are specific for that particular page. To select any feature on the list of options requires movement of the cursor, which in the eMap is identified as highlighting an item on a list or a field (box) on a page.
2. Use the **ROCKER** keypad to move the cursor (highlight) up and down a list or up, down, and sideways.
3. Once you have moved to the selection desired, press the **ENTER** key to either activate the feature or pop-up a sub-menu or list of yet more feature options. Just repeat this process to select an option from this list or press the **ESCAPE** key to return to the previous setting. The **ESCAPE** key will move backwards through these steps or when pressed and held, back to the Map Page.

To select and activate a function button:

1. When moving about a page with function buttons, like the 'Mark Waypoint' page you will observe function such as 'OK', 'Map' and 'Goto'. To activate the function, highlight the desired button and press the **ENTER** key. (Refer to the bottom left picture.)

Naming a waypoint, entering a street address or placing any sort of data that has not been pre-defined requires the use of both the **ROCKER** keypad and the **ENTER** key.

To enter a name or number in a data field:

- Once you have accessed a page with programmable data fields (i.e. 'Mark Waypoint', 'Find Address') you can use the **ROCKER** keypad to move the cursor (Highlight) to fields on the page. Use the Up/Down bars to move up or down and the Left/Right bars to move sideways.
- Pressing the **ENTER** key with the field highlighted begins the process for entering data in the form of alphanumeric characters.
- Use the **ROCKER** keypad Up/Down bars to cycle through numbers 0 to 9, plus, minus symbols, blank space, and the alphabet. Pressing and releasing the keypad moves you character by character through the list. Pressing and holding the keypad moves you rapidly through the list.
- Use the **ROCKER** keypad Left/Right bars to move to the next character on the line or backwards to edit characters.
- When data entry is completed press **ENTER** to accept data, then move to the next programmable field. Not all data fields are programmable, like the date and time. When moving about a page with these type fields, the cursor will skip over them.

Every Field and Button on this page can be programmed or activated.

- A waypoint symbol can be selected from a list of symbols.
- The waypoint can be renamed.
- The coordinates can be changed.
- The elevation can be changed.
- The buttons can be activated.

Mark Waypoint

■ **HOM**-----

Location
N 39°00.000'
W 095°00.000'

Elevation
984

Delete Map

Goto OK

Entering Data

Select Street Name

W 109TH-----

S W 109th St

N W 145th

N W 145th Ter

Rd W-6

Rd W-6e

Rd W-6g

WOODfield Dr

Co Rd W10s

Co Rd W11s

You can enter both names and numbers using the **ROCKER** keypad and **ENTER** key in programmable fields.

General Time Inter:

Time Format
12 Hour

Time Zone UTC Offset

Other **-02:00**

Daylight Savings Time
Auto

Current Date
31-DEC-04

Current Time
06:01:37

Data Entry Field
Non-Programmable Data Fields

About GPS



The Map page is the main operating page of the eMap. It provides position, direction, distance, map features, speed, time and location information.



The Map Page can be expanded to fill the full display area, oriented to either North or to Track Up to match your direction of travel. You can change the map scale by Zooming In or Zooming Out. You can customize the way in which map details are displayed.

The Global Positioning System (GPS) is a system of 24 satellites which circle the earth twice a day in a very precise orbit and transmit information to earth. The eMap must continuously “see” at least three of these satellites to calculate your position and track your movement. At times, additional satellites may be needed to determine a position.

By using an almanac (a timetable of satellite numbers and their orbits) stored in the receiver’s memory, the eMap can determine the distance and position of any GPS satellite and use this information to compute your position.

The Map Page is the main operating page of the eMap. All system programming and options are designed to support navigation activity using the Map Page.

The Map Page shows your movement using a real-time track log (an electronic bread crumb trail that appears directly on the map as you’re traveling), and your present position as a triangle icon in the center of the map. The Map Page also shows any nearby lakes, rivers, highways and towns. Use the zoom keys (**IN** and **OUT**) to adjust the map to the desired scale.

The map can be oriented with the top of the page always pointing north or it can automatically rotate to keep your current direction of travel (track) at the top of the screen. The default setting is ‘North Up’, which keeps the top of the page always pointing north. Refer to the section titled GPS Info Page.

Nearby waypoints are depicted on the map with any one of over 50 different symbols, with the waypoint name shown directly above the symbol. We’ll cover more about the eMap’s waypoint features and the Map Page in this reference section.

Start Up Your eMap

To Start Up (initialize) the eMap, take the unit outside and find an open area where the built-in antenna has a clear view of the sky. You may either hold the receiver at a comfortable height with the antenna pointing up, or mount the receiver on the dash of a vehicle or on a bike. Refer to Appendix A.

To turn the eMap on, press and release the POWER key.

The Title Page and up to two information pages will be displayed while the unit conducts a self test. Once testing is complete, the these pages will be replaced by the Map Page. The first time you use the eMap it must determine its location using a feature called 'AutoLocate'. This is also necessary when you have moved the unit more than 500 miles from where it was last used. If this is necessary the eMap will automatically begin initialization, which should take from five to seven minutes depending on the overhead satellites in view. If there are not enough satellites in view to initialize, the eMap will pop-up a 'Poor Satellite Reception' message with three options. A brief explanation for each option will appear when each is highlighted. Press the **ENTER** key to confirm your option choice.

The three options are:

Use Indoors - Select this option if you are indoors. (For best performance) *This option turns off the GPS receiver to conserve power and speed Map Page updating.*

New Location - Select this option if you have moved hundreds of miles. *This option allows you to select a new location from the map or select the AutoLocate feature which will systematically search the sky for satellites until your location is determined.*

Continue Acquiring - Select this option if no other option applies. *You may need to move to a location that allows a clear, unobstructed view of the sky.*

After initialization the eMap usually provides a position fix in less than one minute. Your eMap is now ready to use!

Start Up



The Title Page and two information pages are displayed when the eMap is first turned on. During this time the GPS receiver is conducting a self-test.



The three initialization options for 'Poor Satellite Reception' messages

Contrast Settings



To adjust the screen contrast, use the **LEFT** or **RIGHT** Rocker keys to move the contrast adjustment slider.

Backlighting



Use the **UP** or **DOWN** Rocker keys to move the Backlighting lever up for **ON** or down for **OFF**

Setting the Screen Contrast

Before you begin using the eMap, you may want to adjust the contrast setting for best viewing of the display screen

To Set the Screen Contrast:

1. Press and hold the **BACKLIGHT/CONTRAST** Key on the side of the unit until the Contrast Adjustment window appears.
2. Press the **LEFT** or **RIGHT** side of the **ROCKER** keypad to adjust the level of contrast. Left to lighten and Right to darken. Press the **ENTER** key to save the setting.

