

MAP 330 Series

MAGELLAN User Manual







User Manual

MAP 330/MAP 330M



This User Manual provides the instructions for using the Magellan MAP 330 and the Magellan MAP 330M GPS receivers. Any reference to the MAP 330 in this User Manual applies to both receivers. Those areas that apply only to the MAP 330M will be noted.





WARNINGS

FOR SAFETY REASONS, THE DRIVER SHOULD NOT USE THIS DEVICE IN A VEHICLE WHILE IN MOTION TO ASSIST THE DRIVER TO NAVIGATE.

Please do not try and change any settings on the MAP 330 while driving. Come to a complete stop or have your passenger make any changes. Taking your eyes off the road is dangerous and can result in an accident in which you or others could be injured.

USE GOOD JUDGEMENT

This product is an excellent navigation aid, but does not replace the need for careful orienteering and good judgement. Never rely solely on one device for navigating.

USE CARE

The Global Positioning System (GPS) is operated by the U.S. Government, which is solely responsible for the accuracy and maintenance of GPS.

The accuracy of position fixes can be affected by the periodic adjustments to GPS satellites made by the U.S. Government and is subject to change in accordance with the Department of Defense civil GPS user policy and the Federal Radionavigation Plan. Accuracy can also be affected by poor satellite geometry.

USE PROPER ACCESSORIES

Use only Magellan cables and antennas; the use of non-Magellan cables and antennas may severely degrade performance or damage the receiver, and will void the warranty.

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SW Rev.: 1.20+



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All Magellan GPS receivers are navigation aids, and are not intended to replace other methods of navigation. Purchaser is advised to perform careful position charting and use good judgment. READ THE USER GUIDE CAREFULLY BEFORE USING THE PRODUCT.

1. MAGELLAN CORPORATION'S WARRANTY

Magellan Corporation warrants their GPS receivers and accessories to be free of defects in material and workmanship for a period of one year from the date of original purchase. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL PURCHASER OF THIS PRODUCT.

In the event of a defect, Magellan Corporation will, at its option, repair or replace the product with no charge to the purchaser for parts or labor. The repaired or replaced product will be warranted for ninety (90) days from the date of return shipment, or for the balance of the original warranty, whichever is longer.

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PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT, AT MAGELLAN CORPORATION'S OPTION, OF ANY DEFECTIVE PART OF THE RECEIVER OR ACCESSORIES WHICH ARE COVERED BY THIS WARRANTY. REPAIRS UNDER THIS WARRANTY SHALL ONLY BE MADE AT AN AUTHORIZED MAGELLAN SERVICE CENTER. ANY REPAIRS BY A SERVICE CENTER NOT AUTHORIZED BY MAGELLAN CORPORATION WILL VOID THIS WARRANTY.

3. PURCHASER'S DUTIES

To obtain service, the purchaser must obtain a Return Materials Authorization (RMA) number from Magellan Corporation (800-707-7845 - rma@magellangps.com) prior to shipping. If under warranty, the purchaser must return the receiver or

accessories postpaid with a copy of the original sales receipt, purchaser's return address and the RMA number clearly printed on the outside of the package to:

MAGELLAN AUTHORIZED SERVICE CENTERS

MAGELLAN CORPORATION WILL NOT BE RESPONSIBLE FOR ANY LOSSES OR DAMAGE TO THE PRODUCT INCURRED WHILE THE PRODUCT IS IN TRANSIT OR IS BEING SHIPPED FOR REPAIR. INSURANCE IS RECOMMENDED. MAGELLAN SUGGESTS USING A TRACKABLE SHIPPING METHOD SUCH AS UPS OR FEDEX WHEN RETURNING A PRODUCT FOR SERVICE.

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Except as set forth in item 1 above, all other expressed or implied warranties, including those of fitness for any particular purpose or merchantability, are hereby disclaimed.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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The following are excluded from the warranty coverage.

- INSTALLATION
- BATTERIES
- FINISHES
- DEFECTS RESULTING FROM INSTALLATION
- ANY DAMAGE DUE TO ACCIDENT, RESULTING FROM INACCURATE SATELLITE TRANSMISSIONS. INACCURATE TRANSMISSIONS CAN OCCUR DUE TO CHANGES IN THE POSITION, HEALTH OR GEOMETRY OF A SATELLITE.
- ANY DAMAGE DUE TO SHIPPING, MISUSE, ABUSE, NEGLIGENCE, TAMPERING, OR IMPROPER USE.



- SERVICING PERFORMED OR ATTEMPTED BY ANYONE OTHER THAN AN AUTHORIZED MAGELLAN SERVICE CENTER.
- MODIFICATIONS TO THE RECEIVER WHICH MAY BE REQUIRED DUE TO ANY CHANGE IN THE GLOBAL POSITIONING SYSTEM (GPS). (**Note:** All Magellan GPS receivers use GPS to obtain position, velocity and time information. GPS is operated by the U.S. Government, which is solely responsible for its accuracy and maintenance. Certain conditions can cause inaccuracies which could require modifications to the receiver. Examples of such conditions include but are not limited to changes in the GPS transmission. SUCH MODIFICATIONS ARE NOT COVERED BY THIS WARRANTY.)

OPENING OF THIS PRODUCT BY ANYONE OTHER THAN AN AUTHORIZED MAGELLAN SERVICE CENTER WILL VOID THIS WARRANTY.

6. EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES

MAGELLAN CORPORATION SHALL NOT BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DAMAGES RESULTING FROM DELAY OR LOSS OF USE, LOSS OF OR DAMAGES ARISING OUT OF BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY EVEN THOUGH CAUSED BY NEGLIGENCE OR OTHER FAULT. MAGELLAN CORPORATION SHALL NOT BE LIABLE TO THE PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER ARISING OUT OF THE NEGLIGENT USAGE OF THE PRODUCT.

IN NO EVENT WILL MAGELLAN CORPORATION BE RESPONSIBLE FOR SUCH DAMAGES, EVEN IF MAGELLAN CORPORATION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

7. COMPLETE AGREEMENT

This written warranty is the complete, final and exclusive agreement between Magellan Corporation and the purchaser with respect to the quality of performance of the goods and any and all warranties and representations. THIS WARRANTY SETS FORTH ALL OF MAGELLAN CORPORATION'S RESPONSIBILITIES REGARDING THIS PRODUCT.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

8. FOR PURCHASER'S OUTSIDE OF THE UNITED STATES

THIS WARRANTY GIVES YOU SPECIFIC RIGHTS. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM PROVINCE TO PROVINCE AND CERTAIN LIMITATIONS CONTAINED IN THIS WARRANTY MAY NOT APPLY TO YOU.

If you purchased this product outside of the United States, this limited warranty is governed by the laws of the State of California and shall benefit Magellan Corporation, its successors and assigns.

- - -

For further information concerning this limited warranty, please call or write:

Magellan Corporation, 960 Overland Court,
San Dimas, California, U.S.A. 91773

Phone: (909) 394-5000

Fax: (909) 394-7050



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Introduction

Welcome and congratulations on your purchase of the Magellan MAP 330 GPS receiver. The MAP 330 has all the features that a sailor, fisherman, hiker, hunter, or any person involved with outdoor recreational activities has come to expect from a Magellan GPS receiver. In addition to these features, the MAP 330 offers the ability to display your location on detailed city maps providing you with a complete navigation tool that will last you for years to come.

The MAP 330M has all the features of the MAP 330, and has nav aids (fixed nav aids, buoys, lighthouses and marinas) preloaded into the receiver's database.

Magellan has been a leader in the hand-held GPS market since introducing the world's first commercial, hand-held GPS receiver in 1989. Since that time Magellan has continued to equip the outdoorsman and consumer markets with navigational receivers, all the way from the first GPS receiver for under \$100 to automotive receivers with turn-by-turn routing capabilities.

Before you begin, make sure that your package includes all of the items listed on the side panel of the box. If any of these items are missing or damaged, please contact Magellan Corporation at (866) 737-8604 for replacement items.

About This User Manual

This User Manual is divided into six chapters; *Introduction*, *Setting Up the MAP 330*, *Basic Operation*, *Reference Guide*, *Frequently Asked Questions*, and *Appendix*. Each of these chapters will be explained briefly so you can tell which ones are right for you. A glossary and index are provided after the Appendix as well.

Setting Up the MAP 330: This chapter will show you how to prepare the MAP 330 for use. Instructions will include how to install the batteries, how to connect the wrist strap and how to initialize the MAP 330.

Basic Operation: This chapter provides you with step-by-step instructions for using the basic functions of the MAP 330. This chapter will explain getting a position fix, viewing the Map screen, saving a waypoint and using a GOTO. Knowing these four basic steps will enable you to use the MAP 330 for most things you will want to do.



Introduction

Reference Guide: Here you will find step-by-step instructions for all of the features found in the MAP 330. This chapter is set up in a way that you can quickly and easily find the feature you are looking for.

Frequently Asked Questions: This chapter is aimed at answering some of the more basic questions that you may have about your MAP 330, the global positioning system (GPS) and using the MAP 330 to its fullest. Experienced GPS users will probably not find any new information in this chapter but new GPS users may find many of their questions answered here.

Appendix: Sections containing information about connecting your MAP 330 to external devices, accessories, troubleshooting and specifications can be found in the Appendix.

Glossary: A glossary is provided explaining some of the terms and abbreviations found in the MAP 330 and this manual that may not be familiar to all users.

It's time to begin using your MAP 330. Don't be overwhelmed with the size of the manual as we have tried to give enough information for the beginning user as well as provide the experienced users with the specifications and features that they are looking for.

The most important thing to us is to be sure that you are completely satisfied with your MAP 330 and the accompanying documentation. If you have any ideas, suggestions or even a complaint, please pass them along to us through our web site (www.magellangps.com) or by mail.



Setting Up the MAP 330

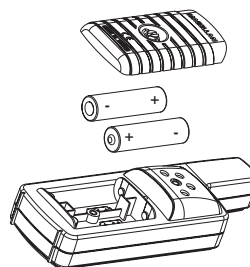
Setting up the MAP 330 is a simple three-step process: installing the batteries, attaching the wrist strap and initializing the MAP 330.

Installing the Batteries

The MAP 330 uses two AA batteries that are installed from the back through the battery cover. You can expect to get up to 10 hours of usage on two AA batteries with the backlight turned off.

To remove the battery cover, turn the ring of the battery door screw counterclockwise until the battery cover can be removed. Insert the new batteries as shown, making sure that the batteries are installed with the correct polarity.

Replace the cover and tighten the battery door screw by turning it clockwise until the battery door is securely in place. Avoid overtightening the battery door screw.



How much time do I have to replace the batteries? *Any waypoints or routes you have created are stored in permanent memory and should not be lost for months with the batteries removed. Present position and time data is not stored in permanent memory but will be held in memory for at least two hours without batteries installed.*



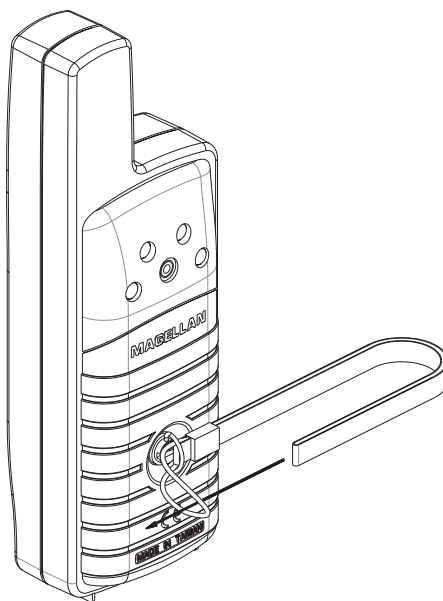
Always turn the MAP 330 off before removing the batteries or turning off external power. Failure to do so can cause loss or corruption of data.



Setting Up the MAP 330

Connecting the Wrist Strap

The wrist strap attaches to the ring on the screw for the battery door cover. The picture below shows how the wrist strap should be attached.





Setting Up the MAP 330

Initialization for First Time Use

The final step in setting up the MAP 330 is to initialize the receiver for first-time use. This will help your MAP 330 begin computing your position in the fastest manner possible.

The reason for initialization is to speed up the process for computing the first position fix when the MAP 330 has no last position computed in memory (i.e., when the MAP 330 is brand new or memory has been cleared). This gives the MAP 330 an approximate indication of where it is located so it can use its satellite almanac (stored in permanent memory) to estimate what satellites are overhead and which ones it should be looking for.

Follow these instructions to initialize the MAP 330.

Turn the MAP 330 On

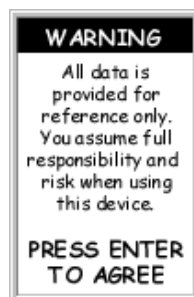
Press



The MAP 330 turns on and displays the start-up screen and a warning screen.



Start-up Screen



Warning Screen

Press

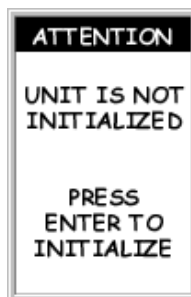


(You have 10 seconds to press ENTER or the MAP 330 will shut off.)

Setting Up the MAP 330

The MAP 330 displays a message box indicating that the receiver needs to be initialized.

Press **ENTER**




Enter Your Approximate Position (Initialize)

Use the  to highlight your general region.

Press **ENTER**



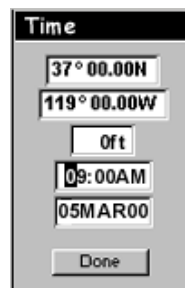
Use the  to highlight your area.

Press **ENTER**.



The cursor appears in the time field, waiting for you to input your local time. Set your local time using the arrow keys. Be sure that you set the AM/PM indicator.

Note: After the MAP 330 starts to pick up signals from any satellite, it will automatically update the time using the satellite's atomic clock.



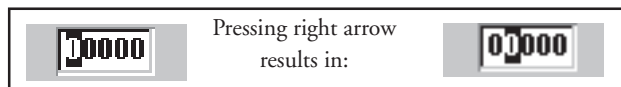



Setting Up the MAP 330

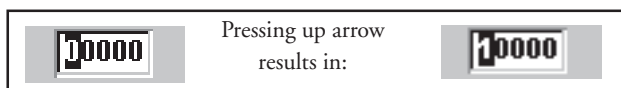
To use the arrow keys to edit a field, follow the simple diagram below.

Editing

 moves the cursor block left or right.



 increments the value up or down.



When the time is correct, press **ENTER**.

The last piece of information needed is the date. Using the arrow keys, enter the present date.

Press **ENTER**.

Date

37° 00.00N

119° 00.00W

0ft

03:17PM

05MAR00

Done

All the information that the MAP 330 needs to speed up the process of computing its first fix has been entered and the Done button is highlighted.

Date

37° 00.00N

119° 00.00W

0ft

03:17PM

15APR00


Done

To complete the initialization process, press **ENTER**.



Setting Up the MAP 330

The Sat Status screen is displayed and the MAP 330 is now ready to be used. At this point you can begin using the MAP 330 beginning with the Basic Operation described in the next chapter or you can turn the MAP 330 off.

