User Manual

SporTrak Color
GPS Mapping
Receiver

MAGELLAN

✋ 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 SporTrak 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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Table of Contents

Introduction

Welcome and congratulations on your purchase of the Magellan SporTrak Color GPS mapping receiver. The SporTrak Color 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 SporTrak Color 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.

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 packing list. Magellan is a registered trademark name for Thales Navigation.

About This User Manual

This User Manual is divided into six chapters; Introduction, Setting Up the SporTrak, Basic Operation, Reference, 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 SporTrak: This chapter will show you how to prepare the SporTrak Color for use. Instructions will include how to install the batteries, how to select the languages and how to initialize the SporTrak Color.

Basic Operation: This chapter provides you with step-by-step instructions for using the basic functions of the SporTrak Color. 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 SporTrak Color for most things you will want to do.

Reference: Here you will find step-by-step instructions for all of the features found in the SporTrak Color. 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 SporTrak Color, the global positioning system (GPS) and using the SporTrak Color 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 SporTrak Color 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 SporTrak Color and this manual that may not be familiar to all users.

It's time to begin using your SporTrak Color. 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 SporTrak Color 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 SporTrak

Setting up the SporTrak Color is a simple three-step process: installing the batteries, selecting the language to be used and initializing the SporTrak.

Installing the Batteries

To change the batteries, remove the battery door on the back of the SporTrak Color. The door can be easily removed by pressing on the lever at the top of the battery door. This releases the door and allows it to swing away from the receiver. There is a small lip at the bottom of the battery door, so be sure to open the door as if it were hinged on the bottom.

Remove the old batteries and install two new AA batteries, observing the correct polarity. Replace the door by aligning the lip at the bottom of the door to the groove at the bottom of your receiver. Swing the door back into place until the lever snaps into the body of the receiver.

Anytime you replace the batteries, you should re-calibrate the compass. This will insure that your SporTrak Compass is providing you with the most accurate compass information.

When battery life is low you will receive a warning, letting you know that it is just about time to change the batteries. You can continue to use your SporTrak Color with the low battery indication but the compass may react erratically. If you need to use the compass during low battery periods, you should perform the compass calibration routine when the warning first appears.
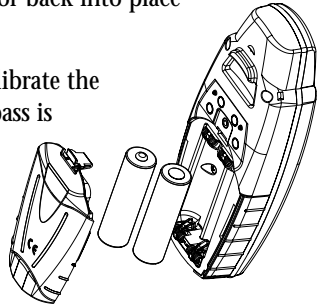
See the Appendix of this manual for details on calibrating the compass.

How much time do I have to replace the batteries? Any waypoints or routes you have created are stored in permanent memory with the batteries removed. Present position and time data is not stored in permanent memory but will be held in memory for at least 12 hours without batteries installed.

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

Selecting Language

The first time you use your SporTrak (or if memory has been completely erased) you will be asked to select the language that you want to use. Use the UP/DOWN arrows on the keypad to highlight the language you desire. With the language highlighted, press the ⊕ ENTER button. You can select English, French, German, Spanish, Italian, Portuguese, Finnish, Dutch or Swedish.

You can change the language at any time by accessing the Languages option of the Setup Menu. (See Changing Languages in the Reference Section of the User Manual.)

Initialization for First Time Use

 The final step in setting up the SporTrak is to initialize the receiver for first-time use. This will help your SporTrak 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 SporTrak has no last position computed in memory (i.e., when the SporTrak is brand new or memory has been cleared). This gives the SporTrak 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 SporTrak.

Turning the SporTrak On

Press ☀ [POWER]

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

Press ⊕ [ENTER]. (You have 10 seconds to press ⊕ [ENTER] or the SporTrak will shut off.)

> The SporTrak displays a message box indicating that the receiver needs to be initialized.

Press ⊕ [ENTER].

```
ATTENTION!

UNIT IS NOT
INITIALIZED


PRESS
ENTER TO
INITIALIZE
```

Enter Your Approximate Position (Initialize)

Use the Up/Down arrows on the keypad to highlight your general region.

Press ⊕ [ENTER].

```
Region

Enter Coord
USA
Americas
Europe
Asia East
Asia West
```

Use the Up/Down arrows on the keypad to highlight your area.

Press ⊕ [ENTER].

```
Area

Alabama
Alaska
Arizona
Arkansas
California
Colorado
```

