

Cobra®

Operating Instructions for Your

GPS 500

GLOBAL POSITIONING SYSTEM RECEIVER



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Important Information

► CAUTIONS

The user is responsible for operating this product wisely. The product is intended for use only as a navigational aid and should not be used when precise measurement of direction, location, distance or topography is required.

GPS (Global Positioning System) is operated by the U.S. government, which is solely responsible for its accuracy and maintenance. The system is subject to changes, which could affect the accuracy and performance of GPS equipment.

Remove the batteries from the unit if you do not expect to use it for months at a time. As with any batteries, leakage can occur. When re-installing batteries, observe proper polarity.

STOP WARNINGS

If you choose to use this device in a vehicle, it is the sole responsibility of the operator of the vehicle to use this device in a safe manner. Be careful to avoid being distracted from safe and proper driving practices.

If you choose to use this device in a vehicle, it is the sole responsibility of the operator 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 GPS receiver over airbag panels or in a place where the driver or passengers are likely to have an impact with the device in an accident or collision.

NOTE

Cobra Electronics Corporation reserves the right to change or improve information in this manual without notice. Please visit www.cobra.com for updates or questions.

Customer Support

In this user's manual, you should find all the information you need to operate your GPS 500. If you require further assistance after reading through this manual, Cobra® Electronics offers the following customer support services: In the USA:

Automated Help Desk is available in English 24 hours a day, 7 days a week at 773-889-3087.

Customer Service Operators are available in English and Spanish at 773-889-3087 Monday to Friday, 8:00 a.m. to 6:00 p.m. CST.

Questions can be faxed to 773-622-2269.

Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via e-mail at: productinfo@cobra.com

On-line answers to frequently asked questions (in English only) can be found at: www.cobra.com.

Outside the U.S.A., **please contact your local dealer.**

Non-English Manuals

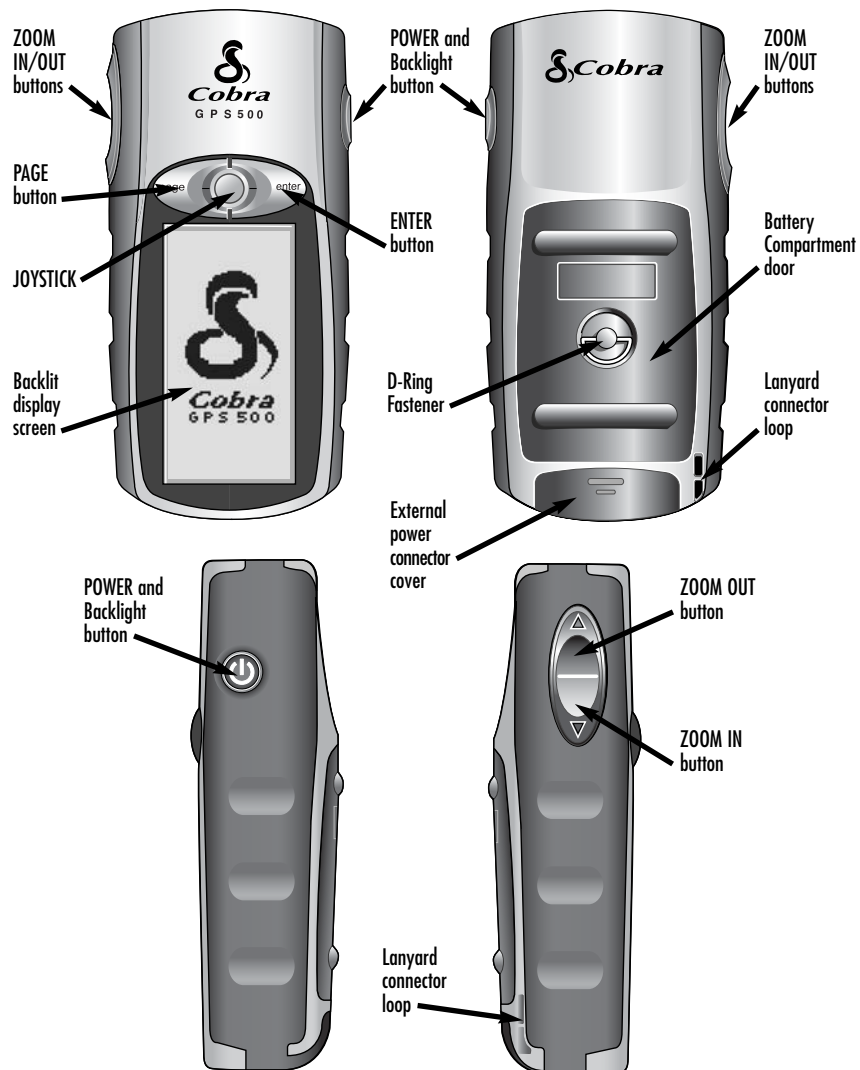
The GPS 500 is equipped to communicate in the language of your choice: English, Dutch, French, German, Italian, Portuguese, Spanish or Swedish, (see "System Page-Settings: Languages," page 50).

For operating instructions in Dutch, French, German, Italian, Portuguese, Spanish or Swedish please visit www.cobra.com/gps-manuals.html.

FCC Compliance

This device complies with Class B of the FCC rules.

Operation is subject to the condition that this device does not cause harmful interference. It must accept any interference received, including that which may cause undesirable operation.



Congratulations!

You've made a smart choice by purchasing the GPS 500 Global Positioning System receiver from Cobra®. Designed to give you access to the most advanced satellite navigation technology available, your GPS 500 offers you these sophisticated features and capabilities:

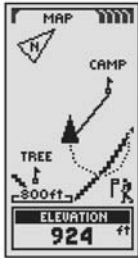
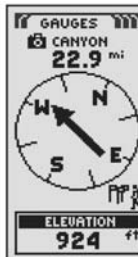
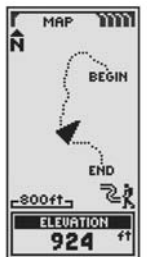
Features:

- **Cobra® EXCLUSIVE** 18-channel technology gives you the quickest acquisition time of any handheld recreational GPS receiver available
- Locks on to signals from satellites. Delivers accurate positioning within as little as 3 meters
- Displays the route to your destination and your progress along that route
- Indicates direction of travel to your destination with a compass pointer
- Displays current position, altitude, bearing, time of day, current speed of travel, average speed throughout your trip and estimated time of arrival at your destination
- Stores up to 500 navigational waypoints
- Lets you program and store up to 20 different navigational routes, using up to 50 points in each route
- With optional accessories, can interface and share data with computer mapping software
- Allows you to navigate to cities already programmed into the unit's memory, or to points of interest you can load from a computer
- Automatically tracks your travel, and shows you how to return along the same track (up to 10 separate tracks can be stored)
- Easy-to-use joystick simplifies operation
- Up to 100 map datums to choose from
- Display screen can be backlit for maximum visibility
- Is waterproof to IXP7 (submerged 1 meter for 30 minutes) standards and can operate in temperatures from 5°F to 158°F (-15°C to 70°C)
- With optional computer software and interface cable, you can connect to any PC to transfer data and take advantage of powerful mapping functions
- Already programmed with continental U.S. state, Canadian provincial and European country boundaries



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1 "GoTo" on Map Page**2 "GoTo" on Gauges Page****3 "GoTo" City/Town on Map Page****4 "GoTo" POI on Gauges Page****5 Navigate Route on Gauges Page****6 Navigate Track on Map Page**

Making Travel Easier

Your Cobra® GPS 500 receiver makes travel easier through the following ways:

GoTo a Waypoint – The GPS 500 can guide you in a straight line to a single point. (See **1** and **2**)

GoTo a City/Town – The GPS 500 is already programmed with hundreds of cities/towns worldwide and can guide you in a straight line to a selected city/town. (See **3**)

NOTE: A city/town is much larger than the precise location indicated by the coordinates stored in your GPS 500. The coordinates assigned to a city/town correspond to a location somewhere within the city/town's limits. These coordinates are intended only for navigation to the city/town, and not for finding a specific location such as the "downtown", commercial area or geographic center. A waypoint or point of interest can be used for more precise navigation within a city/town.

GoTo a Point of Interest – With optional computer software and an interface cable, the GPS 500 can be connected to a computer to take advantage of powerful mapping programs and to transfer data back and forth between the computer and your unit. Points of interest transferred from a computer can be used as points within routes for navigation purposes or your unit can guide you in a straight line to a selected Point of Interest. (See **4**)

Navigate a Route – The GPS 500 gives you the opportunity to select two or more waypoints or points of interest to create up to 20 routes. You can then use your GPS 500 to guide you in a straight line from point to point through a selected route. (See **5**)

Navigate a Track – The GPS 500 automatically keeps a record of your progress as you travel and gives you a graphic representation or "track log" of the path or track you have taken. You can use the track log to create a track that you can recall for navigation. The track can be navigated in the forward or the reverse direction of the original travel. (See **6**)

This manual is designed to help you take advantage of these and our many other features. We suggest that you begin by reading the "General Information" and "Five Main Pages" sections first. If you are not familiar with the satellite navigation technology, these will help you understand the basics. Then, take your Cobra® GPS receiver outside and practice while you read the sections on how to operate it.

GPS Basics

The Global Positioning System (GPS) is a space-based radio-navigation system. It consists of 24 satellites, which orbit the earth at an altitude of approximately 11,000 miles, and ground stations. GPS provides users with accurate information on position, velocity and time. This is available anywhere in the world and in most weather conditions.

GPS was initiated in 1973 to reduce the proliferation of navigation aids by the United States Department of Defense. By creating a robust system that overcame the limitations of many previously existing navigation systems, GPS became attractive to a broader spectrum of users. GPS has been successful in classic applications such as aviation and marine navigation since it was first developed. Since then, it has become useful for a wide range of people because its capabilities are accessible using small, affordable equipment. What was once available only in very expensive equipment, Cobra® brings to you with our high-quality line of affordable handheld GPS receivers.

How GPS Works

GPS uses a global network of 24 satellites that transmit radio signals to earth from high earth orbit. Thankfully for users, the United States has offered free use of the system to the international community. Many international user groups have accepted GPS as the core for an international civil satellite navigation capability.

GPS service provides users with extremely accurate positioning information anywhere on or near the surface of the earth. To accomplish this, each of the 24 satellites emits signals to receivers below. GPS determines location by computing the difference between the time that a signal is sent and the time it is received. GPS satellites carry atomic clocks that provide extremely accurate time information. The time information is placed in the codes broadcast by the

satellite so that a receiver can continuously determine the time the signal was broadcast. The signal contains data that your Cobra® GPS receiver uses to compute the locations of the satellites and to make other adjustments needed for accurate positioning. Your Cobra® GPS receiver uses the time difference between the time of signal reception and the broadcast time to compute the distance, or range, from the receiver to the satellite. With information about the ranges to four satellites and the location of each satellite when the signal was sent, your Cobra® receiver can compute its own three-dimensional position: latitude, longitude, and altitude. People think of GPS as having three segments: control, space and user. What follows is a little information about each segment.

Control Segment

The Control Segment of GPS consists of the Master Control Station, Monitor Stations and Ground Antennas.

The one master control station, located at Falcon Air Force Base in Colorado Springs, Colorado, USA is responsible for overall management of the remote monitoring and transmission sites. As the center for support operations, it calculates any position or clock errors for each individual satellite, based on information received from the monitor stations. Then it "orders" the appropriate ground antennas to relay the corrective information back to that satellite.

Five monitor stations are located at Falcon Air Force Base in Colorado, Hawaii, Ascension Island in the Atlantic Ocean, Diego Garcia Atoll in the Indian Ocean and Kwajalein Island in the South Pacific Ocean. Each of the monitor stations checks the exact altitude, position, speed and overall health of the orbiting satellites. The control segment uses measurements collected by the monitor stations to predict each satellite's orbit and clock. The prediction data is up-linked, or transmitted, to the satellites for transmission back to the

continued

users. The control segment also ensures that the GPS satellite orbits and clocks remain as designed. A station can track up to 11 satellites at a time. Each station performs this "check-up" twice a day, as the satellites complete their journeys around the earth. Noted variations, such as those caused by the gravity of the moon and sun and the pressure of solar radiation, are passed along to the master control station.