To turn the MAP 330 off, press .

Basic Operation

For many of you this will be your first introduction into using a GPS receiver as a navigational tool. With all of the features and functions provided with the MAP 330, it may seem a bit intimidating at first. Don't worry. There are only a few things you need to know to use the MAP 330. They will be discussed here in detail. Other features and functions can be found in the Reference Section of this manual.

MAP 330 GPS Receiver

Quadrifilar Antenna

IN - Zooms in the display of the Map screen. (Press once to zoom one level, press and hold to quickly move through the zoom levels.)

ESC - Cancels the operation of the last button pressed. Also scrolls through the NAV screens in reverse order.

NAV - Accesses the various navigation screens.

MARK/GOTO - **MARK** is used to create a waypoint. **GOTO** is used to create a direct route to any waypoint stored in memory.

OUT - Zooms out the display of the Map screen. (Press once to zoom one level, press and hold to quickly move through the zoom levels.)

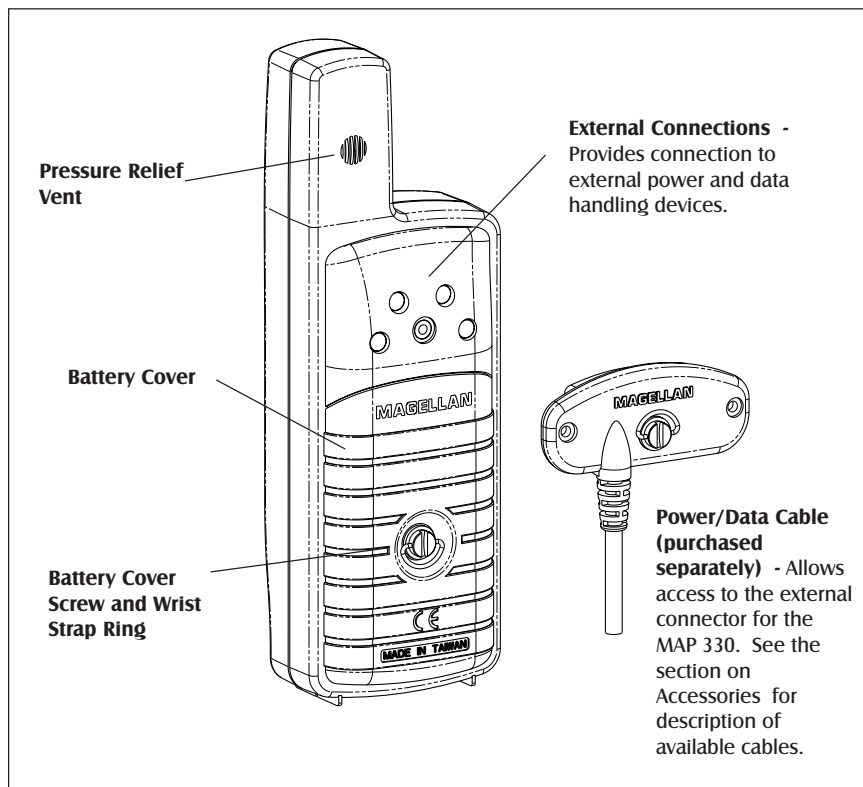
ENTER - Confirms data entries or menu selections.

MENU - Accesses menus for displayed screens. Also provides access to waypoint, route and setup functions.

Power/Light - Turns the MAP 330 on/off. Also used to turn the display backlight on/off.

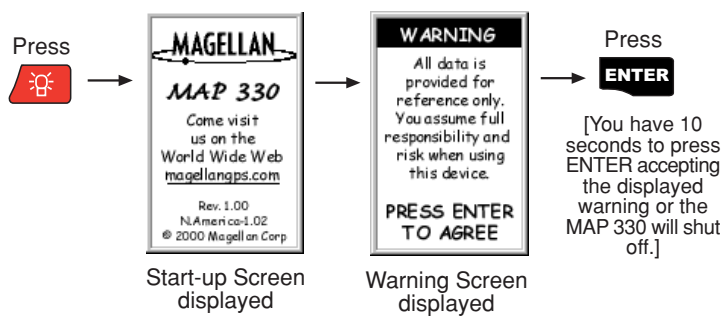


Basic Operation



Turning Power On/Off

Tuning the MAP 330 On

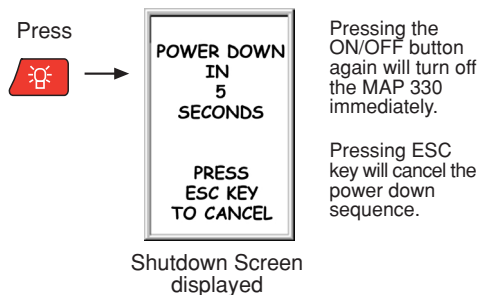


The last navigation screen you were viewing will be displayed. If the last navigation screen view was the Map screen, the last zoom scale setting will be used.



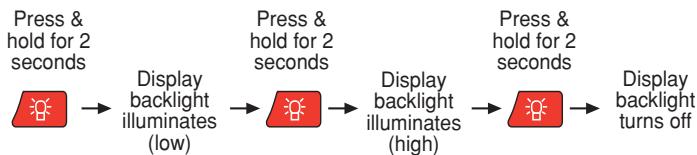
Basic Operation


Turning the MAP 330 Off



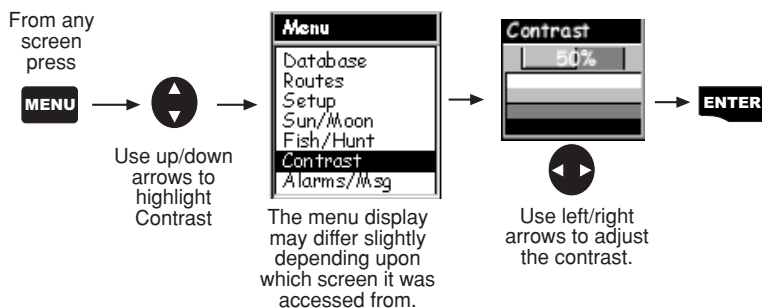
Turning the Backlight On/Off

The display backlight can be set to one of three levels (low, high or off).



 The backlight causes severe drain on the batteries in the MAP 330. To prevent accidentally turning the backlight on and leaving it on, the MAP 330 will turn the backlight off when there has been no button presses for 4 minutes. Pressing any button will turn the backlight back on in this instance. You can change the time delay for the backlight in Setup. (See the Setup section in the Reference chapter.)

Adjusting the Contrast





Basic Operation

Getting a Position Fix

Because the MAP 330 attains information it needs from satellites orbiting the earth, the antenna needs to have a relatively unobstructed view of the sky. This allows the MAP 330 to choose from all satellites currently available.



If the view of the sky is poor, (large cliffs or buildings, heavy foliage or other obstructions) the satellite signals can be blocked and the receiver may take longer to compute a position fix.

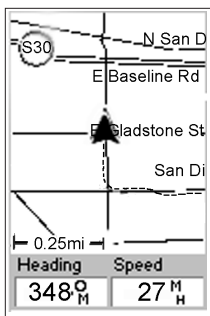
You can observe the signal strength and the satellites being used on the Satellite Status screen (described in the next section).



Holding the MAP 330. The receiver is designed to fit comfortably in your hand. Hold the MAP 330 in the palm of your hand with the antenna pointing towards the sky.

Navigational Screens

The MAP 330 has five navigation screens: Map screen, Compass screen, Large Data screen, Position screen and Sat Status screen. They will be described briefly here. More detailed information on the different screens can be found in the Reference chapter.



Map Screen . The Map screen has two modes, position or cursor. In the position mode, your present position is indicated by the large arrow icon in the center of the display. If you are moving, the arrow will point in the direction that you are heading. At the bottom of the screen is the scale for the map displayed and two data fields that can be customized, or turned off, depending upon your needs.

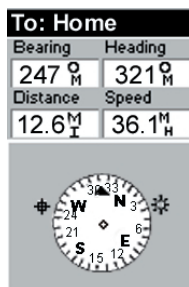
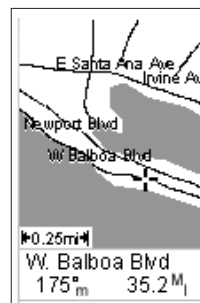


Basic Operation

In the Cursor Mode, you are provided with a cursor that can be moved on the map. At the bottom of the display is the information for the position of the cursor relative to your present position. Also any points of interest that the cursor is over will be shown.

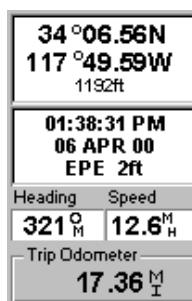
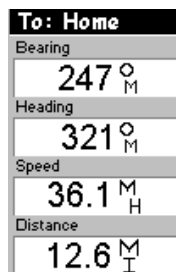
To access the Cursor Mode, press any arrow on the keypad. A crosshair appears that can be moved with the arrow keys.

To return to the Position Mode, press **ESC**. The cursor will disappear and the present position icon will appear centered on the map.



Compass Screen. This is a handy screen to have at your fingertips while you are navigating. It is totally customizable to display the information that is useful to you. The lower portion of the Compass screen not only displays your heading in a graphical manner, but also displays the relationship of the sun, moon and your destination (if navigating on a route) to your heading.

Large Data Screen. The Large Data screen is similar to the Compass screen but here the compass has been removed to allow for large display of the navigation data. Ideal for when you have your MAP 330 mounted on the dashboard of a boat using the optional swivel mounting bracket. Even from a distance the information can be read with ease.

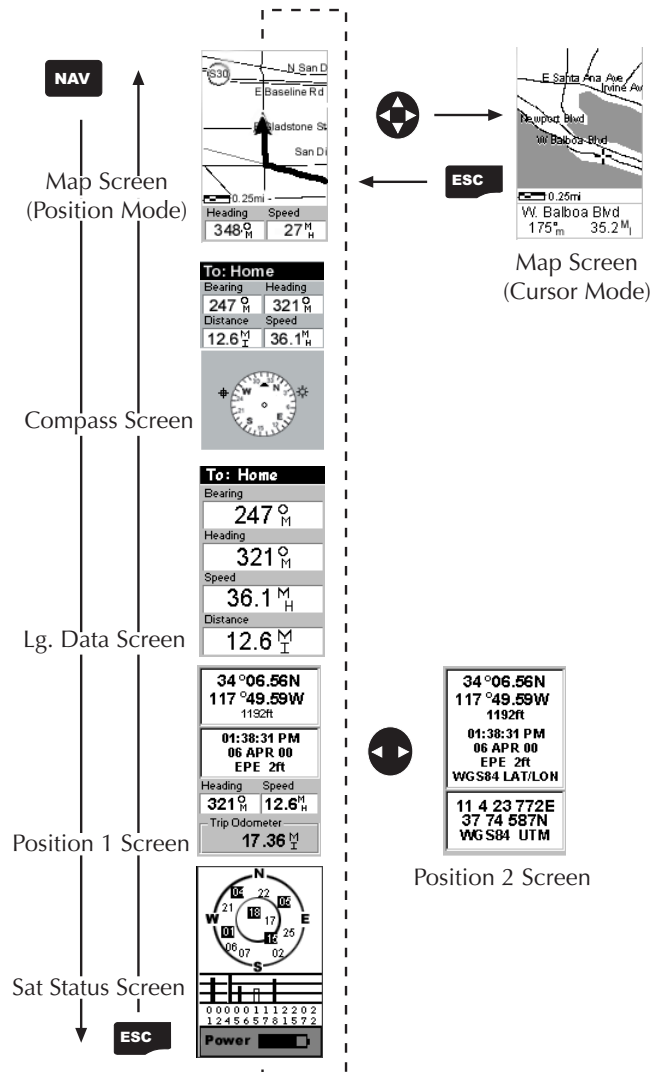


Position Screens. The Position screens 1 and 2 display your present position using the coordinate systems that you have selected in Setup. This screen shows all of the basic position, time and satellite information. In addition current navigation information is shown on the bottom half of the screen.

Accessing the Navigation Screens

From any screen other than a navigation screen, pressing **NAV** returns you to the last navigation screen viewed. Note that if you are inputting data, pressing **NAV** will return you to the last navigation screen but your inputs will not be saved.

While viewing any navigation screen, you can maneuver through the other screens following the sequence below.





Saving a Waypoint

A waypoint is a point on a map that you can name and save in the MAP 330. They are primarily used for creating routes. Whether the route is a simple GOTO or a more complex multileg route, it needs stored waypoints to use as its starting and destination point.

Saving a Waypoint with a Receiver-Generated Name

From any screen, press and hold **MARK** for 2 seconds and the Mark screen is displayed.

The “Save” button is highlighted and you can press **ENTER** to save the waypoint using the default name and icon.

You can later go back and edit any of the waypoint information through the Database Menu or you can change the information now following the guidelines below. (See *Waypoints* in the Reference chapter.)

The screenshot shows the 'Mark' screen with the following fields and values:

Icon	Name
#	WPT001
Location	
37°00.00N 119°00.00W	
Elevation	
00000ft	
Message	
CREATE MESSAGE?	
Save	Route

Saving a Waypoint with a User-Input Icon and Name

From any screen, press and hold **MARK** for 2 seconds. Use the UP/DOWN arrows and notice that the highlight moves from field to field and then back to “Save.”

Highlight the Icon field using the UP/DOWN arrows. Press **ENTER**.

This screenshot is identical to the one above, showing the 'Mark' screen with the 'Save' button highlighted.

Basic Operation

The Icon Select window is displayed. Use the arrow keypad to move from one icon to another with the name of the icon displayed at the top. As a reference tool, all of the icons and their names are listed in the Reference Chapter. When you have highlighted the icon you want to use, press **ENTER**.



The cursor is now highlighting the Waypoint Name field. With the Name field highlighted, press **ENTER**. The input keyboard is displayed. The very top of the keyboard window shows you what field you are changing, in this case the Name field.



You can now use the arrow keypad to select the character you wish to enter. With the character highlighted press **ENTER** and the character is appended to the name you are entering and displayed in the field above the keys. (Waypoint names can be up to 8 characters in length.)

Highlighting “Back” and pressing **ENTER** erases the last character you entered.

Highlighting “Clear” and pressing **ENTER** clears the entire name.

Highlighting the space bar and pressing **ENTER** adds a space.

Highlighting “Shift” and pressing **ENTER** displays the lower case letters and some additional punctuation marks.





Basic Operation

When you have the name the way you want it, highlight “OK” and press **ENTER**. You are returned to the Mark screen with the new name displayed.

Mark

Icon	Name
	Magellan
Location	
37°00.00N 119°00.00W	
Elevation	
00000ft	
Message	
CREATE MESSAGE?	

Save Route

Entering a Message

Any waypoint can have a message assigned to it. This comes in handy in further identifying the waypoint. If this was a waypoint for a friend's house or business, you could add a phone number or any other information that you find useful.

Use the UP/DOWN arrows to highlight the Message field and press **ENTER**.

The keyboard window is displayed the same as when the Name was changed. Only this time the top of the window says “Message” and the field you are typing into is larger to accommodate more characters. You can have up to 30 characters in the message field.

