

iFINDER[®] H2O

Handheld Mapping GPS Receiver Operation Instructions

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WARNING!

A CAREFUL NAVIGATOR NEVER RELIES ON ONLY ONE METHOD TO OBTAIN POSITION INFORMATION.

CAUTION

When showing navigation data to a position (waypoint), a GPS unit will show the shortest, most direct path to the waypoint. It provides navigation data to the waypoint regardless of obstructions. Therefore, the prudent navigator will not only take advantage of all available navigation tools when traveling to a waypoint, but will also visually check to make sure a clear, safe path to the waypoint is always available.

WARNING!

When a GPS unit is used in a vehicle, the vehicle operator is solely responsible for operating the vehicle in a safe manner. Vehicle operators must maintain full surveillance of all pertinent driving, boating or flying conditions at all times. An accident or collision resulting in damage to property, personal injury or death could occur if the operator of a GPS-equipped vehicle fails to pay full attention to travel conditions and vehicle operation while the vehicle is in motion.

Section 1: Read Me First!

How this manual can get you out on the road, fast!

Welcome to the exciting world of GPS satellite navigation! We know you're anxious to begin finding your way with this hand-held technology, but we have a favor to ask. Before you grab the batteries and head outside, please give us a moment or two to explain how our manual can help you get the best performance from this remarkable little GPS unit.

First, we want to thank you for buying an iFINDER® H2O. Whether you're a first-time user or a professional navigator, you'll discover that the iFINDER is a true pocket-sized, full-featured mapping GPS receiver. When you team an iFINDER with one of our specialized maps or our custom mapping software MapCreate™ 6, you have an incredible combination. No other consumer GPS mapping system on the market offers so much information and so many features in one package.

Our goal for this book is to get you on the road or out to the woods and water fast, with a minimum of fuss. Like you, we'd rather spend more time traveling, and less time reading the manual!

So, we designed our book so that you *don't* have to read the *whole thing* from front to back for the information you want. At the start (or end) of each segment, we'll tell you what content is coming up next. If it's a concept you're already familiar with, we'll show you how and where to skip ahead for the next important topic. We've also made it easy to look up any tips you may need from time to time. Here's how:

The manual is organized into seven sections. This first section is an introduction to Lowrance GPS. It tells you the basics you need to know before you can make the unit look around and tell you where you are.

Section 2 will help you get the batteries and MultiMedia Card (MMC) correctly installed in your iFINDER. We'll also tell you about some of the accessories available for your unit.

Section 3 is the heart of our book, *Easy Mode Operation*. It will introduce you to the basic GPS functions. We lead off this section with a one-page Easy Mode Quick Reference. **(If you've already figured out how to load the batteries yourself, and you just *can't* wait any longer, turn to the Quick Reference on page 26 and head outside with your iFINDER!)**

The rest of Section 3 contains short, easy-to-scan lessons that follow one another in chronological order. They're all you'll need to know to find your way on the water or in the wilderness quickly.

Easy Mode operation will meet the navigation needs of many users. But, after you've learned the basics (or if you already have some GPS experience), you may want to try out some of iFINDER's many advanced navigation features. That brings us to Section 4, *Advanced Mode Operation*. After we introduce the Advanced Mode menus and submenus, this section contains the rest of iFINDER's command functions, *organized in alphabetical order*.

When you come to a GPS menu command on the iFINDER screen, you can look it up in the manual by skimming over the table of contents or index, just flipping through Section 3 or scanning through the command portion of Section 4.

iFINDER is ready to use right out of the box, but you can fine tune and customize its operation with dozens of options. We describe how to use general system options along with GPS options in Section 5, *System Setup and GPS Setup Options*. This section covers both Easy Mode and Advanced Mode options.

In Section 6, we go into more detail on one of iFINDER's most remarkable capabilities — *Searching*. We'll introduce a couple of search examples in both the Easy and Advanced mode sections, but there are so many map items you can search for, we had to give this function its own section in the manual! For example, did you know iFINDER can look up business phone numbers, functioning as a virtual Yellow Pages? We'll show you how in Section 6.

Finally, in Section 7, we offer *Supplemental Material*, including a list of the GPS datums used, warranties, and customer service information.

Now, if you're into the fine details, glance over the next segment on specifications to see just how much GPS power you hold in your hand. It's important to *us* (and our power users), but if *you* don't care how many waypoints iFINDER can store or how long the batteries last, skip ahead to important information on how iFINDER works, on page 4.

Capabilities and Specifications: iFINDER®

General

- Display:**..... 3" (7.3 cm) diagonal high contrast Film SuperTwist.
- Resolution:**..... 240 pixel x 180 pixel resolution; 43,200 total pixels.
- Backlighting:**..... White LED screen backlighting for night and low-light viewing.

- Input power:**.....3 volts DC (two 1.5v AA batteries); operates up to 12 hours on batteries when using one-second position updates (longer update rates further extend battery life, but will reduce GPS accuracy). Cigarette lighter power adapter included.
- Case size:**..... 5.6" H x 2.5" W x 0.9" D (142 x 65 x 25 mm); water resistant to IPX-2 standards.
- Weight:**.....8.48 ounces (242 grams) with alkaline batteries.

GPS

Receiver: Internal, 12 parallel channel GPS+WAAS; external active or passive antennas optional.

Active Antenna

Voltage:..... 3 volts DC.

Recording: Removable MMC or SD memory cards for recording GPS trip details, displaying custom maps, upgrading operating system software and transferring trip data to personal computer without a slow serial connection.

MMC slots: One, inside battery compartment. Accepts non-proprietary MMC or SD memory cards.

Background map:..... Built-in custom, detailed Lowrance map. Contains: low-detail maps of the whole world (containing cities, major lakes, major rivers, political boundaries); and medium-detail maps of the United States (containing all incorporated cities; Interstate, U.S. and state highways; Interstate highway exits and exit services information; large- and medium-sized lakes and streams.)

Custom mapping: Accepts custom, higher-detail MapCreate™ 6 mapping on memory cards, with searchable Points-of Interest database of hotels, restaurants, shopping, services and more. Navionics® charts on MMC cards optional.

Mapping memory: Up to 512 MB on one MMC (MultiMedia Card) or SD (Secure Digital Card.)

Position updates: Every one second.

Position points: 1,000 waypoints; 1,000 event marker icons.

Graphic symbols for waypoints or event marker icons:

..... 42.

Routes:..... 100; up to 100 waypoints per route.

Plot Trails:..... 99 savable; up to 9,999 points per trail.

Man Overboard:..... MOB feature precisely marks man overboard location with special icon, then automatically displays navigation data to that position.

Audible alarms: Arrival/off-course/destination passed/anchor.

Com Port:..... One serial communications port, NMEA 0183 version 2.0 compatible. Allows exchange of position data with another device, such as an autopilot or personal computer. Optional combination serial/power cable available.

Zoom range:..... 40 ranges; 0.02 to 4,000 miles.

NOTE:

The above memory capacities refer only to iFINDER's on-board memory. The amount of GPS data you can record and save for recall later is only limited by the number of MMC cards you have.

How iFINDER Works

You'll navigate faster and easier if you understand how iFINDER scans the sky to tell you where you are on the earth — and, where you're going. (But if you already have a working understanding of GPS receivers and the GPS navigation system, skip on ahead to Section 2, *Installation & Accessories* on page 9. If you're new to GPS, read on, and you can later impress your friends with your new-found knowledge.)