The last of the three pieces of the control segment of GPS are the ground antennas. Ground antennas monitor and track the satellites from horizon to horizon. They also transmit correction information to individual satellites.

Space Segment

The space segment includes the satellites and the Delta rockets that launch the satellites from Cape Canaveral in Florida. GPS satellites fly in circular orbits at an altitude of 10,900 miles (17,500 km) and with a period of 12 hours. The orbits are tilted to the earth's equator by 55 degrees to ensure coverage of the polar regions. Powered by solar cells, the satellites continuously orient themselves to point their solar panels toward the sun and their antenna toward the earth. Each of the 24 satellites, positioned in 6 orbital planes, circles the earth twice a day.

The satellites are composed of three major subsystems: Solar Panels, Internal Components and External Components.

Solar Panels

Each satellite is equipped with solar array panels. These panels capture energy from the sun, which provides power for the satellite throughout its life.

Internal Components

Internal components are subsystems such as atomic clocks and radio transmitters. Each satellite contains four atomic clocks. These clocks are accurate to a nanosecond

or a billionth of a second. The atomic clocks within the satellites are so accurate because even an extremely small time inaccuracy would translate into an extremely large position difference (1/100 of a second inaccuracy translates to a position difference of 1,860 miles to any GPS receiver).

External Components

The exterior of the GPS satellite has a variety of antennas. The signals generated by the radio transmitter are sent to your Cobra® GPS receiver via L-band antennas. Another component of the satellite is the radio transmitter, which generates the signal. Each of the 24 satellites transmits its own unique code in the signal.

User Segment

You and your Cobra® GPS receiver are a part of the user segment along with many other private individuals and military personnel and their GPS receivers. Military GPS equipment has been integrated into fighters, bombers, tankers, helicopters, ships, submarines, tanks, jeeps and soldiers' equipment. GPS is also used on space shuttles.

Cutting-edge satellite navigation technology coupled with your Cobra® GPS receiver can help overcome many of the hardships and hazards associated with recreation. Your Cobra® GPS receiver allows you to go practically anywhere with confidence knowing precisely where you are at all times. With your Cobra® GPS receiver, you will be able to record accurately any location and return to that precise spot, time and again, anytime, anywhere.

Data Field Choices Descriptions

Your Cobra® GPS 500 has the ability to display various types of information to you. In order to take advantage of the rich information available to you, it is important that you understand the meaning of certain terms. Below is a list of terms that will aid you in using your Cobra® GPS 500.

Accuracy - the distance within which the unit can accurately locate a position

Avg Speed - average speed throughout the current navigation

Bearing - the direction you are currently heading

Date - the current date

Destination - the destination is the last point on a route, or the end of a track

Elevation - your current elevation above sea level

ETA - Estimated Time of Arrival, based on the average speed you have traveled over the course of your entire route or track

Location - your current location shown in degrees/minutes of latitude and longitude

Max Speed - the highest speed that you have traveled during the current navigation

Odometer - total cumulative distance traveled since the last time the odometer was reset

Power - power icon showing power source (external or battery), battery charge level, and backlight On or Off

Speed - your current speed

Time - the current time in your selected time zone

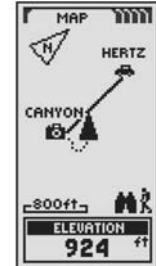
Trip Odom - the distance traveled since the last time the trip odometer was reset

Trip Time - the trip time is the total time that has elapsed during your current navigation since your last reset

Set Data Display



Map Page



Set Data Display



Gauges Page



Set Data Display



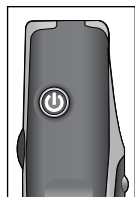
Trip Meter Page



1 2



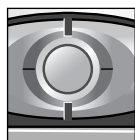
3 POWER Button



4 PAGE Button



5 JOYSTICK



Installing Batteries 1 2

Your GPS 500 operates on two standard AA batteries (not included). Always use high-quality alkaline batteries. To install batteries, twist the D-ring connector counterclockwise (anticlockwise) and remove the battery compartment cover. Insert two AA batteries ensuring correct polarity alignment. Replace the battery compartment cover and twist the D-ring clockwise to lock.

As an optional power source, an Automotive Power Adapter (not included, see "Optional Accessories", page 63) can be used with your GPS 500.

Using the Buttons and Joystick

You can access all features of your GPS 500 by using three buttons and the joystick. After reading the general explanations below, please refer to "Using the Map Page," page 10, to begin using the buttons to operate your unit.

The POWER Button 3

Pressing and holding the POWER button for 2 seconds will turn the device on or off.

With the unit turned on, pressing and releasing the POWER button will turn on the display backlight. The display will remain lit until no buttons have been pushed for 15 seconds (for more details, see page 47).

The PAGE Button 4

Pressing and releasing the PAGE button allows you to cycle through the five main pages (described in the next section). If you have proceeded to one of the menus (described later in this manual), the PAGE button is an "escape" key, allowing you to exit the menu and return to the previous screen. At any time, pressing and holding the PAGE button for 2 seconds will display the Page List menu. From this menu you can go directly to any main page.

The JOYSTICK 5

Whenever you see a menu of selections, pushing the JOYSTICK up or down allows you to scroll through the selections displayed. A side scroll bar next to a menu indicates that more selections can be viewed by scrolling beyond the bottom or top of the list that is currently visible. The JOYSTICK is also used to move around the Map page (see page 12).

continued

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The ENTER Button 6

Pressing and releasing the ENTER button accepts a highlighted selection.

The ENTER button can also be used as a Waypoint shortcut.

To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.

The ZOOM IN/OUT Button 7

When a map is displayed, you can use the ZOOM IN/OUT button to zoom in or zoom out on the image of the map.

Turning the Power On 8 9

To turn on your GPS 500, press and hold the POWER button for 2 seconds. A start-up screen appears for a few seconds, followed by a screen that shows that the unit is attempting to lock on to signals from GPS satellites. Once three satellite signals have been acquired, the screen will automatically switch to the Map page and the unit is ready to use.

NOTE: The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

To turn the power off, press and hold the POWER button for 2 seconds.

NOTE: When you use the GPS 500 for the first time, it will take up to approximately 50 seconds to lock on to the GPS satellites.

Powersave Mode 10 11

If you wish to save battery power while using just the non-navigational features of your unit, you can turn GPS navigation off. To do so, while still in the Acquiring Satellites screen, highlight using the JOYSTICK and select NO by pressing the ENTER button. To turn GPS navigation off after the screen automatically changes to the Map page, see page 46.

In Powersave Mode, no GPS functions will be available until you turn GPS back on. To do so, please refer to page 46.

NOTE: You can turn GPS off at any time. Please see "Turning GPS Off and On," page 46.

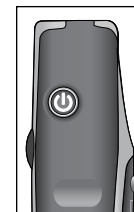
6 ENTER Button



7 ZOOM IN/OUT Button



8 Power Button



9 Startup Screen

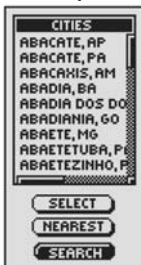


10 Enter Button



11 GPS Status Screen



1 Waypoint**2** Cities/Towns**3** POI**Navigating with the GPS 500**

Your GPS 500 receives signals from Global Positioning System satellites that are in fixed orbits (stationary relative to the ground) around the earth. By acquiring — or locking on to — the signals from at least three satellites, your unit can use triangulation to precisely determine your current position, elevation above sea level and bearing (the direction you are facing). As you travel, the unit automatically acquires the strongest satellite signals available at your current location. By becoming familiar with the unit's basic operating features, you will be able to use its powerful navigational capabilities.

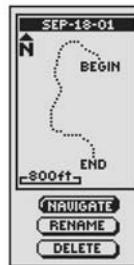
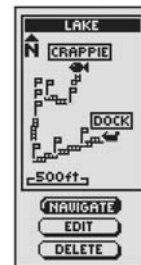
Waypoint, City/Town or Point of Interest 1 2 3

You can create waypoints. A waypoint is a specific location that you ask the unit to record. In this manual, you will learn how to mark your current location as a waypoint, or set the coordinates for a waypoint anywhere in the world. You can create and store up to 500 waypoints. You can ask the unit to show you the direction of travel to an individual waypoint, or how to navigate along a series of waypoints.

Already stored in your GPS 500 are coordinates for hundreds of cities throughout the world plus continental U.S. state, Canadian provincial and European country boundaries. You can also select any city/town and ask the unit to show you the direction of travel to that city/town.

With optional computer software and interface cable, you can access a computer mapping database to load the coordinates for points of interest (POIs) into your GPS 500. This gives you access to hundreds of points of interest, which you can use as waypoints for navigation.

continued

4 Track**5** Route**Track 4**

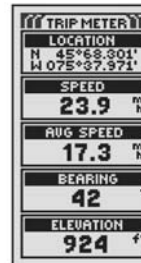
Your GPS 500 automatically keeps a record of your travel, called a track. The unit shows you a map-like picture of your track. You can create and store up to 10 different tracks. Each track can be recalled and used for navigation as the unit shows you how to retrace the track again, either forward or in the reverse direction. When traveling in unfamiliar territory, this is a quick and easy way to make sure you always know how to get back to your starting point.

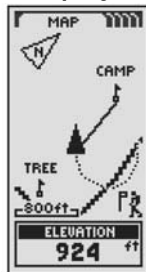
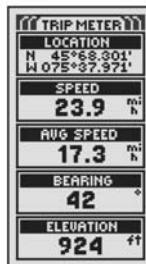
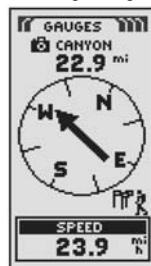
Route 5

A route is a series of waypoints which you choose to navigate in a specific sequence. Up to 50 points may be stored in a route. Once you have created a route, your GPS 500 will guide you from point to point. As you reach each point, the unit automatically begins navigating to the next one.

Trip Meter 6

Along with the navigational features, the trip meter in your GPS 500 keeps accurate time, allowing it to precisely calculate your speed of travel, average speed throughout your trip and estimated time of arrival (ETA) at your chosen destination.

6 Trip Meter

1 Map Page**3** Trip Meter Page**2** Gauges Page**4** Nav Data Page**5** System Page

The Five Main Pages

In the following sections of this manual, you will learn how to use five main pages to access all the features of your GPS 500:

Map Page 1

The Map page displays a map of your current position in relation to any waypoints, cities/towns, and points of interest (POI) that you have selected. It can show you the “GoTo” direction of travel to a selected destination. The Map page also shows you the track that you have traveled along. If you have created a route, the map can show you that route and your current position on it (see page 10).

Gauges Page 2

The Gauges page displays a compass that shows your current direction of travel or the direction to your next waypoint. The data field currently showing “speed” is user-selectable (see page 14).

Trip Meter Page 3

The Trip Meter page displays a number of use-selectable fields with information about your current location, the progress you have made, your direction of travel, your speed of travel and the time of your trip (see page 16).

Nav Data Page 4

The Nav Data page allows you to store and select waypoints for navigation, use the unit’s automatic tracking feature, and program and recall a route to selected destinations (see page 18).

System Page 5

The System page allows you to choose the various settings and formats that the unit uses to navigate and display information (see page 44).

NOTE: Whenever satellite lock is lost or GPS is turned OFF, certain animation icons (below) appear on screen and continue to loop until GPS is ON and/or satellite lock is re-acquired (see page 46).



Animation sequence that appears when satellite lock is lost



Animation sequence that appears when GPS is turned OFF

Using the Map Page

Map Page 1

The Map page displays a graphic representation of the navigation currently in progress. You can choose to display or hide any waypoints; cities/towns; continental U.S. state, Canadian provincial and European country boundaries; points of interest; routes or tracks that you are using. A black ▲ (triangle) in the middle of the screen indicates your current position and direction of travel. A data field at the bottom of the screen shows you information of your choosing about your position or navigation. You can zoom in and out on the map image by using the ZOOM IN/OUT button. You have a number of options for customizing the display, (details below).