Using the Backlighting Feature

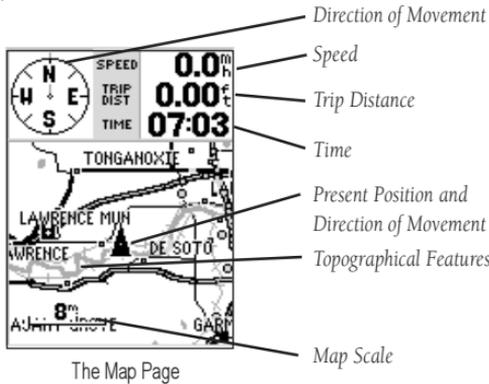
You can set you eMap unit to backlight the screen for easy viewing in dim and dark lighting conditions. You can select 'Stays On', or enable the automatic shut-off feature to preserve battery life. Automatic shut-off times from 15 seconds to 2 minutes (since last key press) are available. To program timing options, refer to the section on Setup Options.

To turn the backlighting On and Off:

1. Press and release the **BACKLIGHT/CONTRAST** key. If set for automatic timeout it will shut-off automatically at the set time after the last key press. Pressing any key will re-activate the backlight. If the timeout is set for 'Stays On' it will not turn off. To turn the backlighting Off without waiting for the timeout, press the **BACKLIGHT/CONTRAST** key again.
2. You can also turn the backlight function **ON** or **OFF** by pressing and holding the **BACKLIGHT/CONTRAST** key until the 'Backlight/Contrast' window appears. Then, press the **ROCKER** keypad **UP** for **ON** or **DOWN** for **OFF**. (Refer to the illustration to the left.)

Using the Map Page

The Map Page provides navigational information and is supported by all other features. The Map Page can be customized to display information such as map scale, speed, direction, topographical features, distance and time.



The Map Page

The Map Page shows your movement using a real-time track log (an electronic bread crumb trail that appears directly on the map as you're traveling), and your present position as a triangle icon in the center of the map. The Map Page also shows any nearby lakes, rivers, highways and towns.

Detailed map features as well as information about those features can be displayed using a map cartridge containing data downloaded from a GARMIN MapSource CD-ROM. Refer to Appendix A for ordering information.

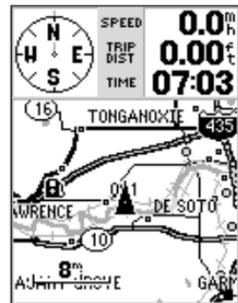
Use the zoom keys (**IN** and **OUT**) to adjust the map to the desired scale.

To change the map scale:

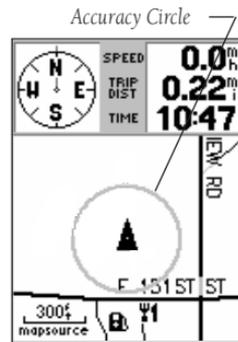
1. Press the **IN** zoom key to select a smaller scale and more detail for a smaller area.
2. Press the **OUT** zoom key to select a larger scale and display a larger area.

In many cases, the map will display an 'Accuracy Circle' surrounding the position icon defining the accuracy of your present location according to its position calculations. The smaller the circle the more accurate your location.

The Map Page



The Map Page displays a variety of navigation information in optional data fields.

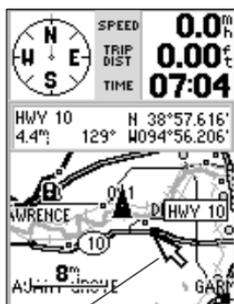


Zoom IN to view more map details.



Zoom OUT to view more map area.

The Map Page



Use the **ROCKER** keypad to move the panning arrow about the Map Page.



Map feature detailed information page.



Select the **Goto** button, and press **ENTER** to create a direct route to a new waypoint.

Using the Panning Arrow:

Another important Map Page feature is the pan function, which allows you to display an arrow to point at and identify features on the map, and to move the map in order to view areas beyond the current viewing area on the display.

To activate the pan function:

1. Use the **ROCKER** keypad to move the arrow in the desired direction. As the arrow moves to the edge of the display screen the map will also move to reveal more map area.
2. When moving to the edge of the display, the map will take some time to redraw (refresh) the screen to show the new area of the map. When using the eMap with the GPS receiver operating, map redrawing will be slower. To significantly speed the time to redraw the display, select the "Use Indoors" option from the Map Page Options Menu which turns off the receiver. Refer to the Map Page Options section on the following pages to use this option.

When the arrow is placed on a map object, the name of the object will be highlighted. This feature applies to waypoints, roads, lakes, rivers...almost everything that is displayed with the exception of route lines and track data.

To navigate to a map feature or location:

1. Use the **ROCKER** keypad to move the arrow to the desired waypoint, city, exit or point of interest on the map.
2. Press the **ENTER** key to display detailed information about the item.
3. To mark a route to that location on the Map Feature Detail Page, highlight the **Goto** button on the page and press the **ENTER** key. A route line will be drawn on the map from your present location to the marked item. The bearing compass will change to a direction arrow and the distance to that location will be shown at the top of the map.

Using the Map Page Options

The Map Options Menu allows you to choose from a full page map or a map with data fields, from 'Use Indoors' or 'Use Outdoors', to stop an active navigation program, to measure distance between points on the map, and to setup how geographic features will appear on the map.

The 'Full Screen Map' option allows you to view more map area while navigating.

To display a 'Full Screen Map':

1. With the Map Page displayed, press the **MENU** key.
2. The Map Options Menu will pop-up with 'Full Screen Map' highlighted. Press the **ENTER** key and the Map Page will display a full screen map.
3. To return to a Map Page with data fields displayed, repeat the process. You will notice that the option now reads 'Show Data Fields' and when the **ENTER** key is pressed the page displays the data fields again.

The 'Use Indoors' option is an important feature that turns off the GPS receiver and enables you to conserve power usage, and speed Map Page redrawing. The 'Use Outdoors' option turns on the GPS receiver for real-time navigation.

To activate 'Use Indoors' or 'Use Outdoors' options:

1. With the Map Page Options Menu displayed, use the **ROCKER** keypad to highlight the 'Use Indoors' option and then press **ENTER**. The Map Page will appear with an on-screen message stating, 'GPS turned off (for use indoors)'. Press the **ENTER** key to confirm.
2. To return to operation with the GPS receiver, press the **MENU** key, highlight 'Use Outdoors' and press the **ENTER** key.



WARNING: Remember that the 'Use Indoors' option turns the GPS receiver off and should never be used for actual navigation.

The 'Stop Navigation' option stops any active route navigation. The option will appear gray if there is no active navigation and cannot be selected.

Map Page Options



You can also select a variety of display and feature options from the Map Page Options Menu.



"Full Screen Map" display.



'Use Indoors' Option



'Use Outdoors' Option

Map Page Options



You can display the distance and direction from your current location to another location on the map.

The 'Measure Distance' option displays at the top of the map and allows you to view the name of a location on the Map Page, the distance and direction from your current location to that location. Measuring distance from point to point on the map is accomplished by using the panning arrow to mark locations you want to measure the distance between.

To use the 'Measure Distance' feature:

1. With the Map page displayed, press the **MENU** key to pop-up the options menu.
2. Highlight and select 'Measure Distance' from the list of options. Press the **ENTER** key to activate. A field with distance data will appear at the top of the map.
3. Move the panning arrow to the point you want to measure from and press **ENTER** key.
4. Move the panning arrow to a second point (the one you want to measure to) and distance information will be displayed at the top of the map screen.