First, think of your iFINDER as a small but powerful computer. (But don't worry — we made iFINDER easy to use, so you don't need to be a computer expert to find your way!) The iFINDER includes a keypad and a screen with menus so you can tell it what to do. The screen also lets iFINDER show your location on a moving map, as well as point the way to your destination.

This pocket-sized computer also contains an antenna and specialized scanning receiver, something like your car radio. But instead of your favorite dance tunes, this receiver tunes in to a couple of dozen GPS satellites circling the earth. (It will also listen in to the WAAS satellites in orbit, but more about that in the upcoming segment introducing you to GPS and WAAS.)

iFINDER listens to signals from as many satellites as it can "see" above the horizon, eliminates the weakest signals, then computes its location in

relation to those satellites. Once iFINDER figures its latitude and longitude, it plots that position on the moving map shown on the screen. While the screen is updated once a second, your iFINDER is making these internal calculations and determining its position several times a second!

The performance doesn't stop there. Stored in the permanent memory of each iFINDER is a basic background map of the *entire* world. We lock it in here at the factory — you can't change or erase this map.

Another portion of iFINDER's onboard memory is devoted to *recording* GPS navigation information, which includes waypoints, event marker icons, trails and routes. This lets you look back the way you came. Think of this data storage like the hard drive memory in a computer or a tape in a cassette tape recorder. You can save several different GPS data files, erase 'em and record new ones, over and over and over again. Like any computer file, these **GPS Data Files** (file format *.usr) can be shared between iFINDERS, other Lowrance GPS or sonar/GPS units, even personal computers.

iFINDER has one more thing in common with a personal computer. Just as computers have a floppy disk drive for storing and exchanging files, iFINDER has a slot for an MMC (MultiMedia Card) or SD (Secure Digital) Card flash memory card. These solid-state memory devices are about the size of a postage stamp, but can hold data ranging from 8 MB to 512 MB in size. (Compare that to a floppy disk's 1.44 MB capacity!) iFINDER uses all that MMC space for two key purposes.

First, you can backup your onboard GPS Data Files by copying them to the MMC. Since the MMC is removable (like a floppy disk or a cassette tape), you can store these GPS Data Files on a personal computer equipped with an MMC card reader. (Or store them on a pocketful of MMCs, if you don't have a computer.) Our MapCreate mapping software can save, edit or create its own GPS Data Files, which can be copied to the MMC and then loaded from the MMC into iFINDER's memory. (**NOTE:** No matter where they come from, GPS Data Files *must* be loaded from the MMC into memory before iFINDER can use them.)

The other key GPS use for MMCs is storage of special high-detail, custom maps, which you can produce on your computer with our MapCreate software. These MapCreate custom maps contain much greater detail than the basic background map. These **Custom Map Files** (file format *.lcm) can also be shared between iFINDERS, other Lowrance GPS or sonar/GPS units and personal computers.

You make your own Custom Map Files with our MapCreate software, but you don't have to. We also sell ready-to-use FreedomMaps™. These custom maps are pre-loaded on MMCs. (No computer work required!).

iFINDER automatically reads Custom Map Files directly from the MMC or SD Card. To use a custom map, all you need to do is slide an MMC containing a map into the unit.

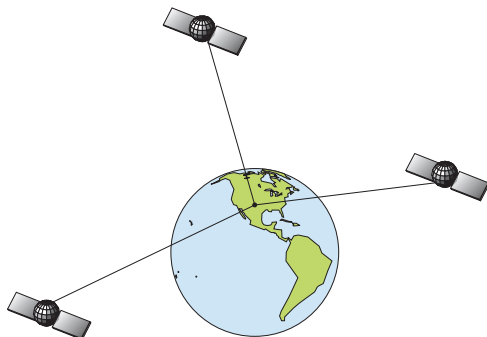
Introduction to GPS and WAAS

Well, now you know the basics of how iFINDER does its work. You might be ready to jump ahead to Section 2, *Installation & Accessories*, on page 9, so you can install the batteries. Or you might want to see how our text formatting makes the manual tutorials easy to skim. If that's the case, move on to "How to Use This Manual" on page 8. But, if you want to understand the current state of satellite navigation, look over this segment describing how GPS and its new companion WAAS work together to get you where you're going.

The Global Positioning System (GPS) was launched July 17, 1995 by the United States Department of Defense. It was designed as a 24-hour-a-day, 365-days-a-year, all weather global navigation system for the armed forces of the U.S. and its allies. Civilian use was also available at first, but it was less accurate because the military scrambled the signal somewhat, using a process called Selective Availability (SA).

GPS proved so useful for civilian navigation that the federal government discontinued SA on May 2, 2000, after the military developed other methods to deny GPS service to enemy forces. Reliable accuracy for civilian users jumped from 100 meters (330 feet) under SA to the present level of 10 to 20 meters (about 30 to 60 feet.)

Twenty-four satellites orbit 10,900 nautical miles above the Earth, passing overhead twice daily. A series of ground stations (with precisely surveyed locations) controls the satellites and monitors their exact locations in the sky. Each satellite broadcasts a low-power signal that identifies the satellite and its position above the earth. Three of these satellites are spares, unused until needed. The rest virtually guarantee that at least four satellites are in view nearly anywhere on Earth at all times.



A minimum of three satellites are required to determine a 2D fix.

The system requires signal reception from three satellites in order to determine a position. This is called a 2D fix. It takes four satellites to determine both position and elevation (your height above sea level — also called altitude). This is called a 3D fix.

Remember, the unit must have a clear view of the satellites in order to receive their signals. Unlike radio or television signals, GPS works at very high frequencies. These signals can be easily blocked by trees, buildings, an automobile roof, even your body.

Like most GPS receivers, iFINDER doesn't have a compass or any other navigation aid built inside. It relies solely on the signals from the satellites to calculate a position. Speed, direction of travel, and distance are all calculated from position information. Therefore, in order for iFINDER to determine direction of travel, you must be moving and the faster, the better. This is not to say that it won't work at walking or trolling speeds — it will. There will simply be more "wandering" of the data shown on the display.

GPS alone is plenty accurate for route navigation, but the U.S. Federal Aviation Administration has special aircraft navigation needs that go beyond basic GPS. So, the FAA has developed a program to boost GPS performance with its Wide Area Augmentation System, or WAAS. The FAA commissioned the system on July 11, 2003.

WAAS is designed to increase GPS accuracy to within 7.6 meters vertically and horizontally, but it consistently delivers accuracies within 1-2 meters horizontal and 2-3 meters vertical, according to the FAA. It does this by broadcasting correction signals on GPS frequencies. Your unit automatically receives both GPS and WAAS signals.

However, there are some fringe areas of the U.S., including parts of Alaska, that do not yet receive robust WAAS coverage. Continued WAAS development is planned to extend WAAS coverage in the years to come.

WAAS boosts the accuracy of land GPS navigation, but the system is designed for aircraft. The satellites are in a fixed orbit around the Equator, so they appear very low in the sky to someone on the ground in North America. Aircraft and vessels on open water can get consistently good WAAS reception, but terrain, foliage or even large man-made structures can sometimes block the WAAS signal from ground receivers.

You'll find that using your GPS receiver is both easy and amazingly accurate. It's easily the most accurate method of electronic navigation available to the general public today. Remember, however, that this receiver is only a tool. Always have another method of navigation available, such as a map or chart and a compass.