> 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 SporTrak starts to pick up signals from any satellite, it will automatically update the time using the satellite's atomic clock.

```
Time

37°00.00N
119°00.00W
0ft
09:00AM
05MAR00

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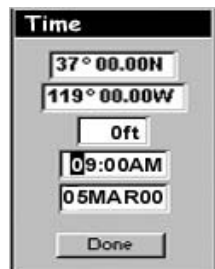
To use the arrow keys to edit a field, follow the simple diagram below.

Editing

◀ ▶ moves the cursor block left or right.

Pressing right arrow results in:

▲ ▼ increments the value up or down.

Pressing up arrow results in:
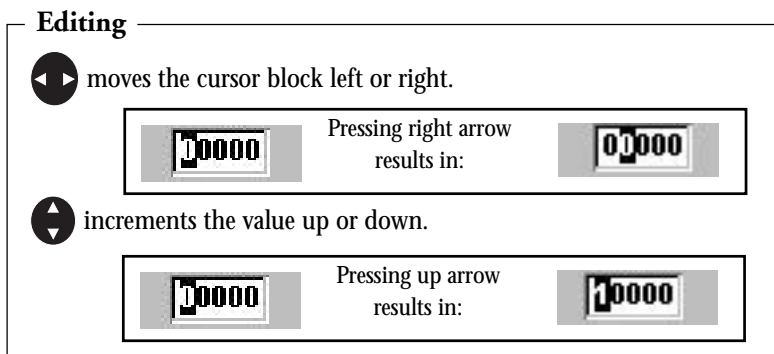
When the time is correct, press ⏎ [ENTER].

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

Press ⏎ [ENTER].
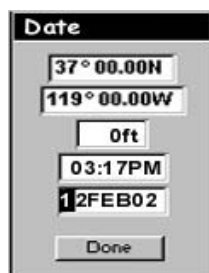
All the information that the SporTrak needs to speed up the process of computing its first fix has been entered and the Done button is highlighted.

To complete the initialization process, press ⏎ [ENTER].
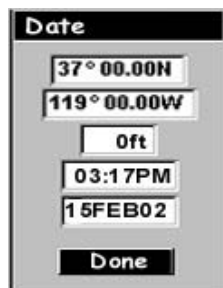
The Satellite Status screen is displayed and the SporTrak begins acquiring the data from the satellites. You can begin using the SporTrak beginning with the Basic Operation described in the next chapter or you can turn the SporTrak off. If you turn the SporTrak off, all of the information you just entered will be saved.

To turn the SporTrak off, press ☀ [POWER].
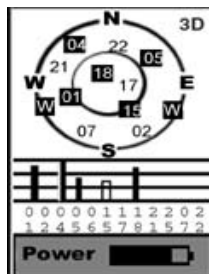
Basic Operation

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 SporTrak, it may seem a bit intimidating at first. Don't worry. There are only a few things you need to know to use the SporTrak. They will be discussed here in detail. Other features and functions can be found in the Reference Section of the User Manual.

SporTrak Color GPS Receiver

MARK - This key is used to MARK (save) your current or defined position.

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.)

NAV - Accesses the various navigation screens.

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

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

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.

PWR - Turns the SporTrak on/off. Also used to turn the display backlight on/off.

ENTER - Confirms data entries or menu selections.

Turning Power on/Off

Turning the SporTrak On
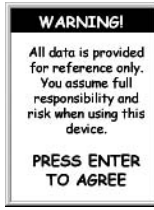
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SporTrak
Color
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us on the
World Wide Web
magellangps.com

V 2.00 - WAAS Enabled
NA.Basic-1.00
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WARNING!
All data is provided
for reference only.
You assume full
responsibility and
risk when using this
device.

**PRESS ENTER
TO AGREE**

You have 10
seconds to accept
the warning by
pressing ENTER
or the SporTrak
will shut off.

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.

Turning the SporTrak Off

**POWER DOWN
IN
5
SECONDS**

**PRESS
ESC KEY
TO CANCEL**

Pressing the POWER
button again will turn off
the SporTrak immediately.

Pressing ESC will cancel
the power down
sequence.

Turning the Backlight On/Off

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

Press and
hold for 2
seconds
Display
backlight
illuminates
(high)

Press and
hold for 2
seconds
Display
backlight
illuminates
(low)

Press and
hold for 2
seconds
Display
backlight
turns off

The backlight causes severe drain on the batteries in the SporTrak. To prevent accidently turning the backlight on and leaving it on, the SporTrak 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.

Adjusting the Contrast

From any screen

Use up/down arrows to highlight Contrast

Menu
Database
Routes
Setup
Vert. Profile
Sun/Moon
Fish/Hunt
Contrast
Alarms/Msg
Card Utilities
Help

(The menu display may differ slightly depending upon which screen it was accessed from.)

Use left/right arrows to adjust the contrast.

Menu
Contrast
50%
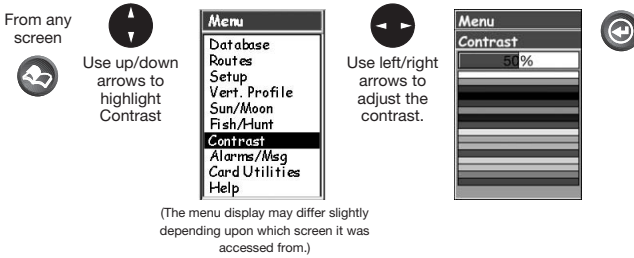
Getting a Position Fix

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

If the view of the sky is poor due to 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 SporTrak — The receiver is designed to fit comfortably in your hand. Hold the SporTrak in the palm of your hand with the antenna pointing towards the sky.

Navigational Screens

The SporTrak Color has nine navigation screens: Map screen, Compass screen, Large Data screen, two Position screens, Road screen, Data Screen, Speed 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 of the User Manual.

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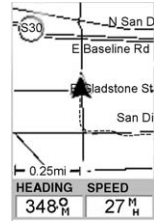
In the Cursor Mode, you are provided with a cursor that can be moved on the map. At the bottom of the display is the information for the position of the cursor relative to your present position. Also any points of interest that the cursor is over will be shown.

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 SporTrak mounted on the dashboard of a boat using the optional swivel mounting bracket. Even from a distance the information can be read with ease.
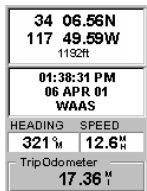
Position Screens — The Position screens 1 and 2 display your present position using the coordinate systems that you have selected in Setup. This screen shows all of the basic position, time and satellite information. In addition, current navigation information is shown in the bottom half of the screen.

Road Screen — The Road screen presents your route as if you were travelling on a road. When you need to make a turn, the road will graphically display the turn and the direction. Waypoint and destination icons will be displayed relative to your position as they come into view. Above the road is a compass that displays your heading and above that are four customizable data fields.
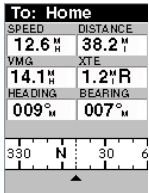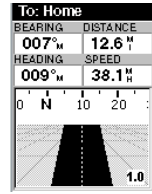
Data Screen — When you need to see a lot of information in one place then you'll appreciate the Data screen. The Data screen provides you with six data fields and an active compass that is the same as the one used on the road screen. You have the option of customizing this screen by selecting what data is displayed in the upper six fields.

Speedometer Screen — The Speedometer screen displays your speed in a familiar graphical format. There are four additional data fields at the top of the display that can be customized to display the data that you need. The bottom of the screen contains a trip odometer that will record the distance travelled since the last time the odometer was reset.
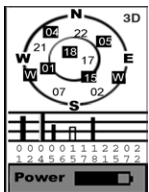
Satellite Status Screen — The Sat Status screen provides you with a graphical display of the satellites in view and which ones are being used to compute the navigation data. The bar graph shows you the relative signal strength being received for each satellite. At the bottom of the display is an indication of the battery life remaining. When you are using external power, it will be indicated here as well.

Accessing the NAV 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.

Saving a Waypoint

A waypoint is a point on a map that you can name and save in the SporTrak. 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 몿 [MARK].

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 of the User Manual.)

Saving a Waypoint with a User-Input Icon and Name

From any screen, press 몿 [MARK]. 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].

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 of the User Manual. When you have highlighted the icon you want to use, press ⏎ [ENTER].
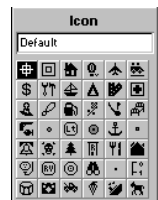
The cursor is now highlighting the Waypoint Name field. With the Name field highlighted, press ⏎ [ENTER]. The input keyboard is displayed. The very top of the keyboard window shows you what field you are changing, in this case the Name field.

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. (Note: 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.

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.

Entering a Message

As many as 200 waypoints 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.

Is there a limit to the number of waypoints I can store in the SporTrak?
Yes, the SporTrak will store up to 500 user waypoints in memory. 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.

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 SporTrak in its built-in database.

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, a city or the cursor.

Selecting a Destination Waypoint from 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, Near City or Near Cursor. In this case, you will be using "Near Position".

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 press 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.)

Using the arrow keys to navigate the displayed keyboard, begin typing in the name of the waypoint (destination) you are looking for.

For example, suppose your destination was to be Los Angeles. Use the keypad to highlight the letter "L" and press ⏎ [ENTER]. Notice how the name is changed to the first city stored in the SporTrak's memory that begins with the

letter "L" and that the cursor has moved to the next letter in the city name. (You can move the cursor back if you made a mistake by highlighting the "<-" button on the keyboard and press ⊕ [ENTER].)

Since we are looking for Los Angeles, we need to highlight the "O" next and press ⊕ [ENTER]. Then the "S" and press ⊕ [ENTER].

To add a space, highlight the "space bar" and press ⊕ [ENTER]. (Also, you can use the "->" button to move the cursor to the right if you want to skip the letter the cursor is indicating.)

You don't need to spell out the entire word. The attempt here is to get close to the name so you won't need to scroll very far during the next step. As a guide, entering the first five letters should be sufficient. When you are satisfied with what you have entered, highlight "OK" and press ⊕ [ENTER].

The list of all the waypoints for the category you selected, in this case cities, is displayed with the waypoint that was previously selected at the top of the list. Now just use the Up/Down arrows to highlight the waypoint you are looking for and press ⊕ [ENTER].

For this example, you would highlight Los Angeles and press ⊕ [ENTER]. The Map screen is displayed and the SporTrak will begin computing all of the necessary information needed to get you to your destination.

Navigating on a GOTO Route

The SporTrak 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 SporTrak 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.

GOTO routes are NOT saved in memory when the SporTrak is turned off. If you are navigating on a GOTO route and you need to turn the SporTrak 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 SporTrak off before arriving, you might consider making a 1-leg route using the route menu.

Summary

This concludes the basic operation of the Magellan SporTrak, but there is so much more. More detailed information can be found in the Reference Section of the User Manual.

If this is your first time using a GPS receiver, you should take some time now to get comfortable with the NAV screens and begin saving some waypoints at different locations. An ideal way to get used to using the Magellan SporTrak is to go outside your house and obtain a position fix. (An easy way to see that you are computing a position fix is to view the Sat Status screen. When you see "3D" in the upper right corner, you are computing fixes.) Now view the Map screen. Chances are you will see some familiar streets being displayed.

Now that the SporTrak has told you where you are, save this location into memory by pressing 🔖 MARK. Now would be a good time to practice using the keypad to enter a new name for this waypoint. "Home" would be a good choice. When you have finished inputting a name and you've highlighted DONE and pressed ⏎ ENTER, you will be back at the Map screen. Notice there is now an icon displayed for the waypoint you just created.

Next, go to the store, a friend's house or any location away from where you are now. Repeat the process of "Marking" this position. (Be sure you are computing fixes before saving the position.) Now you should have two distinct waypoints saved in your SporTrak.

Using the simple instructions provided here, press 🚶 GOTO, highlight "User" and press ⏎ ENTER. Now use the up/down arrows to highlight the "Home" waypoint (if you called it that) and press ⏎ ENTER. The Magellan SporTrak will now begin computing all of the information you need to return to your home. As you are travelling, notice the different NAV screens and witness the data changing as you are moving. (Don't view the SporTrak screen if you are driving, let the passenger do that.)

Everything else the SporTrak can do for you is based on the simple exercise you just performed and when you are comfortable doing this, everything else will be a simple building block on what you already know.

Reference

Power / Backlight / Contrast

Turn the SporTrak On — Applies power to the SporTrak and displays last NAV screen viewed. During power-up the first screen shows the software and map database versions currently loaded in the SporTrak. 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 SporTrak will shut off after 10 seconds.)

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V 2.00 - WAAS Enabled
NA.Basic-1.00
© 2002 Thales Navigation

WARNING!
All data is provided
for reference only.
You assume full
responsibility and
risk when using this
device.
**PRESS ENTER
TO AGREE**
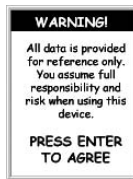
You have 10 seconds to accept the warning by pressing ENTER or the SporTrak will shut off.

Turn the SporTrak Off — Shuts down the SporTrak.

Press ⊗ [CANCEL] to abort before 5 seconds has elapsed.

During the 5 second countdown, pressing the ☀ [POWER] key again will shut the SporTrak 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" to change the settings for the automatic timer).

Press and hold for 2 seconds.

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

From any screen

Use up/down arrows to highlight Contrast

Menu
Database
Routes
Setup
Vert. Profile
Sun/Moon
Fish/Hunt
Contrast
Alarms/Msg
Card Utilities
Help

Use left/right arrows to adjust the contrast.
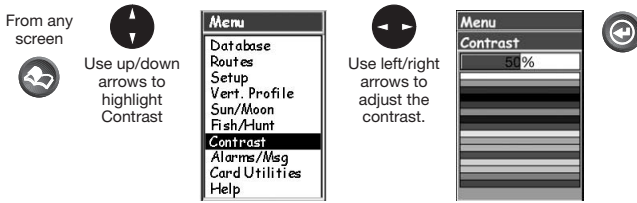
Menu
Contrast
50%

(The menu display may differ slightly depending upon which screen it was accessed from.)

Navigational Screens

Selecting NAV Screens — The ⊕ [NAV] button provides a means of accessing the navigation screens. (Note: the sequence displayed is when all eight (counting both Position Screens as one screen) navigation screens are turned on. Screens turned off in Setup will not be displayed.)

Navigation Screen Sequence
Map Screen
Compass Screen
Large Data Screen
Position Screen
Road Screen
Data Screen
Speed Screen
Satellite Status Screen
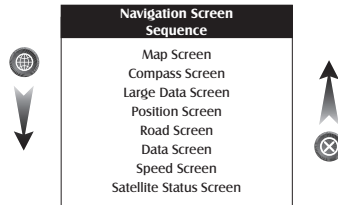