Using Setup Map Options

The Setup Map Options Pages allow you to choose how map features will display on the Map Page. You can customize them to your preferences by selecting file tabs with settings for map detail like track logs, road and street labels, geographic features like land cover and more. Here is a list of subjects and their settable features.

Map - Detail, Orientation, AutoZoom

Line - Track Log (Text and Zoom) and Street Labels (Text and Zoom)

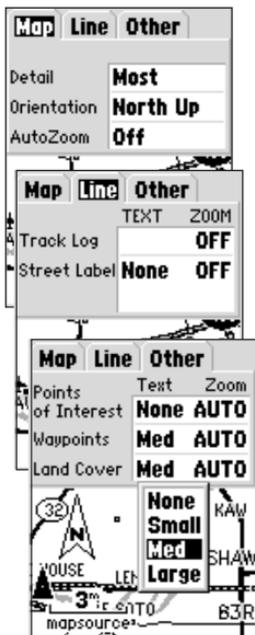
Other - All Waypoints (Text and Zoom) and Land Cover (Text and Zoom)

Using the Map Setup options settings you can eliminate map clutter at specific zoom levels and increase readability of those map features that are important to you.

Detail - has five settings ranging from Most to Least

Text - settings range from Small, Medium and Large or None.

Zoom - settings range from 200 feet to 800 miles or Auto.



The Map Setup Pages allow you to customize map details.

Marking a Waypoint

A waypoint is any identified point on the map that has been named and recorded. The eMap can store 500 waypoints in memory. Waypoints are used to build routes and as destinations to Goto.

To create a personal waypoint:

1. Press and hold the **ENTER** key for more than 1 second to create a new waypoint for your current location. It will automatically be assigned a 3-digit number or you can name it as a personal waypoint.
2. To save the waypoint and store it on the Waypoints List, press the 'OK' button to save the waypoint.
3. To name the waypoint, use the **ROCKER** keypad to highlight the waypoint name field. Press the **ENTER** key to isolate the first character of the name and then use the **ROCKER** keypad Up/Down bars to enter the first character of the name. Use the Right bar to move to the next character and repeat the process until you have entered the name. Then press **ENTER** to confirm the name. You can enter a total of 10 characters in the field. This waypoint name will appear on the Map Page.
4. To assign an identifying map symbol to a waypoint, use the **ROCKER** keypad to highlight the field at the left of the name field. Then press **ENTER** to display the Waypoint Symbol List. Use the **ROCKER** keypad to scroll through the list of symbols and select one that best describes the marked waypoint. Then press **ENTER** to assign the symbol and return to the waypoint page. The symbol will now appear along with the name on the Map Page when you select the 'Map' button and press the **ENTER** key.

Marking a Waypoint



The 'Mark Waypoint' Page with automatically assigned waypoint number.



To personalize a waypoint by assigning a name, use the **ROCKER** keypad and **ENTER** key.



The Waypoint Symbol List allows you to mark a waypoint on the map using an identifying map symbol.

Marking a Waypoint

Use the **ROCKER** keypad to move to and highlight the Location and Elevation fields and then enter the coordinates and elevation desired. You may want to rename the waypoint as well.

Editing a Waypoint

Use the **ROCKER** keypad to enter data and the **ENTER** key to confirm entries.

To create a new waypoint by manually entering its coordinates:

1. Press and hold the **ENTER** key to access the Mark Waypoint Page.
2. Highlight the Location field on the Mark Waypoint Page and press **ENTER** to highlight the first character of the location coordinates. Enter the desired coordinates. When completed press **ENTER**. If desired you may also change the waypoint name and/or symbol.

To manually enter the elevation for a waypoint:

1. Highlight the Elevation field on the Mark Waypoint Page and press **ENTER** to highlight the first character of the elevation. Enter the desired elevation. When completed press **ENTER**.

To view the area around the waypoint on the Map Page:

1. Highlight the 'Map' button on the Mark Waypoint Page and press **ENTER**.

To Goto a waypoint from the Mark Waypoint Page:

1. Highlight the 'Goto' button and press **ENTER**. The Map Page will provide guidance to the waypoint.

Editing a Waypoint

A waypoint can be edited to change the map symbol, name, coordinates, or elevation.

To edit a waypoint:

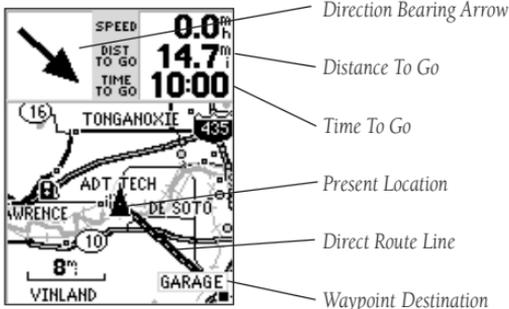
1. Access the Waypoints List by first pressing the **FIND** key to display the Find Menu. Then, with the waypoints option highlighted, press the **ENTER** key to display the waypoints list.
2. Use the **ROCKER** keypad Up/Down bars to scroll to the waypoint you want to edit. Then, press **ENTER** to display the Edit Waypoint Page.
3. Make changes to the waypoint symbol, name, location, and elevation fields as necessary following the procedures previously explained.

Once you've stored a waypoint in memory, you can use the eMap to guide you to it by using the Goto feature. A Goto is really nothing more than a straight-line course from your present position to a location you've selected. A Goto can be performed by specifying the location from the Waypoints by Name List, Cities by Name List, Nearest Waypoints List, Nearest Cities List, or Nearest Exits List. Optional MetroGuide map cartridges allow you to Goto Points of Interest, Addresses and Intersections.

To Goto a listed location:

1. With the List containing the desired location displayed, use the **ROCKER** keypad to highlight the desired waypoint, city, or exit, etc.
2. Press the **ENTER** key to display the page containing information about that location.
3. Highlight the Goto button on that page, and then press the **ENTER** key to navigate to the selected location. A route line directly from your present location to that location will be displayed on the Map Page.

Once a Goto destination is selected, use the Map Page to navigate as you head toward your destination. A bearing arrow provides directional guidance and 'Distance To Go' and 'Time To Go' fields keep track of your progress.



The Map Page with the waypoint displayed and route line from your present location.

Going To a Waypoint

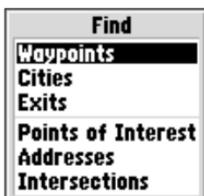


To select a destination from all waypoints stored in memory, highlight the desired waypoint and press **ENTER**.

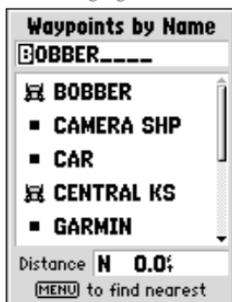


To Goto a waypoint, highlight the Goto button on the page and press **ENTER**.

Using the Find Feature



The Find List with waypoints highlighted.