Also remember that this unit will always show navigation information in the shortest line from your present position to a waypoint, regardless of terrain! It only calculates position, it can't know what's between you and your destination, for example. It's up to you to safely navigate around obstacles, no matter how you're using this product.

How to use this manual: typographical conventions

Many instructions are listed as numbered steps. The keypad and arrow "keystrokes" appear as boldface type. So, if you're in a real hurry (or just need a reminder), you can skim the instructions and pick out what menu command to use by finding the boldface command text. The following paragraphs explain how to interpret the text formatting for those commands and other instructions:

Arrow Keys

The arrow keys control the movement of dotted cross-hair lines on your mapping screen called the cursor. The arrow keys also help you move around the iFINDER menus so you can execute different commands. They are represented by symbols like these, which denote the down arrow key, the up arrow, the left arrow and the right arrow: ↓ ↑ ← →.

Keyboard

The other keys perform a variety of functions. When the text refers to a key to press, the key is shown in bold, sans serif type. For example, the "Enter/Save" key is shown as **ENT** and the "Menu" key is shown as **MENU**.

Menu Commands

A menu command or a menu option will appear in small capital letters, in a bold sans serif type like this: **ADVANCED MODE**. These indicate that you are to select this command or option from a menu or take an action of some kind with the menu item. Text that you may need to enter or file names you need to select are shown in italic type, such as *trail name*.

Instructions = Menu Sequences

Most functions you perform with iFINDER are described as a sequence of key strokes and selecting menu commands. We've written them in a condensed manner for quick and easy reading.

For example, instructions for backtracking a trail in Easy Mode would look like this:

1. Press **MENU** | ↓ to **NAVIGATE TRAIL** | **ENT**.
2. Now, begin moving and follow your iFINDER.

Translated into complete English, step 1 means: "Press the Menu key. Next, press the down arrow key to scroll down the menu and select (highlight) the Navigate Trail menu command. Finally, press the Enter key."

Also note that throughout this text, we will refer to the iFINDER H2O as iFINDER, or simply as the unit.

Section 2:

Installation & Accessories

Power

The iFINDER operates from AA batteries or on 3 volts DC using an optional external power cable with a cigarette lighter adapter. When the power cable is used, the iFINDER automatically switches to it if the external power is greater than the battery voltage. If the external power fails, the unit automatically switches to the batteries.

Flash memory will keep your stored data safe and accessible for the life of the product — after the unit is turned off, no battery or external power is needed to store your data.

Batteries

The unit requires two, 1.5 volt AA batteries. We recommend that you use alkaline batteries for the best trade-off between battery life and cost. We recommend DURACELL[®] brand, but other brands will work. If you're looking for an extended-life battery, the Duracell[®] ULTRA battery has performed well in our tests.

You can also use rechargeable AA alkaline batteries, such as those made by RAYOVAC[®], or rechargeable AA nickel metal hydride (NiMH) batteries. We do not recommend nickel cadmium (NiCd) rechargeable batteries because we tend to get poor battery life from them.

Rechargeable alkaline batteries will not last as long as standard alkaline batteries. However, rechargeable NiMH batteries should give you suitable battery life.

Lithium batteries are lighter than alkaline, and with some brands of lithium battery the iFINDER H2O will float. We've tested the iFINDER H2O using Energizer[®] e2[®] lithium batteries, and it remained afloat.

NOTE:

The battery gauge on the Satellite Status Page may not read accurately with some battery brands because discharge rates can vary significantly. This is especially true for rechargeables. This battery gauge was calibrated for alkaline batteries.

Do not mix different battery types. Mixing battery types may cause leakage. (For example, don't use both alkaline and NiMH batteries at the same time, and don't use standard alkalines with rechargeable alkalines.)

Battery Installation

Turn the unit over so that the back is facing you. With your thumb or nail, pull back on the small clip to release the battery cover latch as shown in the following images. Once the latch is released, pull the battery cover up out of the grooves in the bottom of the case.



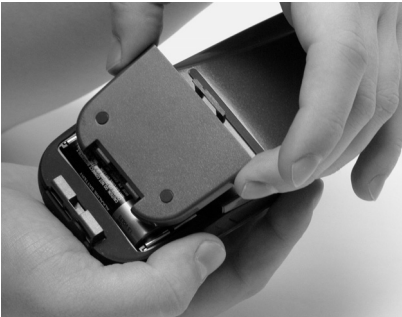
Remove iFINDER battery cover.

Install the batteries according to the embossed signs in the battery compartment, which shows the correct polarity. Point the positive pole of the upper battery to the left; point the positive pole of the bottom battery to the right.

NOTE:

Inside the battery compartment is a rotating MMC card lock. The grip on this lock must be turned parallel with the direction of the batteries for them to fit properly.

Replace the battery compartment cover. First align the latch tabs at the bottom of the cover with the slots at the case's base. Press the cover into place, and then firmly push up on the clip at the top of the cover until it latches in place. There is usually an audible click when the latch engages.



Replace battery compartment cover. Align tabs with slots in the base, left. Press latch firmly until it clicks, as shown right

Cigarette Lighter Power Adapter

To use external DC power: Plug the power cable's cigarette lighter adapter into a cigarette lighter receptacle. Next, pull aside the rubber cover on the bottom of the unit and insert the other connector as shown in the following image. A small clip on the connector should hold the connector in place.



Attach external power cable to iFINDER.

WARNING:

Do not remove the cigarette lighter adapter and splice the exposed wires directly to a 12-volt power system. The cigarette lighter adapter contains *in the plug* a protective fuse and a voltage regulator to convert 12 volts down to about 3 volts. Without this regulator, connecting your unit to a 12-volt power source will destroy the unit. This damage will not be covered by your warranty.

The iFINDER can use two other optional external cables to supply a NMEA/serial data connection or a combination of power and data. These cables are discussed in the following segment on NMEA connections.

NMEA Cable Connections

NMEA is a standard communications format for marine electronic equipment. For example, an autopilot can connect to the NMEA interface on this unit and receive positioning information. The unit can exchange information with any device that transmits or receives NMEA 0183 data.

To exchange NMEA data, Lowrance offers an optional data only cable and a power/data combo cable:

The PC-DI7 is a NMEA/serial communications cable. It has a standard female DB-9 connector on one end to attach your unit to a computer's serial communications port.

The PC-DI8 combines a cigarette lighter power adapter with a DB-9 plug for a NMEA/serial com port connection to a laptop computer or other device. This is our favorite cable for connecting the iFINDER H2O to a laptop computer in an RV or other vehicle. By transmitting NMEA data to the computer, you can get live position data for GPS-compatible mapping software.

You can also run one of our free Lowrance GPS emulators on your laptop, and operate it with real-time position information.

To use it, plug the power adapter into a cigarette lighter socket, plug the DB-9 connector into a serial port on the computer and attach the cable to the iFINDER. Then see "Com Port Configuration" in Sec. 5.

MMC or SD Memory Card Installation

Your iFINDER uses a MultiMedia Card to store information, such as custom maps, waypoints and other GPS data. The unit can also use Secure Digital Cards (SD cards) to store information.

NOTE:

Throughout this manual, we will use the term MMC, but just remember that your unit can use an MMC *or* SD card to store data.