Returning to Last Viewed NAV Screen — Pressing the ⊕ [NAV] button returns the SporTrak to the last NAV Screen viewed. (Note: if the ⊕ [NAV] button is pressed from a screen where data is being input, the data will not be saved.)

Map Screen

The Map screen is the very heart of the SporTrak. 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.
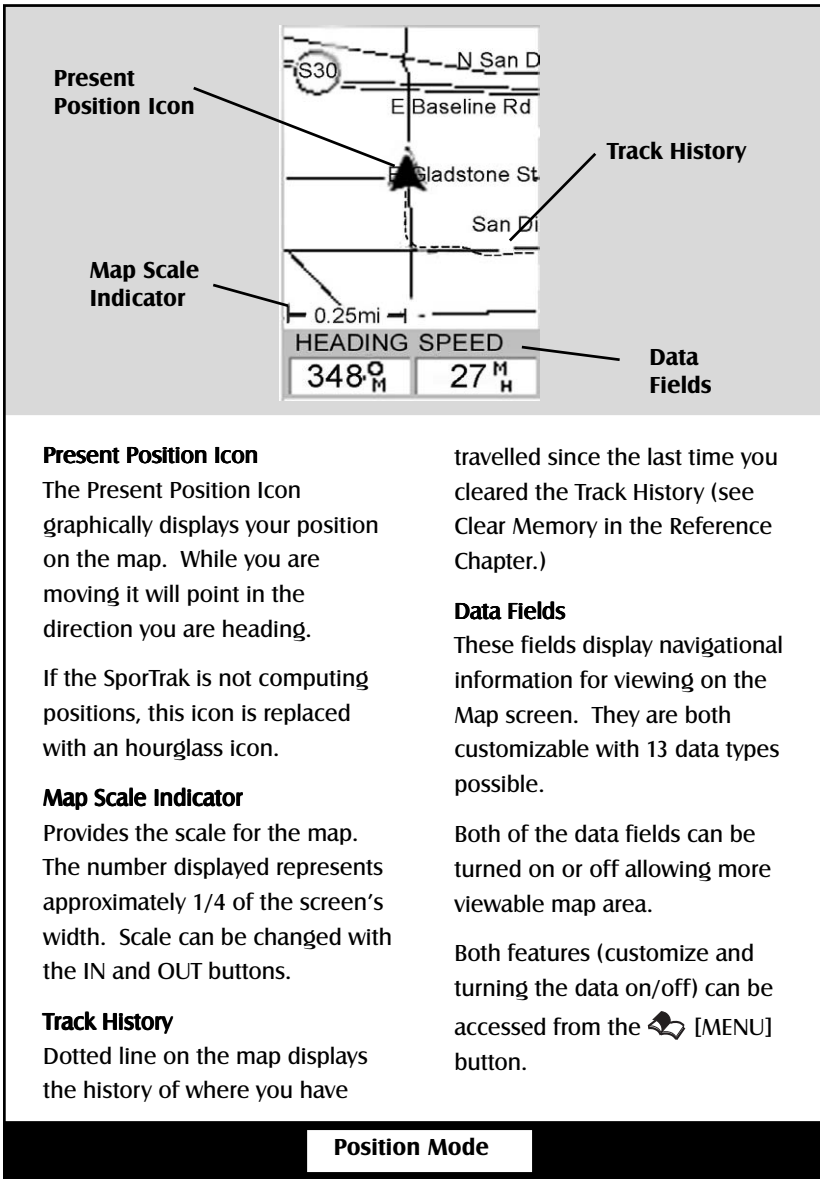
Present Position Icon

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 SporTrak 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.

Position Mode

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.

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.

Cursor Mode

Cursor Icon
The Cursor Icon pinpoints the location you have selected by using the arrow keys.

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.

Waypoint Name
Whenever the cursor is over a map object, the name of the map object is displayed, otherwise the word "cursor" appears. The data shown in the information block is the heading and distance from your present position to the cursor.
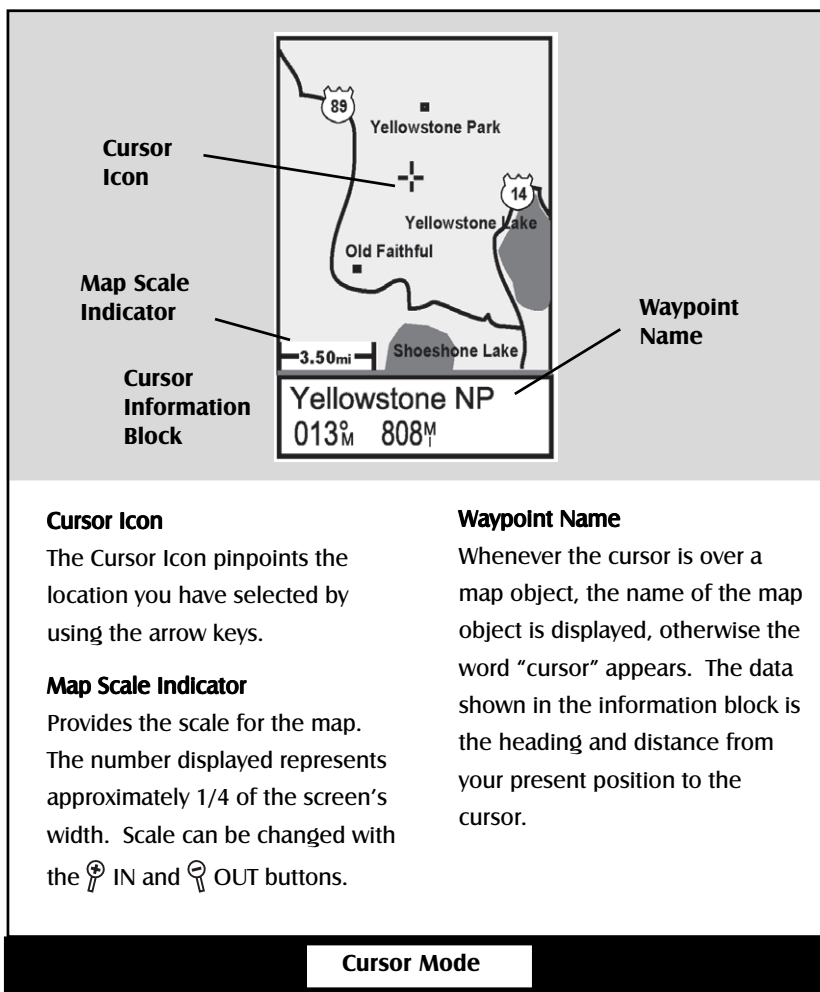
Setting the Map Detail — The detail of the map can be set to highest, high, medium, low or lowest. This changes the zoom level that different map objects (cities, highways, labels, etc.) are displayed. If you have set a zoom level and the display is too cluttered, set the map detail to a lower level; conversely set it to a higher level to view more detail. The default is Medium.
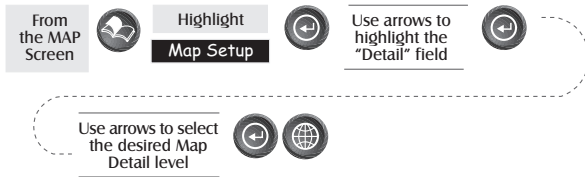
Customizing the Map Display — The Map screen can be customized for your individual needs and requirements. You can select what is being displayed on the map as well as what additional data will be presented at the bottom of the screen. Customization is broken into two parts; what items are displayed on the map and what data fields (if any) are displayed at the bottom of the screen.

Selecting Map Items

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

Turning On/Off Track Lines — As you move, your track history is normally displayed on the map screen represented by a dashed line. This function allows you to turn off or on these lines. Default is On.

Turning On/Off Topographic Lines — **[Available only if a map has been uploaded from a Magellan MapSend Topo for the United States CD-ROM]** This function will hide all topo lines and topographic information. Default is On.

Turning On/Off Displayed POI's — **[Available only if a map has been uploaded from a Magellan MapSend Streets and Destinations or MapSend Topo for the United States CD-ROM]** Allows you to select which, if any, POIs that have been uploaded from a MapSend product to be displayed. Default is On.

From the MAP Screen		Highlight Map Setup		Use L/R arrows to select "Display" tab	Use U/D arrows to select POI	

Globally Turn Map Items On/Off — If you have uploaded map data from a MapSend product, you will notice that the list of POIs can be extremely lengthy. To aide you in the customization of the display you can turn everything on or off globally.

To turn off all map items, follow these instructions.

From the MAP Screen		Highlight Map Setup		Use L/R arrows to select "Display" tab	Use U/D arrows to select **Clear All**	

After you have turned off all of the map items, you can go back and just select the POIs that you want to view. Please note that this function will also turn off waypoints, track lines and, if applicable, topo lines. Be sure to turn these back on if you want to see them.

Inversely, to globally turn on all of the map items, follow the above steps but select "**Mark All**" instead of "**Clear All**".

Setting Up Map Data Fields — The following options are available ONLY if you are in the Position Mode of the Map screen. If you are in the cursor mode, press the ⊗ [ESC] key and the display will snap back to the Position Mode with the arrow icon displaying your present postion. (If you are not clear on which mode you are in, the simpliest way to determine it is to see what cursor is displayed; an arrow indicates Position and a crosshair indicates Cursor. If you press the ⊗ [ESC] key and the display changes to another Nav Screen you were in the Position Mode and you can press ⊕ [NAV] to return to the map.

Turning Data Fields On/Off — This option allows you to turn on or off the two information fields that are displayed on the Map screen. Turning these off allows for more of the map to be displayed. Default is SHOW.

When Map Info is hidden and the map is in the cursor mode, the bearing (BRG) and distance (DIS) to the cursor is shown in the bottom left corner of the map replacing the scale. (Note: if you have uploaded topographic information from Magellan's MapSend Topo for the United States CD-ROM, the elevation at the cursor's location is displayed, not the bearing and distance.)   If the cursor happens to be on a map object, the name of the object is displayed.

Selecting the Data Fields — This function allows you to select which data fields are to be displayed. You can choose from Customize Fields, Street Information or, if topographic information is loaded, you can select Horizontal Profile or Terrain Projection. If you select either Horizontal Profile or Terrain Projection and you do not have topographic information loaded a warning screen is displayed.

Two Data Fields Description — This option displays two boxes at the bottom of the map that can display data that you choose. Displaying these data fields is the default for the SporTrak.

Changing 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: If you have selected Hide Map Info, this option will not be available in the menu. Also, you must have the Two Data Fields displayed on the Map screen to be able to customize them. Press ⊗ [ESC] when you are done to leave the customize mode.

Street Information Description — This mode just displays the name of the street close to your present position.

Horizontal Profile Description — This mode displays at the bottom of the Map screen a graphical representation of the horizon at a fixed distance from your present position. This fixed distance is equal to the map scale you have selected for the Map screen, so as you zoom in or out, the horizon displayed will change. In the Horizon Profile mode, you will also notice a line projected out from your present position icon to a shorter perpendicular line. The intersection of the two lines indicates the location on the map where the horizon is being computed. (This function requires that map data has been uploaded from Magellan MapSend Topo for the United States and that your present position as well as the projected horizon falls within the area uploaded.)
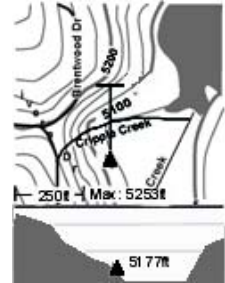
You should note that when you select Horizontal Profile, your Map Orientation will change to "Track Up" so you may need to change that when you are done viewing the horizontal profile. If you change Orientation to something other then Track Up while viewing the Horizontal Profile, the default Two Data Fields is displayed. Changing the Orientation back to "Track Up" will revert back to the Horizontal Profile.

Also, you must be zoomed in to a scale of 0.80 miles or closer for the horizontal profile to be displayed. Zoom scales higher then 0.80 miles will cause the data displayed to change to the Two Data Fields and will change back to Horizontal Profile as you zoom in to 0.80 miles and below.

Terrain Projection Description — This feature allows you to view the terrain directly ahead of you graphically. It is computed from your present position and extends in a straight line to the top of your display. This provides you with instantaneous information on what terrain elevations are directly in front of you. Your present position and elevation are indicated at the left side of the display. The maximum elevation for the terrain ahead of you is displayed above the graph, next

to the map scale indicator. (This function requires that map data has been uploaded from Magellan MapSend Topo for the United States and that your present position as well as the projected horizon falls within the area uploaded.)

Like Horizontal Profile, you must be zoomed in to a scale of 0.80 miles or closer for the projected terrain to be displayed. Zoom scales higher then 0.80 miles will cause the data displayed to change to the Two Data Fields and will change back to Terrain Projection as you zoom in to 0.80 miles and below.

You should note that when you select Terrain Projection your Map Orientation will change to "Track Up" so you may need to change that when you are done viewing the projected terrain. If you change Orientation to something other then Track Up while viewing the Terrain Projection, the default Two Data Fields is displayed. Changing the Orientation back to "Track Up" will revert back to the projected terrain.

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.
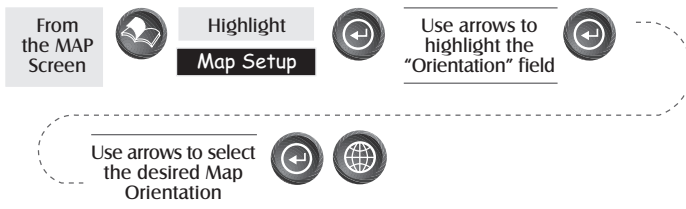
North Up	North is at the top of the screen.
Course Up	The heading of the active leg of the active route is at the top of the screen. If no route is active, North Up orientation is used until a route is activated.
Track Up	Your heading (i.e., the direction you are travelling) is at the top of the screen.

Selecting Primary Usage — The SporTrak can be set to either Land or Marine Usage. When in Land (default), the map displays land areas in white and water areas as dark gray. For marine applications it may be desirable to reverse the display, showing water as white and land as dark gray. This will make reading some of the data information on the water easier.
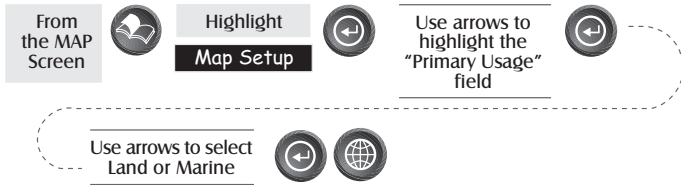
Selecting Track Mode — Allows you to set how often the SporTrak stores track points. Setting the mode to "OFF" stops the SporTrak from saving any new track points. In "Auto" or "Auto Detailed" mode, the SporTrak uses a method for track point storage that maximizes memory. Using Auto, you will see more points on and near turns and less points on straight stretches of the map. You also have the option of selecting fixed intervals for track point storage.terrain.

Setting the Track Mode to "OFF" will cause severe limitations to the ability of your SporTrak to create a backtrack route. The same temporary waypoints used to create the displayed track are used to compute a backtrack route. Therefore, it is highly recommended that you use the "Auto" Track Mode whenever possible.

Auto vs. Auto Detailed. You will notice two of the options for the Track Mode are Auto (default) and Auto Detailed. Basically, both options behave the same. While your are travelling in a straight line, only a few track points are taken, but as you turn the SporTrak increases the rate of track points. This allows for a good representation of your track with minimal track points stored. Auto Detailed performs exactly the same as Auto, but has the base rate of track points saved increased. This allows a more detailed track then Auto to be taken, while at the same time saving memory over a fixed rate.

Using Vertical Profile — Vertical Profile displays the elevation as a graphical display for the option you select.

Only Track History is available for this function if MapSend Topo for the United States map data is not uploaded. (Path Check is shown as an available function but will not display the vertical profile, however it can be used to graphically create a route. See the information on Path Check for more details.) If a topographic map has been uploaded, you have the additional options of selecting Path Check, Route or Highlighted Road.

While viewing the vertical profile screen, you can use the left and right arrows to move the profile accordingly. The vertical dashed line in the middle of the profile plot provides the elevation for that point on the profile.
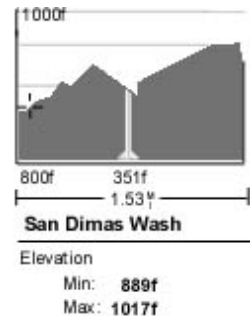
Selecting Vertical Profile — Note, not all options for Vertical Profile are available at all times. For example, if you have a topographical map loaded but the cursor or present position is not on a road, the option "Highlighted road" will not be displayed.

From Any Screen		Highlight Vert. Profile		Select option	

Track History Description — This option displays the vertical profile of the track that is stored in the SporTrak. If you have cleared your track, either with the Clear Track option or clearing memory, Track History cannot be accessed.

1000f

800f   351f
        1.53ᵞ

San Dimas Wash

Elevation
Min: 889f
Max: 1017f

Highlighted Road Vertical Profile Description — (Available only with map data uploaded from Magellan MapSend Topo for the United States.) If the cursor or your present position is on a road and you have topographic maps loaded, you can view the vertical profile for the road you have selected.

Route Vertical Profile Description — (Available only with map data uploaded from Magellan MapSend Topo for the United States.) If you have at least one route stored in memory, you can view the vertical profile for the route. After selecting Vertical Profile, you will be asked to select the route you want to plot.

Path Check Description — Path check performs two functions. First, it allows you to create a path on the Map screen graphically and then view this path's vertical profile (assuming that you have uploaded a topo map). You can also save this path as a route, allowing an additional method of creating a route.

After selecting Path Check from the Vert. Profile menu, you will be returned to the Map screen where you can begin to lay out your path. Using the arrow keypad, move the cursor to the desired location of the path's beginning and press 🏃 [GOTO]. Now use the arrow keypad to move to a new location and press 🏃 [GOTO]. Notice a thick line has been drawn between the two points. Continue moving the cursor and pressing 🏃 [GOTO] until your path is complete. When it is done, press ⏎ [ENTER] and the vertical profile for the path is displayed.

When you are done viewing the Vertical Profile of the path you created, press ESC to return to the map screen. Now you can continue adding legs to the path.

Tip: You can convert this path into a stored route by simply pressing the 🔖 [MENU] key and selecting the Save To Route option.

Compass Screen
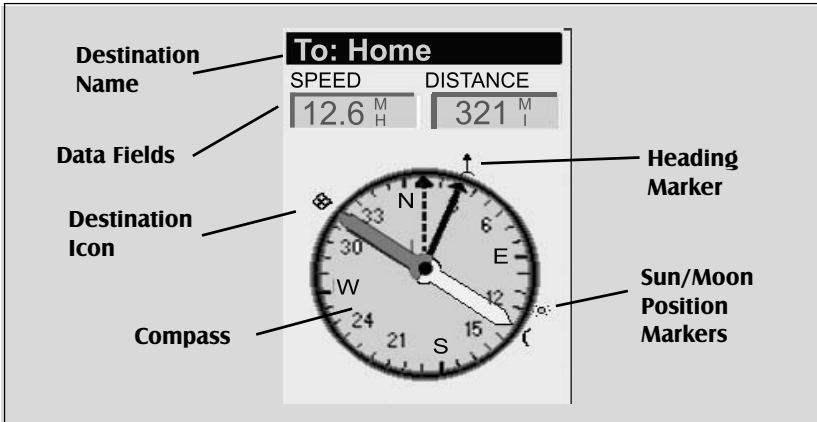
Destination Name

Data Fields

Destination Icon

Compass

To: Home

SPEED   DISTANCE

12.6 ^M_H 321 ^M_I

N   E   W   S

33   30   24   21   15   12   6

Heading Marker

Sun/Moon Position Markers

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.

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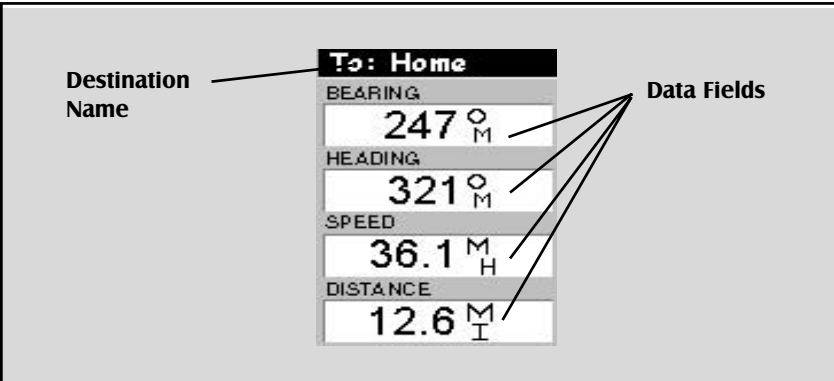
Destination Icon
When you are travelling on a route, an icon representing the destination of the leg or GOTO is displayed outside the compass. This provides you with the direction you need to head to arrive at the destination. When you are on course and heading straight for the destination, the destination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