Waypoints By Name List. Use the **ROCKER** keypad to enter the first characters of the waypoint name or scroll through the list.



Nearest Waypoints Option



Nearest Waypoints List with the first waypoint highlighted.

You can locate Personal Waypoints, Cities, and Interstate Exits included in the eMap basemap. If you are using a data cartridge with MetroGuide map data, you can also locate Points of Interest, Addresses and Intersections. If no map cartridge is installed the last three options will appear gray.

Using the Find Feature to Locate a Waypoint

Once you have created and saved a waypoint it will be stored on the Waypoints List in the Find Feature Menu.

To locate a waypoint:

1. Press the **FIND** key to display the Find Feature Menu.
2. If you want to select a waypoint from the list of Nearest Waypoints, press the **MENU** key to pop-up the waypoints option window. Highlight Find Nearest and press the **ENTER** key to display the list of Nearest Waypoints. Scroll down the list until the waypoint you desire is highlighted, then press the **ENTER** key.
3. Highlight the Waypoints option and press the **ENTER** key to display the Waypoints by Name List. If you know the name or number of the waypoint, you can press **ENTER** to highlight the first character in the name field at the top of the page and enter the first character of the waypoint name, adding characters until the waypoint you desire is displayed. The distance to the waypoint from your present position is displayed in the field at the bottom of the page. Press the **ENTER** key to display the waypoint page.

The Waypoint Page offers four options: you can edit information on the page, you can delete the waypoint, you can view the waypoint on the Map Page, and you can Goto the waypoint. After you select Goto, the Map Page will display a direct line from your present position to the waypoint along with the distance to go, speed, and direction of travel.

Using the Find Feature to Locate a City

If you want to locate or travel to a city you can use the Cities List in the Find Feature Menu. You can display it on the Map Page, Goto it, and view information about population size and distance from your present location.

To locate a city:

1. Press the **FIND** key to display the Find Feature Menu.
2. To find a nearby city, press the **MENU** key to access the 'Find Nearest' option and press the **ENTER** key to change the city list to the 'Nearest Cities' list. This list displays the 50 nearest cities to your location.
3. Use the **ROCKER** keypad to highlight the 'Cities' option and press **ENTER** to display the 'Cities by Name' List. If you know the name of the city, you can press the **ENTER** key to highlight the first character in the name field at the top of the page and then enter the first letter of the name using the **ROCKER** keypad, adding characters until the name of the city is displayed.
4. Press the **ENTER** key to display the City Page for the highlighted city. This page displays the city name, the size by population and the distance from your present location.
5. Use the **ROCKER** keypad to move from the 'OK' button to either the 'Map' or 'Goto' button and press the **ENTER** key. Pressing the 'Map' button displays the city on the Map Page. Pressing the 'Goto' button displays a direct line to the city, the distance, time to go and direction of travel.

Using the Find Feature

Cities by Name	
100 MILE HOUSE..	
100 MILE H, BC	
150 MILE H, BC	
70 MILE HO, BC	
ABACATE, AP	
ABACATE, PA	
ABACAXIS, AM	
ABADIA, BA	
Distance	NW 1536.6 mi
MENU to find nearest	

Nearest Cities	
Wellsville	
Fairway	
Mission Hills	
Stanley	
Mission Woods	
Westwood	
Westwood Hills	
Leawood	
Distance	E 21.1 mi
MENU to find by name	

City	
Westwood Hills	
Size	
Small Town	
Distance	
E 21.1 mi	
Goto	Map OK

Waypoint Map	
Map Pointer	N 39°02.395'
21.1 mi	082° W094°36.691'

Using the Find Feature



Nearest Exits List with Highlighted Selection.



Exit Page with list of services and desired service highlighted.



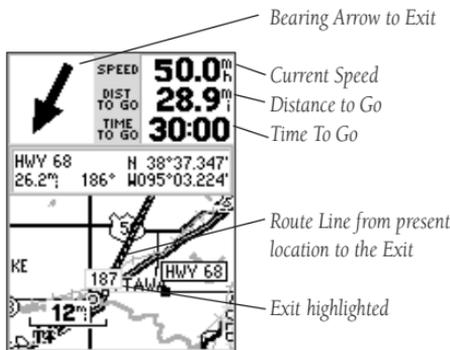
Service page with detailed list of services.

Using the Find Option to Locate an Exit

If you want to locate a nearby exit on an interstate highway you may find it on the Exits List in the Find Feature Menu. You can choose from a list of exit types to view and view a list of services.

To locate an exit:

1. Press the **FIND** key to display the Find Feature Menu.
2. Use the **ROCKER** keypad to highlight 'Exits' and then press the **ENTER** key. A pop-up menu will appear with a choice of exit types, 'All Types', 'Services', 'Rest Area', and 'Other'.
3. Press the **ENTER** key to select the type of exits you wish to view and the list of those types nearest to your location will appear. At the bottom of the list, a distance field indicates the distance from your present position to the highlighted exit on the list.
4. Pressing the **ENTER** key, while an exit is highlighted, will display the Exit Page with a list of services located near that exit. Highlighting a service from that list and pressing **ENTER** will display information about that service, such as types of fuel available, convenience store, etc.



Map Page with Exit

Using the Find Feature to Locate a Point of Interest:

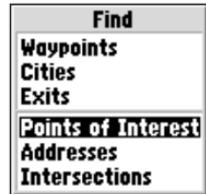
If you are using a map data cartridge and you want to locate a point of interest within the scope of the map data on the cartridge such as a restaurant, museum, motel, etc., you can select the 'Point of Interest' list from the 'Find' menu.

To locate a point of interest:

1. Press the **FIND** key to display the Find Feature Menu. Then, press the **ENTER** key to display the list of categories. A 'Select Map' page will appear if there is more than one map on the cartridge that has the information you are trying to find.
2. Highlight the category of your choice and then press **ENTER** to display the list of types.
3. Highlight the type of your choice and then press **ENTER** to display the list of the 'Points of Interest'. Press **MENU** to change from 'By Name' to 'Nearest' to display only those locations near your present position.
4. Highlight the item of your choice and press the **ENTER** key to display the information page for that item. The page will include the full name, address, and often the phone number.

The information page allows you to use the map button to view the location on the Map Page or use the Goto button to display a direct line to the location on the map page as well as time to, direction, and distance to the location. A message will display and a beep will be heard when you near the location. You can use the Route feature to construct a route using roads and intersections as waypoints to navigate to the location.

Using the Find Feature



Category and Types Lists



Highlighted Item



Information Page with Map and Goto buttons.

Using the Find Feature

Addresses	
Number	215
Street	-----
City (optional)	-----
Postal Code (optional)	-----
Find	

Make entries in each field.
City and Postal Code are optional entries.

Select Street Name
EW-----
Em Rd
Emanuel St
Emerald Cir
Emerald Dr
Emerald Rd
Emerson
Emerson Ave
N Emerson Rd
S Emerson Rd

Lists of streets, cities and postal codes allow selection and entry in Find Page fields.