Both of these solid-state flash memory devices are about the size of a postage stamp. An SD card is slightly thicker than an MMC. As this manual went to press, MMCs were available in storage capacities of 8 MB, 16 MB, 32 MB, 64 MB and 128 MB. SD cards were available in capacities of 8 MB, 16 MB, 32 MB, 64 MB, 128 MB, 256 MB and up. We have successfully tested SD cards up to 512 MB.

Additional MMC cards are available from LEI Extras; see ordering information inside the back cover of this manual. MMCs and SD cards are also available at many consumer electronics stores.

The MMC slot is located in the battery compartment, beneath the batteries on the right side of the unit. The contact pins are springy, to make it easier to insert and remove the MMC card.

To remove an MMC

1. Remove battery compartment cover.
2. Remove batteries, if present.
3. Hold unit facedown in right hand. Use your thumb or index finger and press down on the center of the MMC label.



Remove an MMC Card.

4. Drag the MMC from the slot into the battery compartment.
5. Turn the iFINDER face up and give it a shake to dump the MMC into your hand or onto a work surface.

To add an MMC or SDC

1. Remove battery compartment cover.
2. Remove batteries, if present.
3. Hold unit facedown in right hand. Drop the MMC card into the slot, label-up, with the notched edge toward the right.
4. Press down on the center of the label and slide the card to the right.



Add an MMC Card.

5. Turn the plastic rotating card lock until it holds the card firmly in place, with the grip parallel to the direction of the batteries.
6. Replace the batteries and battery cover.

FreedomMaps™

FreedomMaps are pre-made custom maps that cover multiple states, provinces, countries or other geographic regions on a single memory card. They give you all the features found in our MapCreate™ mapping software, but without the necessity of using a computer. FreedomMaps are available for the United States, Canada and Europe. In 2004, FreedomMaps with topographic contours will become available for the United States and Canada.

Like custom maps built in MapCreate, the custom map on a FreedomMap card contains all of these features: rivers/lakes/tributaries; more than 60,000 critical navigation aids; more than 10,000 wrecks/obstructions in coastal and Great Lakes waters; interstate/federal/state highways; interstate exit services; searchable Points-of-Interest (POI) database including: airports, hotels, restaurants, entertainment, emergency services; rural roads and city streets; cities and towns; railways; key landmarks; searchable street intersections and street addresses; national parks and forests with boundaries; wildlife preserves; and more!

FreedomMaps come to you preloaded on a single 128 or 256 MB memory card. Simply insert the memory card into your Lowrance GPS unit, and you're ready to go.

FreedomMaps are available through LEI-Extras. To order a card (or for a list of the areas available) see the ordering information in the back of this manual.

External Antenna

A GPS antenna requires a clear view of the sky for optimum operation. Inside a vehicle, your iFINDER can sometimes maintain satellite lock while sitting on the seat beside you, but we don't recommend this for optimum performance.

Since the "view" is restricted to what can be seen through the windows, this operating mode will reduce position accuracy and will increase the chance of losing satellite lock. Inside a vehicle, the unit operates best with an optional external antenna mounted on the windshield, on the dash or on the top of the vehicle.

The optional external antenna can use a magnetic base that allows temporary mounting on any flat ferrous metal surface. A suction-cup mount allows you to attach the antenna to a windshield.

The iFINDER H2O can use the passive FA-8 antenna or the active RAA-3 antenna. The active antenna offers a further performance boost by amplifying the satellite signals it receives. This is especially helpful when operating in areas such as dense forests, which can obstruct GPS

signals. Your unit will automatically switch between the active RAA-3 and its internal antenna (located in the top of the case). If you purchase the passive FA-8, you must use a menu check box to manually switch between it and the internal antenna. See the topic "External Passive Antenna" in Sec. 5.



Attach iFINDER antenna to windshield bracket with two screws.

You may achieve good results by simply placing the external antenna on the top of the dash, at the base of the windshield. A piece of the rubber non-skid shelf liner material available in recreational vehicle supply stores will also help hold the antenna in place.

To use the antenna: Mount it in a location with an unobstructed view of the sky. Plug the connector into the unit's antenna socket, located on the back, in the upper left corner of the case.

R-A-M[®] Bracket Mounting Systems

Several R-A-M[®] mounting brackets are available for your iFINDER. There are permanent mounts and temporary mounts suitable for virtually any boat, aircraft or other vehicle, even motorcycle handlebars.



Two R-A-M mounting systems for your unit.

One model has a mounting arm and cradle attached to a swivel ball plate that can be screwed or bolted to a supporting surface. Another has a moldable, weighted, rubber foot and gooseneck for support virtually anywhere without screws or adhesives. R-A-M even has suction cup bases for attachment to windscreens or fiberglass surfaces. See your Lowrance dealer or visit the LEI web site for the latest options; accessory ordering information is on the inside back cover of this manual. For a complete look at the many mounting options, visit the R-A-M web site at www.ram-mount.com.

Other Accessories

Other iFINDER accessories include MMC cards, MMC card readers and MapCreate™ 6 custom mapping software for your computer. (The iFINDER H2O Plus model ships with the GPS Accessory Pack, which is composed of the MapCreate CDs, the card reader, and one memory card.)

If these accessories are not available from your dealer, see the accessory ordering information on the inside back cover of this manual.



MapCreate™ 6 CD-ROM and MMC card reader for USB ports.

Section 3: Easy Mode Operation

This section addresses Easy Mode operation for iFINDER's main GPS functions. The principles are the same in both operating modes, so this discussion also serves as a good introduction to Advanced Mode work.

Before you turn on iFINDER and find where you are, it's a good idea to learn about the different keys, the three Page screens and how they all work together. BUT, if you just can't wait to get outside, grab the batteries and turn to the one-page *Quick Reference* on page 26.

Keypad



iFINDER H2O keypad.

1. **PWR/LIGHT** (Power & Light) – The PWR key turns the unit on and off and activates the backlight.
2. **PAGES** – Pressing this key switches the unit between the three different page screens in Easy Mode. (Satellite, Navigation and Map.) Each page represents one of the unit's major operation modes.
3. **MENU** – Press this key to show the menus, which allow you to select or adjust a feature from a list.
4. **ARROW KEYS** – These keys are used to navigate through the menus, make menu selections, move the map cursor and enter data.
5. **ENT/SAVE** (Enter & Save) – This key allows you to save data, accept values or execute menu commands.

- 6. **EXIT** – The Exit key lets you return to the previous screen, clear data or erase a menu.
- 7. **FIND** – The Find key launches the iFINDER search menus and some navigation functions.
- 8. **ZOUT** – (Zoom Out) – This key lets you zoom the screen out to see a larger geographic area on the map. Less detail is seen as you zoom out.
- 9. **ZIN** – (Zoom In) – This key lets you zoom the screen in to see greater detail in a smaller geographic area on the map.

Power/lights on and off

To turn on the unit, press **PWR**. To turn on the backlight, press **PWR** again. Pressing **PWR** once again will turn off the backlight. (Press **EXIT** to clear any message or alarm displays.)

Turn off the unit by pressing and holding the **PWR** key for 3 seconds.

Main Menu

Easy Mode has a single Main Menu, which contains some function commands and some setup option commands. The tutorial lessons in this section will deal only with functions, the basic commands that make iFINDER do something. iFINDER will work fine for these lessons right out of the box with the factory default settings. But, if you want to learn about the various options, see *Sec. 5, System Setup and GPS Setup Options*.