Selecting Options 2

From the Map page, press and release the ENTER button to display the Map Page Options menu. Push the JOYSTICK up or down to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

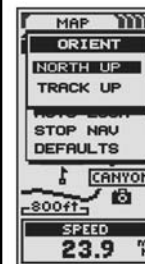
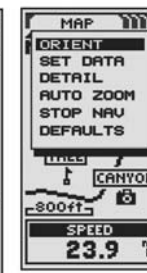
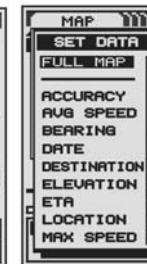
Orient Option 2 3

Highlight and select ORIENT to designate the orientation of the map display. To make the screen always represent magnetic north, highlight and select NORTH UP (see 1). To make the screen always represent the direction of travel, highlight and select TRACK UP (see 5).

Set Data Option 2 4 5

Highlight and select SET DATA to choose the information about your current position or navigation that you want to be displayed at the bottom of the Map page. Highlight and select FULL MAP to show the entire image of the map currently in use (see 5). Highlight and select from the following for display at the bottom of the page: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time (see 1). (For more information about the optional data selections, see “Data Field Choices Descriptions,” page 4).

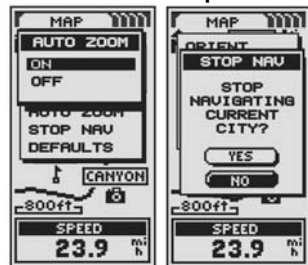
continued

1 Map Page (North Up)**3** Orient**2** Map Options**4** Set Data**5** Full Map (Track Up)

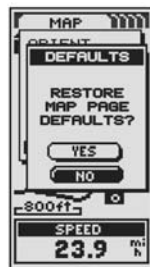
6 Map Details 7 Show/Hide Details



8 Auto Zoom 9 Stop Nav Option



10 Defaults



Map Detail Option 2 6 7

Highlight and select DETAIL to show/hide any or all of the details to be displayed on the map. Details shown include all waypoint, city/town, or POI names; waypoint, city/town, or POI symbols; waypoints; cities/towns; Points of Interest; track or travel completed so far; navigational track or route and continental U.S. state, Canadian provincial and European country boundaries.*

NOTE: All symbols will be replaced by a small dot when hidden.

Auto Zoom Option 2 8

Highlight and select AUTO ZOOM to turn this feature on or off. When this feature is on, the scale of the map adjusts automatically to show the entire navigation currently in progress. When this feature is off, you adjust the scale of the map manually using the ZOOM IN/OUT button.*

Stop Nav Option 2 9

To stop the current navigation (GoTo, Route or Track), highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to make the current navigation continue.*

Defaults Option 2 10

Highlight and Select DEFAULTS to restore all original default Map page settings. Highlight and select YES to restore original settings to Map Orientation = North Up; Data field information = Speed; Map Details shown = Names, Symbols, Waypoints, Cities/Towns, POI, Track, Route, States; Auto Zoom = On. Highlight and select NO to maintain all current settings.

*See "Using the Nav Data Page," page 18, to learn about this feature.

Moving Around the Map Image

From the Map page, you can zoom in or zoom out on the map image by pressing the ZOOM IN/OUT button. The data field on the map image can be hidden by selecting FULL MAP (see "Set Data Option", page 10). A section of map outside the current viewing area can be seen by panning. Details about a waypoint, city/town, POI, track or route can be accessed while in the panning mode.

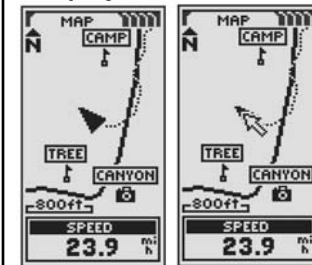
Panning Mode

To see any portion of the map image that is beyond the left, right, top, or bottom edge of the screen, you can "pan" your view in any direction.

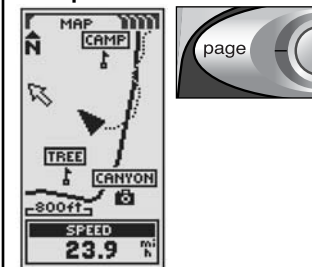
1. While on the Map page 1, push the JOYSTICK in any direction to enter panning mode. An arrow-shaped cursor will appear 2.
2. Move the cursor in any direction by pushing the JOYSTICK left, right, up or down. When the cursor reaches an edge of the map image, the image will "pan" in that direction 3.
3. To exit panning mode, press and release the PAGE button 4.

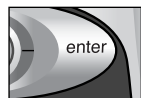
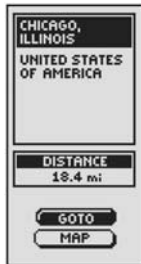
continued

1 Map Page 2 Arrow Cursor




3 Panning Map 4 Page Button



5 Arrow Cursor**6** Enter Button**7** Waypoint or POI Detail**8** City/Town Detail**9** Track Detail**10** Route Detail**Utilizing Various Features in Panning Mode**

While in panning mode, you can access waypoints, cities/towns, points of interest, tracks or routes shown on the map.

1. While on the Map page **1**, push the JOYSTICK in any direction to enter panning mode. An  arrow-shaped cursor will appear **2**.
2. Move the cursor by pushing the JOYSTICK left, right, up, or down to the waypoint, city/town, point of interest, track or route you want to access information about **5**. If the cursor reaches an edge of the map image, the image will "pan" in that direction **3**.
3. Press the ENTER button **6** to select the waypoint, city/town, point of interest, track or route.
4. Select from the detail's options (see **7** or **8**) or press the PAGE button **4** to return to the Map page.

- Select a waypoint or point of interest. The name, location and elevation of that point will appear **7**. Highlight and select GOTO to either return to the Map page to navigate to the selected point, or cancel the navigation if "GoTo" is already in progress. Highlight and select MAP to display the Map page with the selected point centered. Highlight and select EDIT to change the name, symbol, location coordinates or elevation of the selected point. Highlight and select DELETE to delete the selected point. (See "Waypoints, Select Option", page 19, or "POI, Select Option", page 35.)

- Select a city/town to view its name and country and your current distance from it **8**. Highlight and select GOTO to either return to the Map page to navigate to the selected city/town, or cancel the navigation if "GoTo" is already in progress. Highlight and select MAP to re-center the map on the chosen city/town. (See "Cities/Towns, Select Option", page 33.)

- Select a track or route, the name of that track or route will appear **9** **10**.

Gauges Page 1

The Gauges page displays a compass that indicates direction of travel. It can show the direction you are currently traveling or the direction from your current position to the next waypoint in your navigation.

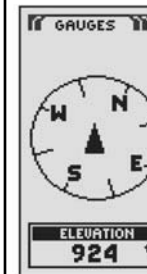
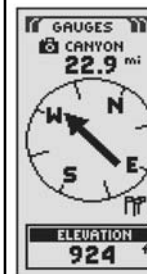
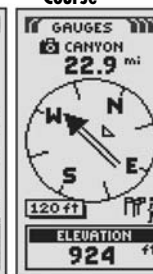
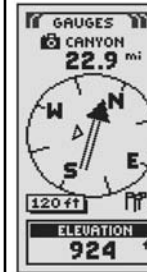
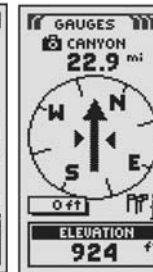
Selecting Options 1 2

From the Gauges page, press and release the ENTER button to display the Gauges Page Options menu. Push the JOYSTICK up or down to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Pointer Options 2 3 4 5 6 7

Highlight and select POINTER to designate the compass display information about your course **3**. Highlight and select BEARING to make the compass indicate the direction to your next waypoint **4**. Highlight and select COURSE to make the compass indicate direction to your next waypoint with arrows that show if you are on course **7** or left **6** or right **5** of course. This display also shows how many feet or meters off course you are currently.*

continued

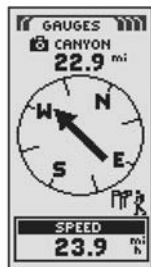
1 Compass**2** Select Options**3** Pointer Settings**4** Bearing**5** Right of Course**6** Left of Course**7** On Course

*See "Using the Nav Data Page," page 18, to learn about this feature.

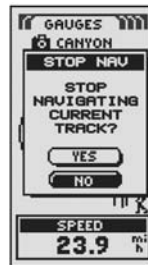
8 Set Data List



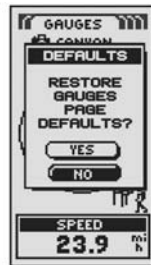
9 Data from Set Data List Displays on Gauges Page



10 Stop Nav Yes/No



11 Restore Defaults Yes/No



Set Data Option 2 8 9

Highlight and select SET DATA to choose information about your current position or navigation that you want displayed at the bottom of the Gauges page. You may highlight and select from the following: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time. (For more information about the optional data selections, see "Data Field Choices Descriptions," page 4).

Stop Nav Option 2 10

To stop the current navigation (GoTo, Route or Track), highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to make the current navigation continue.*

Defaults Option 2 11

Highlight and Select DEFAULTS to restore all original default Gauges page settings. Highlight and select YES to restore original settings to Pointer = Bearing; Data field information = Speed. Highlight and select NO to maintain all current settings.

*See "Using the Nav Data Page," page 18, to learn about this feature.

Trip Meter Page 1

The Trip Meter page displays information about your current position, the navigation in progress and other available data. It can display up to 5 fields that you can select from a total of 15 choices.

Selecting Options 1 2

From the Trip Meter page, press and release the ENTER button to display the Trip Meter Page Options menu. Push the JOYSTICK up or down to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Reset Option 2 3

Highlight and select RESET to reset any or all of the Trip Meter values to 0. Highlight and select ALL to reset all values to 0, or highlight and select individual values: Maximum Speed, Average Speed, Trip Odometer, Trip Time, Odometer, Track Log.

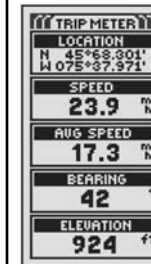
Font Size Option 2 4 5

Highlight and select FONT SIZE to increase or reduce the size of the text displayed in each field. Highlight and select SML 5-FIELD for smaller text with 5 data fields displayed or highlight and select LRG 3-FIELD for larger text with 3 data fields displayed.

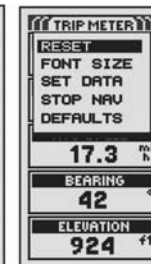
NOTE: The lower two fields from 5-field screen will be hidden when switching to 3-field.

continued

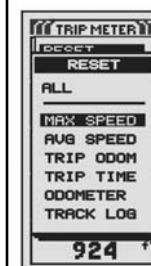
1 Trip Meter Info



2 Option Settings



3 Reset Values

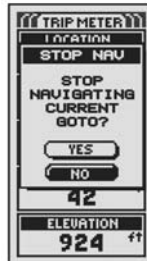
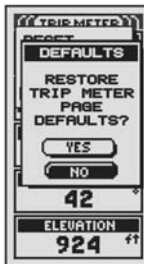


4 Font Size



5 LRG 3-FIELD Option



6 Data Options**7 Stopping Nav****8 Restore Defaults Yes/No****Set Data Option 2 6**

Highlight and select SET DATA to choose the fields you want displayed on the Trip Meter page. (Highlight and select the field you want to change – the highlighted field will blink – then highlight and select the new field from the menu.) Menu includes: Accuracy, Average Speed, Bearing, Date, Destination, Elevation, ETA, Location, Maximum Speed, Odometer, Power, Speed, Time, Trip Odometer, Trip Time. (For more information about the optional data selections, see “Data Field Choices Descriptions,” page 4).

Stop Nav Option 2 7

To stop the current navigation, highlight and select STOP NAV. Highlight and select YES to stop. Highlight and select NO to have current navigation continue.*

Defaults Option 2 8

Highlight and Select DEFAULTS to restore all original default Trip Meter page settings. Highlight and select YES to restore original settings to Font Size = Small 5-Field; Data field information = Location, Speed, Trip Odometer, Odometer, Maximum Speed. Highlight and select NO to maintain all current settings.

*See “Using the Nav Data Page,” page 18, to learn about this feature.

Nav Data Page 1

The Nav Data page gives you access to the powerful navigational features of your GPS 500. From this page, you can create and store up to 500 waypoints. For each one, you can choose a name and assign a symbol. Using the navigational features, you can ask the unit to show you the “GoTo” direction of travel to reach a selected waypoint.