Intersections	
First Street	E 100th St
Second Street	Emerald Rd
City (optional)	Admire, KS
Postal Code (optional)	-----
Find	

Enter street, city and postal code names from the lists provided. When finished, press the 'Find' button at the bottom of the page to view the location on the map.

Using the Find Option to Locate an Address or an Intersection

If you want to locate an address or intersection contained in the data on your map cartridge, you can select 'Address' or 'Intersection' from the 'Find' menu.

To locate an address:

1. Press the **FIND** key to display the Find Feature Menu. Use the **ROCKER** keypad to move down to highlight the 'Address' option and then, press the **ENTER** key to display the 'Find Address' page.
2. Press the **ENTER** key again to isolate the first block on the 'Number' field to begin entering the street number. Use the **ROCKER** keypad Up/Down bars to enter the street number and Left/Right bars to move to the next digit. Press the **ENTER** key when finished and move to the 'Street' field using the **ROCKER** keypad.
3. With the 'Street' field highlighted, press the **ENTER** key to display the 'Select Street Name' list. You can use the field at the top of the page to enter the beginning characters of the street name and the list will display matches as you add characters or you can press the **ENTER** key to move to the list and then use the **ROCKER** keypad to scroll through the street names until you find the street you want.
4. With the desired street highlighted, press the **ENTER** key to place the street name on the find page. Repeat this process for the 'City' and 'Postal Code' fields. Highlight the 'Find' button and press the **ENTER** key to view a list of possible address matches. Selecting one and pressing the **ENTER** key will display the 'Address' page, from which you can view the address on the map or Goto it.

To locate an intersection:

1. Press the **FIND** key to display the Find Options Menu. Use the **ROCKER** keypad to move down to highlight the 'Intersection' option and then, press the **ENTER** key to display the 'Find Intersection' page. Follow steps 3 and 4 described above to find and display the intersection on the map.

The eMap's Main Menu provides access to the Trip Computer Page, the Routes Page, the Tracks Page, GPS Information Page, and the Setup Options Files. The Main Menu can be accessed using the **MENU** key.

To display the Main Menu, press the MENU key twice.

There are seven menu options: Trip Computer, Routes, Tracks, GPS Information, MapSource Information, System Information, and System Setup (a group of three tab indexed pages). The icons at the bottom of the page provide information about backlighting status (lamp lit or unlit), and power usage (a battery with a gray fill that indicates battery capacity or power cord plug for external power use).

Battery Capacity Icon



To select a Main Menu option, highlight the desired item and press ENTER.

About the Trip Computer

The Trip Computer page provides you with current readouts for: Trip Odometer, Stopped Time, Moving Average Speed, Moving Time, Overall Average Speed, Total Traveling Time, Maximum Speed, and a total distance Odometer. The Trip Computer Option Menu allows you to reset the Maximum Speed, Trip Odometer, and the total distance Odometer.

To reset trip computer readouts:

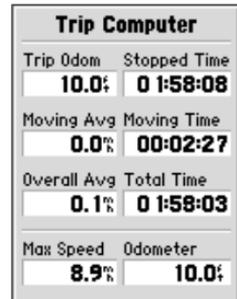
1. Press the **MENU** key with the Trip Computer Page displayed to "pop-up" the options list.
2. Highlight the desired reset option and press **ENTER**. You will be returned to the Trip Computer page with the chosen option reset.

Using the Main Menu



The Main Menu lists seven program options.

The Trip Computer



The Trip Computer Page provides information about time and speed.



There are three reset options.

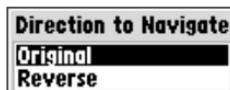
Tracks Page



The Tracks Page with a list of saved tracks. Tracks that are not named are assigned a date.



Saved Track Page with named track and 'TracBack' feature selected.



TracBack navigation option pop-up menu.



Track navigation on the Map Page.

The Tracks Page provides a record and visual reference of paths you have traveled while using the eMap. The GARMIN TracBack® navigation feature allows you to retrace your path using a 'Track' automatically stored in the eMap, eliminating the need to store waypoints along the way. Once saved, it becomes a 'Track'. The 'Track' is an electronic 'breadcrumb' trail, showing the path you have traveled. The eMap automatically records (logs) track information whenever your location is known.

To save a track:

1. With the 'Tracks' Page accessed from the Main Menu, first view the information on the page. You will observe in the 'Track Log' field, what percentage of memory available has been used. Highlight the 'Save' button, then press the **ENTER** key.
2. This will pop-up the 'Save Back Through' menu. Scroll down the list using the **ROCKER** keypad to select the time frame you want to save. Then press the **ENTER** key to save the track.
3. This will display a 'Saved Track' page for the newly saved track. A date and number for the track are display in the name field. You can now personalize the name by highlighting the field and entering a descriptive name of your choice.
4. You can then move to the 'Show on Main Map' field to place a check mark in the box if you wish to have the saved track always shown on the map.
5. Highlight the 'OK' button to save and return to the Tracks List or select 'Map' to view the track on the Map Page or 'TracBack' to begin navigation on the Map Page. Selecting 'TracBack' will pop-up an option window for 'Direction to Navigate'. Highlight the desired button and press the **ENTER** key to activate.

To navigate any saved track:

1. Access the 'Tracks' Page and highlight the track of your choice then press the **ENTER** key to pop-up the 'Saved Track' page.
2. Highlight the 'TracBack' button and press the **ENTER** key to begin navigation on the Map Page.

Route navigation allows you to create a sequence of intermediate waypoints which lead you to your final destination. The eMap will store one route, with up to 50 waypoints. A Route can be created and modified from the Route Page or can be created in MapSource and saved into the eMap.

To create a route by entering the name of each waypoint:

1. Access the 'Route' page from the Main Menu.
2. The Current Route is displayed or if no new route has been created the name field will state 'Empty' and will be highlighted.
3. Press the **MENU** key to pop-up the options menu and with 'Add Waypoint' highlighted press the **ENTER** key to display the 'Find' menu which lists Waypoints, Cities, Exits, Points of Interest, Addresses and Intersections. All of these categories can be used to create a waypoint on the 'Route' list.
4. Begin the process of selecting waypoints to add to the Waypoint list. Choose a waypoint, city, etc. and press the **ENTER** key to display the page for that location. Highlight the 'OK' button and press the **ENTER** key to place it on the Route list of waypoints. The route title will change as you add waypoints.

To navigate the route :

1. When you have finished adding waypoints to the Route, press the **MENU** key to pop-up the Route options menu and select 'Start Navigation' and press the **ENTER** key.

Observe that the Map Page is displayed and the map pointer is pointing in the direction of the first waypoint on the route, the compass has changed to a direction arrow and the distance to the first route waypoint is displayed above the map. A route line on the map connects all of the route waypoints. Travel to the first waypoint on the route using the pointer and map detail for guidance. When route direction changes, an 'Approaching Turn' message will appear on the screen.