Main Menu, Easy Mode.

The Main Menu commands and their functions are:

Go To Cursor command: navigates to the current cursor position on the map

Cancel Navigation command: turns off the navigation command after you have reached the end of a back trail or your destination waypoint, Point of Interest or map cursor location.

Screen command: changes the contrast or brightness of the display screen and backlight delay.

Sounds command: enables or disables the sounds for key strokes and alarms and sets the alarm style.

Navigate Trail command: sets up navigation back to the start of the current trail.

Clear Trail command: clears all the points stored in the plot trail.

Sun/Moon command: finds the rising and setting time of the sun and the moon.

Units of Measure command: changes the speed or distance units. Also used to change the heading, time and temperature formats.

Set Local Time command: sets the time for your local time zone.

Advanced Mode command: used to switch from Easy Mode to Advanced Mode. Easy Mode shows only the most commonly used features to simplify the interface and simplify operation.

Transfer My Data command: load from or save to an MMC card GPS Data Files containing waypoints, routes, trails and event marker icons.

Software Info command: shows the product name and software version of the unit's operating system software, as well as copyright notices.

Pages

Easy Mode has three Page displays that represent the three major operating modes. They are the Satellite Status Page, the Navigation Page and the Map Page. They are accessed by pressing the **PAGES** key. Pressing **PAGES** repeatedly scrolls among the three screens in an endless circular loop.

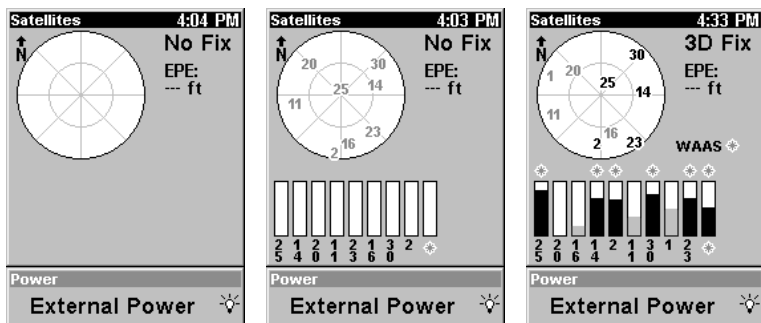
Satellite Status Page

This Page, shown in the following images, provides detailed information on the status of iFINDER's satellite lock-on and position acquisition. To get to the Satellite Status Page: press **PAGES** repeatedly until the page you want appears.

No matter what page you are on, a flashing current position indicator/question mark symbol and flashing GPS data displays indicate that satellite lock has been lost and there is no position confirmed. This page shows you the quality and accuracy of the current satellite lock-on and position calculation.

WARNING:

Do not begin navigating with this unit until the numbers have stopped flashing!



Satellite Page. Left view indicates unit has not locked on to any satellites and does not have a fix on its position. Center view shows satellites being scanned. Right view shows satellite lock-on with a 3D position acquired (latitude, longitude and altitude.)

This screen shows a graphical view of the satellites that are in view. Each satellite is shown on the circular chart relative to your position. The point in the center of the chart is directly overhead. The small inner ring represents 45° above the horizon and the large ring represents the horizon. North is at the top of the screen. You can use this to see which satellites are obstructed by obstacles in your immediate area if you hold the unit facing north.

The GPS receiver is tracking satellites that are in bold type. The receiver hasn't locked onto a satellite if the number is grayed out, therefore it isn't being used to solve the position.

Beneath the circular graph are the bar graphs, one for each satellite in view. Since the unit has twelve channels, it can dedicate one channel per visible satellite. The taller the bar on the graph, the better the unit is receiving the signals from the satellite.

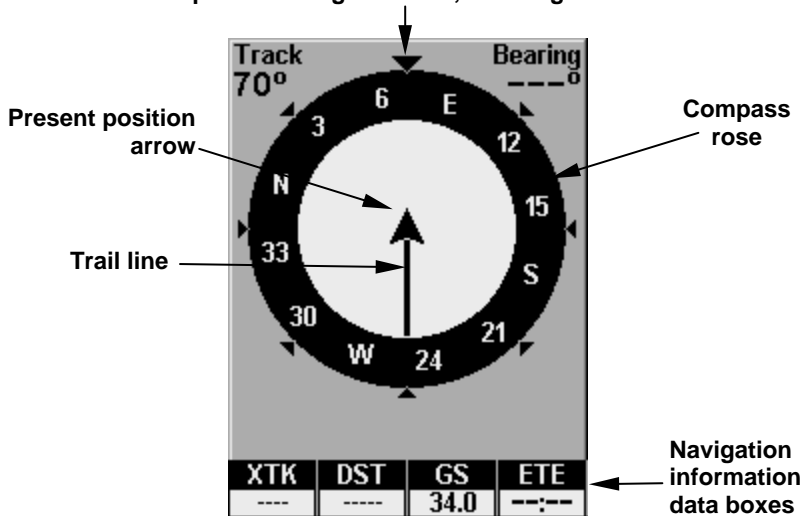
The "Estimated Position Error" (horizontal position error) shown in the upper right corner of the screen is the expected error from a benchmark location. In other words, if the EPE shows 50 feet, then the position shown by the unit is estimated to be within 50 feet of the actual location. This also gives you an indicator of the fix quality the unit currently has. The smaller the position error number, the better (and more accurate) the fix is. If the position error flashes dashes, then the unit hasn't locked onto the satellites, and the number shown isn't valid.

Navigation Page

This Page has a compass rose. It shows your direction of travel and the direction to a recalled waypoint. The navigation screen looks like the one in the following image when you're not navigating to a waypoint or

other destination. No graphic course information is displayed. Your position is shown by an arrow in the center of the screen. Your trail history, or path you've taken, is depicted by the line extending from the arrow. The arrow pointing down at the top of the compass rose indicates the current track (direction of travel) you are taking.

Track or compass heading indicator, showing direction of travel



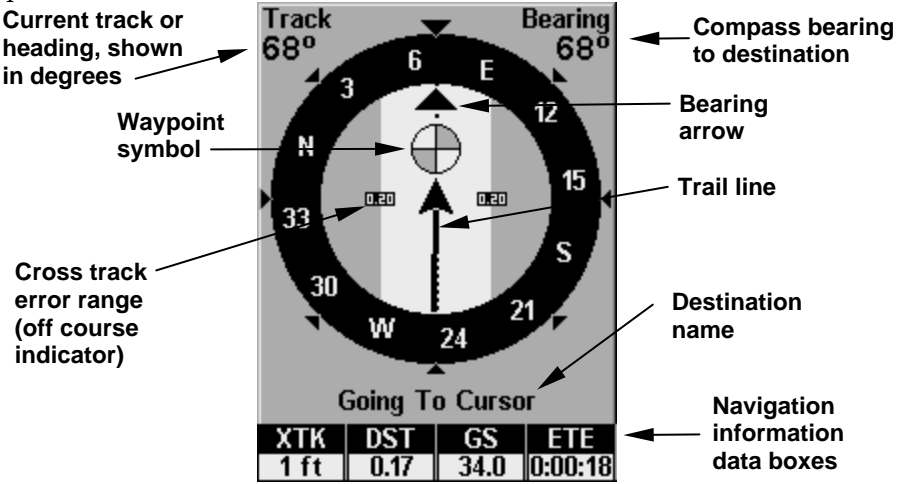
Navigation Page, recording a trail, traveling east. Page looks like this when iFINDER is not navigating to a waypoint, following a route, or backtracking a trail.