To accept the new message, highlight “OK” and press **ENTER**. To leave the message the way it was, press **ESC** at any time.



Is there a limit to the number of waypoints I can store in the MAP 330? Yes, the MAP 330 will store up to 500 user waypoints in memory. However, the MAP 330 will only allow messages to be created for 200 waypoints. If you should ever get that many and need to input more, you will have to delete ones that you no longer need to make room.



Basic Operation

Using GOTO Routes

A GOTO route is simply a route with a start point and a single destination point; I am here and I want to *go to* there. All that is required to create a GOTO route is having the destination waypoint saved in memory. This waypoint can be one that you have saved earlier (which is stored in your User Waypoint List) or any of the landmarks that come with the MAP 330 in its built-in database.



For example, suppose you parked your car and planned on going hiking for about an hour. And suppose that when you are done with your hike you want directions for getting back to your car. It's all very simple. First, at the location you parked your car you would use the MAP 330 to compute that position and then you would save that position with a name like "Parked." After your hike, you can use the GOTO function (described following this section) and select "Parked" as your destination from the User Waypoint List. The MAP 330 will then guide you back to your car.

Creating a GOTO Route

Press GOTO. The first thing that has to be done is to select the destination waypoint. This is done by accessing the waypoint database. The first screen is used to select the category of the database that the waypoint is in and how it will be found, alphabetically or nearest to your position or cursor.



Selecting a Destination Waypoint from the Database using "Near Position"

Use the UP/DOWN arrows to highlight the category that your destination waypoint is in. Use the LEFT/RIGHT arrows to select how the waypoints are displayed, Alphabetical, Near Position or Near Cursor. In this case, you will be using "Near Position".



Basic Operation

The example shown here is a sample of a City Waypoint List. This is a sample of a Nearest City Waypoint list for Magellan. Your screen will look different.

Use the UP/DOWN arrows to highlight your choice of waypoint to be your destination and press **ENTER**.



The GOTO route is now active and you are returned to the last viewed navigation screen.

Selecting a Destination Waypoint from the Database using "Alphabetical"

Highlight any category, other than User, and use the LEFT/RIGHT arrows to select a Find By of Alphabetical. Press **ENTER**. In this example, Cities was selected and this is how the screen appears.

This is a very long list and using the UP/DOWN arrows to find the right waypoint could take a long time. To speed up the process of finding a waypoint in the list, the MAP 330 offers you a way of "jumping" to the area of the list where the waypoint you want can be found.

For example, suppose your destination was to be Los Angeles. Press the UP arrow once. Notice that the first letter in the cursor has changed to a "B". The list has also "jumped" to the first city that starts with the letter "B".





Basic Operation

Since we are looking for Los Angeles, we need to repeat pressing the UP key until the letter “L” is displayed in the cursor.

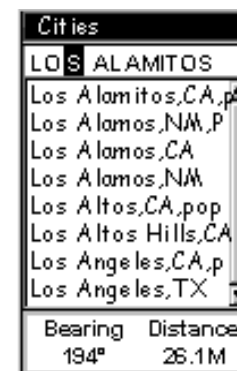
The City Waypoint list would look like this. This is pretty good as now the listing shows the cities beginning with the letter “L”, but we can get even closer.



Press the RIGHT arrow once. The cursor has moved to the second character in the list. Press the UP arrow until the letter “O” is in the cursor. (Note that the MAP 330 skips over letters that have no corresponding waypoint in the list. Since no city begins with “LB”, it skipped past “LB” and looked for a city that starts with “LC” and so on. This takes a little time so press the UP arrow and wait as this process may take a second to do.)



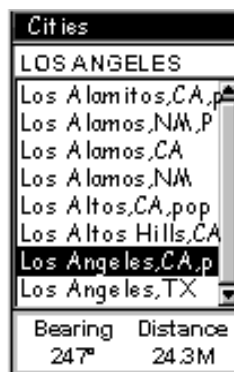
Press the RIGHT arrow again and use the UP arrow to select “S” in the cursor. Now you have gotten to a point on the list where you can see the city waypoint name for Los Angeles.





Basic Operation

You can now select Los Angeles from the list by pressing **ENTER**. The first city in the list is now highlighted. Use the DOWN arrow to highlight Los Angeles.



With Los Angeles highlighted, it can be selected as the destination of the GOTO route by pressing **ENTER**.

You are now sent to the last NAV screen that was viewed. The GOTO route has been activated and you are ready to begin navigating on the route.

Navigating on a GOTO Route

The MAP 330 has the ability to provide you with the tools you'll need to navigate to your destination. You have the choice of three customizable screens that display the information that you need in the layout that you desire. Hikers may find the compass screen perfect for them while boaters may prefer the Large Data or Map screen. For you, the Map screen may have all the information you'll ever require.

Press **NAV** until the navigation screen you want is displayed.

If you selected the Map screen, you will see your position icon in the center of the screen with a line drawn for you on the map, graphically displaying the GOTO route.



Note that this route is line of sight (LOS) or "as the crow flies." The MAP 330 does not compute the route using streets and highways providing a turn-by-turn routing. You'll find very quickly that you can easily use the roads and highways displayed on the Map screen and compare them to the displayed route and get to your destination simply.



Basic Operation



GOTO routes are NOT saved in memory when the MAP 330 is turned off. If you are navigating on a GOTO route and you need to turn the MAP 330 off, you will need to restart the GOTO. Routes, however, are stored in memory.

If you need to make a GOTO but expect to turn the MAP 330 off before arriving, you might consider making a 1-leg route using the route menu. More information on routes can be found in the Reference chapter of this manual.

These are just the basics of the MAP 330 and for many users this is all that they will ever need. However, there are many more features in the MAP 330 that you may want to become familiar with.

- Multileg routes (numerous GOTOs strung together to make a single, complex route).
- Sunrise/Sunset and Lunar Information (allows you to see the time that the sun will rise and set along with lunar phase for a given position and date).
- Best Hunting and Fishing Times (Displays the best hunting and fishing times for a given position. Real handy for hunters and boaters.)
- Alarms and Alarm Messages (You can have the MAP 330 provide an audible and visual alert for four different alarms: Anchor, Arrival, XTE or GPS Fix.)
- Setting up the MAP 330 (You can change many of the settings in the MAP 330 to meet your requirements. All of the possible choices can be found in the Setup Menu.)
- Clearing the MAP 330's memory (You can clear just a few or all of the stored data that you entered into the MAP 330. Be careful, once you clear the data, it is gone until you re-enter it.)

All of these and other features can be found in the Reference chapter of this manual. Just refer to it as you need.

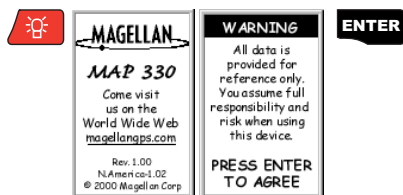
Again, thank you for joining the family of Magellan users and be sure to visit us on the web at www.magellangps.com for any software updates, MAP 330 information and a host of other items that you may find useful.



Reference

Power / Backlight / Contrast

Turn the MAP 330 On — Applies power to the MAP 330 and displays last NAV screen viewed. During power-up the first screen shows the software and map database versions currently loaded in the MAP 330. The second screen gives a warning that must be read. After reading the warning press ENTER to proceed. (If you do not press ENTER, the MAP 330 will shut off after 10 seconds.)



Turn the MAP 330 Off — Shuts down the MAP 330.



Press ESC key to abort before 5 seconds has elapsed.

During the 5 second countdown, pressing the PWR/LIGHT key again will shut the MAP 330 off immediately.

Using the Display Backlight — Illuminates the display for easier viewing in dark surroundings. Use only as needed as the backlight causes a large drain on the batteries. An automatic timer will turn the backlight off when a button has not been pressed for a selected duration (see Setup).



Press and hold for 2 seconds

Button Sequence

1st Press	Light On (low)
2nd Press	Light On (high)
3rd Press	Light Off



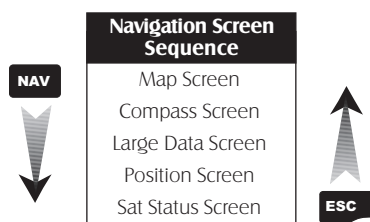
Reference

Adjusting the Display Contrast — Sets the contrast of the display for easy viewing in most lighting conditions.



Navigation Screens

Selecting NAV Screens — The NAV button provides a means of accessing the navigation screens. (Note: the sequence displayed is when all five navigation screens are turned on. Screens turned off in Setup will not be displayed.)



Returning to Last Viewed NAV Screen — Pressing the NAV button returns the MAP 330 to the last NAV Screen viewed.



(Note: if the NAV screen is pressed from a screen where data is being input, the data will not be saved.)

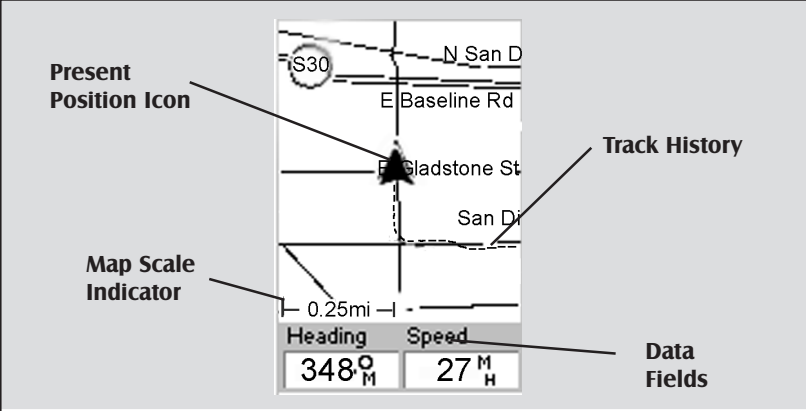
Map Screen

The Map screen is the very heart of the MAP 330. The Map screen has two modes: Position and Cursor.

In the Position Mode, the map is centered around your present position with an arrow cursor indicating your position and points in the direction you are heading. Two customizable data fields are presented at the bottom of the display. If you require to see more of the map you can also turn off these data fields. Information as to how to customize this screen follows this brief description of the Map screen.



Reference



Present Position Icon

The Present Position Icon graphically displays your position on the map. While you are moving it will point in the direction you are heading.

If the MAP 330 is not computing positions, this icon is replaced with an hourglass icon.

Map Scale Indicator

Provides the scale for the map. The number displayed represents approximately 1/4 of the screen's width. Scale can be changed with the IN and OUT buttons.

Track History

Dotted line on the map displays the history of where you have travelled since the last time you

cleared the Track History (see Clear Memory in the Reference Chapter.)

Data Fields

These fields display navigational information for viewing on the Map screen. They are both customizable with 13 data types possible.

Both of the data fields can be turned on or off allowing more viewable map area.

Both features (customize and turning the data on/off) can be accessed from the MENU button.

Optionally, using the customize function, the data fields can be replaced with the name of the street or intersection you are presently on.

Position Mode

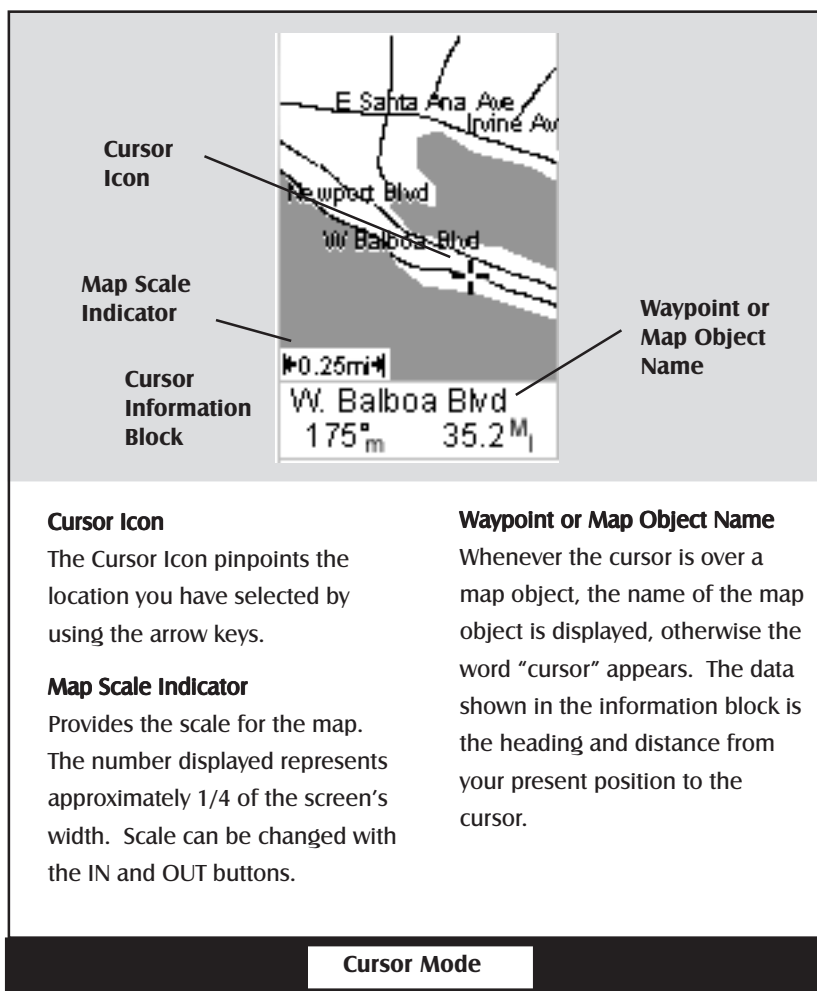


Reference

In the Cursor Mode, you are provided with a cursor that can be moved on the map. At the bottom of the display is the information for the position of the cursor relative to your present position. Also any points of interest that the cursor is over will be shown.

To access the Cursor Mode, press any arrow on the keypad. A crosshair appears that can be moved with the arrow keys.

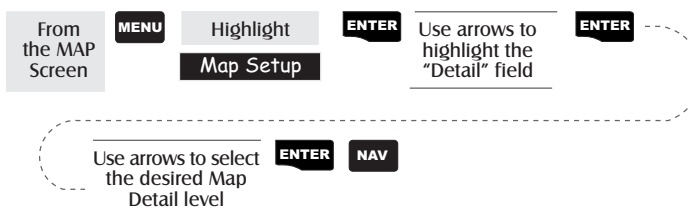
To return to the Position Mode, press **ESC**. The cursor will disappear and the present position icon will appear centered on the map.



















Reference

Setting the Map Detail — The detail of the map can be set to highest, high, medium, low or lowest. This changes the zoom level that different map objects (cities, highways, labels, etc.) are displayed. If you have set a zoom level and the display is too cluttered, set the map detail to a lower level; conversely set it to a higher level to view more detail. The default is Medium.