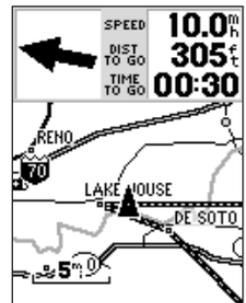
Route Page



Route Page with a named Route, list of waypoints, and cities. When navigating a Route, the Distance and ETA (arrival time) will display at the bottom of the page.



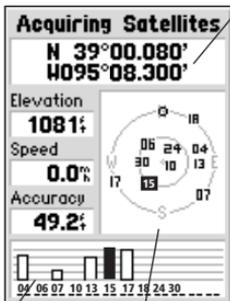
Select Waypoints, Cities, Exits, Points of Interest, Addresses and Intersections to build your route.



Route Displayed on Map Page

GPS Info Page

Current location coordinates.



Status Bars Sky View

The GPS Information Page acquiring satellites. Hollow bars indicate acquiring satellites.

Solid bars indicate acquired satellites and are identified by the highlighted numbers in the sky view.



GPS Status Page Options



Elevation Entry Field

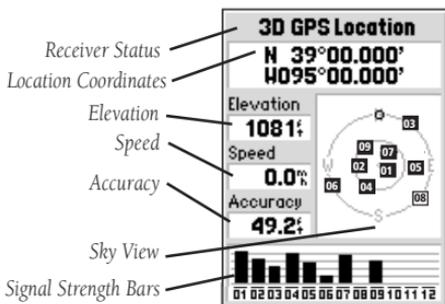
The GPS Information Page provides a visual reference of various receiver functions, including current satellite coverage, receiver operating mode, estimated accuracy, elevation, speed, and current location. As the receiver locks onto satellites, a signal strength bar will appear for each satellite in view, with the appropriate satellite number (01-32) underneath.

Each satellite has a 30-second data transmission that must be collected before that satellite can be used for navigation. Once a fix has been calculated, the eMap will update your position, track and speed, by using the best satellite signals.

You can use the GPS Information Page to set the Sky View orientation either 'North Up' or 'Track Up'. You can set your location, set your elevation from the pop-up options list.

When you first turn the unit on the page header will read 'Acquiring Satellites'. When it locks onto enough satellites to navigate it will read '2D GPS Location' or '3D GPS Location'.

When the 'Use Indoors' option is chosen from the Map Page Options Menu, the GPS Information Page will not be accessible.



The GPS Information Page

The MapSource Information Page

The MapSource Information Page shows you information about detailed map data contained on the optional map cartridge you can install in your eMap unit.

This page displays the map set name of the MapSource map data on the map cartridge. The name of the maps installed on the cartridge will be displayed in the center field along with a check box. The lower field displays complete information about the highlighted map.

If the check box for a map is checked, that map will be shown on the map pages. If the box is not checked the map will not be shown on the map pages. You cannot view multiple types of MapSource data at the same time.

When you leave a MetroGuide area for instance and enter a MapSource topographic map, the display will change to contour lines. The same is true when moving from a topo map to a MetroGuide Map. The MetroGuide maps are at the top of the hierarchy and will replace any other map information. Here is the list of hierarchy for your reference beginning with those titles that take precedence:

1. MetroGuides
2. US Road and Recreation
3. US Topographic
4. World Map

When the Map Page is displaying MapSource data the word "MapSource" will appear below the map scale bar in the lower left corner of the page.

The System Information Page

The System Information Page tells you the version of operating software installed in your eMap unit. You may need to refer to this page only when service to the unit is required.

MapSource Info



MapSource Info Page

System Info

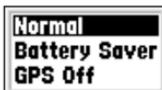


System Info Page

eMap Setup



'General' Settings File



Operating Mode Options



Backlight Timeout Options



Beeper Options



Units of Measure Options

Setup provides three tabbed pages to allow you to choose from various system setup options for 'General', 'Time' and 'Interface' settings. If you choose not to change a setting, it will remain at the factory set 'Default'.

'General' Settings Page:

The 'General' Settings Page allows you to choose between three operating modes, 'Normal' with the GPS receiver operating, 'Battery Saver' with a less frequent satellite signal updating process to save on battery power, and 'GPS Off' which allows you to operate the eMap with GPS receiver turned off to also save on battery power. The 'Use Indoors' option on the Map Page options menu functions the same as the 'GPS Off' mode.

The backlighting timeout delay can be set to stay on or to turn off automatically 15 seconds, 30 seconds, 1 or 2 minutes after the last time you have pressed a keypad key. When using the external power (cigarette lighter) adapter, the backlight does not timeout.

The audible 'Beeper' setting can be programmed to sound whenever a key is pressed or an on-screen message appears, only when a message appears, or off altogether.

The units of measure can be set to Statute, Metric, or Nautical.

To program the 'General' Settings Page:

1. Highlight the field you want to program using the **ROCKER** keypad and press the **ENTER** key to pop-up the options window.
2. Highlight the desired option using the **ROCKER** keypad and then press the **ENTER** key to confirm.

'Time' Settings Page

The 'Time' Settings Page allows you to choose from a 12 hour or 24 hour time format, enter the proper time zone, enter the proper UTC Time Offset and choose to activate or deactivate Daylight Savings Time.

When you select 12 hour time formatting, the clock will read like a standard clock with 12 hour AM and 12 hour PM cycles. The 24 hour option sets the eMap to display a 24 hour cycle (Military Time).

The time zone can be set to any one of nine pre-programmed zones or by entering the UTC Time Offset value in the field to the right of the time zone field. You can find time offset values for your longitude by following instructions and the Time Offset Chart on page 34.

Daylight savings time can be set to Automatic (using the built-in almanac to automatically change the clock settings when daylight savings goes into or out of effect). You can choose 'Yes' to manually add daylight savings or 'No' to remain on standard time.

'Current Date' and 'Current Time' fields are not programmable.

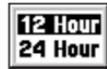
To program the 'Time' Settings Page:

1. Highlight the field you want to program using the **ROCKER** keypad and press the **ENTER** key to pop-up the options window.
2. Highlight the desired option using the **ROCKER** keypad and then press the **ENTER** key to confirm.
3. To exit the Setup program, press the **ESCAPE** key.
4. To enter a special UTC time offset value, you must first highlight the UTC Offset field. Press **ENTER** to highlight the first digit then use the **ROCKER** keypad Up/Down arrows to enter the first digit from the UTC Time Offset Chart (page 34). Use the Right arrow to move to the next digit and repeat the process until the value has been entered then press **ENTER** to confirm your entry. The 'Time Zone' entry will automatically change to match the UTC offset.

eMap Setup

General	Time	Inter:
Time Format		
12 Hour		
Time Zone		UTC Offset
Central		-06:00
Daylight Savings Time		
Auto		
Current Date		
31-DEC-04		
Current Time		
06:00:24M		

'Time' Settings File



Time Format Options



Time Zone Options



Daylight Savings Time Options

General	Time	Inter:
Time Format		
12 Hour		
Time Zone		UTC Offset
Central		-03:00
Daylight Savings Time		
Auto		
Current Date		
31-DEC-04		
Current Time		
06:00:44M		

UTC Time Offset Entry
(See Appendix E)

Date and Time are fixed fields, but change with 'Offset' settings.