The coordinates for hundreds of cities/towns throughout the world are already stored in your GPS 500. You can select any city/town and ask your unit to show you the “GoTo” direction of travel to that city/town.

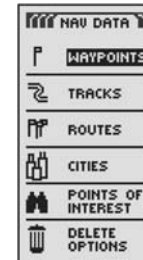
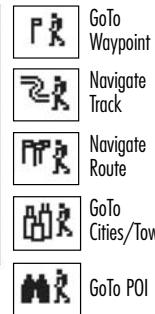
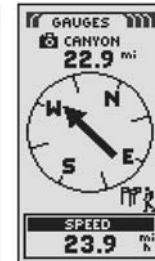
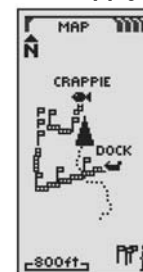
With optional computer software and interface cable, you can connect your GPS 500 to a computer mapping database to access the coordinates for points of interest (POIs). (See “Using the Data Interface,” page 48.) Once stored in the unit’s memory, points of interest can be used as waypoints for navigation.

You can also create and store up to 10 tracks. Your GPS 500 automatically keeps a record of your progress as you travel and gives you a graphic representation of the track you have taken. You can ask the unit to guide you in the reverse direction along the same track.

You can select two or more waypoints or points of interest to create up to 20 routes. Your GPS 500 will then show you the way to follow the route accurately.

To assist in your navigations, the GPS 500 is already programmed with continental U.S. state, Canadian provincial and European country boundaries.

Whenever navigation is in progress, a “hiker” icon **2** will appear next to the corresponding selection on the main Nav Data page **3**. The “data” icon and the “hiker” icon will also appear in the lower right hand corner of the Map page and Gauges page **4 5**.

1 Nav Data Page**2 Hiker Icons****3 Navigation in progress****4 Navigation on Gauges page****5 Navigation on Map page**

1 Nav Data Page



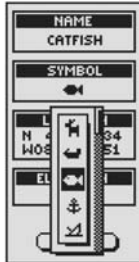
2 Waypoints Options



3 Select Options



4 Edit Info



5 Delete Waypoint



Waypoints

When you select WAYPOINTS from the Nav Data page (see **1**), your GPS 500 will display a list of the waypoints currently stored. You can create, save and recall up to 500 waypoints. If you want to change the location for a waypoint, its location coordinates can be edited. You can ask the unit to show you the "GoTo" direction of travel to reach any waypoint you select.

NOTE: You can store up to 50 waypoints into a route.

NOTE: You can record your current location as a waypoint at any time simply by pressing the ENTER button for 2 seconds, or by following the procedure described on page 20, under "New Option."

Selecting Options 1 2

From the Nav Data page, highlight using the JOYSTICK and select WAYPOINTS by pressing the ENTER button. Push the JOYSTICK up or down to scroll through the menu sections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Select Option 2 3 4 5

Highlight and select SELECT to access any waypoint on the list. Highlight and select any waypoint listed on the screen to bring up that waypoint's information screen. You may then highlight and select GOTO to display the Map page showing you the direction of travel to the selected waypoint. Highlight and select MAP to display the Map page with the selected waypoint centered. Highlight and select EDIT to edit the name, symbol, location coordinates or elevation of the selected waypoint. Or highlight and select DELETE to delete the selected waypoint.

continued

6 Add New Waypoint



7 Information Screen



New Option 2 6 7 8

Highlight and select NEW to add a new waypoint to the list. Highlight and select MARK CURRENT to save the coordinates for your current location as a waypoint. The default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint, (see "Editing Text", page 41). (You can use Waypoints/Select/Edit to change them later.) Highlight and select ENTER MANUAL to enter the location coordinates for a waypoint manually (see "Editing Text," page 41). Entering an elevation is optional. The default name (a 3-digit number) and symbol (a flag) will be assigned. (You can use Waypoints/Select/Edit to change them later.)

Waypoint shortcut. To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.

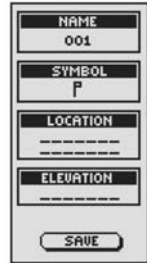
Sort Option 2 9

Highlight and select SORT to sort the list of waypoints according to name, symbol, nearest waypoint or most recently saved waypoint. Highlight and select NAME to sort waypoints in alphabetical order by name. Highlight and select SYMBOL to have waypoints with symbols displayed first (groups of waypoints with the same symbol are sorted alphabetically). Highlight and select NEAREST to have waypoints sorted by distance from your current location, with the nearest listed first. Highlight and select MOST RECENT to sort waypoints according to when they were saved, with the most recent listed first (see "Sort," page 42).

Search Option 2 10

Highlight and select SEARCH to search the list of waypoints for a name that you entered. Press the ENTER button to begin entering the name you want to search (see "Editing Text," page 41). The name of the waypoint containing the letters you entered is highlighted on the list (see "Search," page 43).

8 Information Screen



9 Sort List of Waypoints



10 Search Existing Waypoint List



1 Nav Data Page



2 New Waypoint



Creating a New Waypoint

To mark your current location as a new waypoint:

Waypoint shortcut: To mark a new waypoint using current location, press and hold the ENTER button for 2 seconds. A confirmation window will pop up.

1. From the Nav Data page, highlight using the JOYSTICK and select WAYPOINTS by pressing the ENTER button **1**. Highlight and select NEW **2**.
2. Highlight and select MARK CURRENT **3**. The waypoint information screen appears **4**. A default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint (see "Editing Text," page 41).
3. When you have finished editing your new waypoint, select SAVE **4** to return to the main Nav Data page **1**. To return to the main Nav Data page without saving the new waypoint, press the PAGE button **6**.

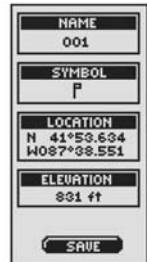
To enter any location as a new waypoint manually:

1. From the Nav Data page, highlight using the JOYSTICK and select WAYPOINTS by pressing the ENTER button **1**. Highlight and select NEW **2**.
 2. Highlight and select MANUAL **3**. The waypoint information screen appears **5**. A default name (a 3-digit number) and symbol (a flag) will be assigned. You can either accept the default name and symbol or rename and change the symbol of the waypoint (see "Editing Text," page 41). The Location field will blink.
 3. Enter the location (latitude and longitude) of your new waypoint (see "Editing Text," page 41).
 4. Highlight ELEVATION, the field will blink. Enter the location's elevation (see "Editing Text," page 41).
- NOTE:** ELEVATION does not need to be entered to save your new waypoint.
5. When you have finished editing your new waypoint, select SAVE **5** to return to the main Nav Data page **1**. To return to the main Nav Data page without saving the new waypoint, press the PAGE button **6**.

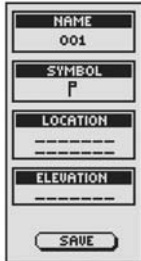
3 Current or Manual



4 Information Screen



5 Information Screen



6 Return to Nav Data Page



"GoTo" a Selected Waypoint

To make the map show the navigational path to a selected waypoint:

1. From the Nav Data page, highlight using the JOYSTICK and select WAYPOINTS by pressing the ENTER button **1**. Highlight and select SELECT **2**.
2. Highlight and select the waypoint you want to navigate or "GoTo" **3**. The waypoint information screen for that waypoint appears with four selections: GoTo, Map, Edit and Delete **4**.
3. Highlight and select GOTO to navigate to your selected waypoint **4**. This will bring up the Map page with the GoTo path between your current position and the selected "GoTo" waypoint **5**.

While in the Gauges page, a navigation or "GoTo" is illustrated by a flag and hiker icon in the bottom right hand corner of the screen. Also, your selected GoTo waypoint and distance to that waypoint are shown above the compass **6**.

1 Nav Data Page



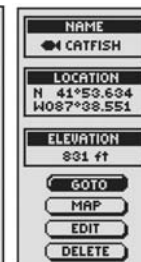
2 Selecting Stored Waypoint



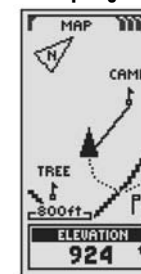
3 Select Waypoint



4 Waypoint Information



5 "GoTo" on Map Page



6 "GoTo" on Gauges Page



- 1** Nav Data Page
- 2** View Stored Tracks



- 3** View Stored Tracks
- 4** Save or Recall Track



- 5** Save Options
- 6** Save Options



Tracks

When you select TRACKS from the Nav Data page (see **1**), your GPS 500 will display a list of the tracks currently stored. Your unit will automatically record a track as you travel. You can store up to 10 tracks and later recall any of those tracks to use for navigation. Your unit can guide you along a selected track in either direction.

While you are navigating a track, a flashing hiker icon will appear next to that track on the track list **2**. Selecting a track currently being navigated will let you view information such as your current location in relation to the track and ETA (see "Navigate a Selected Track," page 25).

NOTE: Your GPS 500 automatically begins tracking your travel whenever it is turned on and linked to satellites. It keeps the recorded travel stored in its log even when the power is turned off, starting a new tracking "session" when it is turned back on. Old tracks will remain in memory (2,000 tracking points) unless erased by user (see "Deleting Individual Waypoints, Tracks, Routes or POIs," page 40).

Selecting Options **1 3**

From the Nav Data page, highlight using the JOYSTICK and select TRACKS by pressing the ENTER button to display the Tracks screen. Use the JOYSTICK to scroll through the list of tracks, then press the ENTER button to go to the highlighted track. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

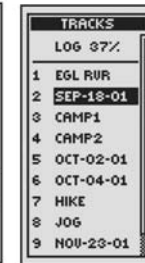
Log Option **2 4 5 6 7**

Highlight and select LOG to save the current track or scroll to recall a track saved previously **3**. Highlight and select SAVE **4** to save either the THIS SESSION **5** (the travel recorded since the unit was last turned on) or the ENTIRE LOG **6** (all travel recorded since the log was last cleared) (see CLEAR below). You can either accept the default name (the current date) or rename the track before saving (see "Editing Text," page 41).

Highlight and select CLEAR **4** to clear the log of all travel that has been recorded. The unit automatically restarts recording your travel **7**.

continued

- 7** Clear Log
- 8** View Stored Tracks



- 9** Track Preview and Options
- 10** Navigate



- 11** Rename
- 12** Delete



Select Option **8 9 10 11 12**

Highlight and select any stored track for navigation, renaming or deletion **8**. Highlight and select NAVIGATE **9** and then FORWARD or REVERSE **10** to display the map page showing you the direction to travel to follow on the selected track. Highlight and select RENAME **9** to change the name of a selected track **11** (see "Editing Text," page 41). Highlight and select DELETE **9** to delete the selected track **12**.

1 Nav Data Page



2 Select Track



3 Highlight Navigate



Navigate a Selected Track

To make the map show the navigational path along a selected track:

- From the Nav Data page, highlight using the JOYSTICK and select TRACKS by pressing the ENTER button **1**.
- Highlight and select the track you want to navigate **2**. A map of the selected track appears with 3 selections: Navigate, Rename and Delete **3**.
- Highlight and select NAVIGATE to navigate through your selected track **3**.
- Choose one of the following:
 - Highlight and select FORWARD **4** to navigate from the beginning to the end of the selected track.
 - Highlight and select REVERSE **4** to navigate from the end to the beginning of the selected track.
- Either selection will bring up the Map page with the track path shown **5**.

While in the Gauges page, Track navigation is illustrated by a curved double line and hiker icon in the bottom right-hand corner of the screen. Also, your selected track and distance to complete the navigation of that track are shown above the compass **6**.

While you are navigating a Track, a flashing hiker icon on the track list indicates that a track is currently being navigated **7**. When this track is selected from the list, a preview map of your current location in relation to that track will appear with an ETA to your destination **8**.