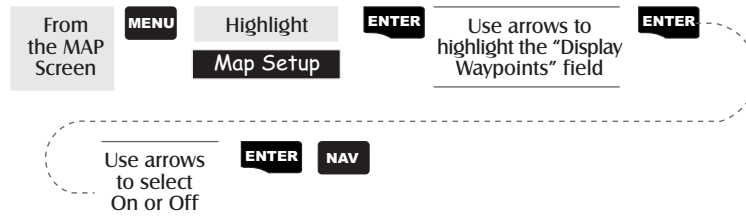


Map Screen Legend

Present Position Cursor	 (Pointer)
Panning Cursor	 (Crosshair)
Not Computing Fixes	 (Hourglass)
Waypoint	Displayed with the icon selected for that waypoint.
Oceans	 - dark gray
State Lines	 - black line
Rivers	  - light gray
Lakes	 - dark gray
Swamps	 - light gray
Railroads	 - light gray
Interstate Roads	 - double black line
U.S. Routes	 - thick black line
Roads	 - black line
National Parks	 - light gray

Reference

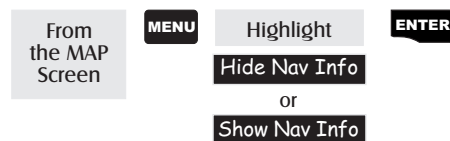
Turning On/Off Display Waypoints — Turns on or off the waypoints on the Map screen. Default is On.



City Definition — The MAP 330 refers to cities as major, large, medium or small. Each city definition has its own icon and is defined by the population of the city. The four definitions, the icon and the population size requirements are shown below.

Definition	Icon	Population
Major City	●	≥ 500,000
Large City	●	≥ 100,000
Medium City	■	≥ 10,000
Small City	■	< 10,000

Turning Nav Info On/Off — This option allows you to turn on or off the Nav Information box that is displayed at the bottom of the Map screen. Turning these off allows for more of the map to be displayed. Default is SHOW.



When Nav Info is hidden and the map is in the position mode, the name of the map object that the position icon is over is displayed at the bottom of the map.



Reference

When Nav Info is hidden and the map is in the cursor mode, the bearing (BRG) and distance (DIS) to the cursor is shown at the bottom of the map. If the cursor happens to be on a map object, the name of the object is displayed instead of BRG/DIS.

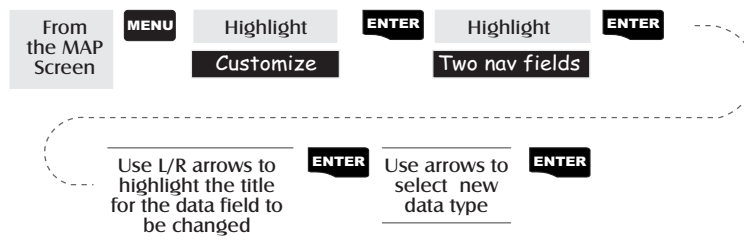
Selecting Street Information or Data Fields for Nav Information —

When the Nav Info box is being displayed at the bottom of the Map screen, you have the option of displaying street information or two customizable data fields. Note: This option is available only if the Nav Information is being displayed. (See *Turning Nav Info On/Off*.)



If you select Street Information, the Nav Info box at the bottom of the screen displays the name of the street or intersection you are travelling on. As you are travelling on a street, the name of that street will be shown on the first line of the Nav Info box and the name of the next cross street is shown on the second line. When you are not on a street, the Street Information will be replaced by the two data fields until it is determined that you are back on a street.

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 13 different data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, or date). Note: To be able to customize the data fields, you must be viewing the “Two nav fields” on the Map screen. (See *Selecting Street Information or Data Fields for Nav Information*.)





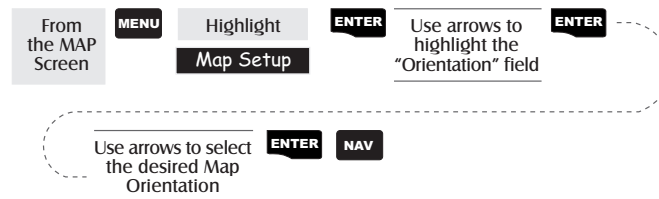
Reference

Data	Description
Bearing	This is the direction to your destination from your present position, in degrees, from North.
Distance	This is distance (measured in the Nav Units selected in Setup) to your destination.
Speed	This is the rate that you are travelling. The unit of measure is selected in Setup - Nav Units.
Heading	This is the direction you are moving (in degrees). When the heading and bearing are the same, you are travelling on a direct line to your destination.
VMG	VMG (Velocity Made Good). This is the speed that you are getting closer to your destination. If the heading and bearing are the same, then VMG will be the same as Speed since all of the speed that you are travelling is being applied to arriving to your destination. However, if you are off course, your VMG will be less than the speed that you are travelling.
CTS	CTS (Course To Steer). This is the angle that you need to turn to put you back on course.
ETA	ETA (Estimated Time of Arrival). This is the local time that you will arrive at your destination based on the rate of speed that you are moving to your destination. (See VMG.)
ETE	ETE (Estimated Time Enroute). This is how long, in time, that it will take you to arrive at your destination based upon your speed to the destination.
XTE	XTE (Cross Track Error). XTE is the perpendicular distance from your present position to the course line you should be on to go to your destination.
Turn	This is the direction you need to turn to put you on the shortest distance to your destination from your present position.
Elevation	This is the distance above sea level that you are presently at.
Time	Local time.
Date	Current date.



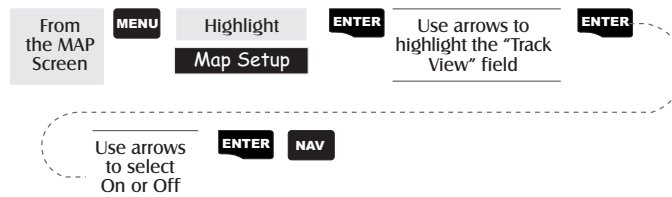
Reference

Changing the Map Orientation — You can change how the map is orientated on the screen to either North Up, Course Up or Track Up. Default is North Up.



Track History — As you travel, the MAP 330 automatically saves hidden waypoints into its memory. These waypoints can then be used to guide you back to where you started. If you drew a line between each waypoint you would then have a record of your travels, or your "track".

Turning On/Off Track View — Allows you to turn on or off the track history displayed on the map. The track history can clutter up the map making some details difficult to see. Turning off Track View does not stop the MAP 330 from saving your track; it is just not displayed.



Selecting Track Mode — Allows you to set how often the MAP 330 stores track points. In "Auto" (Automatic), the MAP 330 uses a method for track point storage that maximizes memory usage. Using Auto, the MAP 330 stores more points on or near turns and less points on straight stretches of the map. You also have the option of selecting fixed intervals for track point storage.





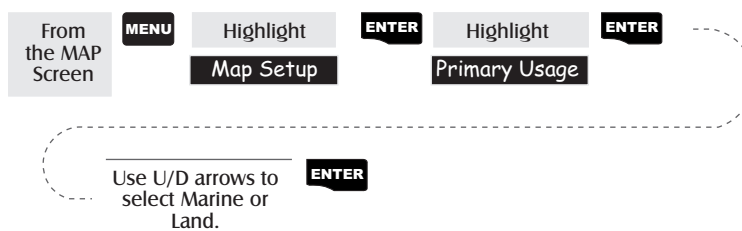
Reference

Setting the Track Mode to “OFF” stops recording your track. The same temporary waypoints used to create the track are used to compute a backtrack route. Therefore, setting Track Mode to “Off” will not allow you to create a backtrack route. It is highly recommended that you do not set the Track Mode to OFF in case you ever need to use backtrack.



Clearing Track — This will delete all of the track points stored in memory. This is how you would reset the track history at the start of a trip. Use this with caution. By deleting the track points that are stored, you will be unable to perform a backtrack to any of these points.

Selecting Land or Marine Use — As a default, the MAP 330 is in the “Land Mode.” In the land mode, water is displayed as dark grey areas on the map and land is shown in light grey. This makes it very easy to distinguish between land and marine areas and provides the best background for viewing street information. However, it makes viewing nav aids and other marine-based waypoints difficult to view. To accommodate marine usage, the MAP 330 allows you to switch the shading to make water areas light and land areas dark. The selection of land or marine use can be found in the Map Setup option.





Compass Screen

The diagram shows the Compass Screen interface. At the top, it displays 'To: Home'. Below this, there are four data fields arranged in a 2x2 grid: Bearing (247°M), Heading (321°M), Distance (12.6M), and Speed (36.1M). Below the data fields is a circular compass rose with cardinal directions (N, E, S, W) and intermediate directions (NE, SE, SW, NW). A small icon representing the destination is shown on the left side of the compass. A heading marker is shown on the right side of the compass. A sun/moon position marker is shown on the right side of the compass. Labels with leader lines point to the Destination Name, Data Fields, Destination Icon, Compass, Heading Marker, and Sun/Moon Position Marker.

To: Home	
Bearing	Heading
247° _M	321° _M
Distance	Speed
12.6 _M	36.1 _M

Destination Name
When you are navigating on a GOTO or multileg route, the name of the destination is placed here. For multileg routes, the name displayed is the name of the destination for the leg of the route you are presently navigating on.

Data Fields
Customizable data fields. The data displayed can be selected from 13 different options. Customizing is accessed through the MENU button. Some of the data displayed requires you to be moving to be computed, invalid data is indicated by dashes.

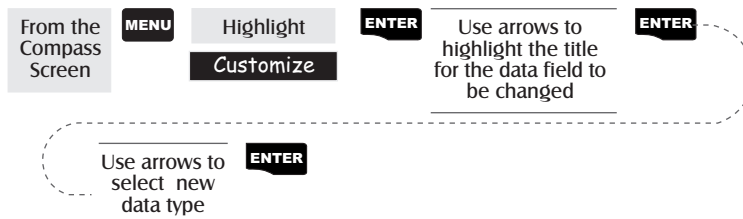
Destination Icon
When you are travelling on a route, an icon representing the destination of the leg or GOTO is displayed outside the compass. This provides you with the direction you need to head to arrive at the destination. When you are on course and heading straight for the destination, the destination icon will be lined up with the heading marker.

Compass/Heading Marker
Using the compass and the heading marker, you can view your heading information in a familiar manner. Note that you need to be moving for this data to be valid.



Reference

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 13 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, or date) for any of the four fields. (See explanation of Data Types in the Map Screen section.)



Large Data Screen

Destination Name points to the text "To: Home".

Data Fields points to the list of data fields: Bearing, Heading, Speed, and Distance.

To: Home	
Bearing	247° M
Heading	321° M
Speed	36.1 M _H
Distance	12.6 M _I

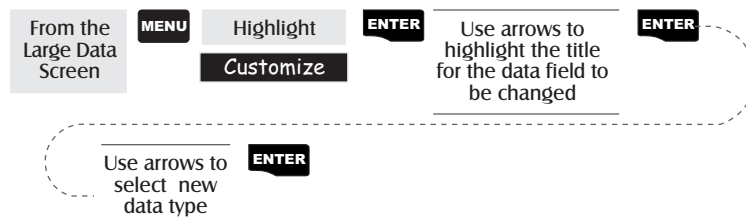
Destination Name
When you are navigating on a GOTO or multileg route, the name of the destination is placed here. For multileg routes, the name displayed is the name of the destination for the leg of the route you are presently navigating on.

Data Fields
Customizable data fields. The data displayed can be selected from 13 different options. Customizing is accessed through the MENU button. Some of the data displayed requires you to be moving to be computed, invalid data is indicated by dashes.



Reference

Customizing the Data Fields — Allows you to change the data that is being display to 1 of 13 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, or date) for any of the four fields. (See explanation of Data Types in the Map Screen section.)



Position Screen

The Position screens 1 and 2 display your present position using the coordinate systems that you have selected in Setup. The Position 1 screen shows all of the basic position, time and satellite information on one screen. In addition, current navigation information is shown in the bottom half of the screen.

Selecting the Position Screen — Use the Left or Right arrows to switch between the two position screens. This allows the same position to be displayed in different coordinate systems. This is useful when comparing navigation data between devices and charts that use different coordinate systems.

You can change the coordinate system displayed by following the instructions in *Setup - Selecting the Coordinate System*.

Resetting the Trip Odometer — Resets the trip odometer to 0000.00.





Reference

The diagram shows the screen of a Magellan MAP 330 GPS receiver. The screen is divided into several sections. At the top, it displays 'Present Position Coordinates and Elevation' as '34°06.56N' and '117°49.59W' with an elevation of '1192ft'. Below this is the 'Current Time and Date' section showing '01:38:31 PM' and '06 APR 00' with 'EPE 2ft'. The 'Data Fields' section is divided into 'Heading' (321°M) and 'Speed' (12.6M/H). At the bottom is the 'Trip Odometer' showing '17.36M/I'. Labels with lines point to each of these sections.

Use the Left/Right Arrows to toggle between Position 1 and Position 2

<p>Present Position Coordinates and Elevation</p> <p>Displays your present position in the coordinate system chosen in Setup. Also displays the elevation of the present position. If the MAP 330 is not computing position fixes, the last computed position is displayed.</p> <p>GPS Status</p> <p>Provides information on the current status of the GPS receiver portion of the MAP 330.</p>	<p>Data Fields</p> <p>Customizable data fields. The data displayed can be selected from 13 different options. Customizing is accessed through the MENU button. Some of the data displayed requires you to be moving to be computed, invalid data is indicated by dashes.</p> <p>Trip Odometer</p> <p>The odometer performs like the odometer in your car. It can be reset through the MENU button.</p>
---	--



Reference

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 13 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, or date) for any of the two fields. (See explanation of Data Types in the Map Screen section.)

From the
Position
Screen

MENU

Highlight

ENTER

Use arrows to
highlight the title
for the data field to
be changed

ENTER

Customize

Use arrows to
select new
data type

ENTER

GPS Status Messages — Messages indicating the status of the GPS receiver section of the MAP 330 are displayed on the Position screen.

Message	Description
Searching - 1st sat	Searching for 1st satellite.
Searching - 2nd sat	1st satellite found; searching for 2nd satellite
Searching - 3rd sat	Two satellites are being tracked and searching for a third.
Searching - 4th sat	Three satellites are being tracked and searching for the fourth.
Collecting Data	All satellites needed for position fix are being tracked and position is being computed.
Averaging	MAP 330 is computing fixes; speed is near 0.0 so position is being averaged.
EPE xxft	Estimated Position Error in feet. MAP 330 is computing fixes while moving.
DGPS	Computed fixes are being differentially corrected.