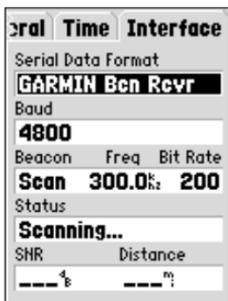
eMap Setup



'Interface' Settings File



Serial Data Format Options



Serial Data Format Page for a GARMIN Beacon Receiver. When set for 'Scan' the unit will stop at the first received beacon signal. When set for 'User' you must enter the frequency of the desired beacon and adjust the bit rate. The 'Status' field provides advisory information about the beacon status and a message will appear if the beacon signal is not being received.

'Interface' Settings Page

The 'Interface' Settings Page allows you to choose from 7 different input/output serial data formats, or none at all. This feature is used when connecting your eMap unit to external NMEA devices, DGPS beacon receiver, a personal computer, etc. Below is a description of each format:

- GARMIN - the proprietary format used to exchange waypoint, track, and map data with a PC.
- GARMIN Beacon Receiver - Allows DGPS input using a GARMIN beacon receiver and a standard RTCM SC-104 format and DGPS tuning.
- NMEA Out - supports the output of standard NMEA 0183 version 2.0 data.
- Text Out - allows simple ASCII text output of location and velocity information, without any input capabilities.
- RTCM In - allows DGPS input using a standard RTCM SC-104 format without any output capabilities.
- RTCM In/NMEA Out - allows DGPS input using a standard RTCM SC-104 format and supports the output of standard NMEA 0183 version 2.0 data.
- RTCM In/Text Out - allows DGPS input using a standard RTCM SC-104 format and simple ASCII text output of location and velocity information.
- None - Provides no interfacing capabilities.

To program the 'Interface' Settings Page:

1. Highlight the Serial Data Format field using the **ROCKER** keypad then press the **ENTER** key to display the pop-up list of serial data format options. Make your selection and press the **ENTER** key to confirm.
2. If 'GARMIN Beacon Receiver' or 'RTCM In/NMEA Out' format is selected, additional fields are provided to control a GARMIN differential beacon receiver (e.g. GBR 21) directly from your eMap unit. Tuning is automatic with 'Scan' or you can enter the beacon frequency and bit rate when you select 'User' from the Beacon pop-up list to manually tune the receiver.

Standard Accessories *(Included with the eMap Unit)***Lanyard.....Part No. 013-00005-00**

Provides convenient method for carrying the eMap. Attaches to a slot on the back of the unit.

Owner's Manual.....Part No. 190-00152-00**Quick Start Guide..... Part No. 190-00152-01****Optional Accessories** *(Not included with the eMap Unit)***Impact Resistant Cover Part No. 010-10234-00**

Provides impact and moisture barrier to protect internal components in harsh environments. Includes neck lanyard.

Carrying Case..... Part No. 010-10235-00

Protects the eMap while not in use.

Utility Carrying Case.....Part No. 010-10117-01Large enough to hold the eMap and accessories. *(Not shown)***Vehicle Dash Mount.....Part No. 010-10202-00**

Attaches to vehicle dash or any flat surface.

Vehicle Suction Mount.....Part No. 010-10262-00

Attaches to vehicle windshield or any smooth flat surface.

Bicycle MountPart No. 010-10204-00

Attaches eMap to bicycle handlebar.

Vehicular Power Adapter Part No. 010-10203-00

Provides unit operation from an automobile cigarette lighter.

GA 27C Remote GPS Antenna. Part No. 010-10052-05

Magnetic or windshield mount for enhanced satellite acquisition.

PC Data CablePart No. 010-10206-00

Allows transfer of map data from a PC to an eMap data cartridge.

Data Cable Part No. 010-10205-00

Wiring harness. Connections for data input/output.

MapSource® Map Data CD-ROMs

Allows downloading of detailed map data to eMap data cartridges. See your GARMIN dealer for MapSource details.

MetroGuide® Cartridges

Provides detailed metropolitan area map information for major US cities. Request MetroGuide Listing: P/N 190-00120-04

8 MB Blank Data Cartridge...Part No. 010-10227-00

Stores detailed map information via downloadable GARMIN MapSource CD-ROMs.

16 MB Blank Data Cartridge.Part No. 010-10226-00

Stores detailed map information via downloadable GARMIN MapSource CD-ROMs.

CAUTION: GARMIN Accessories have been designed and tested specifically for use with GARMIN products. Accessories offered for sale by other manufacturers have not necessarily been tested or approved by GARMIN for use with GARMIN Products. Use of such accessories might cause damage to your GARMIN Product and void the terms of the warranty. Using GARMIN Accessories with other manufacturer's products is not recommended for the same reasons.

Accessories

Lanyard



Impact Resistant Cover



Carrying Case



Vehicle Dash Mount



Vehicle Suction Mount



Bicycle Mount



Vehicular Power Adapter



GA 27C Remote Antenna



MetroGuide Cartridges

Specifications

PHYSICAL

Case:	High-impact plastic alloy, waterproof to IPX2 standards
Size:	5.5" x 2.375" x .815"
Weight:	Approx. 6.7 oz. (190g) w/batteries
Operating Range:	5° to 158°F (-15° to 70°)

PERFORMANCE:

Receiver:	Differential ready PhaseTrac12™
Acquisition Time:	Approximately 15 seconds (warm start) Approximately 45 seconds (EzInit™/cold start) Approximately 5 minutes (AutoLocate™)
Update Rate:	1/second, continuous
Position Accuracy:	15 meters (49 feet) RMS* 1-5 meters (3-15 ft) with DGPS corrections**
Velocity Accuracy:	0.1 knots RMS steady state
Dynamics:	Performs to specifications to 6 g's
Interfaces:	RS232 w/NMEA 0183, RTCM 104 DGPS data format and proprietary GARMIN
Antenna:	Built-In (Patch)

POWER:

Input:	Two 1.5 volt AA batteries.
Power Consumption:	340 mW
Battery Life:	Up to 14 hours (with 2 AA batteries) in Power Saver Mode

Specifications subject to change without notice.

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

**With optional GARMIN GBR 21 Beacon Receiver input

The temperature rating for the eMap may exceed the usable range of some batteries. Alkaline batteries can rupture at high temperatures. Alkaline batteries lose a significant amount of their capacity as temperature decreases. If using the eMap in below freezing temperatures, use lithium batteries for longer battery life. Extensive use of backlighting will also significantly reduce battery life.

Messages

The eMap uses an on-screen pop-up message system to alert you to unit operating characteristics. Press the **ENTER** key to acknowledge and return to the page you were viewing.

Approaching Turn - You are less than one minute away from a turn in your route.

Arriving at Destination - You have reached your destination.

Base Map Failed - The unit's base map has failed. Return your unit to GARMIN for service.

Batteries Low - The batteries in your unit are low and no longer capable of supporting unit operation. Install new batteries.

Database Error - There is an error in the unit's database. Service is required.