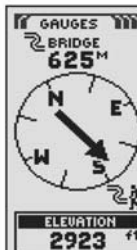
4 Choose Direction



5 Navigation on Map



6 Navigation on Gauges Page



7 Flashing Hiker



8 Map Page with ETA



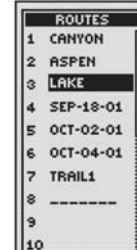
1 Nav Data Page



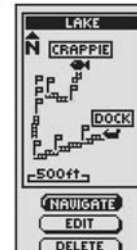
2 Navigation on Route



3 Highlight Route



4 Route Options



Routes

When you select ROUTES from the Nav Data page (see **1**), you can use your GPS 500 to designate up to 20 separate routes consisting of up to 50 waypoints and/or points of interest. You can later recall any of the saved routes to use for navigation. Your unit can guide you along a selected route in either direction.

While you are navigating a route, a flashing hiker icon will appear next to that route on the route list **2**. Selecting a route currently being navigated will let you view information such as distance to the next point or ETA (see "Viewing Information for a Route Being Navigated," page 32).

Selecting Options 1 3 4

From the Nav Data page, highlight using the JOYSTICK and select ROUTES by pressing the ENTER button to display the routes screen. Push the JOYSTICK up or down to scroll through the list of routes, then press the ENTER button to go to the highlighted route. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Navigate Option 3 4 5

Highlight and select any stored route you want to make your GPS 500 guide you along (see "Creating a New Route," page 27). Highlight and select NAVIGATE and then FORWARD or REVERSE to display the Map page showing you the direction to travel to follow on the selected route.

Edit Option 4 6

Highlight and select any stored route you want to edit. Highlight and select EDIT to add or delete any points you have selected in creating the route. On the Edit screen, highlight and select INSERT WAYPT to add a waypoint to a new or existing route, INSERT POI to add a point of interest to a new or existing route, REMOVE to delete a selected point from a route, or DONE to display the route with any changes made. (See "Editing a Route," page 29.)

Delete Option 4 7

Highlight and select any stored route you want to delete. Highlight and select DELETE to delete a route you have created. Highlight and select YES to delete the route, or NO to make the route remain in memory.

5 Navigate Route



6 Edit Options



7 Delete



1 Nav Data Page



2 Route Page



3 Overwrite Existing Route



4 Display New Route List



5 Edit Menu



6 Display Waypoints



Creating a New Route

To create a new route consisting of up to 50 waypoints and/or points of interest:

1. From the Nav Data page, highlight and select ROUTES **1**. Highlight and select the line of empty spaces at the end of the list of routes **2**. A blank New Route screen appears with the current date shown as the default name for the route **3**. You can either accept the default name by scrolling down to the first blanks or rename the new route (see "Editing Text," page 41).
2. Highlight and select the first line of empty spaces in the numbered list **4**. The Edit menu appears **5**.
3. Highlight and select INSERT WAYPT or INSERT POI to add a point (waypoint or point of interest) to the route **5**. The list of available points appears **6**.

continued

4. Highlight and select SELECT. Push the JOYSTICK up or down to highlight the point you want to add to your route **7**. You can sort or search the list (see "Sort," page 42 or "Search," page 43).

5. Press the ENTER button to add the highlighted point to your route. The New Route screen appears with the added point displayed.

Highlight and select the next blank field **8**. Repeat steps 3 to 5 to add more waypoints.

6. When you have finished creating your route, select DONE **9**, then press the PAGE button to return to the main Nav Data page **10**.

Insert/Remove Waypoints/POIs in Route

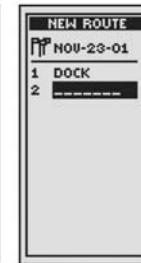
To insert a waypoint into the route, highlight and select the waypoint that will come immediately before the one you want to add. Highlight and select INSERT WAYPT or INSERT POI **9**. When the list of all waypoints or POIs appears, select the waypoint or POI to insert as you did in **6**, **7**, and **8** above. (See "Editing a Route," page 29)

To remove a waypoint or POI in the route, highlight and select the waypoint or POI you want to remove. Highlight and select REMOVE **5**. Your New Route list will automatically be updated to reflect the waypoint or POI removal. (See "Editing a Route," page 29)

7 Highlight Waypoint



8 Add Waypoint

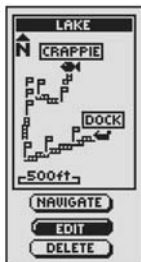


9 Done



10 Return to Nav Data Page



1 Nav Data Page**2** Route List**3** Select Edit**4** Routes Current Points**5** Highlight Insert**6** Highlight Point**7** Joystick**Editing a Route****Inserting a Waypoint/POI into a Route**

To add a waypoint or point of interest to an existing route:

- From the Nav Data page **1**, highlight and select ROUTES. Highlight and select the route you wish to add a point to **2**. The selected route's screen appears **3**.
 - Highlight and select EDIT **3**. The Edit Route screen appears with all current points in the route displayed **4**.
 - Highlight and select the point that will come immediately before the one you want to add **4**. The Edit menu appears **5**.
 - Highlight and select INSERT WAYPT or INSERT POI to add a point (waypoint or point of interest) to the route **5**. The list of available points appears **6**.
 - Highlight and select SELECT **6**. The first point on the list is highlighted.
 - Push the JOYSTICK **7** up or down to highlight the point you want to add to your route. You can sort or search the list (see "Sort," page 42 or "Search," page 43.)
 - Press the ENTER **8** button to add the highlighted point to your route. The Edit Route screen appears with the added point displayed **9**.
- Repeat steps 4 to 7 to edit other points on the route.
- When you have finished editing your route, highlight and select any point. Highlight and select DONE **10**. Press the PAGE button to return to the main Nav Data page **14**.

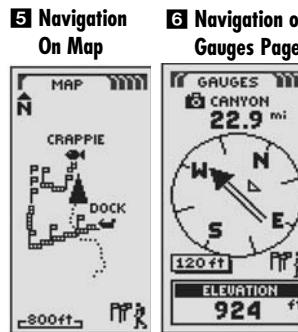
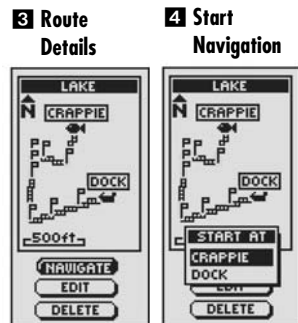
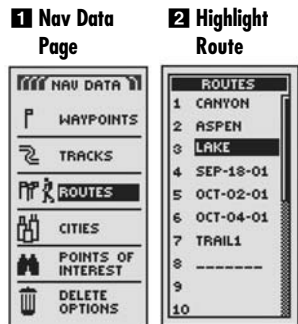
continued

8 Add Point to Route**9** Edited Route List**Remove a Waypoint/POI from a Route**

To remove a waypoint or point of interest from an existing route:

- From the Nav Data page, highlight and select ROUTES **1**, then highlight and select the route you wish to remove the point from **2**. The selected route's screen appears **3**.
 - Highlight and select EDIT **3**. The Edit Route screen appears with all current points in the route displayed **4**.
 - Highlight and select the point you wish to remove **11**. The Edit screen appears.
 - Highlight and select REMOVE **12**. The Edit Route screen appears with the selected point removed **13**.
- Repeat steps 3 and 4 to remove other points on the route.
- When you have finished editing your route, highlight and select any point. Highlight and select DONE **10**. Press the PAGE button to return to the main Nav Data page **14**.

10 Highlight Done**11** Routes Current Points**12** Highlight Remove**13** Edited Route List**14** Return to Nav Data Page



Navigate a Selected Route

To make the map show the navigational path along a selected route:

1. From the Nav Data page, highlight using the JOYSTICK and select ROUTES by pressing the ENTER button **1**.
2. Highlight and select the route you want to navigate **2**. A map of the selected route appears with selections: Navigate, Edit and Delete **3**.
3. Highlight and select NAVIGATE to navigate through your selected route **3**. To begin navigation, highlight and select your desired start point **4**.
4. Your selection will bring up the Map page with the route path shown **5**.

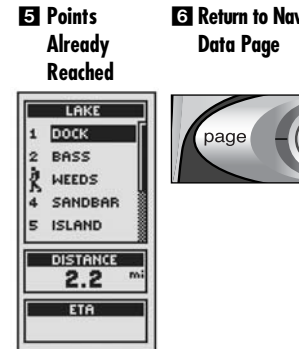
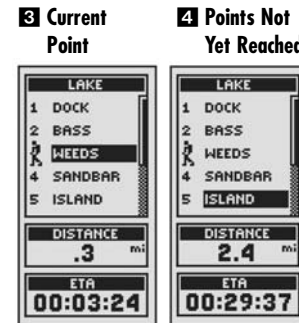
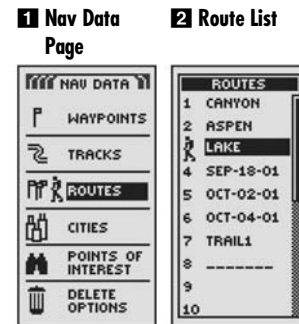
NOTE: A flashing hiker icon on the Nav Data page indicates that a route is currently being navigated.

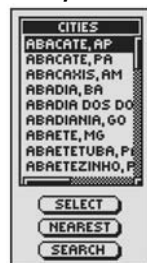
While in the Gauges page, Route navigation is illustrated by a group of flags and hiker icon in the bottom right-hand corner of the screen. Also, the next point on your route navigation and the distance to that point are shown above the compass **6**.

Viewing Information for a Route Being Navigated

By selecting a route which is currently being navigated, you can view information for any of the points along that route:

1. From the Nav Data page, select ROUTES **1**. The list of all routes currently stored appears **2**.
2. Highlight and select the route currently being navigated, as indicated by the blinking "hiker" icon **2**. A route information screen appears which includes the list of points (waypoints and/or points of interest) in the route with the point currently being navigated highlighted and indicated by the blinking "hiker" icon; the distance to that point; and the estimated time of arrival **3**.
3. Select any point in the route.
 - For points not yet reached, the distance from your current location and ETA are displayed **4**.
 - For points passed, only the distance from your current location will be displayed **5**.
4. Press the PAGE button to return to the Routes List **6 2**.



1 Nav Data Page**2 Highlight City/Town****3 Selected City/Town****4 Map Page****5 Nearest City/Town****6 Search****Cities/Towns**

When you select CITIES from the Nav Data page, you have access to the coordinates for hundreds of cities/towns worldwide already stored in your GPS 500's memory. You can ask the unit to show you the "GoTo" direction of travel to reach any city/town you select.

NOTE: A city/town is much larger than the precise location indicated by the coordinates stored in your GPS 500. The coordinates assigned to a city/town correspond to a location somewhere within the city/town's limits. These coordinates are intended only for navigation to the city/town, and not for finding a specific location such as the "downtown", commercial area or geographic center. A waypoint or point of interest can be used for more precise navigation within a city/town.

Selecting Options 1 2

From the Nav Data page, push the JOYSTICK up or down to highlight CITIES and press the ENTER button to display the CITIES screen. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Select Option 2 3 4

Highlight and select SELECT. Highlight and select any city/town on the CITIES screen. (Push the JOYSTICK left or right to see the full name.) You will see its name and country and distance from your current location. Highlight and select GOTO to display the Map page showing you the direction of travel to the selected city/town. Highlight and select MAP to display the Map page with the selected city/town centered. All Map page functions are available whether you select GOTO or MAP.

Nearest Option 5

Highlight and select NEAREST to display the 50 cities/towns nearest to your current position, in order from the nearest to the farthest. See "Select Options" above to get details on a selected city/town from the Nearest List.

Search Option 6

Highlight and select SEARCH to search the list of cities/towns for a name you enter (see "Search," page 43). Enter the name of a city/town (see "Editing Text," page 41). The list adjusts to show the city/town starting with the letters you enter. Press ENTER to highlight the search city/town in the CITIES list. See "Select Options" above to get details on a selected city/town from the CITIES list.

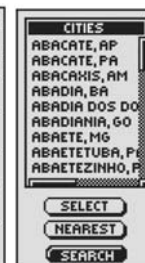
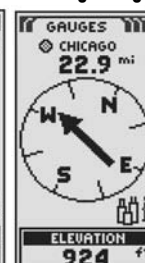
"GoTo" a Selected City/Town

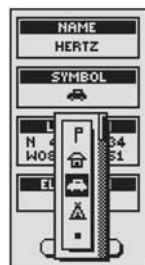
To make the map show the navigational path to a selected city/town:

1. From the Nav Data page **1**, push the JOYSTICK up or down to highlight CITIES and press the ENTER button to display the CITIES screen **2**.
2. Highlight and select SELECT. Highlight and select the city/town you want to GoTo. **3** Details for the selected city/town appears **4**.
3. Highlight and select GOTO to navigate to your selected city/town **4**.
4. This will bring up the Map page showing you the direction of travel to the selected city/town **5**.