When navigating to a waypoint or following a route, the Navigation screen looks like the one shown in the following image. Your ground speed, track, distance and bearing to waypoint, and course are all shown digitally on this screen.

The current cross track error is shown in the XTK box. This is the distance you are off-course to the side of the desired course line. The course line is an imaginary line drawn from your position when you started navigating to the destination waypoint. It's shown on the navigation page as a vertical dotted line.

Lines on either side of the present position show the current cross track error range. The default for the cross track error range is 0.20 mile. For example, if the present position symbol touches the right cross track error line, then you are 0.20 mile to the right of the desired course. You need to steer left to return to the desired course. You can use the **ZIN** or **ZOUT** keys to change the cross track error range. A circular symbol depicting your destination (waypoint) appears on the screen as you approach the waypoint as shown on the screen below.

Travel Time is the time that it will take to reach your destination at your present closing speed. Arrival Time is the local time that it will be when you arrive at the destination, based upon your present closing speed and track.



Navigation Page, going to cursor. Driver is headed east (a 68° track) toward a cursor location 68° (bearing) away. The cross track error range (white corridor) is 0.20 miles either side of the course. The driver is headed toward the cursor location, which is 0.17 miles away. The vehicle is virtually on course (off course only 1 foot). Traveling at a speed of 34 mph, the driver will arrive at the waypoint in 18 seconds.

Map Page

The map screens show your course and track from a "bird's-eye" view. By default, this unit shows the map with north always at the top of the screen. (This can be changed using options in Advanced Mode. See the topic *Map Orientation*, in Sec. 5.) If you're navigating to a waypoint, the map also shows your starting location, present position, course line and destination.

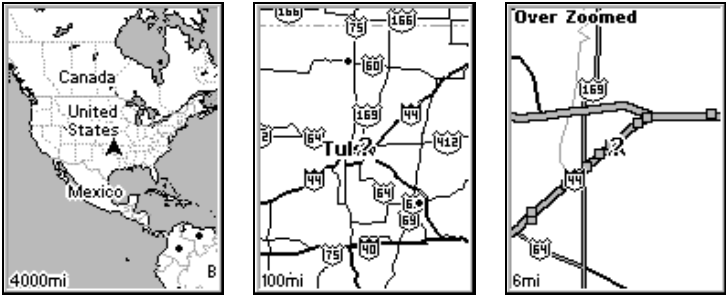
NOTE:

When our text says, "navigating to a waypoint," we really mean navigation to *any* selected item, whether it is a waypoint you made, a map feature or an item (like a restaurant) from the POI database.

Using the map is as simple as pressing the **PAGES** key. A screen similar to those in following images appears. The arrow flashing in the center of the screen is your present position. It points in the direction you're traveling. The solid line extending from the arrow is your plot trail, or path you've taken. (Remember, a flashing question mark on the arrow symbol or flashing text displays means iFINDER has not yet calculated a position.)

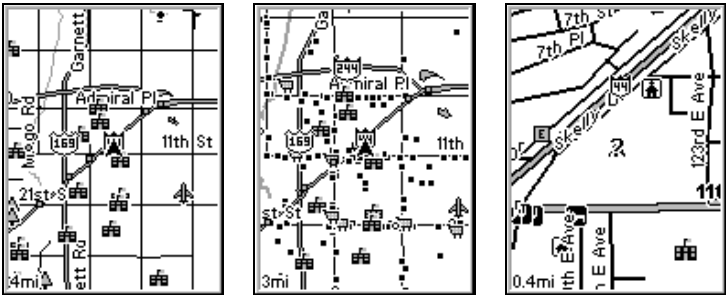
The map zoom range is the distance across the screen. This number shows in the lower left corner of the screen. In the first example below left, the range is 4,000 miles from the left edge of the map to the right edge of the map.

The Zoom In and Zoom Out keys zoom the map to enlarge or reduce its coverage area and the amount of mapping detail shown. There are 39 available map zoom ranges, from 0.02 miles to 4,000 miles.



Far left, Map Page opening screen.. Center, zoomed to 100 miles and right, zoomed to 6 miles. Over Zoomed means you have reached the detail limits in an area covered only by the basic background map. Zooming in any closer will reveal no more map details because a high-detail custom map has not been loaded on the MMC for this area.

If you're using only the factory-loaded background map, the maximum zoom range for showing *additional* map detail is 8 miles. You can continue to zoom in closer, but the map will simply be enlarged without revealing more map content (except for a few major city streets). Load your own high-detail custom map made with MapCreate, and you can zoom in to 0.05 miles with massive amounts of accurate map detail.



Map Pages with high-detail map of an urban area loaded on the MMC. At left, arterial streets appear at the 4 mile zoom range, with a few Point of Interest icons visible. Center, numerous dots representing Points of Interest become visible at the 3 mile range. Right, at the 0.4 mile zoom, you can see an interstate highway with an exit, major and minor streets as well as Point of Interest icons.

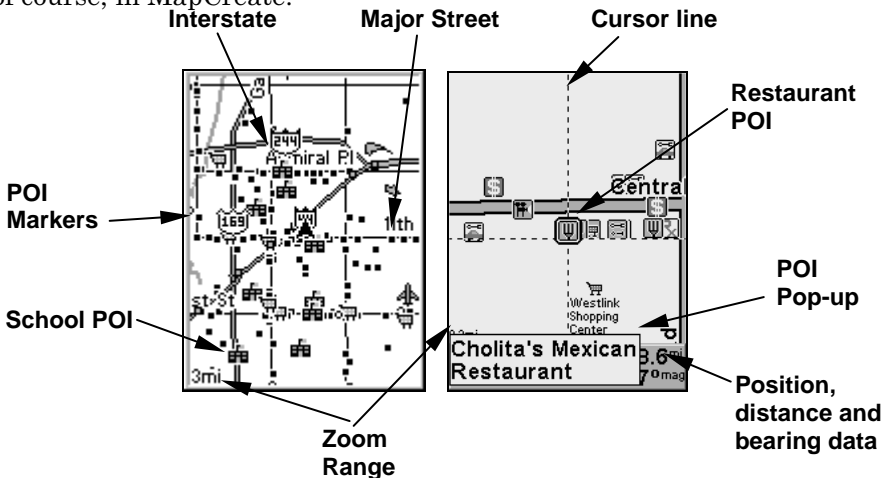
Background map vs. MapCreate map content

The background map includes: low-detail maps of the whole world (containing cities, major lakes, major rivers, political boundaries); and medium-detail maps of the United States.

The medium-detail U.S. maps contain: all incorporated cities; shaded metropolitan areas; county boundaries; shaded public lands (such as national forests and parks); some major city streets; Interstate, U.S. and state highways; Interstate highway exits and exit services information; large- and medium-sized lakes and streams; and more than 60,000 navigation aids and 10,000 wrecks and obstructions in U.S. coastal and Great Lakes waters

MapCreate custom maps include massive amounts of information not found in the background map. MapCreate contains: the searchable Points of Interest database, all the minor roads and streets, all the landmark features (such as summits, schools, radio towers, etc.); more rivers, streams, smaller lakes and ponds and their names.