GPS Turned Off (for use indoors) - The eMap's GPS receiver has been turned off to conserve battery power and speed Map Page display redrawing.

Lost Satellite Reception - The unit has lost satellite signals. Try moving to another location with a clearer view of the sky.

No Differential GPS Position - The beacon receiver is not communicating with the unit. Refer to the 'Interface' setup page of the unit to view messages in the 'Status' field.

None Found - There is no such address, intersection, point of interest, or city in the map information database. Check spelling or number entry and try again.

RAM Failed - The eMap has detected a failure in its internal memory. If the message persists, service is required.

ROM Failed - The permanent memory has failed and the unit is not operable. Service is required.

Route Memory Full - No additional waypoints can be added.

Route Truncated - A complete uploaded route will not fit into memory. Modify the route to reduce size.

Messages

Track Memory Full - All of the saved track locations are used.

Track Truncated - A complete uploaded track will not fit into memory. Clear existing track memory or reduce the amount of new track data.

Transfer Complete - The eMap has finished uploading or downloading information to the connected device.

Waypoint Already Exists - The name you selected has already been assigned. Choose another name.

Waypoint Memory Full - All 500 waypoints have been assigned.

Cleaning

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

Storage

Storing alkaline batteries in the unit for extended periods is not recommended. In order to reduce the chance for battery leakage in the battery compartment and map data cartridge slot, remove the batteries when storing the unit for more than six months.

Water Immersion

The eMap is not waterproof. It may withstand momentary immersion if retrieved quickly and wiped dry. However, the battery compartment and map cartridge slot may retain residual water and should be wiped out with a clean cloth and allowed to air dry with the compartment cover removed before reuse.

Impact Resistance

The eMap unit will withstand occasional impact from hand to floor without major damage. However, if frequently used in an outdoor environment, the Impact Resistant Cover is recommended. Refer to the List of Optional Accessories on page 29.



*Impact Resistant
Cover*

Trouble-Shooting Guide

To resolve problems that cannot be remedied using this guide: Contact GARMIN Customer Service at 913-397-8200

Symptom	Probable Cause	Remedy
Unit does not turn ON	Batteries are exhausted.	Replace batteries.
“Poor GPS Coverage” message is constant.	Your location does not allow a clear view of the sky.	Move to a new location.
Unit will not power ON even with new batteries.	Batteries may be installed backwards. Unit has sustained damage from water or impact.	Reinstall batteries. Return unit to GARMIN for service.
Unit powers up, but then turns OFF	Batteries may be nearly exhausted.	Replace batteries.

The eMap is programmed to provide “pop-up” messages concerning operational characteristics and conditions. Refer to Appendix C.

UTC Time Offset Chart



To determine your longitudinal zone: press the ENTER key to mark a waypoint and observe the longitudinal coordinate in the Location field.

Match it to a set of values on the chart to the right and select the Offset value to be entered in the UTC Offset field on the Time tab of the setup menu.



Note that when you select a time zone from the 'Time Zone' list, the 'UTC Time Offset' is automatically entered. You need to enter the 'UTC Offset' only when not in a listed time zone.

This chart is provided to help you determine the time offset settings for your current location if it not in one of the time zones listed on the Time Setup Page. To change the UTC Offset, if necessary, press the **MENU** key twice to access the Main Menu. Then scroll down to the Setup option, press **ENTER** to access and then tab over to the 'Time' page. Highlight the UTC Offset field and press **ENTER** to enter the appropriate offset value from the chart below. To determine your longitudinal zone, press **ENTER** to mark your position and observe the longitude value in the Location field. It should fall between one of the sets of values on the chart.

Longitudinal Zone	Offset
W180.0° to W172.5°	-12.00
W172.5° to W157.5°	-11.00
W157.5° to W142.5°	-10.00
W142.5° to W127.5°	-09.00
W127.5° to W112.5°	-08.00
W112.5° to W097.5°	-07.00
W097.5° to W082.5°	-06.00
W082.5° to W067.5°	-05.00
W067.5° to W052.5°	-04.00
W052.5° to W037.5°	-03.00
W037.5° to W022.5°	-02.00
W022.5° to W007.5°	-01.00
W007.5° to E007.5°	-00.00
E007.5° to E022.5°	01.00
E022.5° to E037.5°	02.00
E052.5° to E067.5°	03.00
E067.5° to E082.5°	04.00
E082.5° to E097.5°	05.00
E097.5° to E112.5°	06.00
E112.5° to E122.5°	07.00
E122.5° to E127.5°	08.00
E127.5° to E142.5°	09.00
E142.5° to E157.5°	10.00
E157.5° to E172.5°	11.00
E172.5° to E180.5°	12.00

Wiring/ Interfaces

Interface formats are selected from the Setup “Interface” on page 28 of this manual. The input/output lines on your eMap unit are RS-232 compatible, allowing easy interface to a wide range of external devices, including PCs, differential beacon receivers, marine autopilots and /or a second GPS receiver.

The NMEA 0183 version 2.0 interface format is supported by the eMap and enables the unit to drive up to three NMEA devices.

NMEA 0183 Version 2.0 Approved Sentences:

GPGGA, GPGLL, GPGSA, GPGSV, GPRMB,
GPRMC, GPRTE, GPWPL, GPBOD

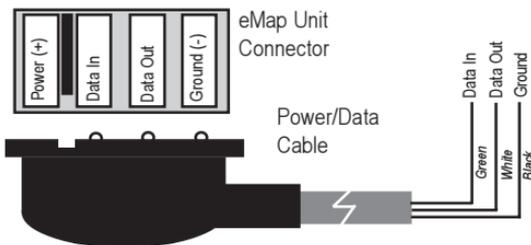
GARMIN Proprietary Sentences:

PGRME (estimated error), PGRMM (map datum),
PGRMZ (altitude), PSLIB (beacon receiver control)

DGPS (Differential GPS) corrections are accepted in RTCM SC-104 version 2.0 format through the ‘Data In’ line. The GARMIN GBR 21 is the recommended beacon receiver for use with the eMap. Other beacon receivers with the correct RTCM format may be used, but may not correctly display status or allow tuning control from the GPS unit.

The eMap may be hard-wired to a serial connector using the Data Cable (see Appendix A for ordering information). Refer to the wiring diagram and the eMap unit data connection illustrated below.

The optional Data Cable is provided to connect your eMap to a PC-compatible computer’s serial port (PC Interface Cable) .



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Limited Warranty

GARMIN Corporation warrants this product to be free from defects in materials and workmanship for one year from the date of purchase. GARMIN will, at its sole option, repair or replace any components which fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor. The customer is, however, responsible for any transportation costs. 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 EXPRESSED OR IMPLIED, INCLUDING ANY LIABILITY ARISING UNDER 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 EXCLUSIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

To obtain warranty service, call the GARMIN Customer Service department (913-397-8200) for a returned merchandise tracking number. The unit should be securely packaged with the tracking number clearly marked on the outside of the package, and sent freight prepaid and insured to a GARMIN warranty service station. A copy of the original sales receipt is required as the proof of purchase for warranty repairs. 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



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