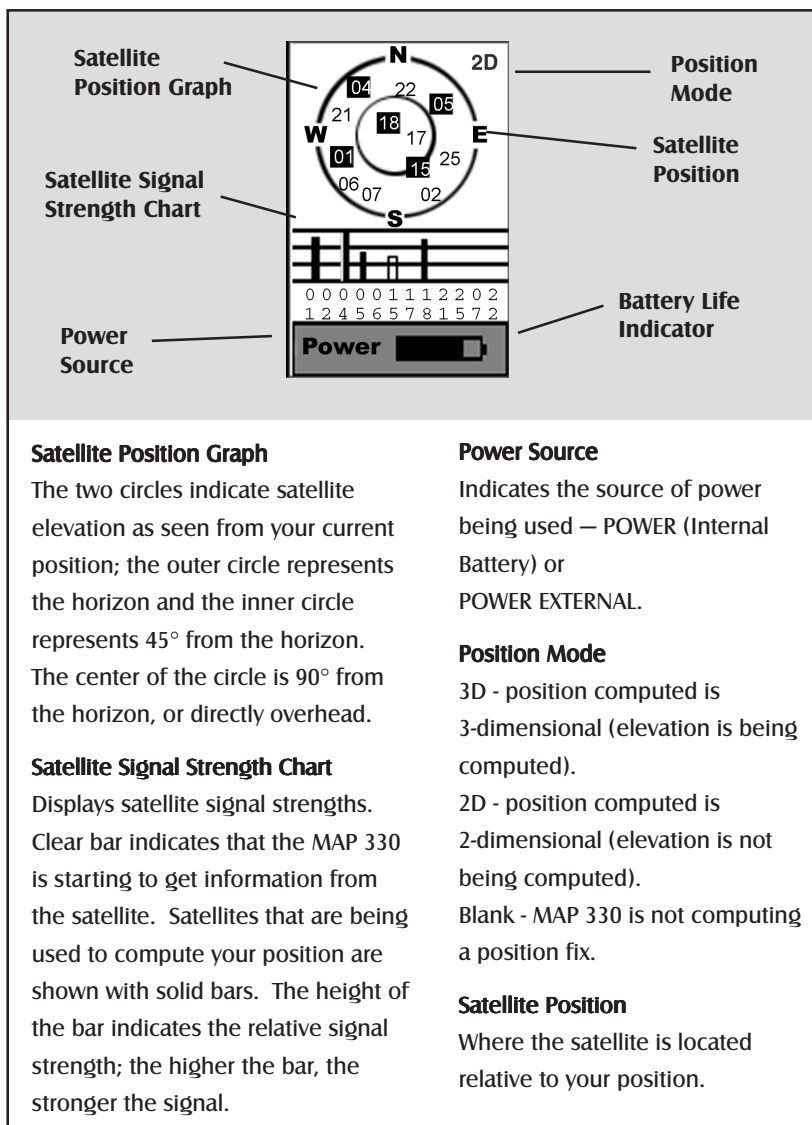
Since the MAP 330 is a 12-channel receiver, once the first satellite is found, finding the remaining satellites and computing a fix may take only a few seconds.



Reference

Satellite Status Screen

The Satellite Status screen visually displays the satellites being used and the strength of the received signal. Additionally, this screen displays the power source you are connected to and, if internal batteries, how much battery life is remaining. This is a very handy screen when you wish to view how well your MAP 330 is tracking satellites.

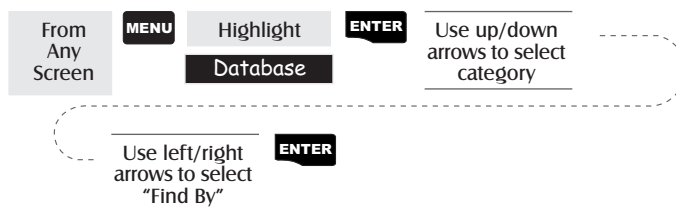




Reference

Waypoints / Database

Accessing Waypoints in the Database — All stored waypoints, whether user-input or preloaded, can be found in the Waypoint Database. You will need to access waypoints in the database whenever you are editing waypoints, activating a GOTO route or creating a multileg route.



Selecting Waypoints from the Nearest List.

If *Near Position* is selected as the “Find By” option for the database or if User was selected as the category, you will be presented with a list of waypoints that you can choose from. The information at the bottom of the screen indicates the bearing and distance to the highlighted waypoint from your present position.



Use up/down arrows to highlight waypoint **ENTER**

Selecting Waypoints from the Alphabetical List.

If *Alphabetical* is selected as the “Find By” option for the database a slightly different screen from the Nearest list is displayed. Since this list can be quite extensive, a “quick-find” box is added at the top of the display to speed up the search. The information at the bottom of the screen indicates the bearing and distance to the highlighted waypoint from your present position or cursor if in the Cursor Mode.



Note: When selecting the User category, the MAP 330 does not use the list with the “Quick-Find” box.



Reference

- 1** Scroll Quick-Find Box
 - Changes character
 - Moves cursor left/right
- 2** Access Waypoint List
 - ENTER** Moves cursor from "Quick-Find" box to highlight waypoints in list
 - ESC** While waypoint list is highlighted, you can return to the "Quick-Find" box by pressing ESC.
- 3** Select Waypoint
 - Moves highlight up/down
 - ENTER** Selects highlighted waypoint
 - Moves name left or right to display long names. Also displays population if applicable.

Cities	
LOS ALAMITOS	
Los Alamitos, CA, p	
Los Alamos, NM, P	
Los Alamos, CA	
Los Alamos, NM	
Los Altos, CA, pop	
Los Altos Hills, CA	
Los Angeles, CA, p	
Los Angeles, TX	
Bearing	Distance
194°	26.1M

Cities	
LOS ANGELES	
Los Alamitos, CA, p	
Los Alamos, NM, P	
Los Alamos, CA	
Los Alamos, NM	
Los Altos, CA, pop	
Los Altos Hills, CA	
Los Angeles, CA, p	
Los Angeles, TX	
Bearing	Distance
247°	24.3M

Selecting Waypoints Nearest to the Cursor. As discussed in the Map Screen section, the Map Screen has two modes of operation, position and cursor. If you are in the cursor mode you may want to know what waypoints are near your cursor rather than the ones nearest to your present position. You can do this by selecting the "Find By" option of *Near Cursor*. You are then presented with a list of waypoints that are close to the cursor for the category you selected.

After the list is presented, you can use the Up/Down arrows to highlight a waypoint, and press ENTER to view information on it. When highlighting a waypoint, the bearing and distance from the cursor to the waypoint is displayed at the bottom of the list.

Note: The "Find By" option *Near Cursor* is only available when the Map screen is in the Cursor Mode.



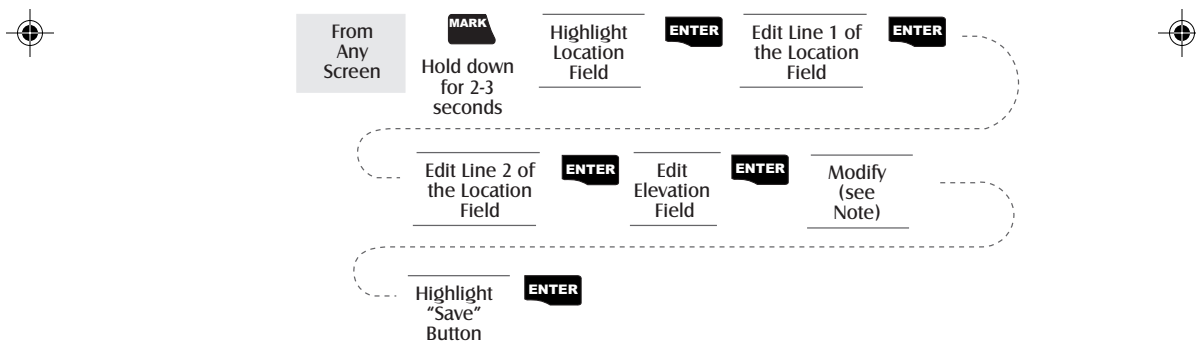
Reference

Saving Present Position as a Waypoint — Creates and stores your present position into the memory of the MAP 330. Stored waypoints can be used in GOTO and route creation. While saving the waypoint, you can edit the icon, name and add a message or you can just save the waypoint using the default name supplied by the MAP 330.



(Note: To modify the icon, name or message use the Up/Down arrows to highlight the field you wish to change and press ENTER. You are then placed into the *Edit Mode*. Using the method described in “Getting Started” you can personalize the waypoint, making it easy to remember what it is.)

Creating New Waypoint Manually — Allows the creation of a new waypoint with coordinates other than your present position. The coordinates for the new position need to be entered manually.



(Note: To modify the icon, name or message use the Up/Down arrows to highlight the field you wish to change and press ENTER. You are then placed into the *Edit Mode*.)

Creating New Waypoint with Map Cursor — Provides a method of creating a new waypoint with coordinates other than your present position. The new coordinates are computed automatically based on the location of the map cursor.



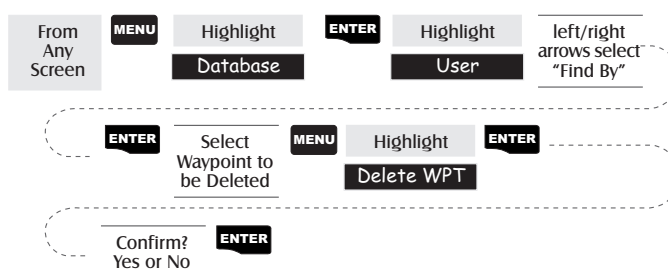


Reference

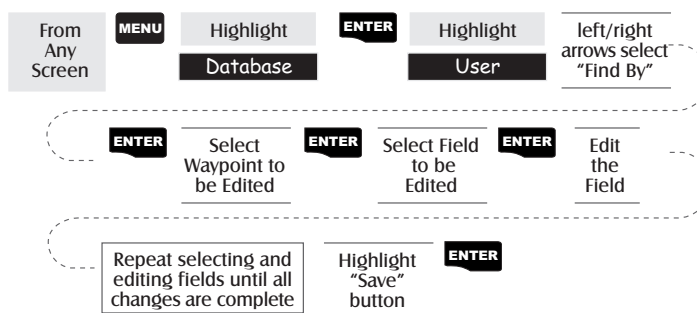


(Note: To modify the icon, name or message use the Up/Down arrows to highlight the field you wish to change and press ENTER. You are then placed into the *Edit Mode*.)

Deleting a User Waypoint — Deletes a waypoint that you have created.



Editing a User Waypoint — Allows you to edit a waypoint that you have already stored in the MAP 330's memory.



An alternative method to entering the edit mode is after highlighting the waypoint you wish to modify press MENU. Highlight Edit WPT and press ENTER.



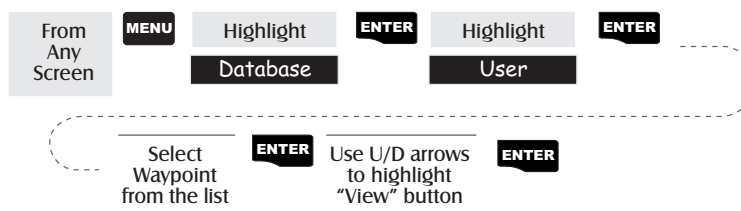
Reference

Viewing a Map Object on the Map — Displays on the Map the Map Object you have selected.

Note: This function is for viewing map objects (cities, airports, etc.) only. See Viewing User Waypoints on the Map for instructions on how to perform this feature using User waypoints.



Viewing a User Waypoint on the Map — Locates and displays on the Map the selected User Waypoint.



Note: If the waypoint is used in a route you will get a warning that it is in a route after selecting it from the list. This is because the screen that you access the view button can also be used to edit the waypoint and it may be undesirable to edit a waypoint that is being used in a route.

Also note that any edits you make to the waypoint are not saved when you use the View button. You need to highlight the Save button and press ENTER to record your changes.

Saving a Map Object as a User Waypoint — Saves a Map Object as a waypoint to be stored in your User Waypoint List. You would do this should you want to modify the object or if you wanted to use the object as a waypoint in the Sun/Moon or Fish/Hunt functions.

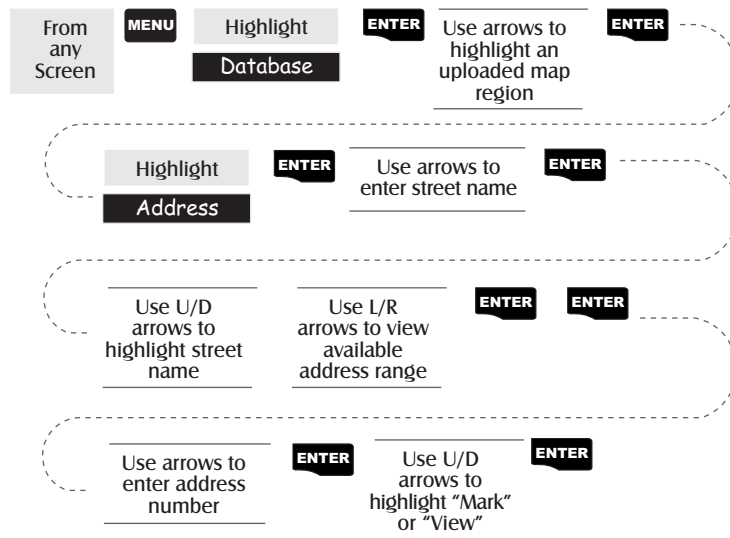
Follow the instructions above for *Viewing a Map Object on a Map*. Press and hold MARK for 2-3 seconds. Edit any field of the waypoint that you want and when you are done, highlight "Save" and press ENTER.



Reference

Searching for a Street Address — This option allows you to search an uploaded map database for a specific street address. After finding the address, you can save it as a waypoint (MARK) or view it on the Map Screen.

NOTE: The option is available ONLY if you have uploaded one or more detailed maps from the Magellan MapSend Streets CD-ROM.



Mark. If you select “Mark” and press ENTER, the Edit Waypoint screen is displayed. You can now change any of the attributes for this waypoint. Highlight “Save” and press ENTER to record this waypoint into the memory of the MAP 330.

View. Selecting “View” and pressing ENTER returns you to the Map Screen in the Cursor Mode with the cursor on the address you entered. From this point, you can create a waypoint by pressing and holding the MARK button.

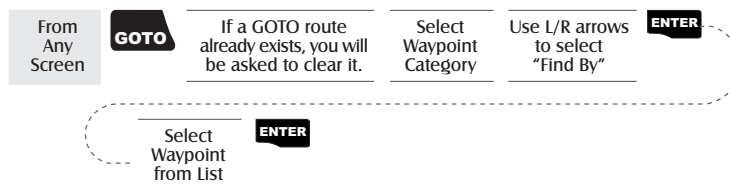
Note: The address search has some limitations and is based upon the map that was uploaded from the MapSend Streets software. While you are entering the address you will notice that the available range is displayed on the screen. Addresses entered must fall within that range.



Reference

Routes

Creating a GOTO Route — Creates and sets as the active route a 1-leg route with your present position as the starting point and a destination waypoint that you choose from the waypoint database.



GOTO routes are not saved in memory. When you turn your MAP 330 off and then back on, the GOTO route is gone. You need to create a new GOTO route if you intend on completing the route.

Also note that when you are selecting the Waypoint Category you are being instructed to select the "Find By". You can select only those waypoints in your general vicinity (Nearest) or all of the waypoints in the category in alphabetical order (Alphabetical).

Creating a Backtrack Route — Creates a route using track information stored in the MAP 330 to "retrace" your steps. A good example of using a backtrack would be if you were out hiking or jogging with your MAP 330 turned on and computing position fixes. After 30 minutes you choose to return to where you started, following the same route you just took. All you need do is follow the instructions below and let the MAP 330 take you there.