What's more important is the large scale map detail that allows your GPS unit to show a higher level of position accuracy. For example, the background map would show you the general outline and approximate shape of a coastline or water body, but the higher detail in MapCreate shows the shoreline completely and accurately (finer detail). Many smaller islands would not be included in the background map, but are, of course, in MapCreate.



When the map is zoomed out far enough, most POIs appear as square dots. As you zoom in closer, the symbols become readable icons. In the 0.3 mile zoom example at right, the cursor has selected the Cholita's Mexican Restaurant POI, which triggers a pop-up box with the POI name. This pop-up box works on POIs at any zoom range.

Tip:

In some urban areas, businesses are so close to one another that their POI icons crowd each other on the screen. In the preceding figure, you can see a packed string of POIs all along the west half of 11th. You can reduce screen clutter and make streets and other map features easier to see by simply turning off the *display* of POIs you're not watching for. (To see how, check the text on Map Detail Category Selection, in Sec. 5. It shows how to use the Map Categories Drawn menu to turn individual POI displays off and on.) Even though their display is turned off, you can still search for POIs and their icons will pop-up when your unit finds them for you.

The following page contains a 12-step quick reference for Easy Mode operation. If you don't want to carry the manual with you as you practice with iFINDER, you might consider photocopying this quick reference page and tucking it into your pocket.

iFINDER® Easy Mode Quick Reference

Start outdoors, with a clear view of the open sky. As you practice, try navigating to a location a few blocks away. Navigation in too small a space, like a backyard, will constantly trigger arrival alarms.

1. Install two AA batteries and an MMC card in the battery compartment on back of case. (See installation details beginning on page 9.)
2. To turn on iFINDER, press and release **PWR** key.
3. Opening screen displays map of North America at the 4,000 mile zoom range. Rotate through the three main Page screens (Map Page, Satellite Status Page, Navigation Page) by repeatedly pressing **PAGES** key; switch Pages to display Satellite Status Page.
4. Wait while unit locates satellites and calculates current position. Process is visible on Satellite page. This takes an average of 1 minute or less under clear sky conditions (unobstructed by terrain or structures.) When the unit acquires position, a tone sounds and a position acquired message appears.
5. With position acquired, press **PAGES** key to display Map Page, which shows a bird's eye view of the earth. You can move around the map by:
 - Zoom in** closer to see greater detail: press **ZIN** (zoom in key.)
 - Zoom out** to see more area, less detail: press **ZOUT** (zoom out key.)
 - Scroll** map north, south, east or west using arrow keys **↑ ↓ → ←**.To stop scrolling and return to current position on map, press **EXIT** key.
6. Set Home waypoint at your current position so you can navigate back here: press **ENT | ENT**.
7. Zoom/scroll map to find a nearby object or location. Use arrow keys to center cursor cross-hair over the map object or location.
8. To navigate to the selected location: press **MENU | ENT | EXIT**. Follow steering arrow on Map Page or compass bearing arrow on Navigation Page.
9. At destination, Arrival Alarm goes off; to clear it, press **EXIT**. Cancel navigation: press **MENU | ↓** to **CANCEL NAVIGATION | ENT | ←** to **YES | ENT**.
10. Navigate back home by Go To Home or Navigate Trail. **Go Home**: press **FIND | ENT**; follow navigation arrows. **Trail**: press **MENU | ↓** to **NAVIGATE TRAIL | ENT**. Wait while route is calculated, then follow arrows.
11. Back home, Arrival Alarm goes off; press **EXIT**. Cancel navigation: press **MENU | ↓** to **CANCEL NAVIGATION | ENT | ←** to **YES | ENT**.
12. To turn off iFINDER, press and hold **PWR** key for three seconds.

Find Your Current Position

Finding your current position is as simple as turning iFINDER on. Under clear sky conditions, the unit automatically searches for satellites and calculates its position in approximately one minute or less.

NOTE:

"Clear sky" means open sky, unobstructed by terrain, dense foliage or structures. Clouds do not restrict GPS signal reception.

If for some reason satellite acquisition takes longer, you may be inside a structure or vehicle or in terrain that is blocking signal reception. To correct this, be sure you are positioned so that the unit has as clear a view of the sky as possible, then turn the unit off and back on again.

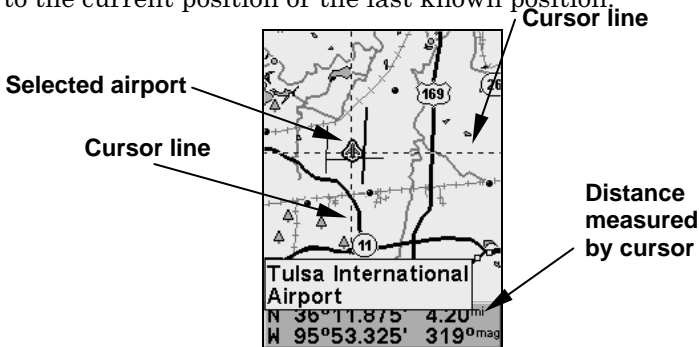
Moving Around the Map: Zoom & Cursor Arrow Keys

The map is presented from a bird's eye view perspective. The current zoom range shows in the lower left corner of the screen.

1. Press the **ZIN** key (zoom in) to move in closer and see greater detail in a smaller geographic area.
2. Press the **ZOUT** key (zoom out) to move farther away and see less map detail, but a larger geographic area.

When you are walking or riding in a vehicle, the map will automatically move as you move. This keeps your current location roughly centered on the screen.

You can manually pan or scroll the map northward, southward, eastward or westward by using the arrow keys, which launches the cross-hair map cursor. This allows you to look at map places other than your current position. To clear the cursor, press **EXIT**, which jumps the map back to the current position or the last known position.



The selected airport to the northwest is 4.2 miles away.

Tip:

Use the cursor to determine the distance from your current position (or last known position, when working indoors) to any map object or location. Simply use the arrow keys to position the cursor over the object or place. The distance, measured in a straight line, appears in the data box at the bottom of the map. Press **EXIT** to clear the cursor.

Selecting Any Map Item with the Cursor

1. Use the zoom keys and the arrow keys to move around the map and find the item you wish to select.

2. Use the arrow keys and center the cursor cross-hair on the desired object. On most items, a pop-up box will give the name of the selected item.

You will also notice a black ring surrounds the item as it becomes selected. Once that happens, if you press **FIND** the Find Menu will pop up with an extra option at the top of the list: **SELECTED ITEM**. Press **ENT** to see the Waypoint Information screen for the selected item.

Searching

Now that you've seen how iFINDER can find where *you* are, let's search for something somewhere else. Searching is one of the most powerful new features in the Lowrance GPS product line.

In this example, we'll look for the *nearest* fast-food restaurant. For more information on different types of searches, refer to *Sec. 6, Searching*.

NOTE:

This example requires the Point of Interest (POI) database included with iFINDER Express or a high-detail MapCreate 6 custom map.

After iFINDER has acquired a position:

1. Press **FIND** | ↓ to **MAP PLACES** | **ENT** | ↓ to **POI-RESTAURANTS**.

2. You could search the entire restaurant category, but in this example we will narrow our search. Press → to **FAST FOOD CHAINS** | **ENT**|**ENT**.