NOTE: A city/town is much larger than the precise location indicated by the coordinates stored in your GPS 500. The coordinates assigned to a city/town correspond to a location somewhere within the city/town's limits. These coordinates are intended only for navigation to the city/town, and not for finding a specific location such as the "downtown", commercial area or geographic center. A waypoint or point of interest can be used for more precise navigation within a city/town.

While in the Gauges page, a navigation or "GoTo" to a city/town is illustrated by a city/town and hiker icon in the bottom right-hand corner of the screen. Also, your selected GoTo city/town and distance to that city/town are shown above the compass **6**.

1 Nav Data Page**2 CITIES Screen****3 Highlight City/Town****4 Select GOTO****5 Navigation On Map Page****6 Navigation on Gauges Page**

1 Nav Data Page**2 POI List****3 POI Information****4 Edit Option****5 Edit Symbol****6 Delete Option****Points of Interest**

You can use optional computer software and an interface cable to connect your GPS 500 to a computer. This allows you to take advantage of powerful mapping programs and to transfer data back and forth between the computer and your unit. (See "Using the Data Interface," page 48.) Points of interest transferred from a computer can be used as points within routes for navigation purposes. (See "Routes," page 26.)

When you select POINTS OF INTEREST from the Nav Data page, you have access to the POIs you downloaded using your Data Interface. A POI's details can be edited. You can ask the unit to show you the "GoTo" direction of travel to reach any POI you select.

NOTE: You can store up to 50 points of interest into a route.

Selecting Options 1 2

From the Nav Data page, push the JOYSTICK up or down to highlight POINTS OF INTEREST and press the ENTER button to display the POI screen. Any points of interest that you loaded into your unit will be displayed. (See "Using the Data Interface," page 48, for instructions on how to load points of interest from a computer.) Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Select Option 2 3 4 5 6

Highlight and select SELECT to access any POI on the list. Highlight and select any POI listed on the screen to bring up that POI's information screen. You may then highlight and select GOTO to display the Map page showing you the direction of travel to the selected POI. Highlight and select MAP to display the Map page with the selected POI centered. Highlight and select EDIT to edit the name, symbol, location coordinates or elevation of the selected POI. Or highlight and select DELETE to delete the selected POI.

continued

7 Sort Option**8 Sort By Symbol****Sort Option 2 8 9**

Highlight and select SORT to sort the list of POIs according to name, symbol, or nearest POI. Highlight and select NAME to sort the POIs in alphabetical order. Highlight and select SYMBOL to sort the POIs with the symbol you chose listed first. (Groups of POIs with the same symbol will be sorted alphabetically.) Highlight and select NEAREST to sort the POIs by distance from your current location, with the nearest listed first (see "Sort," page 42).

Search Option 2 9

Highlight and select SEARCH to search the list of POIs for a name that you enter. Press the ENTER button to begin entering the name you want to search (see "Editing Text," page 41). Enter the name of a point of interest. The list adjusts to show the POI starting with the letters you enter (see "Search," page 43).

9 Search

1 Nav Data Page



2 POI List



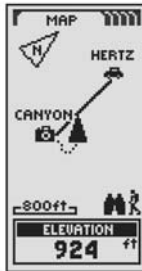
3 Highlight POI



4 Select GOTO



5 Navigation On Map Page



6 Navigation on Gauges Page



“GoTo” a Selected POI

To make the map show the navigational path to a selected POI:

1. From the Nav Data page **1**, push the JOYSTICK up or down to highlight POINTS OF INTEREST and press the ENTER button to display the POI screen **2**.
2. Highlight and select SELECT **3**. Highlight and select any POI listed on the screen to bring up that POI's information screen **4**.
3. Highlight and select GOTO to navigate to your selected POI **4**.
4. This will bring up the Map page showing you the direction of travel to the selected POI **5**.

While in the Gauges page, a navigation or “GoTo” to a POI is illustrated by a pair of binoculars and hiker icon in the bottom right-hand corner of the screen. Also, your selected GoTo POI and distance to that POI are shown above the compass **6**.

Delete Options

When you select DELETE OPTIONS from the Nav Data page, you can delete waypoints, tracks, routes or POIs you have created, or delete all data currently stored. A confirmation window will appear to alert you if no waypoints, tracks, routes, or POIs are currently stored.

Selecting Options 1 2

From the Nav Data page, highlight using the JOYSTICK and select DELETE OPTIONS by pressing the ENTER button. Push the JOYSTICK up or down to scroll through the menu selections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Waypoints Option 2 3

Highlight and select WAYPOINTS to delete any or all of the waypoints you have entered. Highlight and select ONE-BY-ONE to delete waypoints individually (see “Deleting Individual Waypoints, Tracks, Routes, or Points of Interest,” page 40). Highlight and select ALL to delete all waypoints currently stored.

Tracks Option 2 3

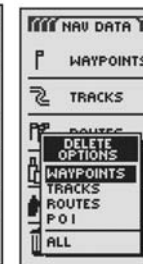
Highlight and select TRACKS to delete any or all of the tracking sessions currently in memory. Highlight and select ONE-BY-ONE to delete track sessions individually (see “Deleting Individual Waypoints, Tracks, Routes, or Points of Interest,” page 40). Highlight and select ALL to delete all track sessions currently in memory.

continued

1 Nav Data Page



2 Delete



3 Delete Options



4 All Option**Routes Option 2 3**

Highlight and select ROUTES to delete any or all of the routes you have stored. Highlight and select ONE-BY-ONE to delete routes individually (see "Deleting Individual Waypoints, Tracks, Routes, or Points of Interest," page 40). Highlight and select ALL to delete all routes currently in memory.

POI Option 2 3

Highlight and select POI to delete any or all of the POIs you have stored. Highlight and select ONE-BY-ONE to delete POIs individually (see "Deleting Individual Waypoints, Tracks, Routes, or Points of Interest," page 40). Highlight and select ALL to delete all POIs currently stored.

All Option 2 3 4

Highlight and select ALL to delete all waypoints, tracks, routes, and points of interest you have stored. Highlight and select DELETE ALL—YES and all data will be deleted. Highlight and select DELETE ALL—NO to cancel the delete function.

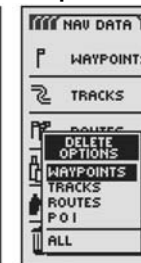
Deleting Individual Waypoints, Tracks, Routes or Points of Interest

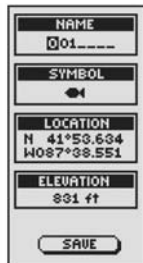
To delete selected items (waypoints, tracks, routes or points of interest) one at a time:

1. From the Nav Data page, highlight and select DELETE OPTIONS **1**. The Delete Options menu appears **2**.
2. Highlight and select WAYPOINTS or TRACKS or ROUTES or POI, according to the item you want to delete **2**. The Delete menu appears **3**.
3. Highlight and select ONE-BY-ONE **3**. A list of all of the selected type of items which you currently have stored appears. You can sort the waypoint or POI list **4** (see "Sort," page 42 or "Search," page 43).
4. Highlight and select the item to delete. A Delete confirmation menu appears **5**.
5. Highlight and select YES. The list of all items appears with the selected item deleted **6**. (Selecting NO will cancel the deletion. Selecting DONE will cancel the deletion and return you to the main Nav Data page.)

Repeat steps 5 and 6 to delete other items.

6. When you have finished deleting, press the PAGE button to return to the main Nav Data page.

1 Nav Data Page**2 Delete Options****3 Delete One-by-One****4 Select Item****5 Delete Confirmation****6 Updated List**

1 Joystick**2 Highlight Space****3 Continue Editing****4 Blank Space****5 Return to Nav Data Page****Editing Text**

To enter or change the information displayed for a waypoint, track or route:

- From any screen that allows you to enter letters, numbers or symbols (names of waypoints/tracks/routes, dates, etc.), push the JOYSTICK **1** up or down to move to the field you want to edit and press the ENTER button.
- Push the JOYSTICK left or right to highlight the space where you want to insert or change a character or symbol **2**.
- Push the JOYSTICK up or down to scroll through the characters or symbols to choose from. Push the JOYSTICK left or right to accept the new character or symbol and move to the next space or character. The next character or symbol is highlighted **4**.
 - To clear a selected character and all characters that follow it, highlight and select the " - " (large dash symbol, it comes after the 9).

When editing characters, repeat the same procedure to change the next character if desired **3**. Push the JOYSTICK left or right to skip characters you do not want to change.

- Press the ENTER button to accept the new characters or symbol.

If necessary, push the JOYSTICK up or down to scroll to the next field you want to edit and follow the same procedure to enter or change characters or symbols.

Sort Option

To sort any list of waypoints or POIs by name, symbol, nearest or most recently saved:

- From any screen with the SORT option, highlight and select SORT **1**.
- Choose from the following choices:
 - Alphabetically by name:
 - The list of points and up to 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select NAME **2 3**.
 - By a chosen symbol (with the selected symbol listed first and waypoints with the same symbol sorted alphabetically):
 - The list of points and up to 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select SYMBOL **2 3**.
 - A list of waypoint/POI symbols appears. Highlight and select the symbol you want at the top of the list **4**.
 - Nearest waypoint to your current location:
 - The list of points and up to 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select NEAREST **2 3**.
 - According to when they were saved with the most recently saved waypoint listed first:
 - The list of waypoints and up to 4 options will be presented: NAME, SYMBOL, NEAREST, MOST RECENT. Highlight and select MOST RECENT **2**.
- The waypoint list appears sorted. Continue your previous activities.

1 Select SORT**2 Waypoint Sort Options****3 POI Sort Options****4 Select symbol**

1 Select SEARCH**2 Search Screen****3 List Adjusts to First Letter****4 Enter More Letters****Search Option**

To search any list of waypoints or points of interest for a particular name:

- From any screen with the SEARCH option, highlight and select SEARCH **1**.
- Select (by pressing the ENTER button) the highlighted blank space to enter the first letter of the name you are searching for (see "Editing Text," page 41) **2**.
- The waypoints or POIs containing that letter first appear at the top of the list. Choose from the following:
 - Continue to enter letters into the blanks until the waypoint you are searching for appears highlighted at the top of the list **3 4**.
 - Accept the current highlighted waypoint. Scroll to select the waypoint you are searching for.
- Continue your previous activities.

System Page 1

The System page gives you various options for changing the system settings used by your GPS 500. From this page you can turn GPS navigation on and off, and adjust the settings for the display, sounds, time, compass, map, method of navigation, etc. You can also turn on your GPS 500's data port to enable data exchange with computer mapping software. (Optional accessories, not included, are required. See "Using the Data Interface," page 48.)

Selecting Options 1

From the System page, push the JOYSTICK up or down to scroll through menu selections, then press the ENTER button to go to the highlighted option. Use the JOYSTICK again to highlight your choice, then press the ENTER button to select it. Press the PAGE button to return to the main page.

Satellites 1 2

To turn GPS navigation on and off, highlight and select SATELLITES, (see "Turning GPS Off and On," page 46). Highlight and select GPS MODE. Highlight and select YES or NO in response to the prompt to access your unit's navigational features or to disable your unit's navigational features. (Turning GPS mode off preserves battery power.)

Display Options 1 3

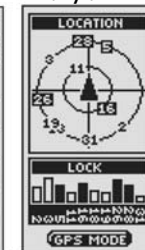
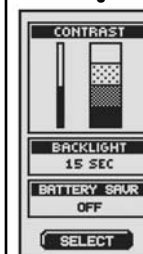
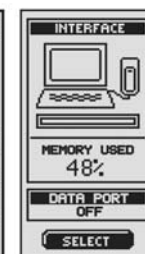
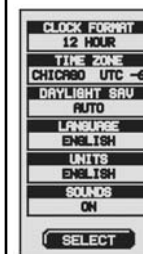
Highlight and select DISPLAY to adjust Contrast, Backlight or Battery saver settings (see "Adjusting the Display," page 47). Highlight and select CONTRAST to change the length of time the backlight remains lit. Highlight and select BATTERY SAVER to turn on or off battery conservation.