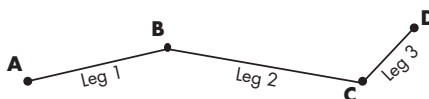




Reference

Creating a Multileg Route — Provides the means to create a multileg route that can be stored in memory.

Multileg routes are easily the most complicated function in the MAP 330, but once you can visualize what a multileg route (route) is, it becomes very easy to understand and create. If you understand that a GOTO is a 1-leg route with a starting point and a destination point, then imagine a bunch of GOTO's strung together where the destination of one GOTO is the starting point for the next GOTO. That means if you had three GOTO's, one from "A" to "B", another from "B" to "C" and a third from "C" to "D" you could then put them together to make one multileg route. In this example you would have a 3-leg route that went from "A" to "B" to "C" to "D".

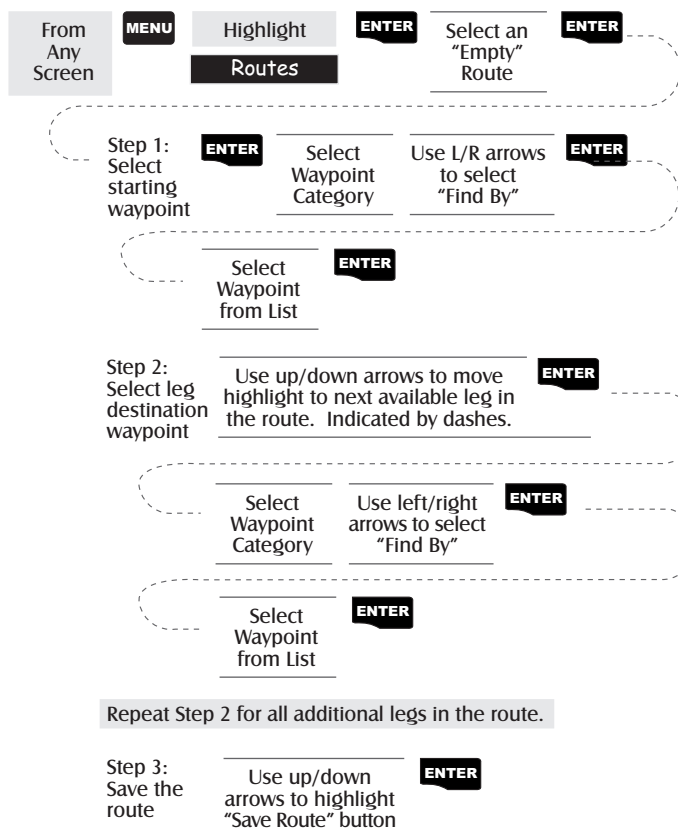


These routes have an advantage over GOTO's in that A) the starting point does not have to be your present position, B) they are always in memory and if activated they remain activated, even when you turn the MAP 330 off and then back on, and C) they can be saved and used over and over again.

(Note: these routes have been termed "multileg" in an effort to make the understanding of them a little clearer, however you could create a 1-leg route and save it in the MAP 330's memory.)



Reference



Sample Route List

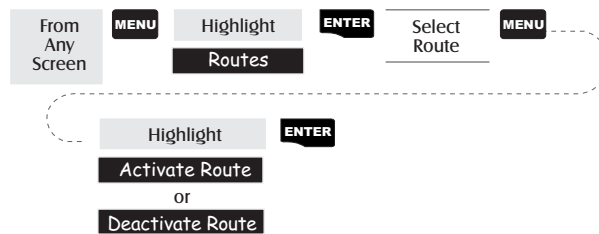
(Bold route indicates "Active" route)



Sample Route Create

Reference

Activating/Deactivating a Route — Enables the activating or deactivating of a stored route. When a route is being used to navigate, it is termed to be “active”. When you want to use a route to navigate with, follow these steps to activate it.



(Note: If the route is active, the MAP 330 will automatically display “Deactivate Route” in the menu and inversely if the route is not active, “Activate Route” will be displayed.)

Viewing a Route — Allows you to view the legs of a route using the same screen that was used to create the route. Viewing a route can be used if you just wanted to see the components of the route or as a precursor to editing the route.



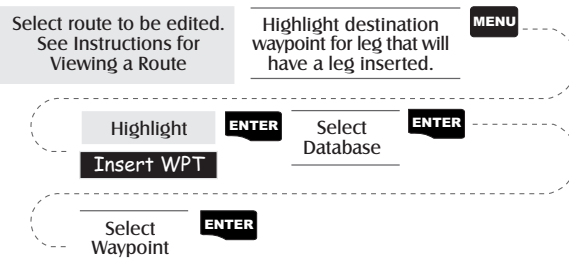
Editing a Route — Enables you to modify an existing route by inserting a leg, deleting a leg or replacing a leg. Follow the instructions above for *Viewing a Route* and then use the instructions for inserting, deleting, replacing or appending a leg as appropriate.

When you are done with editing the route, use the Up/Down arrows to highlight the “Save Route” button and press ENTER.

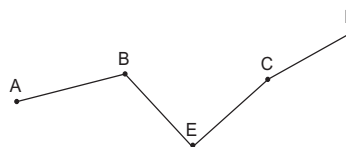


Reference

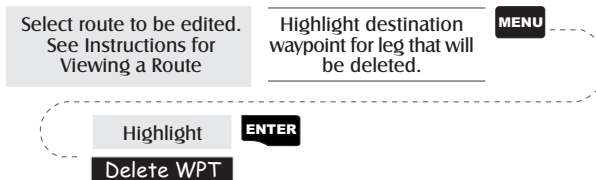
Inserting a Leg — Inserts a waypoint in the middle of an existing leg thereby making two legs where there used to be one.



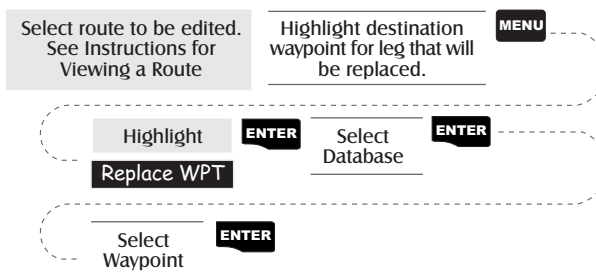
In the example of a route that goes from “A” to “B” to “C” to “D”, if you wanted to insert the waypoint “E” between “B” and “C” you would highlight the waypoint “C” and follow the steps to insert waypoint “E”. Your route would then be “A” to “B” to “E” to “C” to “D”.



Deleting a Leg — Deletes a leg from the route.

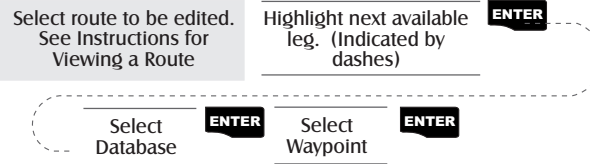


Replacing a Leg — Replaces the destination of an existing leg with a new destination.

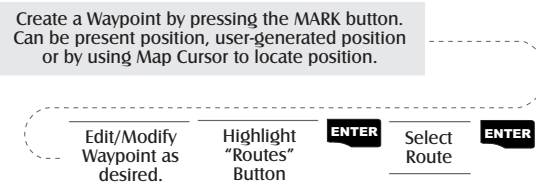


Reference

Appending a Leg — Adds a leg to the end of a route.



Appending a Newly Created Waypoint to a Route — Allows a newly created waypoint to be appended to any route in memory.



Reversing a Route — Allows any route in memory to be reversed. In the example used earlier of "A" to "B" to "C" to "D", if this route were reversed it would end up as "D" to "C" to "B" to "A".



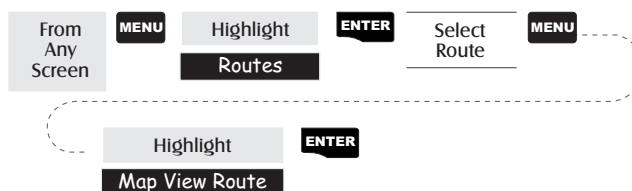
Deleting a Route — Enables the deletion of any route in memory. Useful when you want to add a new route but no "EMPTY" routes are available.



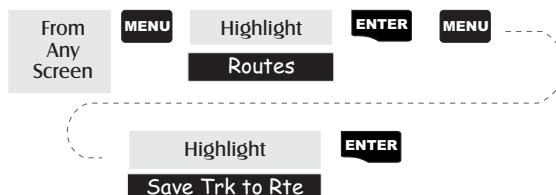


Reference

Viewing a Route on the Map Screen — Provides you with a graphical representation of the route selected on the Map screen.

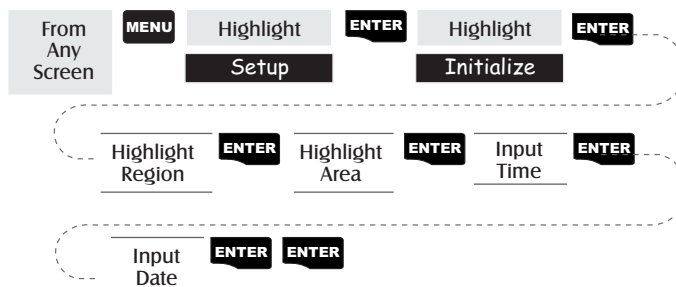


Creating a Route Using Track History — This enables you to automatically create a multileg route using your track history. This route will be saved to your route list with a naming convention of “T01P01 to T01Pxx” where Pxx indicates the number of points in the route.



Setup

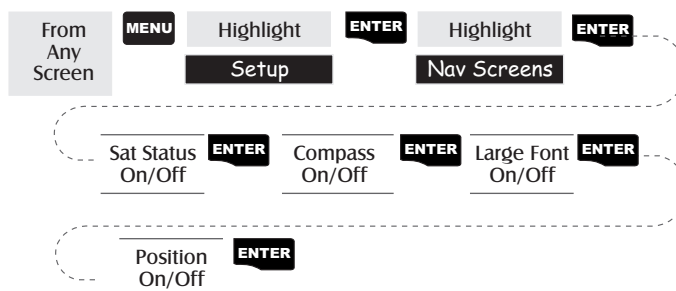
Initializing the MAP 330 — Enables you to initialize the MAP 330 should it be needed to speed up satellite acquisition. Two such instances would be travelling over 500 miles with your MAP 330 turned off or complete loss of memory.





Reference

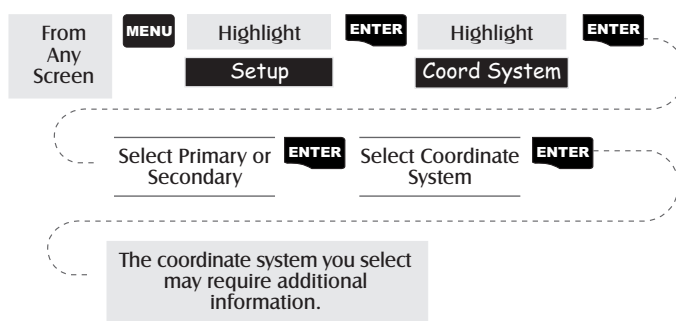
Turning NAV Screens On/Off — Allows you to turn off or on any of the navigation screens you choose.



(Note: you must go through the entire sequence of nav screens for your selections to be saved. As an example, if you turn the Sat Status screen off and press ESC before confirming all of the nav screens, your selection will not be saved and the Sat Status screen will still be on.)

Default: All On

Selecting the Coordinate System — Allows you to set the coordinate system that will be used to display the position for the primary or secondary position screen. Available coordinate systems are: Lat/Lon, UTM, OSGB, Irish, Swiss, Swedish, Finnish, German, French, or User Grid.

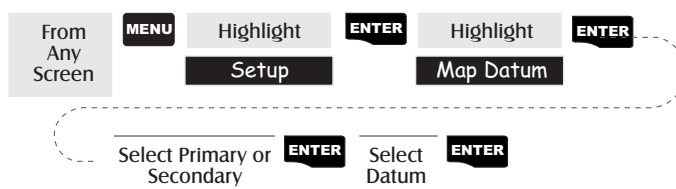


Default: Primary - Lat/Lon DEG.MIN.MMM
Secondary - UTM



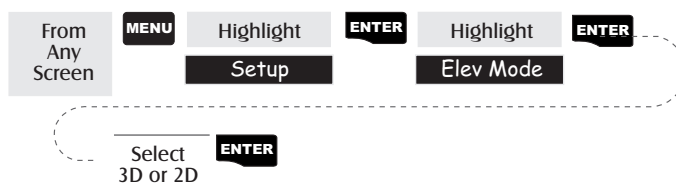
Reference

Selecting a Map Datum — Allows you to set the datum used to compute the coordinates to match the datum used on a map or chart. If you are using a map or chart with your MAP 330 and the datums do not match, you may find irregularities when comparing the coordinates.



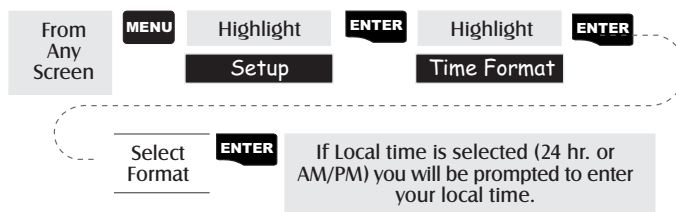
Default: Primary - WGS84 Secondary - WGS84

Selecting the Elevation Mode — Allows you to select the elevation mode used by the MAP 330. You may choose between 3D (uses satellite information to compute elevation) or 2D (displays a fixed elevation based upon the elevation entered).



Default: 3D

Selecting the Time Format — Enables you to choose from three different time formats: Local 24 Hr (military time), Local AM/PM or UTC.

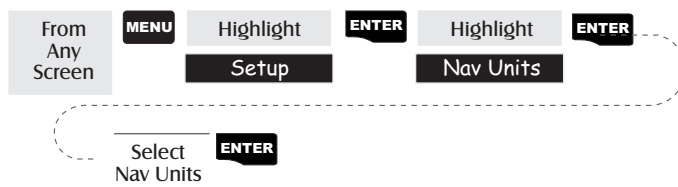


Default: Local AM/PM



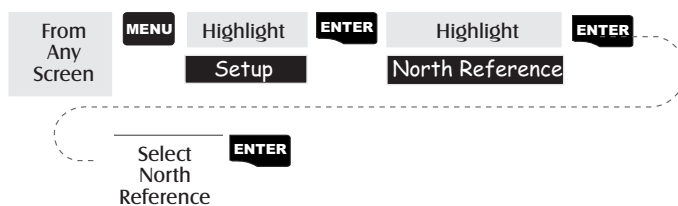
Reference

Selecting NAV Units — Allows you to select the units of measure that will be used when displaying navigational data. Options are: Miles/MPH, NM/Knots or KM/KPH.



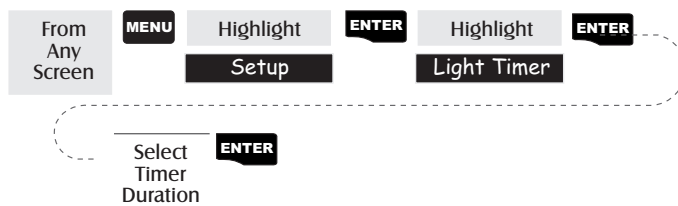
Default: Miles/MPH

Selecting the North Reference — Allows the selection of whether the MAP 330 uses True North or Magnetic North as its North reference.