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the two fields.

From the Compass Screen   Highlight   Customize   Use arrows to highlight the title for the data field to be changed

Use arrows to select new data type

Large Data Screen

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 17 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.
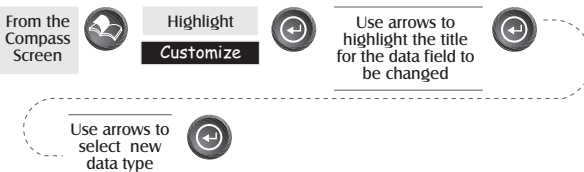
Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the four fields.
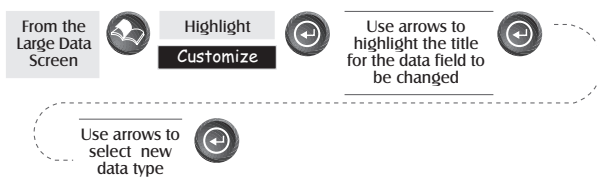
Position Screen

The Position screens 1 and 2 simply 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, all on one screen. In addition, current navigation information is shown on the bottom half of the screen.

Selecting the Position Screen — Allows you to toggle 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.

The screen viewed can be changed by pressing the Left or Right arrows while viewing the Position screen.

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.

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the two fields.
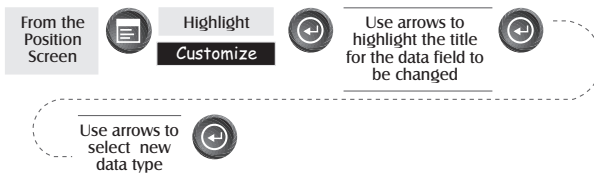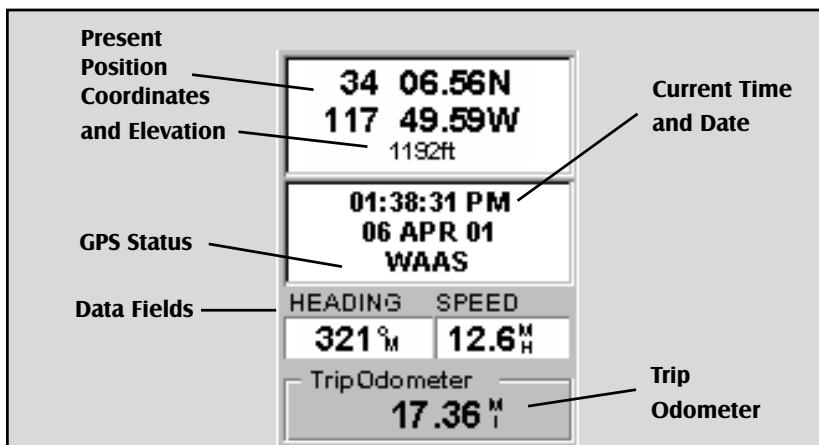
Use the Left/Right Arrows to toggle between Position 1 and Position 2

Present Position Coordinates and Elevation
Displays your present position in the coordinate system chosen in Setup. Also displays the elevation of the present position. If the SporTrak is not computing position fixes, the last computed position is displayed.

GPS Status
Provides information on the current status of the GPS receiver portion of the SporTrak.

Data Fields
Customizable data fields. The data displayed can be selected from 17 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.

Trip Odometer
The odometer performs like the odometer in your car. It can be reset through the 🔖 [MENU] button.

GPS Status Messages — Messages indicating the status of the GPS receiver section of the SporTrak 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	SporTrak is computing fixes; speed is near 0.0 so position is being averaged.
EPE xxft	Estimated Position Error in feet. SporTrak is computing fixes while moving.
DGPS	Computed fixes are being differentially corrected.

Since the SporTrak 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.

Selecting Coordinate System, Map Datum and Elevation Mode — Allows you to change the coordinate system, map datum and elevation mode for the primary and secondary Position Screens. These functions perform identically to the same functions described in the *Setup* section of this manual. Simply described, you press ♠ [MENU] from either Position screen, select the option, press ⊕ [ENTER] and follow the prompts.

Projecting a Waypoint — This function, found on the menu associated with the Position Screen, allows you to create a new waypoint that is a fixed distance and bearing from your present position or from any waypoint/POI stored in the SporTrak.

An example of waypoint projection would be if you wanted to go to a location that is 2.0 miles and due north of your current position. You would access the waypoint projection function and enter 2.0 as the distance and a bearing of 0°. The Waypoint Projection Screen would compute the coordinates of the "projected" location and then allows you to save this waypoint into the SporTrak's memory. From there you could simply do a GOTO to the waypoint you just created.

You can also project waypoints from any stored waypoint or POI by highlighting the "From" field and pressing ⊕ [ENTER]. This will take you to the SporTrak's database, giving you complete access to choose from any of the waypoints/POIs that you have stored.

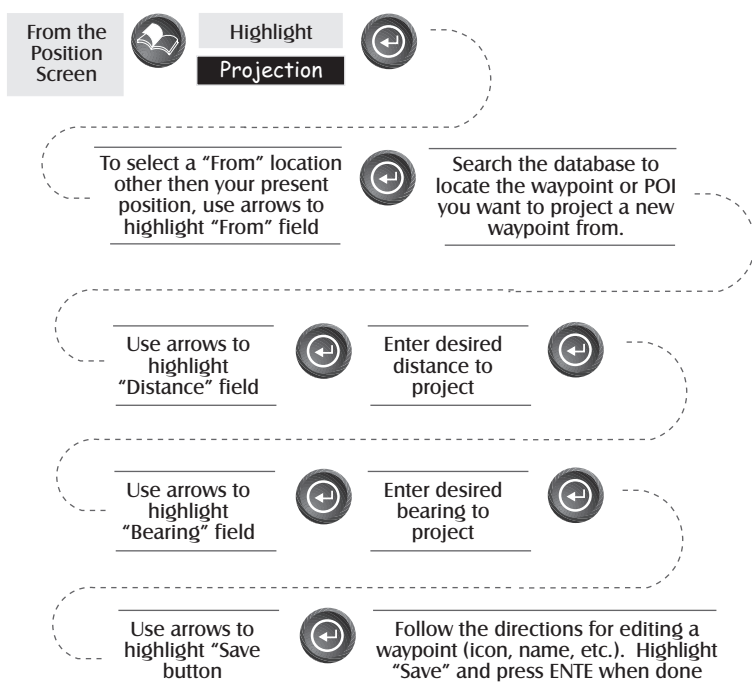|			
From the Position Screen		Highlight Projection	
To select a "From" location other then your present position, use arrows to highlight "From" field		Search the database to locate the waypoint or POI you want to project a new waypoint from.	
Use arrows to highlight "Distance" field		Enter desired distance to project	
Use arrows to highlight "Bearing" field		Enter desired bearing to project	
Use arrows to highlight "Save button		Follow the directions for editing a waypoint (icon, name, etc.). Highlight "Save" and press ENTE when done	

Road Screen

The Road Screen provides you with navigation information in a graphical format. At the top of the display are four customizable data fields. Immediately below them is a compass that will provide you with your heading. Following the compass is a graphical representation of your route as if it was a road. This familiar indication of where you are in regards to your planned route will provide you with the knowledge required for you to keep on track.

Destination Name — Destination Name

Customizable Data Fields

Compass

Road

Scale Indicator

To: Home
BEARING   DISTANCE
007°ᴍ   12.6 ᴹ
HEADING   SPEED
009°ᴍ   38.1 ᴹ
0   N   10   20
1.0

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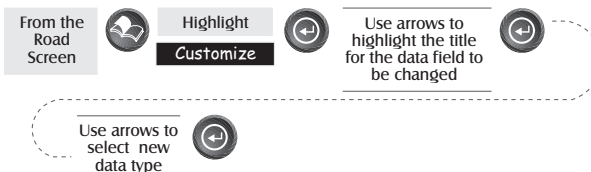
Data Fields
Customizable data fields. The data displayed can be selected from 13 different options. Customizing is accessed through the MENU button. Some of the data displayed requires you to be moving to be computed, invalid data is indicated by dashes.

Compass
Displays your heading in a familiar compass format.

Road
This graphically displays the route (GOTO or other routes) that is active. As you move left or right of your intended track, the road will move on the display indicating which way you need to steer to get back on track. Ideally, the road would be centered on the display. Also, you will see upcoming turns in advance allowing you to make necessary preparations.

Scale Indicator
Use Zoom In/Out to change the scale.

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the four fields.

From the Road Screen → Highlight Customize → Use arrows to highlight the title for the data field to be changed →

Use arrows to select new data type

Data Screen

Destination Name

Customizable Data Fields

Compass

To: Home
SPEED	DISTANCE
12.6	38.2
VMG	XTE
14.1	1.2 R
HEADING	BEARING
009°	007°
330 N 30 6

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 17 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.

Compass
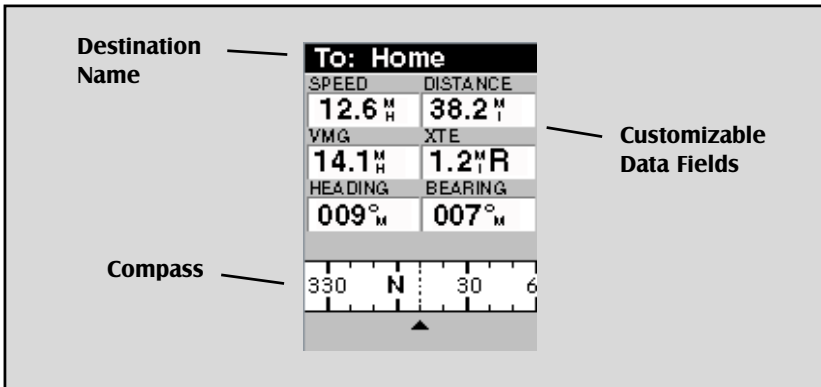
Displays your heading in a familiar compass format.

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the six fields.

From the Data Screen	MENU	Highlight **Customize**	ENTER	Use arrows to highlight the title for the data field to be changed	ENTER

Use arrows to select new data type	ENTER

Speed Screen

Destination Name — To: Home

Customizable Data Fields

Speedometer

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

The data displayed can be selected from 17 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.

Speedometer

Displays your speed using a familiar speedometer display. The scale of the speedometer is not adjustable but will change dynamically to best display your speed.

Trip Odometer

It can be reset using the MENU button.

Customizing the Data Fields — Allows you to change the data that is being displayed to 1 of 17 data options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, Avg. Speed, or Max Speed) for any of the four fields. (See explanation of Data Types in the Map Screen section.)
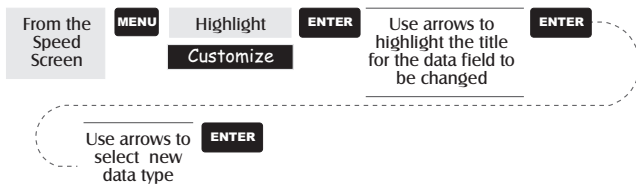
Satellite Status Screen

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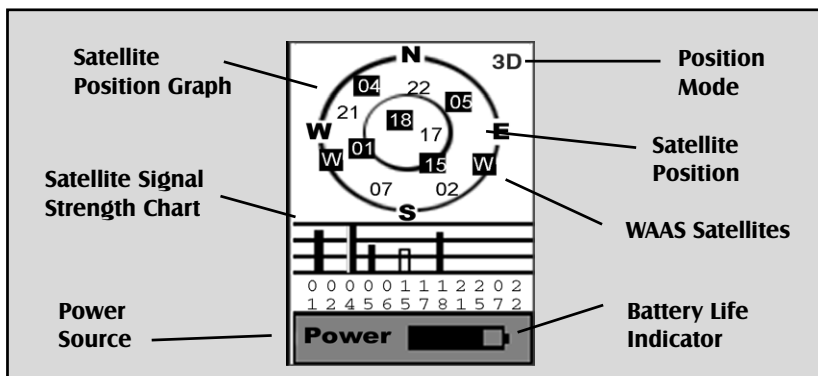n displays the power source you are connected to and, if internal batteries, how much battery life is remaining. This is a very handy screen when you wish to view how well your SporTrak is tracking satellites.

Satellite Position Graph

The two circles indicate satellite elevation as seen from your current position; the outer circle represents the horizon and the inner circle represents 45° from the horizon. The center of the circle is 90° from the horizon, or directly overhead.

Satellite Signal Strength Chart

Clear bar indicates that the SporTrak is starting to get information from the satellite. Satellites that are being used to compute your position are shown with solid bars. The height of the bar indicates the relative signal strength.

Power Source

Indicates the source of power being used — POWER (Internal Battery) or POWER EXTERNAL.

Position Mode

3D - position computed is 3-dimensional (elevation is being computed).
2D - position computed is 2-dimensional (elevation is not being computed).
Blank - SporTrak is not computing a position fix.

Satellite Position

Where the satellite is located relative to your position.

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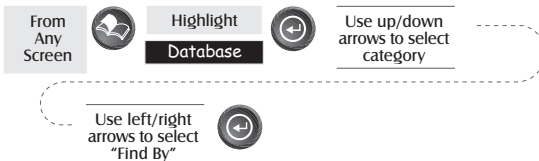
Selecting Waypoints from the Nearest List. If *Near Position, Near City* or *Near Cursor* is selected as the "Find By" option for the database or if User was selected as the category, you will be presented with a list of waypoints that you can choose from. The information at the bottom of the screen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

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. A keyboard is graphically displayed allowing you to enter the name of the waypoint or map object you are looking for. You need not enter the entire name, just enough letters to narrow the search down. (A minimum of four characters is recommended.) Selecting "OK" and pressing enter brings up a listing of the waypoints, starting with the one you entered at the top.

Note: When selecting the User category, the SporTrak does not use the keyboard display.

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.

Saving Present Position as a Waypoint — Creates and stores your present position into the memory of the SporTrak. 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 SporTrak.

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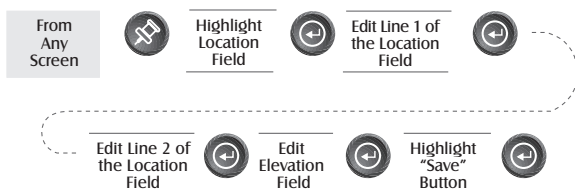
(Note: To modify the icon, name or message use the Up/Down arrows to highlight the field you wish to change and press ⊕ [ENTER]. You are then placed into the *Edit Mode*.)

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.

(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.
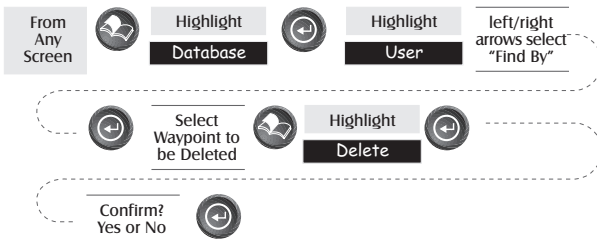
Editing a User Waypoint — Allows you to edit a waypoint that you have already stored in the SporTrak's memory.
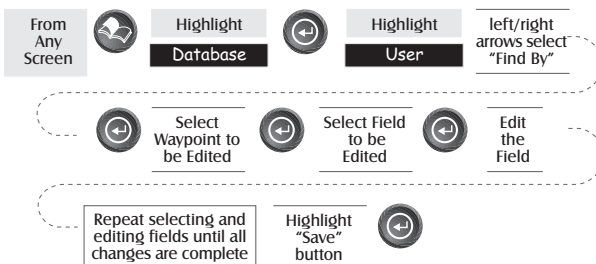
An alternative method to entering the edit mode is after highlighting the waypoint you wish to modify press ✎ [MENU]. Highlight Edit WPT and press ⊕ [ENTER].

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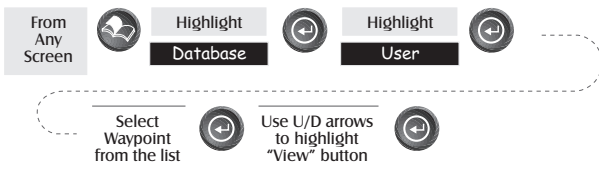
Note: If the waypoint is used in a route you will get a warning that it is in a route after selecting it from the list. This is because the screen that you access the view button can also be used to edit the waypoint and it may be undesirable to edit a waypoint that is being used in a route.

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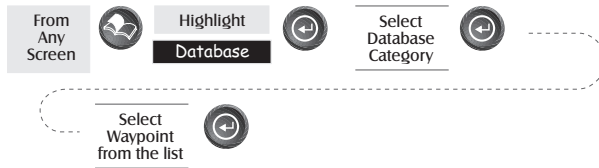
Saving a Map Object as a User Waypoint — Saves a Map Object as a waypoint to be stored in your User Waypoint List. You would do this should you want to modify the object or if you wanted to use the object as a waypoint in the Sun/Moon or Fish/Hunt functions.

Follow the instructions above for *Viewing a Map Object on a Map.* Press 吊 [MARK]. Edit any field of the waypoint that you want and when you are done, highlight "Save" and press ⊕ [ENTER].

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.*
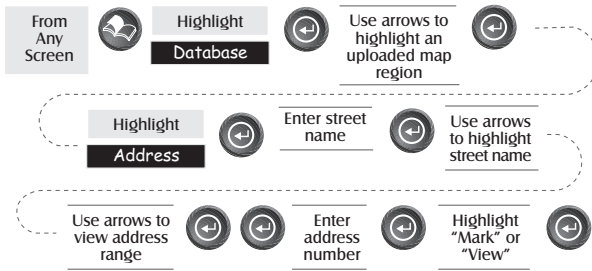
Mark. If you select "Mark" and press ⊕ [ENTER], the Edit Waypoint screen is displayed. You can now change any of the attributes for this waypoint. Highlight "Save" and press ⊕ [ENTER] to record this waypoint into the memory of the SporTrak.

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 the 吴 [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.

Routes

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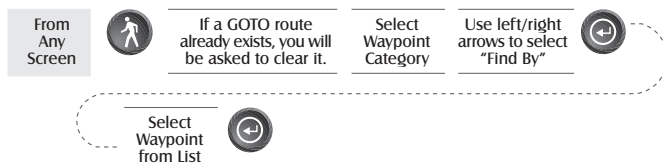
route with your present position as the starting point and a destination waypoint that you choose from the waypoint database.

GOTO routes are not saved in memory. When you turn your SporTrak 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 (Near Position) 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 SporTrak to "retrace" your steps. A good example of using a backtrack would be if you were out hiking or jogging with your SporTrak turned on and computing position fixes. After 30 minutes you
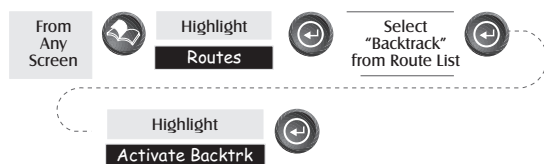
choose to return to where you started, following the same route you just took. All you need do is follow the instructions below and let the SporTrak take you there.

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

SporTrak, 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
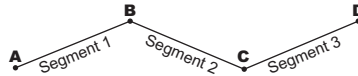
you had three GOTO's, one from "A" to "B", another from "B" to "C" and a third from "C" to "D" you could then put them together to make one multileg route. In this example you would have a 3-leg route that went from "A" to "B" to "C" to "D".
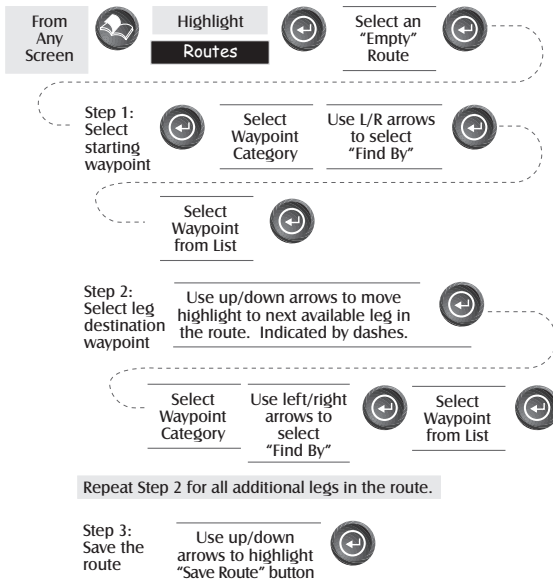
These routes have an advantage over GOTO's in that A) the starting point does not have to be your present position, B) they are always in memory and if activated they remain activated, even when you turn the SporTrak off and then back on, and C) they can be saved and used over and over again.

(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 SporTrak's memory.)

Sample Route List

Sample Route Create

(Bold route indicates "Active" route)

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 SporTrak 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].

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

Select route to be edited. See Instructions for Viewing a Route	Highlight destination waypoint for leg that will have a leg inserted.	

| Highlight **Insert** | | Select Database | | Select Waypoint | |
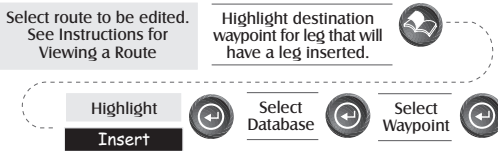
In the example of a route that goes from "A" to "B" to "C" to "D", if you wanted to insert the waypoint "E" between "B" and "C" you would highlight the waypoint "C" and follow the steps to insert waypoint "E". Your route would then be "A" to "B" to "E" to "C" to "D".

Deleting a Leg — Deletes a leg from the route.

Select route to be edited. See Instructions for Viewing a Route	Highlight destination waypoint for leg that will be deleted.	

| Highlight **Delete** | |
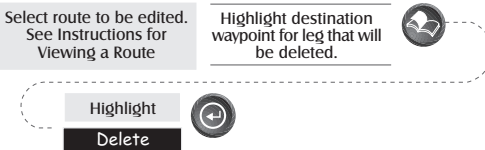
Replacing a Leg — Replaces the destination of an existing leg with a new destination.

Select route to be edited. See Instructions for Viewing a Route	Highlight destination waypoint for leg that will be replaced.	

| Highlight **Replace** | | Select Database | |

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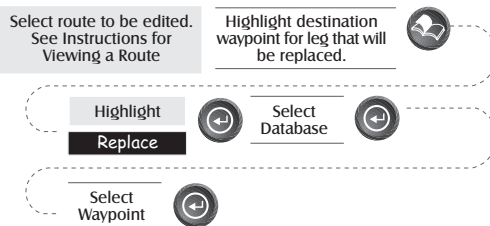
Appending a Leg — Adds a leg to the end of a route.