Interface Option 1 4

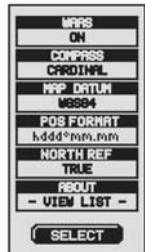
Highlight and select INTERFACE to activate the data port for interface with a computer (see "Using the Data Interface," page 48). Highlight and select DATA PORT—ON to activate the data port. Highlight and select DATA PORT—OFF to deactivate the data port. Highlight and select DATA PORT—NMEA to activate the data port with a direct connection to a computer running a GPS-compatible software resulting in a real-time display of your position on the computer screen.

Settings Option 1 5

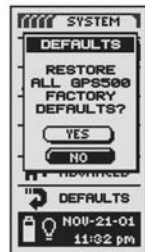
Highlight and select SETTINGS to change the following system settings: Clock Format, Time Zone, Daylight Savings (Summer Time), Language, Measurement Units, Sounds (see "Using the Settings Screen," page 49).

1 System Page**2 Turn GPS Navigation Off/On****3 Adjust Display Settings****4 Data Port Interface****5 Settings**

6 Advanced Settings



7 Access Defaults Option



8 Status Bar



Advanced Option 1 6

Highlight and select **ADVANCED** to change the following advanced operational parameters: WAAS, Compass, Map Datum, Position Format, North Reference, About Your Unit (see "Using the Advanced Screen", page 51).

Defaults Option 1 7

Highlight and Select **DEFAULTS** to restore all original default settings for the entire GPS 500 system. Highlight and select **YES** to restore original settings (see chart below). Highlight and select **NO** to maintain all current settings.

Map Page Defaults	
Function	Default
Orient	North Up
Data Field	Speed
Details Shown	Names (show)
	Symbols (show)
	Waypoints (show)
	Cities/Towns (show)
	POI (show)
	Track (show)
	Route (show)
	States (show)
Auto Zoom	On

Trip Meter Defaults	
Function	Default
Data Field	5 Fields*
	Location
	Speed
	Trip Odom
	Odometer
	Max Speed
Data Field	3 Fields
	Location
	Speed
	Trip Odom

*default font size

Status Bar Indicator 8 1

The status bar at the bottom of the System page updates information automatically. You can see whether the backlight is on or off, as well as the current date and time. You can also determine the present status of the battery as the battery symbol increases the amount of black from the top down as it discharges.

System Page Defaults	
Function	Default
GPS Status	On
Backlight time out	15 seconds
Clock Format	12 Hour
Time Zone	Current Location
Daylight Saving	Auto
	(Summer Time)
Language	English
Measurement Units	English
Sounds	On
WAAS	On
Compass	Cardinal
Map Datum	WGS 84
Position Format	hddd°mm.mm
North Reference	True
Battery Saver	Off

Gauges Defaults	
Function	Default
Pointer	Bearing
Data Field	Speed

Turning GPS Off and On

When indoors, you can turn GPS navigation off, allowing you to use the non-navigational features of your GPS 500 while preserving battery power. When you turn GPS off, the unit stops searching for signals from satellites. When you turn GPS back on to receive signals, the unit must re-acquire signals from at least three satellites before it can begin navigation.

NOTE: The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

To turn GPS off:

- From the System page **1**, highlight using the JOYSTICK and select **SATELLITES** by pressing the ENTER button. A **LOCATION** screen appears, showing the satellite signals being received with the signal strength of each indicated. The satellites that are currently acquired by the unit for navigation are highlighted **2**.
- Select **GPS MODE 2**. "USE WITH GPS OFF?" menu will appear **3**.
- Highlight and select **YES 3**. The unit will immediately turn GPS off and stop receiving satellite signals.
- Press the **PAGE** button to return to the System page **4**.

To turn GPS on:

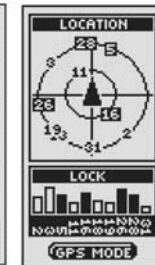
- From the System page, highlight using the JOYSTICK and select **SATELLITES** by pressing the ENTER button **1**. A blank **LOCATION** screen appears **5**.
- Select **GPS MODE 5**. "TURN GPS ON?" menu will appear **6**.
- Highlight and select **YES 6**. Unit will begin searching for satellite signals until it locks on to three of them.
- Press the **PAGE** button to return to System page **4**.

NOTE: The unit must be outside with a clear view of the sky to acquire satellite signals for navigation.

1 Turning GPS Off/On



2 Location Screen Appears



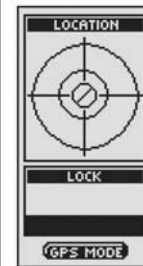
3 Use with GPS Off?



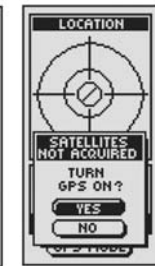
4 Page Button



5 Stop Receiving



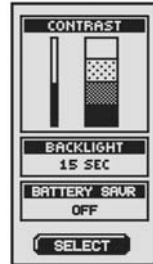
6 Turn GPS On?



1 Access Selections



2 Adjust Settings



3 Change Contrast



4 Select Backlight Interval



5 Select Battery Interval



6 Page Button



Adjusting the Display

You can adjust various settings for your unit's display.

1. From the System page, push the JOYSTICK up or down to highlight and select DISPLAY by pressing the ENTER button 1. CONTRAST, BACKLIGHT, and BATTERY SAVER appear 2.

2. SELECT will be highlighted 2. To adjust contrast, backlight or battery settings, press the ENTER button. Contrast field will begin to blink.

3. Choose from the following. (You only need to select the settings you want to change.)

- Highlight and select CONTRAST to change the contrast of the display screen (highlighted field will blink) 3. Move the slider bar that appears by pushing the JOYSTICK up or down. Press the ENTER button to complete your contrast adjustment.
- Highlight and select BACKLIGHT 4 to change the length of time the screen's backlight remains lit each time you turn it on or when you press and release the POWER button (highlighted field will blink). The BACKLIGHT menu will appear. Highlight and select 15 SEC, 30 SEC, 1 MIN, or STAY ON.

WARNING: If you choose STAY ON, battery life will significantly decrease.

- Highlight and select BATTERY SAVER 5 to conserve battery life. The BATTERY SAVER menu will appear. Highlight and select OFF or ON.

4. To save the changes made, highlight and select SAVE. To exit this function without saving changes, press the PAGE button 6.

Using the Data Interface

Your GPS 500 is designed to let you exchange data with computer mapping programs. With optional software and interface cable (see "Optional Accessories," page 63) you will be able to:

- Upload points of interest from the computer to your unit for use in navigation.
- Download your waypoints, tracks, and routes into the computer and view your travel with powerful mapping software.

You must set the unit's data port to "on" before you can use the data interface:

1. From the System page 1, push the JOYSTICK up or down to highlight and select INTERFACE by pressing the ENTER button. The unit will display the amount of memory currently being used to store data and the current status of the data port 2.

2. Highlight and select SELECT. Highlight and select DATA PORT (field will blink) 2.

3. Choose from the following:

- Highlight and select DATA PORT—ON to turn the data port on 3.
- Highlight and select DATA PORT—OFF to turn the data port off 3.
- Highlight and select DATA PORT—NMEA to activate the data port with a direct connection to a computer running a GPS-compatible software resulting in a real-time display of your position on the computer screen 3.

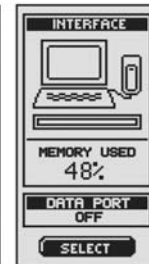
4. To save the changes made, highlight SAVE. To exit this function without saving, press the PAGE button 4.

NOTE: In order to conserve battery power, make sure the data port is set to "off" whenever you are not using the interface.

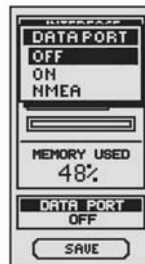
1 System Page



2 Interface Display



3 Turn Data Port On/Off



4 Page Button



1 System Page 2 Select Data Field



3 First Data Field Blinks 4 Clock Format



5 Time Zone 6 Daylight Savings



Using the Settings Screen

From the Settings screen, you can change the various settings listed below.

To change settings:

- From the System page **1**, push the JOYSTICK up or down to highlight and select SETTINGS by pressing the ENTER button. A menu of settings appears **2**.
- Highlight and select SELECT. The first setting field will be highlighted (highlighted field will blink) **3**. Highlight the field you want to change.
- Choose from the following. (You only need to select the settings you want to change.)

• Clock Format

To change the format of the time display, highlight CLOCK FORMAT **3**. Press the ENTER button to bring up the menu and select 12 HOUR or 24 HOUR **4**.

• Time Zone

To choose the time zone you want the clock to use, highlight TIME ZONE **3**. Press the ENTER button to bring up the menu of major cities. Select USE CURRENT LOCATION or the city that is in the desired time zone **5** (see page 55 for World City Time Zone chart).

• Daylight Saving

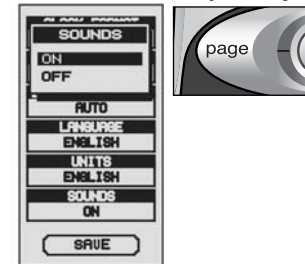
To have the clock use daylight saving time (Summer Time), highlight DAYLIGHT SAVING **3**. Press the ENTER button to bring up the menu. Select AUTO to make the clock switch to daylight saving time (Summer Time) automatically. Select ON to switch manually back to daylight saving time (Summer Time). Select OFF to switch manually the clock to standard time (Winter Time (GMT)) **6**.

continued

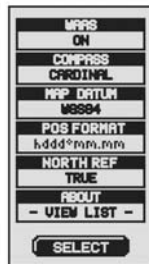
7 Language Options 8 Measurement



9 Sound On/Off 10 Return to System Page



- **Language**
To choose the language used for the display, highlight LANGUAGE **3**. Press the ENTER button to bring up the menu of languages. Select from the following ENGLISH, DUTCH, FRENCH, GERMAN, ITALIAN, PORTUGUESE, SPANISH or SWEDISH **7**.
 - **Units**
To choose the system for measuring distance, select UNITS **3**. Press the ENTER button to bring up the menu. Select ENGLISH, METRIC or NAUTICAL **8**.
 - **Sounds**
To turn the unit's sound on or off, select SOUNDS **3**. Press the ENTER button to bring up the menu. Select ON or OFF **9**.
- To save the changes made, highlight and select SAVE **3**. To exit this function without saving changes, press the PAGE button **10**.

1 System Page**3** First Data Field Blinks**5** Set Compass**2** Select Data Fields**4** WAAS On/Off**6** Map Datum Settings**Using the Advanced Screen**

From the Advanced screen, you can change the advanced operational parameters used by your GPS 500.

To change advanced parameters:

- From the System page **1**, push the JOYSTICK up or down to highlight and select **ADVANCED** by pressing the ENTER button. A menu of advanced parameters appears. **SELECT** will be highlighted **2**.
- Press the ENTER button and the title of the first data field will begin to blink **3**. Highlight field you wish to change (highlighted field will blink).
- Choose from the following. (You only need to select the settings you want to change.)

- WAAS**

To turn the unit's WAAS receiver on or off, highlight **WAAS** **3** (see "What is WAAS," page 57.) Press the ENTER button to bring up the menu. Select ON or OFF **4**.

- Compass**

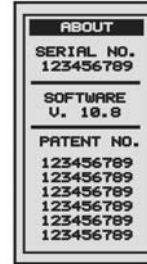
To change the method of indicating direction used by the compass, highlight **COMPASS** **3**. Press the ENTER button to bring up the menu. Select **CARDINAL** (standard N-S-E-W), **DEGREES** (<0°-360°) or **MILS** (0000-6400) **5**.

- Map Datum**

To change the datum used by your unit when comparing information with a paper map or other navigational reference, highlight **MAP DATUM** **3** (see "What is a Map Datum?," page 57, for details). Press the ENTER button to bring up the menu. Select the map datum that matches the item you are comparing **6**.