Default: Magnetic

Setting the Backlight Timer — Allows you to set the time interval that will be used to turn off the display backlight when not in use. Times available are: 30 seconds, 1 Minute, 2 Minutes, 4 Minutes, 10 Minutes or Timer Off.

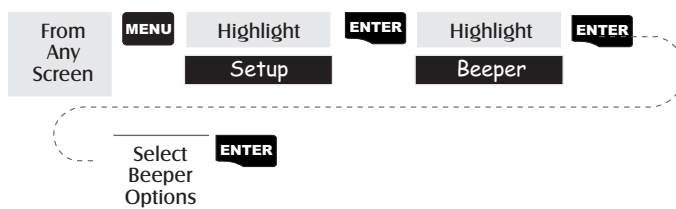


Default: 4 Minutes



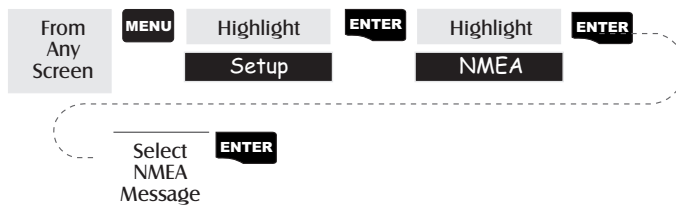
Reference

Turning the Beeper On/Off — Allows you to select which actions will cause the beeper to sound. You can choose from Off, Keys Only (pressing a key causes a beep), Alarms Only (when an alarm is activated) or Keys & Alarms.



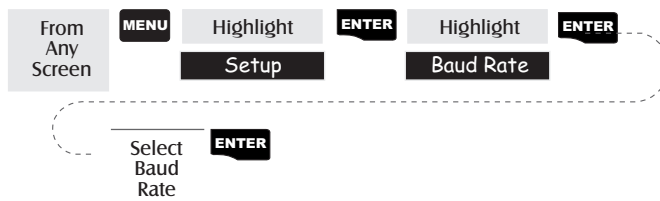
Default: Keys & Alarms

Selecting NMEA Message — Allows the selection of the NMEA message that will be output from the MAP 330. Choices are Off, V1.5 APA, V1.5 XTE or V2.1 GSA. Your choice will be dependent upon what message the device you are connecting to needs to receive.



Default: Off

Selecting the Baud Rate — Enables you to set the baud rate of the data being sent out from the MAP 330's output port. The baud rate sent out must match the baud rate that the receiving device is set for. You can choose from 1200 baud, 4800 baud, 9600 baud or 19200 baud.



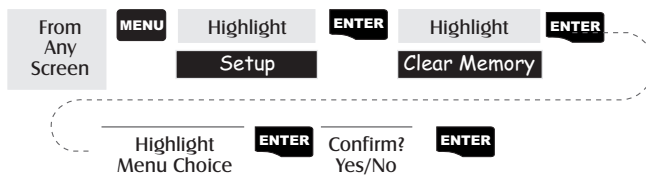
Default: 4800 Baud



Reference

Clearing Memory

All of the Clear functions operate in the same way. The instructions shown apply to all of the Clear options except Clearing All.



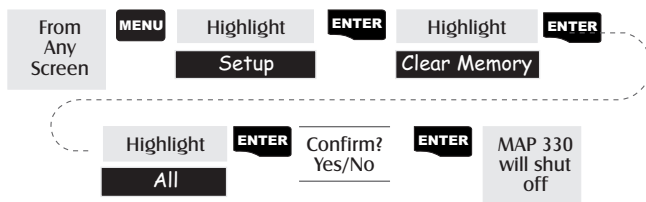
Clearing Track History — This will clear the track history that is displayed on the Map screen from memory.

Clearing Wpts/Routes — This will clear all waypoints and routes from the MAP 330's memory.

Clearing all Routes — This clears all routes from the MAP 330's memory.

Resetting MAP 330 to Factory Defaults — Allows you to reset all of the Setup choices to the factory defaults.

Clearing All Memory in the MAP 330 — This clears all memory from the MAP 330. After completing these instructions, the MAP 330 will shut off. The next time it is turned on, it will prompt you that it needs to be initialized.





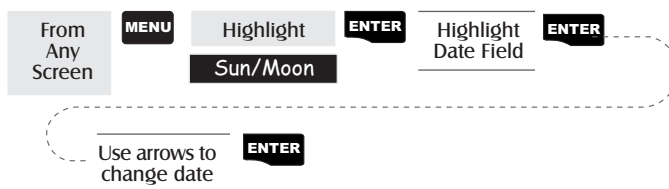
Reference

Sun/Moon Display

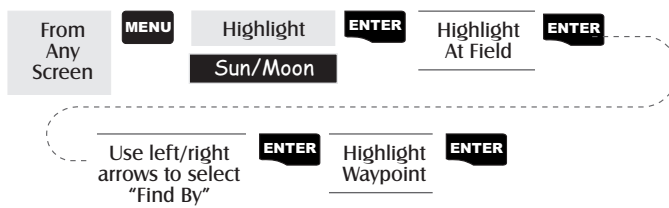
Accessing the Sun/Moon Screen — The Sun/Moon screen displays the sunrise time, sunset time and lunar phase for any waypoint you have stored in the User category in the waypoint database. All times displayed are local times to your present position.



Changing the Sun/Moon Date — Allows you to change the date for the sun/moon information for the position selected.



Changing the Sun/Moon Position — Allows you to change the position that you want to view the sun/moon information for. The default is “Position” which is your present position.





Reference

Fish/Hunt Times Display

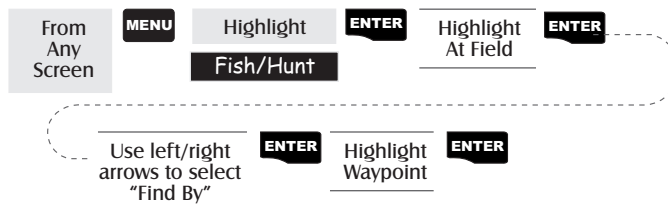
Accessing the Fish/Hunt Screen — The Fish/Hunt screen displays the best times for fishing or hunting for the position you choose from your User waypoints.



Changing the Fish/Hunt Date — Allows you to change the date for the fishing/hunting information for the position selected.



Changing the Fish/Hunt Position — Allows you to change the position that you want to view the fishing/hunting times for. The default is “Position” which is your present position.





MAP 330 Alarms

All of the Alarm options are set in the same way. The instructions below apply to all of the Alarm settings. When the beeper is turned on for alarms (see Setup - Turning the Beeper On/Off) an audible beep will be sounded for the alarm. A visual alert is displayed for the alarm whether the beeper is turned on or off.



Setting the Arrival Alarm — The arrival alarm alerts you that you have arrived at the destination of your GOTO or to the destination of any leg in a route you are navigating on. This option allows you to set the distance from the destination that the alarm will begin to sound.

Setting the Anchor Alarm — The anchor alarm will sound when you have drifted from your anchor point at a distance you set. An example of its use would be as you set anchor you turn on the anchor alarm to beep at a given distance. With the MAP 330 still operating and computing fixes you can then go fishing or other activities knowing that if you drift more than the distance you selected, the MAP 330 will alert you.

Note: DoD applied Selective Availability errors can considerably impact the accuracy of the drift distance.

Setting the XTE Alarm — XTE or cross track errors happen when you are off course for the route you are navigating on. The distance set in the alarm is the distance left or right of the heading you are supposed to be travelling on.

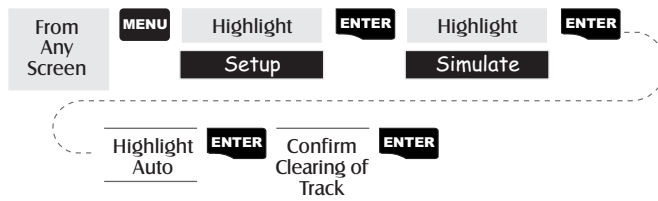
Setting the GPS Fix Alarm — This turns on or off the alarm that can sound whenever the MAP 330 has lost its ability to compute position fixes due to loss of signal from the satellites. This is handy in that it alerts you that you may need to move to an area that has a clearer view of the sky.



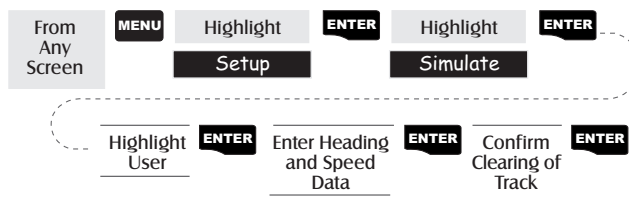
Reference

Using the Simulator

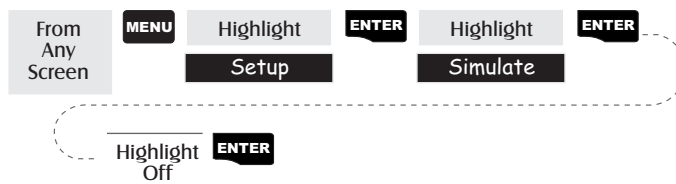
Turning on the Simulator - Auto Mode — This turns the simulator on and uses a predefined heading and speed rate.



Turning on the Simulator - User Mode — This turns the simulator on and uses a heading and speed rate that you define.



Turning the Simulator Off — Turns the simulator off and returns the MAP 330 to normal operation.





Reference

Help Screen

You can view help tips for Nav Screens, Map, Routes, Setup, Database, User Waypoints and Misc Topics. Each topic has a number of tips available that can be viewed.



Use the "Next" and "Previous" buttons to scroll through the MAP 330 tips

About... Screen

The About... screen displays the current status of your MAP 330. Using the About... screen you can tell what the version of the software is, the version and memory size of the base map, the number of and total memory size of detailed maps you may have installed using MapSend Streets™, and how much free memory is available.





Frequently Asked Questions

General

What is the difference between degrees/minutes/seconds (DEG/MIN/SEC) and degrees/minutes/minutes (DEG/MIN/MMM or DEG/MIN/MM)?

There are different ways in expressing the coordinates computed using Lat/Lon coordinate system. With DEG/MIN/SEC the final set of numbers (SEC) is expressed as 0-59 while DEG/MIN/MM expresses the same value as 0-99 and DEG/MIN/MMM is from 0-999. It would be the same as if you had one clock that expressed time as hour/minutes/seconds and another clock that expressed the same time as hours/minutes/decimals. The accuracy for any of the three is the same. Which you choose is dependent upon your preference or any chart you are using at the same time. (You should always make sure that your MAP 330 is setup to be the same as any map or chart you may be using.)

What is 2D vs. 3D?

The difference is primarily how many satellites are used to compute the position fix and how elevation is computed. In 2D (two-dimensional) only three satellites are needed for a position fix and elevation is not computed. Any elevation displayed by the MAP 330 during 2D operation is the elevation you entered. In 3D (three-dimensional), a minimum of four satellites are needed to compute the position and at the same time, elevation is computed by the MAP 330.

When the time changes for daylight savings time will the time, in the MAP 330 change automatically?

No. The time transmitted by the satellites atomic clock are UTC (Universal Time Coordinated) and provides no correction for daylight savings. When daylight savings time changes (or when you move to a new time zone), you need to go into Setup —



Frequently Asked Questions

Time Format and re-select the time format you are using unless you are using UTC. After selecting the format you will be given the opportunity to change the time.

How long can I expect my MAP 330 to run on a fresh set of batteries?

Under normal operating conditions you should get up to 10 hours of use while the display backlight is turned off. This duration will drop significantly if you use the display backlight.

How often do I need to initialize the MAP 330?

Initializing the MAP 330 decreases the time it takes to get a position fix during cold start. What is meant by a cold start is that the MAP 330 has no reference to use as a guide to tell it what satellites should be overhead. Without a reference to start with, the MAP 330 will have to “search the sky” trying to find any satellite that may be in “view.” This takes time and can increase the time it takes to get its first position fix. (Can take 10 minutes in severe conditions.)

So where does this reference come from? Under normal operating conditions, the last position fix computed before the MAP 330 was turned off is stored into memory and will be used as the reference the next time the MAP 330 is turned on. However, if you cleared the memory (see Clearing Memory - All in the Reference Chapter) this stored reference point is removed from memory and you probably will want to initialize the receiver again. Also, if you travel with your MAP 330 for more than 500 miles with it turned off, it will still have the reference point but it may be too inaccurate to be useful and again, you may want to initialize the MAP 330.

Waypoints/Database

What waypoints come preloaded on my MAP 330's database?

The Database contains cities, highways, airports, waterways and national parks.



Frequently Asked Questions

Can I delete preloaded waypoints that I don't use?

No. Waypoints that are preloaded into the MAP 330 will always be available, even when all of the MAP 330's memory has been cleared.

Navigation Screens

Why does my compass not point in the right direction?

The MAP 330 is not a compass. It must be moving at a minimum of 2.0 mph for the compass to compute the direction properly.

Routes

What is a backtrack route?

A backtrack route allows you to "retrace" your steps. As you are moving, the MAP 330 automatically creates and stores hidden waypoints into memory. These waypoints are the ones that the MAP 330 will use to retrace your steps. When you create a backtrack route, the MAP 330 converts these hidden waypoints into User Waypoints.

How do I know which route is active?

Access the route menu by pressing the MENU button and select the option Routes. The route menu lists all of the routes in memory with the active route displayed in bold characters.

Alarms

Why does my MAP 330 not make an audible beep when I have an alarm active?

Check your setup settings for the Beeper. If the selection is Off or Keys Only, the beeper will not sound for alarms.



Frequently Asked Questions

Output Data

What is NMEA?

NMEA (National Marine Electronics Association) is the standard used for interfacing marine electronic devices. This standard has also been adapted for use in a variety of third-party mapping software programs.

What are the NMEA message strings?

The MAP 330 supports version 1.5 and 2.1 of the NMEA 0183 standard.

Additional information on NMEA can be found at on the internet at www.nmea.org, where you can purchase the NMEA Interface Standards. Another excellent source for NMEA standards is a FAQ sheet that is published on the internet by Peter Bennett at vancouver-webpages.com/peter/nmeafaq.txt.

My GPS is not communicating with my computer. What can I do?

Check your baud rate and check the baud rate that your software is using. If they don't match, change either the software's or the MAP 330's baud rate (*See Setup - Changing the Baud Rate.*)

Can I interface my MAP 330 with a Macintosh computer?

Magellan does not supply cabling or software for the Macintosh line of computers. For information on a cable or software that may meet your requirements, visit GPSy at www.gpsy.com on the internet.