Select route to be edited. See Instructions for Viewing a Route	Highlight next available leg. (Indicated by dashes)	

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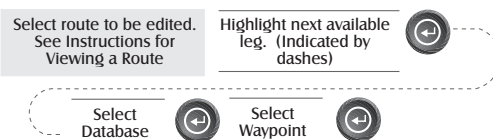
Appending a Newly Created Waypoint to a Route — Allows a newly created waypoint to be appended to any route in memory.

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".
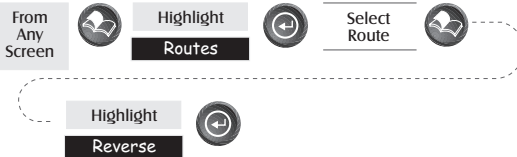
Deleting a Route — Enables the deletion of any route in memory. Useful when you want to add a new route but no "EMPTY" routes are available.
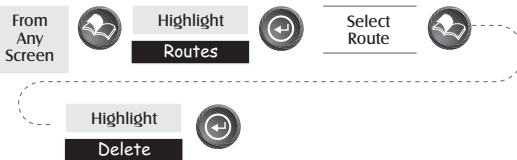
Viewing a Route on the Map Screen — Provides you with a graphical representation of the route selected on the Map screen.
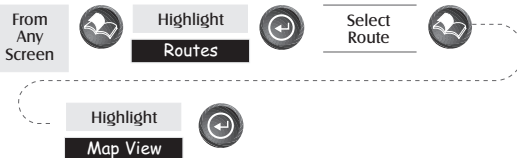
Creating a Route Using Track History — This enables you to automatically create a multileg route using your track history. This route will be saved to your route list with a naming convention of "T01P01 to T01Pxx" where Pxx indicates the number of points in the route.
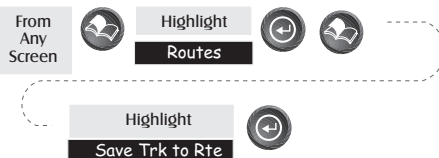
Setup

Initializing the SporTrak — Enables you to initialize the SporTrak should it be needed to speed up satellite acquisition. Two such instances would be travelling over 500 miles with your SporTrak turned off or complete loss of memory.
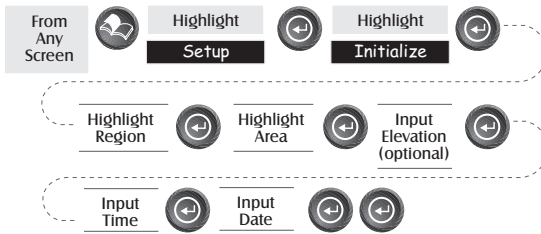
Turning NAV Screens On/Off — Allows you to turn off or on any of the navigation screens you choose.
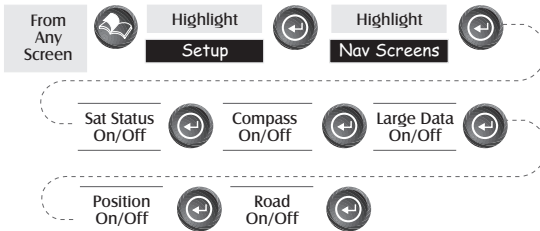
(Note: you must go through the entire sequence of nav screens for your selections to be saved. As an example, if you turn the Sat Status screen off and press ⊗ [ESC] before confirming all of the nav screens, your selection will not be saved and the Sat Status screen will still be on.)

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, USNG, MGRS, or User Grid.
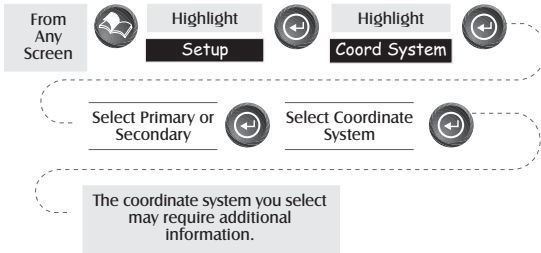
Default: Primary - Lat/Lon   DEG.MIN.MMM
Secondary - UTM

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 SporTrak and the datums do not match, you may find irregularities when comparing the coordinates.
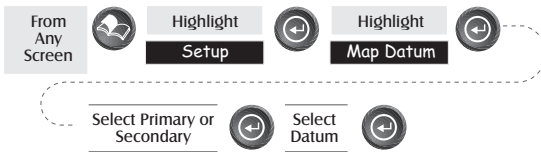
Default: Primary - WGS84   Secondary - WGS84

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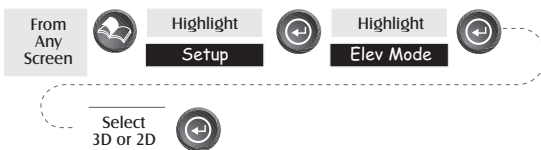
Default: 3D

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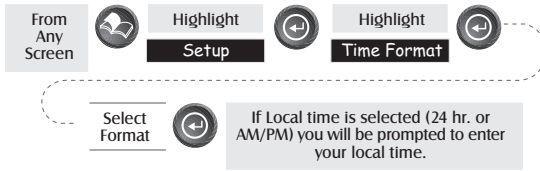
Default: Local AM/PM

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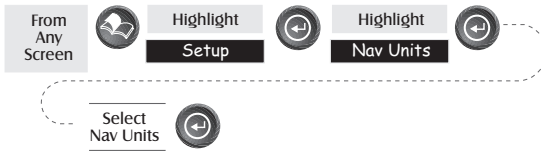
Default: Miles/Ft/MPH

Selecting the North Reference — Allows the selection of whether the SporTrak uses True North, Magnetic North, Military True or Military Magnetic as its North reference.
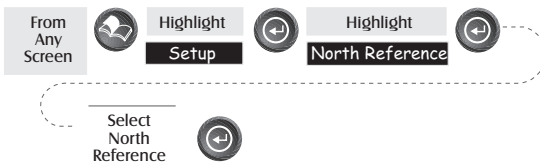
Default: Magnetic

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.
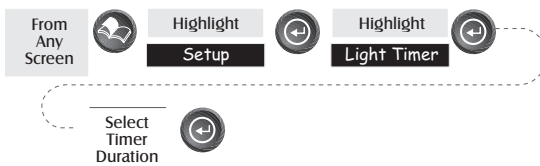
Default: 4 Minutes

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.
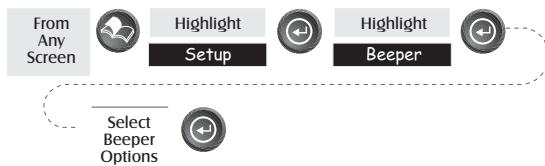
Default: Keys & Alarms

Selecting NMEA Message — Allows the selection of the NMEA message that will be output from the SporTrak. 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.
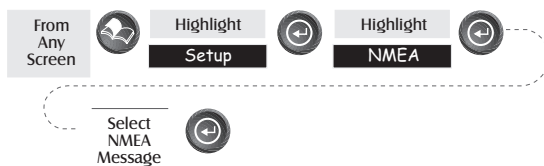
Default: Off

Selecting the Baud Rate — Enables you to set the baud rate of the data being sent out from the SporTrak'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, 19200 baud, 57600 baud or 115200 baud.
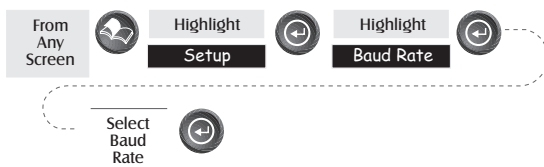
Default: 4800 Baud

Selecting Daylight Savings — Allows you to select what region you are in which will allow the SporTrak to automatically adjust the time displayed to compensate for daylight savings time. You can select United States (daylight savings starts on the first Sunday in April and ends on the last Sunday in October), European Union (daylight savings starts on the last Sunday in March and ends on the last Sunday in October), or you can select Customize which allows you to set the month and day that daylight savings starts and ends in your area.
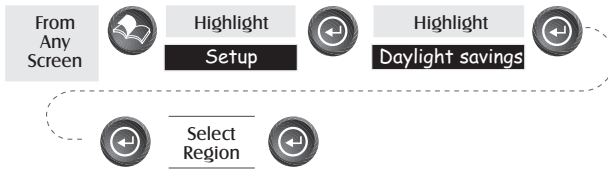
Default: The appropriate daylight savings time (United States or European Union only) will automatically be set by the SporTrak during startup when you use the SporTrak for the first time.

Power Off Timer — Conserving battery life is important to any GPS user and the power off timer provides another tool in saving battery life. Selecting "On" will allow you to select the mode and how long the SporTrak will stay powered on. If the mode you select is "Time", the timer field allows you to select time that the SporTrak will remain on before automatically powering off if no keys are pressed. If the mode selected is "Position", the timer field sets how soon the SporTrak will be powered down when the position hasn't changed and if no keys have been pressed.
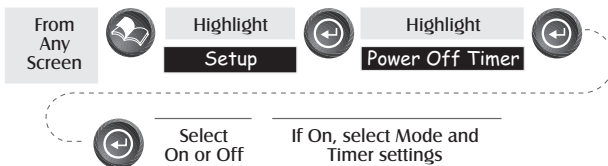
Default: Off

Changing Languages — You can select from one of nine languages (English, French, German, Swedish, Spanish, Italian, Dutch, Portuguese or Finnish) to be used by the SporTrak.
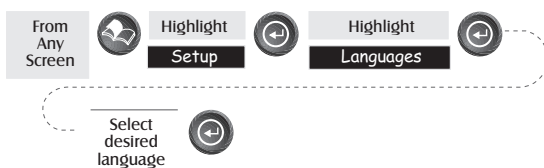
TIP: If you change the language setting in the SporTrak just to see what it looks like and need to get back to the Language Select screen, follow these instructions. Press ⊕ [NAV] until the MAP screen is displayed and press ✎ [MENU]. Select the seventh item in the list and press ⊕ [ENTER]. Press the Up Arrow once and press ⊕ [ENTER]. You are back at the Language Select screen.

Changing the Power Key Settings — Allows you to choose from "No protection" (normal) or "On/Off Protected" (alternate). This will change how the ☀ [POWER] operates in turning the SporTrak on or off.

No Protection: Turn SporTrak On. Press the ☀ [POWER] button. Turn SporTrak Off. Press the ☀ [POWER] button.

On/Off Protected: Turn SporTrak On. Press and hold the ☀ [POWER] button until the first screen is displayed. Turn SporTrak Off. Press the ☀ [POWER] button and then press ⊕ [ENTER] before the power off timer is done.
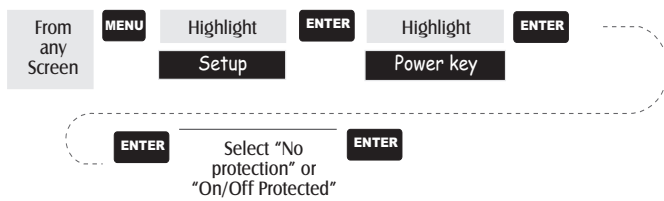
Default: No protection

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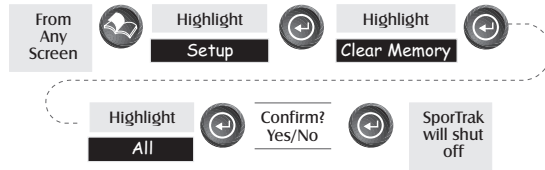
Clearing Track History — This will clear the track history that is displayed on the Map screen from memory.

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

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

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

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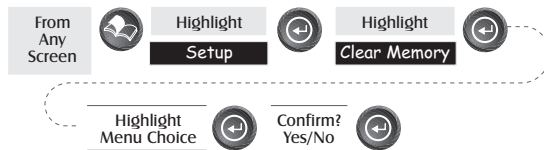
Sun / Moon Display

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.
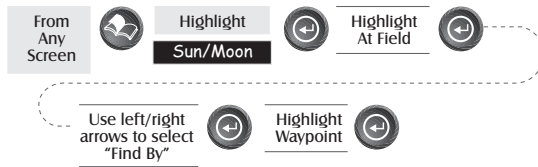
Changing the Sun/Moon Position — Allows you to change the position that you want to view the sun/moon information for. The default is "Position" which is your present position.
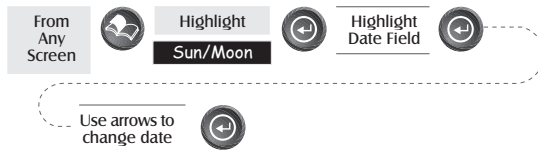
Hunt / Fish Times Display

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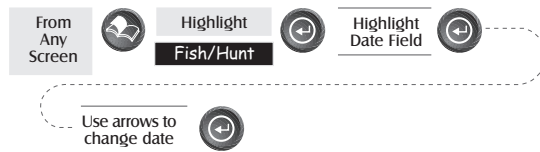
Changing the Fish/Hunt Position — Allows you to change the position that you want to view the fishing/hunting times for. The default is "Position" which is your present position.
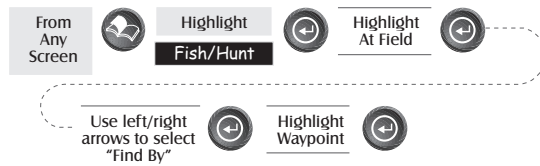
Alarms

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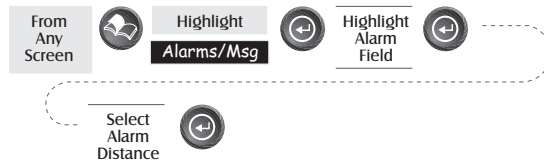
Setting the Arrival Alarm — The arrival alarm alerts you that you have arrived at the destination of your GOTO or to the destination of any leg in a route you are navigating on. This option allows you to set the distance from the destination that the alarm will begin to sound.

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 SporTrak 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 SporTrak will alert you.

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 SporTrak 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.

Using the Simulator

Turning on the Simulator - Auto Mode — This turns the simulator on and uses a predefined heading and speed rate.
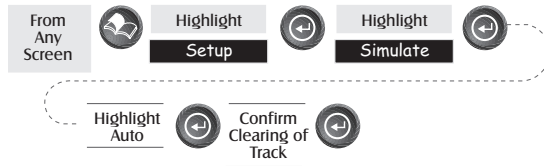
Turning on the Simulator - User Mode — This turns the simulator on and uses a heading and speed rate that you define.
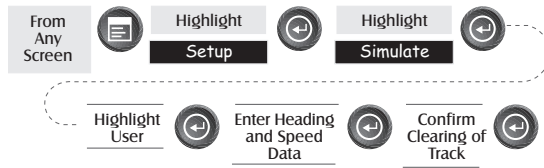
Turning the Simulator Off — Turns the simulator off and returns the SporTrak to normal operation.
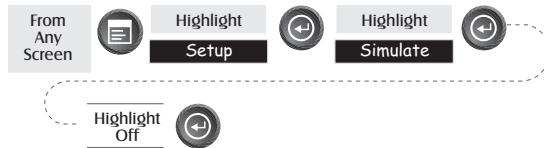
About... Screen

The About... screen displays the current status of your SporTrak. 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.

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.
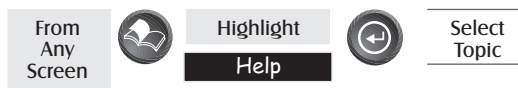
Use the "Next" and "Prev" buttons to scroll the SporTrak Help Files.

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 SporTrak 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 SporTrak 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 SporTrak.

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

Yes. It is automatically selected when the receiver is used for the first time or all of the memory has been cleared. If you need to change the settings for daylight savings, you can use the Setup menu item and access "Daylight savings". There you can select United States, European Union or you can use the customize option to set the rules for daylight savings in your area.

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

Under normal operating conditions you should get up to 14 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 SporTrak?

> Initializing the SporTrak decreases the time it takes to get a position fix during cold start. What is meant by a cold start is that the SporTrak has no reference to use as a guide to tell it what satellites should be overhead. Without a reference to start with, the SporTrak 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 SporTrak was turned off is stored into memory and will be used as the reference the next time the SporTrak 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 SporTrak 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 SporTrak.

Waypoints/Database

What waypoints come preloaded on my SporTrak's database?

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

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

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

Routes

What is a backtrack route?

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

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 SporTrak 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 SporTrak's baud rate (See Setup - Changing the Baud Rate.)

Can I interface my SporTrak 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 is 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 SporTrak turned on.

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

Contacting Magellan

If after using the troubleshooting section, you are still unable to solve your operation problems, please call Magellan's Technical Service at (800) 707-9971.

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. 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:

Thales Navigation
Magellan Consumer Products
960 Overland Court
San Dimas, CA 91773
ATTN: <RMA Number>

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

> Customers outside of the United States should contact the Magellan distributor for your country.   A detailed address of each distributor can be found at www.magellangps.com/.

Magellan® is a registered trademark of Thales Navigation.

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 7 meters, 95% 2D RMS
     w/WAAS <3 meters, 95% 2D RMS

 Velocity 0.1 knot RMS steady state

Limits:

 Speed 951 mph

 Altitude 17,500 meters

Physical:

Size 5.6" x 2.2" x 1.2" [h] x [w] x [d]
    14.2 cm x 5.6 cm x 3.0 cm

Weight 6.8 ounces (204 grams) with 2 AA batteries installed

Display 2.2" x 1.2" [h] x [w]
    5.8 cm x 3.0 cm
    1/8VGA (240 x 160 pixels)

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 9-18 VDC with power cable

Battery Life Up to 14 hours

Compass

The SporTrak Color includes all the features found in all of the SporTrak mapping series of GPS receivers along with a 3-axis electronic compass, a barometer and temperature sensor.

The following text provides you with some information about some of the navigational terms that are used with the electronic compass.

Heading vs. Bearing vs. Course Over Ground

The SporTrak Color adds Course Over Ground (COG) to the list of data parameters that you can select for the customizable fields that are displayed on the navigation screens. The SporTrak Color also uses COG on the compass screen to provide you with additional information that will assist you in navigating to your desired destination.

Heading, in the SporTrak Color, is not computed from the GPS information as it is in the other SporTrak Color products, but rather it uses the electronic compass to determine which way you are facing.

The following is a brief description of how the SporTrak Color interprets heading, bearing, and COG. If you already understand these terms you can skip over the following section.

Heading

Heading in the SporTrak Color is the direction that the antenna (located at the top of the SporTrak Color) is pointing. To get the best representation of your heading, you need to hold the SporTrak Color with the antenna pointing in the direction you are travelling. Holding it at an angle, left or right, will accurately display the heading of the receiver, but it won't be a true representation of your direction of travel. (As you will see next, COG provides a true indication of your direction of travel, regardless of which way the SporTrak Color is pointing.) Heading is displayed all the time.

Course Over Ground (COG)

COG is the direction you are travelling. With the SporTrak Color held directly in front of you, you would think that heading and COG would be the same, but that is not always the case. Boaters are quite familiar with heading and COG being different due to tides and current.

An example of that would be a boat travelling along with a heading of 0°. At the same time, there are currents in the water pushing the boat to one side. This would cause the boat to drift off course in the direction of the current. How much it moves depends on the speed of the boat and the force of the current. In this example, the resulting COG or direction of travel is 15°.
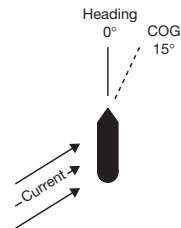
People hiking or walking would normally see the heading and COG being the same with the SporTrak Color pointing directly ahead. However, with the receiver held at a slight angle, left or right, you can see that the heading displayed will differ from the displayed COG.

The key point to remember is while you are moving, COG is the true indication of your direction of travel. COG is displayed only while you are moving at a computed speed of 0.5 miles or faster.

Bearing

Bearing is simply the direction you need to travel to arrive at your destination.

Using the same diagram as before, a destination to a fishing spot has been added. The bearing displayed then indicates the direction that you would need to travel to arrive at the fishing spot.