NOTE: Most widely used datum is WGS 84

continued

7 Location Coordinates**8** Set Orientation**9** System Information**10** Return to System Page

- Position Format**

To change the format the device uses to display location coordinates, highlight **POSITION FORMAT** **3**. Press the ENTER button to bring up the menu select from the following: hddd.ddddd° (degrees, decimal degrees), hddd°mm.mm (degrees, minutes, decimal minutes), hddd°mm'ss.s (degrees, minutes, seconds, decimal seconds), British Grid, Dutch Grid, Finnish KK127 Grid, German Grid, Irish Grid, Maidenhead, MGRS (Military Grid Reference System), New Zealand, Qatar Grid, Swedish Grid, Swiss Grid, Taiwan Grid, User Defined Grid, UTM/UPS (Universal Transfer Mercator/Universal Polar Stereograph), W Malaysian R **7**.

- North Reference**

To change the unit's method of orientation to the earth's magnetic field, highlight **NORTH REFERENCE** **3** (see "About North Reference," page 57). Press the ENTER button to bring up the menu. Select **TRUE** for true north, **MAGNETIC** for magnetic north or **GRID** for grid north **8**.

- About**

Highlight and select **ABOUT** **3** to display system information: your unit's serial number, the version of the operating software used by your unit, and applicable patent numbers **9**. Press ENTER button to return to the Advanced Screen.

- To save the changes made, highlight and select **SAVE**. To exit this function without saving changes, press the **PAGE** button **10**.

1 LOST SATELLITES**2 ARRIVING AT DESTINATION!****3 MEMORY FULL!****4 TRACK LOG ALMOST FULL!****5 TRACK LOG FULL!****Alerts**

As you use your GPS 500, you may see the following alert messages.

1 LOST SATELLITES CONTINUE SEARCHING?

You will see this alert if, for any reason, satellite lock is lost. When you see this message, the unit is automatically trying to re-acquire satellite signals. If you do nothing, the unit will continue to search for signals and the message will disappear when satellite lock is regained. You can select YES to continue searching and clear the alert message. If satellite lock is not regained within 5 minutes, the alert will reappear. You can select NO to turn off GPS navigation and clear the message.

2 NOTICE ARRIVING AT DESTINATION!

If you are navigating to a waypoint, POI or city/town, or along a track or route, you will see this message when you are within 500 feet (150 m) of your destination. Select OK or the PAGE button to clear the message.

3 WARNING MEMORY FULL!

You will see this message if you try to save a waypoint when the list is full, (you can save a maximum of 500 waypoints). Select OK or the PAGE button to clear the message. You will continue to see the message when trying to save a waypoint until you delete one or more waypoints from memory (see page 38).

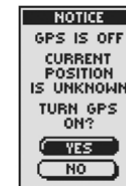
4 WARNING TRACK LOG ALMOST FULL!

This message appears when the track log memory bank is 90% full. Select OK or the PAGE button to clear the message. The message will reappear each time you turn on the unit until you clear the track log (see page 38) or the track log becomes 100% full (see below).

5 WARNING TRACK LOG FULL!

You will see this message when the track log memory bank is full. The unit will not be able to store any more track log points until you clear the track log (see page 38). Select OK or the PAGE button to clear the message. The message will reappear each time you turn on the unit until the track log is cleared.

continued

6 BATTERIES LOW!**7 GPS IS OFF!****8 TRACK LIST FULL!****6 WARNING BATTERIES LOW!**

This message appears approximately 30 minutes before your batteries need to be replaced. Select OK or the PAGE button to clear the message. Replace the batteries as soon as possible. The message will reappear every 10 minutes until the batteries are replaced.

7 NOTICE GPS IS OFF!

This message is displayed any time an action is requested which typically uses GPS satellite tracking "GPS on" (example: marking a waypoint or navigating a route). While GPS mode is set to off, select YES to turn GPS on. Select NO to tell the GPS unit to assume that you are at your last calculated position.

8 WARNING TRACK LIST FULL!

This message appears when you try to save more than 10 tracks. The unit will not be able to save any more tracks until you delete one or more tracks from memory (see page 38). Select OK or the PAGE button clear the message.

World City Time Zones

<u>Longitudinal Zone</u>	<u>Offset</u>
E172.50 to W172.50	-12
IDLW (International Date Line West)	
W172.50 to W157.50	-11
Nome	
W157.50 to W142.50	-10
Honolulu	
W142.50 to W127.50	-9
Yukon Standard	
W127.50 to W112.50	-8
Los Angeles	
W112.50 to W097.50	-7
Denver	
W097.50 to W082.50	-6
Chicago	
W082.50 to W067.50	-5
New York	
W067.50 to W052.50	-4
Caracas	
W052.50 to W037.50	-3
Rio de Janeiro	
W037.50 to W022.50	-2
Fernando de Noronha	
W022.50 to W007.50	-1
Azores Island	
W007.50 to E007.50	GMT +0
London	
E007.50 to E022.50	+1
Rome	
E022.50 to E037.50	+2
Cairo	
E037.50 to E052.50	+3
Moscow	
E052.50 to E067.50	+4
Abu Dhabi	
E067.50 to E082.50	+5
Maldives	
E082.50 to E097.50	+6
Dhufuri	
E097.50 to E112.50	+7
Bangkok	
E112.50 to E127.50	+8
Hong Kong	
E127.50 to E142.50	+9
Tokyo	
E142.50 to E157.50	+10
Sydney	
E157.50 to E172.50	+11
Solomon Islands	
E172.50 to W172.50	+12
Auckland	

Sources of Interference / Errors:

GPS receivers have the potential for position errors due to interference, primarily from the following sources:

Ionosphere and troposphere delays

The satellite signal slows as it passes through the atmosphere. The system uses a built-in model that calculates an average — though not exact — amount of delay.

Signal multi-path

This occurs when the GPS signal is reflected off objects such as tall buildings before it reaches the receiver. This increases the travel time of the signal, causing errors.

Receiver clock errors

The built-in clock can have very slight timing errors.

Orbital errors

Also known as ephemeris errors, these are inaccuracies of the satellite's reported location.

Most common error

Most common error is not having a clear view of the sky, or being under very cloudy conditions, when a satellite signal may not be received.

Number of satellites visible

The more satellites the receiver can see, the better the accuracy. Buildings, terrain, electronic interference or even dense foliage can block signal reception, resulting in position errors or possibly no position reading at all. In general, the clearer the view of the sky is at your location, the better the reception will be. GPS receivers will not work indoors, underwater or underground.

Due to the errors that might occur, it is recommended that the serious navigator use a second navigational tool, such as a magnetic compass or map.

When satellite lock is lost

Whenever satellite lock is lost, the following animation sequence appears onscreen and continues to loop until satellite lock is re-acquired.



When GPS is turned Off

Whenever GPS is turned Off, the following animation sequence occurs and continues to loop until search is activated by user.



Also, all data fields (except for power status data fields) appear blank until GPS is turned On and satellite lock is re-acquired.



What is WAAS?

Wide Area Augmentation System (WAAS) is a GPS-based navigation system that provides precision above and beyond what GPS can do on its own. WAAS was designed to improve the accuracy and ensure the integrity of information coming from GPS satellites.

WAAS is a network of 25 ground reference stations that cover the entire U.S. plus parts of Canada and Mexico. Implemented by the Federal Aviation Administration (FAA) for aviation users, these reference stations are located at precisely surveyed spots and compare GPS distance measurements to known values. When the WAAS signal is available, WAAS-capable receivers typically have a much higher accuracy than non-WAAS units.

What is a Map Datum?

Maps and charts are essentially grids created from a starting reference point called a "datum." Many maps being used today were originally created decades ago. Over the years, technology has allowed us to improve our surveying skills and create more accurate maps. However, there is still a need to adapt GPS receivers to use with older maps.

Most navigational charts and maps will have the datum listed. Cobra® GPS receivers include up to 100 map datums that allow you to switch to a setting that matches your map. The most common US map datums are World Geodetic System 1984 (WGS 84) North American Datum 1983 (NAD 83) and North American Datum 1927 (NAD 27).

NOTE: Using a map datum that does not match the chart you are using can result in significant differences in position information.

About North Reference

The vertical grid lines on any map can be aligned in one of three different ways.

"True North" means that the vertical lines are aligned with the geographic north pole. This is the most common method of orienting maps.

"Magnetic North" means that the vertical lines are aligned in the direction indicated as north by a compass, which can differ from True North to varying amounts, depending on where you are on the earth. (This difference is called "inclination" and "declination.")

"Grid North" refers to the direction in which the straight lines on a map are actually aligned, which may be slightly different from True North, because the rounded surface of the earth can not be accurately depicted on the flat surface of a map.

NOTES

Specifications subject to change.

Temperature rating for the GPS 500 may exceed the usable range of some batteries. Alkaline batteries can rupture at high temperatures.

Alkaline batteries lose a significant amount of their capacity as temperature decreases.

Use Lithium batteries when operating the GPS 500 in below freezing conditions.

Extensive use of screen backlighting will significantly reduce battery life.

External power can only be applied using the Cobra® external power cord/cable.

PERFORMANCE

Receiver:	18 parallel channels
Acquisition Time:	Approximately 10 sec. (warm) Approximately 35 sec. (cold) Approximately 50 sec. (first time)
Update Rate:	1/second, continuous (selectable)
Position Accuracy:	up to 3 meters (10 feet)
Velocity Accuracy:	0.1 knot / 0.1 km/h
Dynamics:	Performs to specifications to 6 g's
Antenna:	Built-in patch antenna

PHYSICAL

Case:	Fully gasketed, high impact ABS plastic, waterproof to 1 meter for 30 min (IPX7 standards)
Size:	4.7" H x 2.3" W x 1.5" D (12 cm x 5.8 cm x 3.8 cm)
Weight:	5.3 ounces
Operating Temperature Range:	5°F to 158°F (-15°C to 70°C)
Storing Temperature Range:	-40°F to 176°F (-40°C to 80°C)

POWER

Input:	Two 1.5 volt AA batteries and/or 12-volt DC external power (vehicle power adapter)
Battery Life:	Up to 20 hours in battery save mode Up to 10-12 hours in continuous operation out of save mode.

Maintenance of Your GPS 500

Your GPS 500 is designed and built to give you years of trouble-free performance without the need for service. No routine maintenance is required.

If your unit does not appear to be operating properly, please follow these trouble-shooting steps:

- ▶ Make sure you are using fresh batteries and they are installed properly.
- ▶ Make sure you are outdoors and away from buildings and obstructions. Also, make sure you have a clear view of the sky.
- ▶ Make sure you have not accidentally turned GPS off (see page 46).

Customer Service

In the U.S.A., you can receive technical assistance with your unit through one of our customer support services:

Automated Help Desk is available in English 24 hours a day, 7 days a week at 773-889-3087.

Customer Service Operators are available in English and Spanish at 773-889-3087 Monday to Friday, 8:00 a.m. to 6:00 p.m. CST.

Questions can be faxed to 773-622-2269.

Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via e-mail at: productinfo@cobra.com

On-line answers to frequently asked questions (in English only) can be found at: www.cobra.com.

Outside the U.S.A. **please contact your local dealer.**

Service

If you suspect that your unit requires service, please call 773-889-3087 BEFORE shipping it to Cobra®. This will ensure that you receive service as quickly as possible.

If you are asked to send your unit to the Cobra® factory, please follow these steps:

1. Send the complete unit.
2. For warranty repair, enclose some form of proof-of-purchase, such as a photocopy or carbon copy of a sales receipt. If you send the original receipt, it cannot be returned to you.
3. Enclose a typed or clearly written description of the problem you are having with your unit, plus the name and address where you want the unit returned.
4. Pack the unit securely to prevent damage during transit. If possible, use the original packing materials.
5. Ship prepaid and insured using a traceable carrier such as United Parcel Service (UPS), Federal Express or first class mail with delivery confirmation. Ship to:

**Cobra Factory Service
Cobra Electronics Corporation
6500 West Cortland Street
Chicago, IL 60707 USA**
6. Please allow 3 to 4 weeks before contacting us about the status of your service. Call 773-889-3087 for assistance.

If your unit is under warranty, it will either be repaired or replaced upon receipt, depending on the model. If your unit is out of warranty, you will receive a letter informing you of the repair or replacement charge.

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