Appendix

Troubleshooting

Receiver will not turn on:

1. Check to see if batteries are installed correctly.
2. Replace with two new AA alkaline batteries.

Takes more than 10 minutes to get a position fix:

1. If there are any obstacles nearby or overhead, move to a new location.
2. Make sure that the antenna is pointing up, has a clear view of the sky and is a reasonable distance away from your body.
3. Check Satellite Status screen to see where the satellites are and if the receiver is acquiring data.
4. If the receiver still does not get a position fix within 10 minutes, you may wish to repeat the initialization procedure.

Receiver turns off unexpectedly

This is commonly caused by excessive static electricity. Turn the receiver back on and it should operate normally. Move the receiver to a new location to avoid a similar occurrence.

Battery life seems shorter than it should be:

1. Make sure that you are using two AA alkaline batteries.
2. Shorter life span of the batteries can be due to excessive use of the backlight. **Turn the backlight off when not needed.**

Position coordinates on your receiver do not match the location on your map.

1. Make sure that your receiver is set up to use the same datum as your map. The map datum is generally shown in the map legend. See *Setup - Changing the Map Datum* under *Reference* for instructions on selecting the map datum in your receiver.
2. Check your LAT/LON format. Make sure that the format selected in COORDINATE SYSTEM (DEG/MIN/SEC or DEG/MIN.MM) is in the same format as the map you are using.

Position on map is not exactly on the road.

It could be caused by distance shifts to the map.

Use map data for reference and do not rely completely on it.

Data was not saved or was corrupted.

This can be caused because you removed the batteries or removed external power with the MAP 330 turned on.



Appendix

Waypoint Icons

These is a list of the icons and their designator that can be assigned to a waypoint while marking a position or editing a waypoint.

	Default		Fuel		Restaurant
	Box		Garden		Rock
	House		Golf		Scuba
	Aerial		Hotel		RV Service
	Airport		Hunt/Fish		Shooting
	Amusement		Large City		Sight Seeing
	ATM		Lighthouse		Small City
	Auto Repair		Major City		Sounding
	Boating		Marina		Sports Arena
	Camping		Medium City		Tourist Info
	Exit Ramp		Museum		Truck Service
	First Aid		Obstruction		Winery
	Fixed Nav Aid		Park		Wreck
	Floating Buoy		Resort		Zoo



Appendix

Features of the MAP 330M

Nav aids. Included with the MAP 330M are fixed nav aids (lights), buoys, lighthouses, marinas and obstructions (wrecks, rocks, etc.). These nav aids can be accessed through the database in the same manner that any other waypoint or map object can be accessed using the Database function.

The screen to the right shows what you can expect to see when accessing the database with a MAP 330M. The additional database categories have been added to the bottom of the list following National Parks. If you scroll down further, using the down arrow, you will see the rest of the nav aid categories.



Tips on Using the MAP 330M

- Loading maps from MapSend Streets CDROM provides more detailed coastlines which are useful for navigation.
- Nav aid icons begin being displayed at 3.5 mile scale with the Map Detail (found in Map Setup) set to Medium. You can adjust the density of the nav aids being displayed by changing the Map Detail setting.
- If you plan to use the MAP 330M mostly in marine applications, set the Primary Usage (found in Map Setup) to Marine. This will make the boat's position, nav aids and waypoint icons much easier to see on the map.
- You may want to customize the Navigation screens to give you marine-related parameters, such as XTE, CTS (course to steer), VMG, etc.



Contacting Magellan

If after using the troubleshooting section, you are still unable to solve your operation problems, please call Magellan's Technical Service at (866) 737-8604.

Representatives are available Monday through Friday from 7 AM to 5 PM, PST. Faxes can be sent to Customer Service at (909) 394-7070.

If necessary, you can also return your receiver to Magellan for repair. Before returning the receiver you must get a Return Materials Authorization (RMA) from Magellan Corporation. To get an RMA, contact a Magellan Technical Service Representative at (800) 707-7845 or you can send an email explaining your reasons to rma@magellangps.com. After receiving the RMA number, ship the receiver by Parcel Post or UPS. Include a description of the problem, your name, address, a copy of your sales receipt and print clearly on the outside of the package the RMA number assigned. If your return ship address is different, please indicate.

With all correspondence, please state the model of your receiver and if calling, please have your receiver with you.

Packages should be sent to:

Magellan Corporation
960 Overland Court
San Dimas, CA 91773
ATTN: Warranty/Repair

Additional information regarding software updates to your MAP 330 can be found in the Product Support section of the Magellan web site (www.magellangps.com).

When calling in for technical support, you may be asked for the version of software and configuration of your MAP 330. To easily find out this information, press MENU from any of the NAV screens, scroll down the menu items until you come to "About..." and press ENTER.



Appendix

Specifications

CHARACTERISTICS

Performance

Receiver 12 parallel-channel technology, tracks up to 12 satellites to compute and update information with quadrifilar antenna

Acquisition Times (under optimal conditions):

Warm approximately 15 seconds

Cold approximately 1 minute

Update Rate 1 second continuous

Accuracy

Position 49 feet (15 meters) RMS

Velocity 0.1 knot RMS steady state

Limits:

Speed 951 mph

Altitude 17,500 meters

Physical:

Size 6.2" x 2.0" x 1.3" [h] x [w] x [d]
15.75 cm x 5.08 cm x 3.30 cm

Weight 7 ounces (198.45 grams) with 2 AA batteries installed

Display 2.2" x 1.33" [h] x [w]
5.59 cm x 3.38 cm
high contrast LCD with EL backlit display

Housing Weatherproof construction, wraparound rubber armor

Temp. Range

Operating 14°F to 140°F to (-10°C to 60°C)

Storage -4°F to 158°F (-20°C to 70°C)

Power:

Source 2 AA alkaline batteries or 9-35 VDC with power cable

Battery Life Up to 10 hours



Appendix

Accessories

Accessories for your receiver are available from your Magellan dealer or you can order directly from Magellan at (800) 669-4477 (press 3 to place an order).

Swivel Mounting Bracket: Mounts the receiver on a surface, allowing for hands-free operation.

Vehicle Mounting Bracket: Full swivel and tilt for easy viewing in any vehicle.

Bike Mounting Bracket: Mounts the receiver on the handlebars of a bicycle, motorcycle or off-road vehicle.

Nylon or Leather Carrying Case: The carrying case provides a way of carrying the MAP 330 on your belt while at the same time protecting it from the elements.

Power/Data Cable (Bare Wires): Allows you to connect your receiver to external power and data.

PC Interface Cable with Cigarette Lighter Adapter: Connects your receiver to your PC for data transfer and to a cigarette lighter for external power.

External Power Cable with Cigarette Lighter Adapter: Allows you to connect the receiver to a cigarette lighter for external power.

PC Cable: Allows you to connect the MAP 330 to a PC.

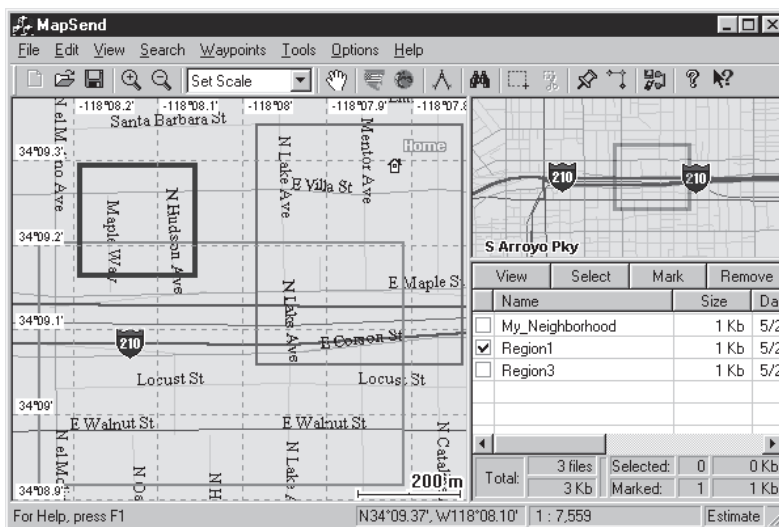
MapSend Streets™ CD-ROM: This software contains a database of detailed street maps that can be uploaded to the MAP 330.



Appendix

MapSend Streets™

The MapSend Streets CD allows you to load detailed street maps into your MAP 330. The maps supplied on the MapSend Streets CD contain full street detail of the U.S. cities.



Features

- Enables you to load street maps (up to 8MB) for any region in the United States into the MAP 330.
- Allows you to cut any rectangular map region you choose to load into the receiver. Maps are not pre-cut to counties or other boundaries.
- Creation, management and upload/download of waypoints and routes.
- Allows straight line distance computation on the map.
- Search for map objects (such as cities, lakes, etc.) by name.

Minimum Requirements

- IBM PC AT-486 or compatible
- 32 MB RAM
- VGA Video Card
- 60 MB Hard Drive Space
- 8x CD-ROM drive
- MS Windows 95/98/NT 4.0 (or higher)

Recommended Requirements

- IBM PC AT-Pentium/300 or compatible
- 64 MB RAM
- True Color Video with 800x600 resolution
- 60 MB Hard Drive Space
- 32x CD-ROM drive
- MS Windows 95/98/NT 4.0 (or higher)



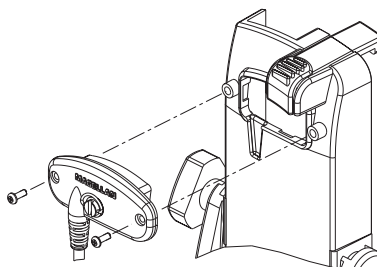
Connecting to External Devices

Available as accessories for your GPS receiver are the following cables: External Power Cable with Cigarette Lighter Adapter, Power/Data Cable, Data Cable and PC Cable with Cigarette Lighter Adapter. The instructions given below apply to all cables, unless otherwise stated.

The cable can be connected to the receiver two different ways:

1. Mount to the back of the Swivel Mounting Bracket.

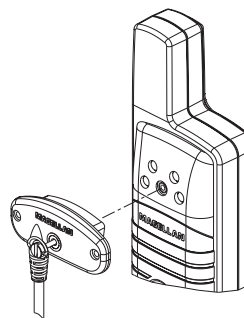
Using the two screws included, attach the plug to the back of the swivel mounting bracket. It is not necessary to tighten the captive screw to the receiver, although you may for added security.



or

2. Mount to the back of the GPS receiver.

Using the captive screw that is attached to the plug, tighten into the back of the receiver (mounting screws are not used).

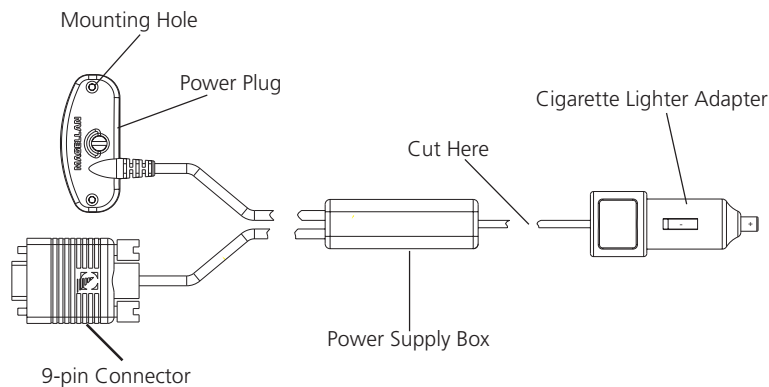


Appendix

Connecting to an External Power Source

If using the cable that comes with the cigarette lighter adapter, simply connect it to the cigarette lighter outlet. If you wish to make a permanent mount to a power supply, cut the cable between the power supply box and the cigarette lighter adapter. Attach the red (+) and black (-) wires to your external power source. The input voltage range for external power is 9-16 VDC.

Caution: Do not bypass the power supply box or you will damage your unit and void the warranty.

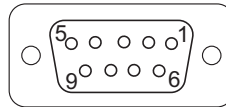


Connecting to a Data Source

Data Connection Pinout (PC and Data cables only)

This is the pinout looking into the 9-pin female connector

Pin 2: Data Out
Pin 3: Data In
Pin 5: Ground



Cable Wiring Color Code

Power Red: Power +
 Black: GND

Data (Power/Data, PC cable & Data cable only)
 Yellow: Data In
 Orange: Data Out
 Black: GND



Glossary

Active Leg	The segment of a route currently being traveled.
Altitude	The current elevation above sea level.
BRG	Bearing. The compass direction from your position to a destination, measured to the nearest degree.
Buoy	A navigation aid (usually found in marine charts) that is floating in water. The position can vary due to the magnitude and direction of the current.
COG	Course Over Ground. The direction the receiver is moving. COG can be reported in true or magnetic north values.
Coordinates	A unique numeric or alphanumeric description of the position.
CTS	Course to Steer. The direction you should be traveling in order to return to the course while proceeding towards the destination. It is a “compromise” course bearing that projects from your current position to a point on the courseline midway between a point perpendicular to your position and the current leg destination waypoint.
Datum	Refers to the theoretical mathematical model of the earth’s sea level surface. Map makers may use a different model to chart their maps, so position coordinates will differ from one datum to another. The datum for the map you are using can be found in the legend of the map. If you are unsure of which datum to use, use WGS84.
Default	The value or setting automatically chosen by the unit unless otherwise directed. Can be changed in Setup.
DST	Distance. Distance from position to destination.
ETA	Estimated Time of Arrival. The estimated time of day the leg’s destination waypoint will be reached.



Appendix

ETE	Estimated Time Enroute. The estimated time remaining to reach the next waypoint in a route.
HDG	Heading. The direction you are facing, defined as an angle from North.
Latitude	The angular distance north or south of the equator measured by lines encircling the earth parallel to the equator from 0° to 90°.
LAT/LON	Coordinate system using latitude and longitude coordinates to define a position on the earth.
Leg (Route)	A segment of a route that has a starting (FROM) waypoint and a destination (TO) waypoint. A route may consist of 1 or more legs. A route that is from waypoint A to waypoint B to waypoint C to waypoint D has three legs with the first being from waypoint A to waypoint B.
Longitude	The angular distance east or west of the prime meridian (Greenwich Meridian) as measured by lines perpendicular to the parallels and converging at the poles from 0° to 180°.
Magnetic North	The direction relative to a magnetic compass.
NMEA	National Marine Electronics Association. A professional organization that defines and maintains the standard serial format used by marine electronic navigation equipment and computer interfaces.
OSGB	A coordinate system describing only Great Britain, similar to UTM's. Used with GRB36 datum.
Position fix	Position coordinates as computed by the MAP 330.
SOG	Speed Over Ground. The speed at which the receiver is moving.
TMP	Temperature.



Appendix

True North	The direction to North Pole from an observer's position. The north direction on any geographical meridian.
UTC	Universal Time Coordinated. Formerly referred to as Greenwich Mean Time (GMT).
UTM	Universal Transverse Mercator metric grid system used on most large and intermediate scale land topographic charts and maps.
VMG	Velocity Made Good. The component of the velocity that is in the direction of the destination.
WPT	Waypoint. A location saved in the receiver's memory which is obtained by entering data, editing data, calculating data or saving a current position. Used to create routes.
XTE	Cross Track Error. The perpendicular distance between the present position and the courseline. Given as a distance, right or left, of course when facing the destination.



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