Bearing will be displayed only when you have a GOTO or other route active.
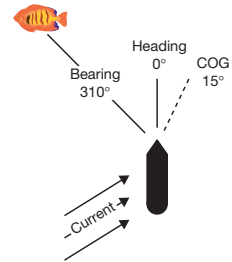
Putting it All Together

With bearing and COG computed, the SporTrak Color can now provide you with the precise information you need to arrive at your destination in the shortest time. In the above example the SporTrak Color would compute that you need to turn 65° to get to your fishing spot. (Remember, since COG is your true heading, the angle you need to turn is the difference between COG and bearing, not heading and bearing.)

As soon as you make this turn, the force of the current on your boat would change. This would also change how much difference there is between your heading and COG. The SporTrak Color continually updates this information giving you the exact turn information you will need to arrive at your destination.

Always remember:

- Heading is the direction that the SporTrak Color is pointing and is displayed all the time.

- Course Over Ground (COG) is the direction that you are travelling over the ground. COG is displayed only while you are moving.

- Bearing is the direction to the destination of a GOTO or leg of a route. Bearing is displayed only when a GOTO or route is active.

Navigating with the Compass Screen

When you are using the Compass Screen to steer to a destination, your goal is to align the Destination Pointer and the COG Pointer together. When both of these pointers are lined up, regardless of your heading, you are moving in a straight line to your destination.

Here the Destination Pointer and the COG Pointer nearly line up exactly and we are moving in a straight line to the destination.

Note: The Destination Pointer points to North and the Destination Icon disappears when you do not have an active route or GOTO.
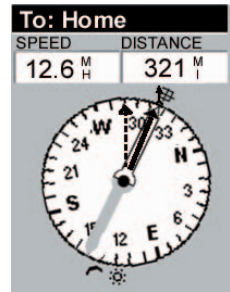
Calibrating the Compass

The electronic compass requires that it is recalibrated **every** time you change the batteries. Failure to calibrate the compass could result in errors of 20° or more to the displayed heading. Calibration is very simple and won't take more than a minute.

It is very important that there are no metallic objects near the SporTrak Color during this calibration.

1. Remove the SporTrak Color from any cradle it may be in and lay it down face up on any flat, nonmetal surface. Also you should not be moving (i.e., in a car or boat in motion) while calibrating the compass. This will affect the calibration causing errors in the compass output.

2. Turn the SporTrak Color on normally and after any of the navigation screens are displayed, press the 🔍 **MENU** button. Using the Up/Down arrows, highlight "Setup" and press ⏎ **ENTER**.

3. Using the Up/Down arrows, highlight "Compass Calibrate" and press ⏎ **ENTER**. Using the on-screen "bubble level", set the SporTrak Color on a level, nonmetallic surface. (Note: If you cannot level the bubble, the SporTrak Color may have lost the basic setting information for the compass. This most often occurs after the SporTrak Color has been dropped or has been struck in a manner that has moved some of the internal electronics. If this is the case, you will need to perform the "Extended Calibration". Information as to how to do this can be found later in this section.)

4. The SporTrak Color will provide the instructions on rotating the receiver.

    Do not rotate the SporTrak Color too quickly. An arrow is provided on the screen and as long as you keep the arrow pointing in the same direction you will be rotating the SporTrak Color at the proper speed.

Note: For most people, the simplest, and most effective method of rotating the SporTrak Color, is to use one finger and push the receiver around in a clockwise manner.

5.   Continue rotating the SporTrak Color until it beeps. (This will be slightly more than one complete rotation.)

      If the calibration is good, the SporTrak Color will display a message that the calibration is complete and acceptable. However, if the SporTrak Color determines that the calibration may be flawed it will prompt you to perform the calibration again. This is most likely caused by the SporTrak Color being too close to metallic objects while you were performing the calibration. You need to move the SporTrak Color to a new location before performing the calibration again.

EXTENDED CALIBRATION

Sometimes additional calibration is required to the SporTrak Color. A second type of calibration may be required when something has caused the sensors to be so far off calibration that the basic calibration routine is not sufficient. This can occur if the SporTrak Color has been vibrated or dropped. The most common indication that extended calibration needs to be performed is during the basic calibration routine you are unable to level the bubble.

To enter extended calibration: (These are the same as the first three steps in performing the basic calibration.)

1.   Remove the SporTrak Color from any cradle it may be in and lay it down face up on any flat, nonmetal surface. Also you should not be moving (i.e., in a car or boat in motion) while calibrating the compass. This will affect the calibration causing errors in the compass output.

2.   Turn the SporTrak Color on normally and after any of the navigation screens are displayed, press the ✿ **MENU** button. Using the Up/Down arrows, highlight "Setup" and press ⊕ **ENTER**.

3.   Using the Up/Down arrows, highlight "Compass Calibrate" and press ⊕ **ENTER**.

      The screen with the bubble level is displayed. Press ⊕ **ZOOM IN** to enter extended calibration.

4.   You are presented with two choices: Factory Defaults or Extended Calibration. It is recommended that you select the factory defaults. This is the simplest and safest method in getting your compass calibrated. You should attempt to manually calibrate only after trying the factory defaults and the compass still does not function satisfactorily.

      Factory Defaults

      If you selected the factory defaults, calibration information that has been stored in memory will be applied to your receiver. You will then return to the basic calibration function, beginning at the leveling phase (bubble screen).

Manually Calibrate

If you chose to manually calibrate your SporTrak Color, you must follow the instructions provided very carefully.

You will be prompted on-screen with the instructions but they are provided here as a supplement to those instructions.

1. Lay the receiver on a flat, nonmetallic surface. Insure that there are no large metallic objects near, especially underneath the surface you are setting the receiver on.
   Press ⏎ **ENTER and** wait for the beep.
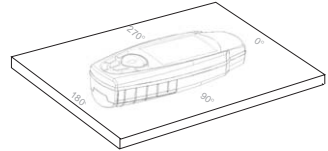
2. Turn the SporTrak Color 90° and wait for the beep.
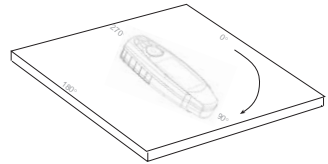
3. Turn the SporTrak Color another 90° to 180° and wait for the beep.
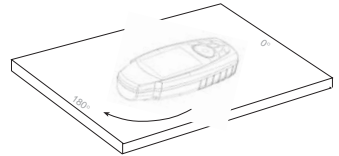
4. Turn the SporTrak Color another 90° to 270° and wait for the beep.
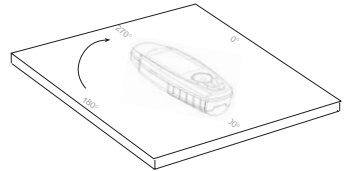
5. Hold the SporTrak Color on its side with the top (antenna) pointing towards you with the display facing right. Hold it steady and wait for the beep.
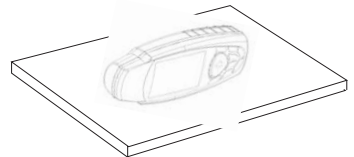
6. Flip the SporTrak Color over with the antenna still pointing towards you but with the display facing left. Hold the receiver steady and wait for the beep.
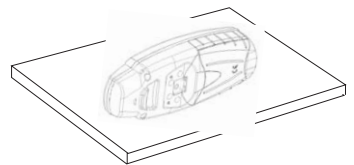
7. Stand the SporTrak Color up with the display facing you and the antenna pointing up. Hold the receiver steady and wait for the beep.
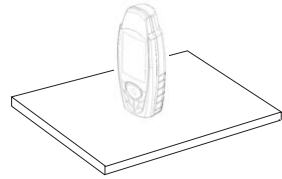
8. Turn the SporTrak Color over. Now the antenna is pointing down and the back of the SporTrak Color is facing you. Hold the receiver steady and wait for the beep.

9. Place the SporTrak Color face down with the antenna pointing towards you. Wait for the beep.
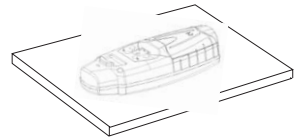
This will conclude the extended calibration and you will be prompted to perform the basic calibration again.

Limitations to the Electronic Compass

The electronic compass has some limitations as to how well it works in certain environments. Large metal objects can affect how well it operates. As an example, should you use your SporTrak Color in an automobile you will find that the compass does a great job of pointing to your engine but no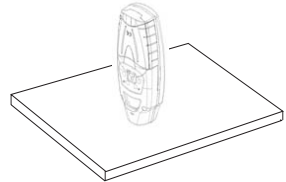t pointing to north. If you find yourself in a situation such as this, you should use the Setup option "Compass Orient." to change the compass orientation to GPS Course. Then the SporTrak Color will get its heading from the GPS signals and not the electronic compass.

Other limitations are in the angle that you hold the SporTrak Color. Holding the receiver flat provides the most accurate readings. While tilting it towards you is acceptable, you should pay attention to the compass readings as you tilt it. At a certain point, you will begin to see the compass begin to drift. The SporTrak Color has compensated for tilt, but the more you tilt it, the more you will notice errors in the compass readings.

The SporTrak Color has a major advantage over many other electronic compasses on the market today in that it can be tilted and still maintain relatively accurate compass readings.

Battery consumption increases whenever the compass is operating, therefore impacting battery life. The compass is operating any time heading is being displayed. So, naturally, while you are on either of the two compass screens or on the Map Screen (your position cursor is pointing to your heading), the compass is running. On the other navigation screens, the compass is off unless you have selected heading for one of the data fields. However, you could go to Setup and with the "Compass Orient." option change the orientation of the compass to "GPS Course" but that would defeat one of the reasons you choose the SporTrak Color.

Setting the Compass Orientation

As discussed in the previous section, there may come a time that you wish to turn the compass off and use the GPS Course to determine your heading. (Remember, GPS Course will only calculate heading when you are moving at a speed greater then 0.5 miles per hour.)

1. From any screen press ✎ **MENU**.

2. Use the arrow pad to highlight "Setup" and press ⏎ **ENTER**.

3. Use the arrow pad to highlight "Compass Orient." and press ⏎ **ENTER**.

4. Use the arrow pad to select "GPS Course" and press ⏎ **ENTER**. (Selecting "Magnetic North" turns the compass back on.

5. Press ✕ **ESC** to exit the Setup Menu and return to the last screen you were viewing.

Using the Barometer and Temperature Screens

In addition to the electronic compass, your SporTrak Color provides you with a "mini-weather station" with temperature and barometer information.

Accessing the Weather Screen

1. From any screen press ✎ **MENU**.

2. Use the arrow pad to highlight "Weather" and press ⏎ **ENTER**.

The Weather Screen is displayed with current temperature and barometer information. Temperature and barometric information are displayed in a familiar and easy to read format. The bottom of the display is a graphic of the barometric readings taken over the last 24 hours. (The SporTrak Color will take barometric readings anytime the compass is active.)

A brief explanation of the barometer graph is in order at this time. A new bar indicating your barometric pressure is added to the graph once every 15 minutes. If during the course of an hour it has taken two readings, it fills in the gap between the readings. If, however, you have turned the receiver off or do not have enough satellites to compute altitude (four satellites are needed for altitude computations), and only one reading or less has been taken in the course of the last hour, there will be gaps in the chart. (*See Accessing Barometer History for more information.*)

Calibrating the Temperature and Barometer

This is not a requirement for using the temperature and barometer readings. It simply makes the readings you have a little more accurate.

1. From the Weather Screen press **MENU**.

2. Using the arrow pad, highlight "Calibrate" and press ⏎ **ENTER**.

3. Using the Up/Down arrows to change the value and using the Left/Right arrows to move the cursor, enter your corrected temperature value. Press ⏎ **ENTER**.

4. Using the Up/Down arrows to change the value and using the Left/Right arrows to move the cursor, enter your corrected barometric pressure value. Press ⏎ **ENTER**.

5. The "Save" button is highlighted. If you are happy with your changes, press ⏎ **ENTER**.

6. If you are not happy with the changes you have two options. One is to use the Left/Right arrows to highlight the "Reset" button and press ⏎ **ENTER** or use the Up/Down arrows to highlight the field you want to redo and press ⏎ **ENTER**. You will then be placed back into the Edit Mode.

   Pressing ⊗ **ESC** will also return you to the Weather Screen without saving any changes you may have entered.

Accessing Barometer History

You may want to view the barometer history that is displayed in the barometer graph in a textual format. This screen will also provide you with the low and high barometer readings for the last 24 hours as well as the reason for the gaps in your chart.

1. From the Weather Screen press ⌁ **MENU**.

2. Using the arrow pad, highlight "Baro history info" and press ⏎ **ENTER**.

None of the fields are editable and are presented for informational purposes only. When you are done, press **ESC** to return to the Weather Screen.

Limitations on Temperature Readings

Since the temperature sensor for your SporTrak Color is inside the receiver, it is trying to read the temperature of the receiver and not your ambient temperature. There has been compensation made to the temperature readings in order to accurately represent the ambient temperature. Some of those compensations come from the values that you may have entered if you calibrated the temperature. Even with all of the compensation, the temperature displayed will still be adversely affected if the receiver is in severe temperature environments. For example, if you place your SporTrak Color on the dashboard of your car or anywhere where the sun is repeatedly beating on it, the internal temperature of the receiver will rise above a point where the temperature compensation values are just not enough. As with any electronic device, it is not good practice to place it in those types of extreme temperatures.

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).

MapSend Topo for the United States: This CD-ROM allows you to upload detailed street maps, topographic data as well as POI's to your SporTrak receiver. (Available only with United States topographic information.)

MapSend Streets and Destinations: This CD-ROM allows you to upload detailed street maps as well as extensive sets of POI's to your SporTrak receiver (available for United States, Canada, and Europe).

MapSend BlueNav: This CD-ROM allows you to upload charts and harbor information from waterways around the world (available for North America and Europe, and soon to be available for Asia/Pacific, and the rest of the world).

MapSend Worldwide Base Map: This software allows you to upload more detailed area maps with highways, railways, major cities, and basic topography.

Carrying Case: The carrying case provides a way of carrying the SporTrak on your belt while at the same time protecting it from the elements.

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.

PC Cable: Allows you to connect the SporTrak to a PC.

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

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.

Serial to USB Adapter: Adapter that provided connection of the PC Cable or the PC Cable with Cigarette Lighter Adapter to the USB port of a laptop or desktop computer.

MapSend Streets

The MapSend Streets CD allows you to load detailed street maps into your SporTrak. The maps supplied on the MapSend Streets CD contain full street detail of US or European cities.
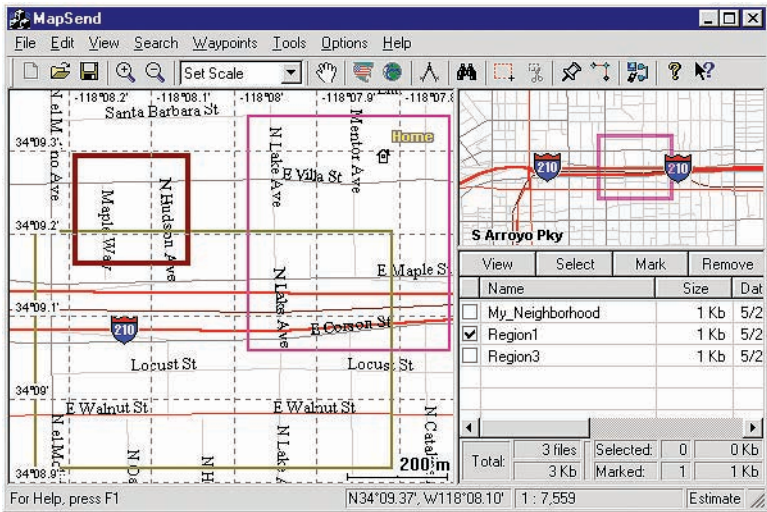
Features

- Enables you to load street maps for any region in the United States or Europe into the SporTrak.

- 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)/2000/XP

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)

Using MapSend

The MapSend series of CD-ROMs allows you to extend the capabilities of your SporTrak GPS receiver and there isn't room here to describe all that you can do. Please refer to the help files in the MapSend for assistance on the features and functions of the software. This brief introduction is provided only to demonstrate the most commonly used function; uploading detailed maps.

Preparation: Make sure that you have a SD card installed in your SporTrak. (Detailed maps are saved to the SD card, not in the SporTrak.) Install fresh batteries in your SporTrak and using the data cable, connect the SporTrak to one of the COM ports on your PC.

Run the MapSend application from your PC.

Set Up Map: Using the zoom in and out tools, select the location on the map for the area that you want to get the detailed map from.

In this example, a detailed map from the Southern California area will be selected.
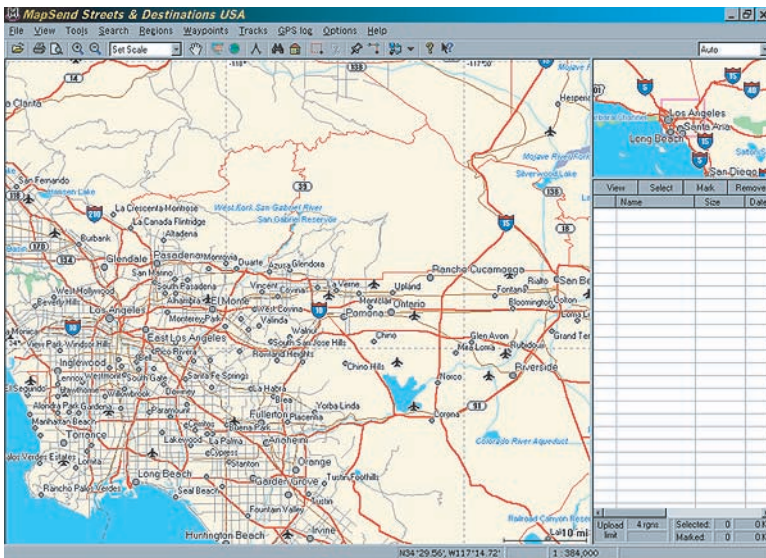
Select Area: Use the "Draw New Region" tool to select the area on the map that you want to upload into your SporTrak.

Here is the region selected for this example. Notice that when you move the cursor inside the rectangle, the memory space that this region will occupy on your SD card is displayed.
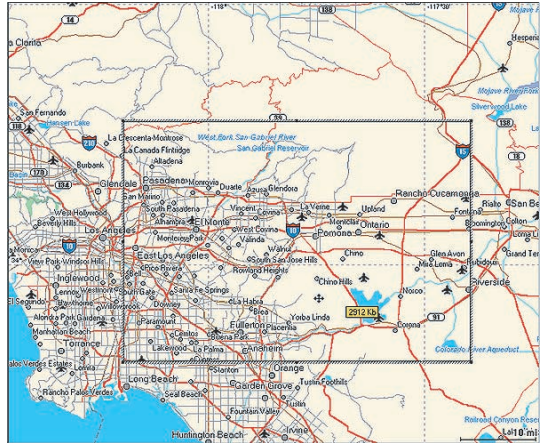
You can further modify this region. To move the region, place the cursor inside the region and with the left mouse button depressed, move the entire region. To change the size of the region, place the cursor on any of the black dots found in the corners or along the sides of the region, press the left mouse button and increase or decrease the size of the defined area.

Cut Region: Select the "Cut Region" tool. You will be prompted to provide a name for this region. Use a name that will help you identify which part of the country this region is for.
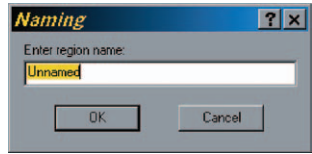
In this example, the name "socal" was used. After supplying the name, this region is added to the region list found at the right of the screen. In the region list, left click on the box in front of the name of the region you want to upload. Notice that the area within the region changes color, giving you a graphical indication of what region(s) are to be uploaded.

Upload Region: Make sure that the SporTrak is turned on and click on the "Upload Regions" 🎴 ▾ button. You will be given the option of Upload to GPS Unit, Upload to SD Card Programmer or Store on Hard Drive. Select Upload to GPS Unit and press "Next".

MapSend will then poll the COM ports looking for the SporTrak receiver. When the COM port has been found, it will be indicated on the PC screen. Press "Next".

The map region will be uploaded to your SporTrak receiver. Now using the SporTrak, go to the Map screen and zoom out over the area on the map where you have uploaded the region. Once you have zoomed out far enough, you will see the outline of a box. This box represents the region that you just uploaded. This portion of the map now has detailed street and points of interest information.

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:

Connecting directly to the SporTrak. Using the captive screw that is attached to the plug, tighten into the back of the receiver.

If you are connecting to the SporTrak while it is mounted in the Mounting Cradle, attach the cable through the back of the cradle. It is not necessary to tighten the captive screw to the SporTrak, although you may do so for added security.
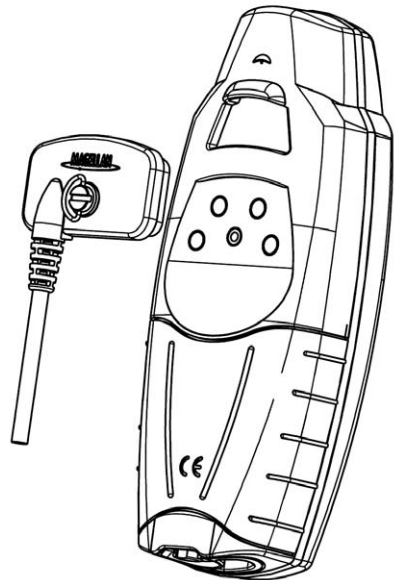
Connecting to an External Power Source

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.

Power Plug

Cigarette Lighter Adapter

Cut Here

Power Supply Box
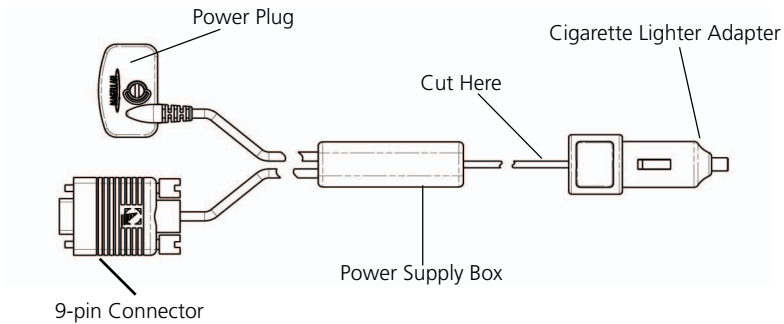
9-pin Connector

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
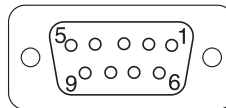
Cable Wiring Color Code

Power   Red: Power +
                     Black: GND

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

WAAS

Your Magellan GPS receiver has been upgraded to include the latest WAAS (Wide Area Augmentation System) technology. With WAAS your GPS receiver can compute position locations with an accuracy never before possible in a commercial receiver.

What is WAAS? WAAS is a means of improving the accuracy of GPS beyond the standard civilian signal. WAAS was developed by the FAA to provide the accuracy needed for aircraft to perform approaches for landings. WAAS improves the accuracy of GPS by calculating the errors in the GPS signal at several monitoring stations around the country and then transmitting the error corrections to special WAAS satellites. In turn, these satellites broadcast the error corrections to WAAS-capable GPS receivers around the world.

WAAS is a free service and, with the small exception of two additional satellites displayed on the Satellite Status screen, it will be transparent to you. There is nothing you need do, it's all ready to go.

How accurate will my GPS receiver be with WAAS? The FAA reports that expected accuracy can be improved to around 7 meters vertically and horizontally. Our own testing suggests that Magellan GPS receivers will typically experience accuracy improvements to around 3 meters. You can expect to see this level of accuracy for 95% of the time that you are receiving WAAS signals.

What are some of the problems with WAAS? The signal coverage with WAAS is not global like GPS satellites. In some locations, receiving WAAS signals can be difficult and intermittent. There are two satellites transmitting WAAS for corrections in the Americas and two more over Africa and India providing similar coverage for Europe. These satellites are geostationary, i.e., they stay in the same spot over the Earth equator. The two satellites for the Americas are over the Pacific and Atlantic Oceans. Chances are then, they will probably be near the horizon from where you are using your GPS receiver. This increases the chance that buildings, foliage, terrain and other obstacles could block the WAAS signal.

Also WAAS is a relatively new system and is still in its developmental stage. So on occasion you may experience service outages. Even during these outages, your GPS receiver will still be working, computing position fixes and helping you get to where you want to go using the GPS signals. The only difference is you will not be getting the precision that WAAS was providing. You can expect to see these outages diminish as the system matures and stabilizes.

For more information on WAAS, you can visit the FAA website's section on their WAAS system: http://gps.faa.gov/programs/WAAS/waas.htm

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.
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 SporTrak (Greenwich SporTrak) 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 UTMs. Used with GRB36 datum.
Position fix	Position coordinates as computed by the SporTrak.
SOG	Speed Over Ground. The speed at which the receiver is moving.
TMP	Temperature.
True North	The direction to North Pole from an observer's position. The north direction on any geographical SporTrak.
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.

SporTrak™ Color User Manual Addendum

Since the release of the User Manual for the SporTrak Color, there have been enhancements to the SporTrak Color's software. This addendum will describe those enhancements as well as provide some additional information that may help you use your SporTrak Color GPS Receiver.

You can keep your SporTrak Color up to date by checking the Magellan® web site at www.magellangps.com for future software releases that you can upload into your SporTrak Color receiver.

Enhancements:

On/Off Protection – This feature is designed to provide a different way to turn the SporTrak Color on or off to avoid accidental turn on or off if carried in a backpack or your pocket.

Keypad Light Timer – This enhancement was introduced to increase the battery life of your SporTrak Color. This feature automatically turns the keypad light off after 1 minute of inactivity.

Map Screen Detailed Information – This provides a simple method of saving a waypoint or going to an item displayed or just viewing additional information about any item displayed on the map. You will find that this method is the easiest way to save or go to any map item.

Destination Plotter – You now have the option of displaying lines on the map screen that graphically display a line from your present position to your destination and/or a line from the departure point to your destination.

Magnetic Heading – Under Map Setup you can now select to set the top of the display to magnetic heading using the information provided by the SporTrak Color's built-in compass.

Map Utilities – You can now select which basemap or detail map you want to use if you have uploaded optional maps into your SporTrak Color's memory. You also have the option of deleting from your SporTrak Color's memory any optional maps that you have uploaded.

Navaids – The SporTrak Color now contains a comprehensive list of navaids to support the many mariners who are using the SporTrak Color receiver.

Tides and Currents – The SporTrak Color can now display tide and current information for various ports and stations. Please note that current information can be displayed only if you have a chart that you have uploaded from one of the optional Magellan MapSend® BlueNav™ software packages.

Corrections to the User Manual:

Page 23 – "Changing the Data Fields" — The User Manual incorrectly states that there are 13 different options to select from for the Map display. There are actually 17 different data field options (bearing, distance, speed, heading, VMG, CTS, ETA, ETE, XTE, turn, elevation, time, date, COG, EPE, avg. speed, or max. speed) you can select.

Page 71 – "Calibrating the Compass" — An additional step was omitted from the instructions. After you rotate the receiver and it beeps as instructed in Step 5, you need to turn the receiver over (face down) until it beeps again.

Additional Information:

SporTrak Color Support – This will provide SporTrak Color owners living in Europe the information they need to contact Thales Navigation for support of their Magellan receiver.

Enhancement Instructions

On/Off Protection. This feature was added to assist those who accidentally turn their receiver on or off while it is being carried in their pocket, backpack or other container. The following shows the differences between normal on/off and protected on/off.

Turning the SporTrak Color On:

Normal: Press the Power key.
Protected: Press and hold the Power key until the first start-up screen is displayed.

Turning the SporTrak Color Off:

Normal: Press the Power key. (Pressing the Escape key aborts the power off.)
Protected: Press the Power key. You have 5 seconds to press the Enter key. If you do not press the Enter key, the SporTrak Color stays on, returning to the last screen displayed.

Turning the Power Key Protection On or Off:

1) From any screen, press the Menu key and use the up or down arrows to highlight "Setup". Press the Enter key.

2) Use the up or down arrows to highlight "Power key" and press the Enter key.

3) Use the up or down arrows to highlight your power key choice, either "No protection" or "On/Off protected". Press the Enter key.

Keypad Light Timer. Normally, when you turn on your SporTrak Color, a light behind the keypad comes on allowing you to see the keys in dark or low-light environments. If at any time, no keys have been pressed for any 1-minute time frame, the keypad light will turn off. To turn the keypad light back on, press any key. (Note that pressing any of the keys with the keypad light off, does not perform the function, only turns the keypad light back on.)

Disabling the Keypad Light Timer

The Keypad Light Timer is on whenever the display backlight is on. Press and hold the Power key down, once for each step, to step through the levels of backlight intensity. When the backlight is off, so is the keypad light.

Map Screen Detailed Information. When your cursor or your position icon is over a map item (road, city, POI, etc.) you can quickly and easily view additional information about that item. From this display, you can very easily save the position into your user database or you can create a GOTO route to that map item with the push of a button.

Viewing Detailed Map Information for Your Present Position

1) While viewing the Map screen and your present position icon is displayed, press the Enter key. (If your Present Position icon is not being displayed, press the Escape key to reset the cursor to your present position. If an hourglass is being displayed instead of your Present Position icon, the SporTrak Color is not computing position information and you may need to give the antenna a better, unobstructed view of the sky.)

2) If your present position is over a map item, a list of all the map items available for your position will be displayed. (If your position is not over a known map item, nothing will be displayed.)

3) Using the up or down arrows, select the item you want to view and press the Enter key.
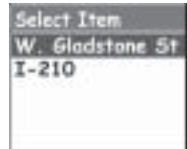
4) A Detail Info screen appears with the coordinates for your position at the time you pressed the Enter key. Any notes or messages about this map item will also be displayed below the coordinate information.

5) You also have the option of saving this map item as a waypoint in your User Waypoints database.
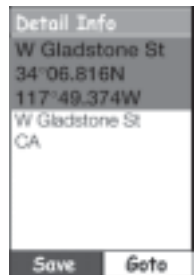
Viewing Detailed Map Information for the Cursor Position

1) Use the arrow keys to move your cursor around the map. When the cursor is over a displayed map item, press the Enter key.

2) A list of all the map items found at your cursor position is displayed. Use the up or down arrows to select the item you want to view and press the Enter key. (If no list is displayed after pressing the Enter key, your cursor is not over any map items.)

3) A Detail Info screen appears with the coordinates for the cursor position. Any notes or messages about this map item will also be displayed below the coordinate information.

4) You can also save this map item as a waypoint in your User Waypoints database or create a GOTO route to this map item (*described below*).

Saving or Going to a Map Item from the Detailed Map Information Screen

1) To Save the Map Item in to your User Waypoint database, use the left or right arrows to highlight the "Save" button at the bottom of the screen and press the Enter key. The Mark screen is displayed allowing you to edit the details for this position. When you are done, highlight the "Save" button and press the Enter key. (This method does not apply to waypoints that are already in your User Waypoint database. User waypoints can be edited or deleted.)

2) To create a GOTO route to the map item chosen, use the left or right arrows to highlight the "GOTO" button and press the Enter key.

Editing or Deleting a User Waypoint from the Detailed Map Information Screen

1) If the map item you selected to view is from your User Waypoint database, you are presented with three buttons, "Edit", "Goto" or "Del". Use the arrow keys to highlight the desired option and press the Enter key.
Edit: Selecting Edit brings up the "Edit WPT" screen allowing you to change the details for this waypoint. When you are satisfied with your changes, use the arrow keys to highlight "Save" and press the Enter key.
Goto: Selecting Goto creates a GOTO route from your present position to the waypoint displayed. You are returned to the Map screen and are ready to begin navigating towards the waypoint.
Delete: Selecting the "Del" button allows you the option of removing this waypoint permanently from your User Waypoint database. A confirmation screen is displayed requiring that you confirm this deletion.

Exiting the Detailed Map Information Screen

To return to the Map screen, press the Escape key.

Destination Plotter. Originally the Map screen displayed a line (plot) from your departure point to your destination when you had an active route or GOTO. The latest enhancement to the SporTrak Color has added a plot line from your present position to your destination. You can turn either of these plot lines on or off under the Map Setup function.
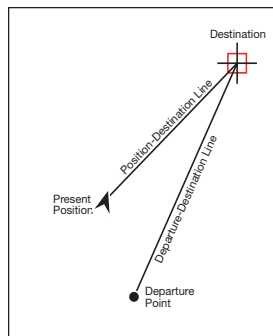
Selecting Destination Plot Lines

1) From the Map screen, press the Menu key. Use the up or down arrows to highlight "Map Setup" and press the Enter key.

2) Press the right arrow to access the "Display" tab.

3) Using the up or down arrows, highlight "Pos-Dest Line" or "Depart-Dest Line"

4) Press the Enter key to toggle the status of your selection. When the box is checked, the line will be displayed.

Magnetic North for the Map Screen. Using the information from the electronic compass built in to your SporTrak Color, you can now set the top of the map display to reflect magnetic north. Previously you could only select the top of the display to reflect north, your course or your track.

Selecting Magnetic Heading Up for the Map Screen

1) From the Map screen, press the Menu key. Use the up or down arrows to highlight "Map Setup" and press the Enter key.

2) With the "Orientation" field highlighted, press the Enter key.

3) A drop down list is displayed with the four options for the map screen orientation. Use the up or down arrows to highlight "Magnetic HDG Up" and press the Enter key.

Map Utilities. You can use this feature to select the basic map or the detailed map that you want to use. You can also use Map Utilities to delete a map, other than the basic map, from memory.

> **What is the difference between a basic map and a detail map?** The basic map (or basemap) is the map that came built in to your SporTrak Color when you purchased it. It has basic street detail and some Points of Interest, which is enough information for simple navigating in towns and major roadways. Basic maps cover a large land area, have limited detailed information and use up a small amount of memory.
>
> Detail maps are maps you can upload using any of the Magellan software options through the MapSend or MapSend BlueNav series of software applications. These maps have an enormous amount of detail down to the street level and a vast selection of POIs that can be displayed on your Map screen. Detail maps are limited in size to the amount of free memory in your receiver, have a lot of detailed information and can use up a substantial amount of memory.
>
> **Are there other basic maps available?** Yes. If you have the Magellan MapSend WorldWide Basemap CD-ROM, you can select any area on the globe and upload it to your SporTrak Color receiver.
>
> **Selecting a Basemap or a Detail Map**
>
> 1) From any screen, press the Menu key. Use the up or down arrows to highlight "Map Utilities" and press the Enter key.
>
> 2) With "Change Map" highlighted, press the Enter key.
>
> 3) Use the up or down arrows to highlight the field, "Basemap" or "Detail Map", that you want to select and press the Enter key.
>
> 4) A list of available maps is displayed. (Also, if you have selected "Detail Map", you have the option of turning it off altogether.) Use the up or down arrows to highlight your choice and press the Enter key. (The Save button displayed at the bottom of these screens is presently non-operational.)
>
> 5) When you have made your selection of the Basemap and Detail map you want displayed, use the up or down arrows to highlight the "Save" button and press the Enter key. A pop-up will briefly be displayed indicating that the maps are being loaded and you will then return to the screen you were viewing when you first accessed the Map Utilities function.
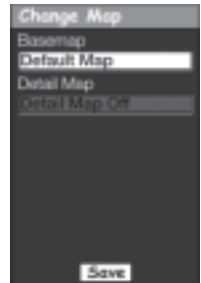
Deleting a Base Map or a Detailed Map

1) From any screen, press the Menu key. Use the up or down arrows to highlight "Map Utilities" and press the Enter key.

2) Use the up or down arrows to highlight "Delete File" and press the Enter key.

3) A list of all the maps that have been uploaded to your SporTrak Color receiver is displayed. Use the up or down arrows to highlight the map you want to delete from memory and press the Enter key.

4) A pop-up confirmation window is displayed. To continue with the delete process, use the right or left arrow to highlight the "Yes" button and press the Enter key.

5) Whether you selected Yes to continue with the delete process, or No to cancel the delete process, you will be returned to the screen you were viewing when you accessed the Map Utilities function.

Navaids. The SporTrak Color now provides mariners with navaids added to their waypoint database. These navaids can be used as any other waypoint and are easily accessed through the Database function of your SporTrak Color receiver.

Tides and Currents. SporTrak Color users can now access tide information for ports that are stored in their basemap. If a chart from one of the Magellan MapSend BlueNav products has been uploaded, additional tide and current information can be displayed for ports/stations that were included with the chart. (Please note that not all MapSend BlueNav charts contain station information.)

The Tide Screens. The Tide screen displays the times for high and low tides, the water height and the coefficients (French internal ports only) for a selected date and port. The displayed water heights are the height of the water at the lowest astronomical tide. These values are provided as a rough guide and may vary with weather conditions.

Accessing the Tide Screen

1) From any screen, press the Menu key. Use the up or down arrows to highlight "Tide" and press the Enter key. When a **MapSend** BlueNav chart is uploaded and has been selected as the detailed map (see *Selecting a Base Map or a Detailed Map*) the menu option displayed will be "Tide/Current".

Changing the Date

1) With the "On" field highlighted press the Enter key. The "On" field will go into the edit mode.

2) Use the up and down arrows to change the data at the cursor position and use the left and right arrows to move the cursor.

3) When you have the date desired, press the Enter key. A pop-up window will be displayed indicating that the SporTrak Color is calculating the tides.

Changing the Port

1) With the "At" field highlighted press the Enter key.

2) If you have a MapSend BlueNav Chart loaded, you will be given the option of selecting internal ports or MapSend BlueNav ports. Use the up or down arrows to highlight your selection and press the Enter key.

3) If you selected to use the internal ports, you will be asked to select a region to search from. Use the up or down arrows to highlight the region and press the Enter key.

4) Use the keypad to enter the name of the port you want to view tide information for. When you feel you have entered enough of the name, you can move the highlight to the "OK" button and press the Enter key.

5) Use the up or down to select the port you are looking for from the list of available ports and press the Enter key. A pop-up window will be displayed indicating that the SporTrak Color is calculating the tides.

Viewing the Graph

1) Use the up or down arrows to highlight "Graph" and press the Enter key.

2) The information above the graph displays time and level of the tide. Use the left or right arrows to bring up a vertical line that can be moved along the graph to change the time for this information. (Note: tide information along the graph is available in 15 minute intervals.)

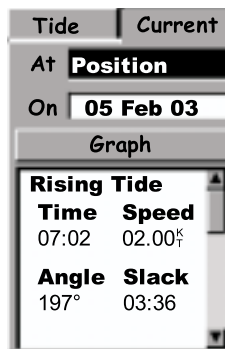3) To exit the graph display and return to the main Tide screen, press the Escape key.
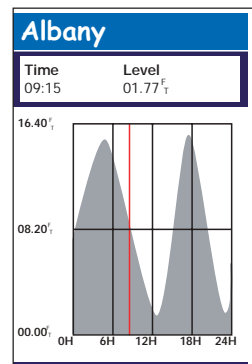
The Current Screens. The Current screen displays the time of the maximum current, its speed, its angle (direction) and the time of the slack water for the date and station indicated on the screen. There may be more current information than can be displayed on one screen. You can use the up and down arrows to scroll through the available data.

You can also view a graph of the current for the 24 hour period of the day you have selected. The upper portion of the graph represents the current of the rising tide, the lower represents the current of the falling tide. The horizontal line through the center at 00.00 represents the slack water. Each peak represents the maximum current.

Accessing the Current Screen

1) From any screen, press the Menu key. Use the up or down arrows to highlight "Tide/Current" and press the Enter key. As a reminder, the Current screen is available only when a MapSend BlueNav chart has been uploaded and is active. If current information is not available, only "Tide" will be displayed as a menu option.

2) Use the right arrow to select the "Current" tab.

Tide	Current
At	**Position**
On	**05 Feb 03**
Graph	

Rising Tide
Time   Speed
07:02   02.00ᵏ

Angle   Slack
197°   03:36

Changing the Date

1) With the "On" field highlighted press the Enter key. The "On" field will go into the edit mode.

2) Use the up and down arrows to change the data at the cursor position and use the left and right arrows to move the cursor.

3) When you have the date desired, press the Enter key. A pop-up window will be displayed indicating that the SporTrak Color is calculating the current information.

Changing the Station

1) With the "At" field highlighted press the Enter key.

2) Use the up or down to select the station you are looking for from the list of available stations and press the Enter key. A pop-up window will be displayed indicating that the SporTrak Color is calculating the current.

Viewing the Graph

1) Use the up or down arrows to highlight "Graph" and press the Enter key.

2) The information above the graph displays time, speed and angle of the current. Use the left or right arrows to bring up a vertical line that can be moved along the graph to change the time for this information. (Note: current information along the graph is available in 15 minute intervals.)

   To exit the graph display and return to the main Current screen, press the Escape key.
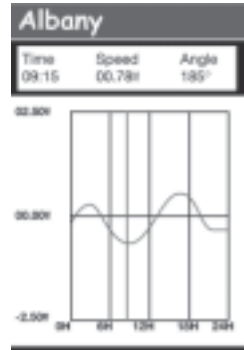
Support for Your Magellan SporTrak Color Receiver

If you need **technical assistance**, "how-to" help, or if you have a technical question about the functionality of your SporTrak Color receiver, you may contact us using your internet browser at www.magellangps.com. You may also reach technical support by fax or by phone.

North America
Our technical support phone representatives are available Monday through Friday, 6:00 a.m. to 5:00 p.m. P.S.T/P.D.T or after hours you may leave a detailed voice mail message that will be returned within the next 24-hours of the next business day.
Telephone: 800 707 9971 or +1 909 394 5000 (Outside North America)
You may also reach technical support by fax: +1 909 394 7070.

France and United Kingdom
From France, please call: +33 825 864 865 (cost of the call is € 0.125/minute)
From the United Kingdom, please call: +33 825 864 865 (cost of international call).

Other Countries
From other countries, please call +1 909 394 5000* or fax +1 909 394 7070.
*Please note that when calling this number support will be in English only and that our technical support phone representatives are available Monday through Friday, 6:00 a.m. to 5:00 p.m. P.S.T/P.D.T.

Product Information - If you would like more information on Magellan products, please see our products page (www.magellangps.com/en/products). If you still cannot find the information you are looking for such as pricing, accessories, product features and functionality, please use the General information form (www.magellangps.com/en/contact/general_form.asp).

Where to buy - If you are trying to find a retailer near you, please see our Dealer Locator form (www.magellangps.com/en/store/dealerlocator/).

Manuals - For replacement manuals for your Magellan products, as well as other helpful information, please visit the Product Support page (www.magellangps.com/en/support/products/).

RMA/Repair Request - If you need product repair or replacement of your Magellan product, please use our Repair Request form (www.magellangps.com/en/support/rma.asp). Only available in North America, other locations, please contact your local distributor using our Dealer Locator form (www.magellangps.com/en/store/dealerlocator/).

General Information and other questions - If none of the categories above fits your question, please use the General Information form (www.magellangps.com/en/contact/general_form.asp).

MAGELLAN

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