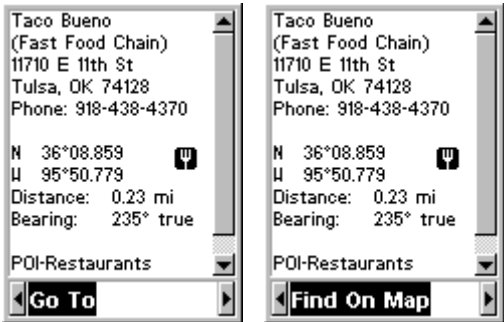


Find Map Places Menu, left; Category Selection menu, center; and list of the nearest restaurants, right.

3. iFINDER says it is calculating, then a list of restaurants appears, with the closest at the top of the list, and the farthest at the bottom of the list. The nearest is highlighted.

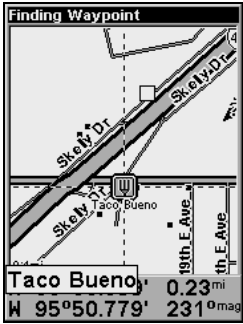
4. If you wish, you could scroll \uparrow or \downarrow here to select another restaurant, but for now we will just accept the nearest one. Press **ENT**.

5. The POI's Waypoint Information screen appears. (This is how you can use iFINDER as a business phone directory!) If you wanted to navigate there, you could press Enter, since the Go To command is highlighted. But we just want to see it on the map, so press \rightarrow to **FIND ON MAP** | **ENT**.



POI information screen on fast food restaurant nearest this position. Screen shows name, street address, phone number, latitude/longitude, distance to the restaurant and its compass bearing. Figure at left shows Go To command; right figure shows Find On Map command.

6. iFINDER's map appears, with the cross-hair cursor highlighting the restaurant's POI symbol. A pop-up name box identifies the POI. A data box at the bottom of the screen continues to display the location's latitude and longitude, distance and bearing.



Map screen showing Finding Waypoint, the result of a restaurant search.

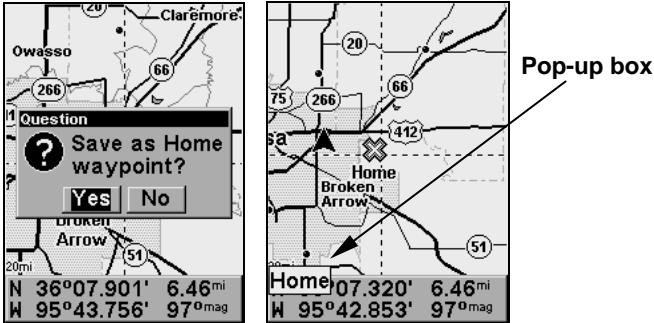
7. To clear the search and return to the last page displayed, press **EXIT|EXIT|EXIT**. (Before you completely exited out of the Search menus, you could have gone looking for another place.)

NOTE:

Search works from mapping and POI data loaded in iFINDER. If you do not have a high-detailed custom map (containing POI data) for the area you are searching loaded on the MMC, you may not find anything.

Set Home Waypoint

A waypoint is simply an electronic "address," based on the latitude and longitude of a position on the earth. Easy Mode allows you to save two waypoints (Home and Man Overboard). To save a Home Waypoint: 1. Press and release **ENT**. 2. The **SAVE AS HOME WAYPOINT?** menu appears, with **YES** highlighted. To accept yes, press **ENT**. The waypoint appears on the map as an X, named "Home."



Save Home Waypoint menu, left. At right, Home waypoint, with X symbol and name. When selected by the cursor, the pop-up box appears.

The example shows waypoint set at the cursor location. If cursor was not active, the point would be placed at the current position.

Caution:

Saving a new "Home" waypoint will overwrite and erase the previous "Home" waypoint.

Navigate Back Home

This command will automatically take you back to the "Home" waypoint you created.

1. Press **FIND|ENT**; then follow navigation arrows on the Map Page or the compass rose on the Navigation Page.

To cancel navigation, press **MENU|↓** to **CANCEL NAVIGATION|ENT|←** to **YES|ENT**. iFINDER stops showing navigation information.

Set Man Overboard (MOB) Waypoint

One of boating's most terrifying events is having a friend or family member fall overboard. This situation can be deadly on any body of water — fresh or salt. It's particularly dangerous at night or if you're out of sight of land. Of course, the first thing to do is remain calm and try all standard safety measures to try and rescue the person.

This unit has a man overboard feature that shows navigation data to the location where the feature was activated. To activate it, press the **ZOUT** and **ZIN** keys at the same time. Your position at the time these keys are pressed is used as the man overboard position.

Caution:

Saving a new "Man Overboard" waypoint will overwrite and erase the previous "Man Overboard" waypoint.

Navigate Back to MOB Waypoint

Find your way back to the accident position with the Navigation Page or Map Page. When MOB is activated, the Navigation Page automatically shows the compass rose with its bearing arrow pointing toward the man overboard position, and the destination name says "Going To Man Overboard." The Map Page displays a Man Overboard waypoint, represented by a human figure, and the steering arrow points where to steer to reach that position.

The man overboard position is also stored in the waypoint table for future reference. It can be edited the same as any other waypoint in Advanced Mode. This prevents the inadvertent loss of the current Man Overboard position.

Tip:

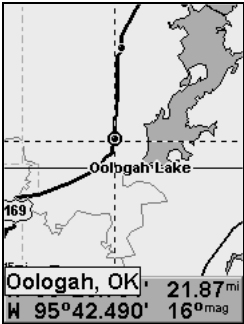
You don't need to have an emergency to use the MOB waypoint. It is the only way you can set an additional waypoint other than "Home" in Easy Mode. When you set the MOB point, just cancel navigation and then use MOB like a regular waypoint. (Remember, you can set 1,000 waypoints in Advanced Mode.)

To cancel navigation to MOB, press **MENU|↓** to **CANCEL NAVIGATION|ENT|←** to **YES|ENT**. iFINDER stops showing navigation information.

Navigate to Cursor Position on Map

The **Go To Cursor** command navigates to the current cursor position on the map. It's a quick and handy way to navigate to anything you can see on the map display.

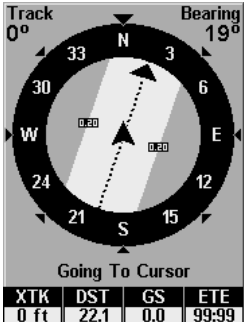
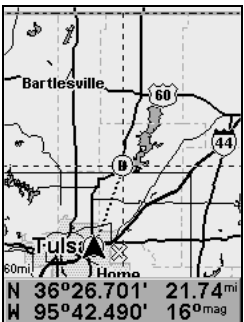
1. Use the cursor (controlled by the arrow keys) with the zoom in and zoom out keys to maneuver around the map until you find a location you want to go to.
2. Center the cursor over the location to select it. See the example below. (Many map items such as waypoints, Points of Interest, towns, etc. can be "selected," and appear "highlighted" with a pop-up box. Other features, such as a river or a street intersection will not appear "highlighted," but the cursor will take you to those locations just the same.)



Navigate to cursor. In this example, the cursor has selected the town of Oologah, Oklahoma.

3. Press **MENU|ENT** and iFINDER will begin navigating to the cursor location.

The Map Page will display a dotted line from your current position to the cursor position. The Navigation Page displays a compass rose showing navigation information to your destination. See the following examples.



The 15-mile zoom figure at left clearly shows the dotted course line connecting your current position to your destination. The 60-mile zoom, center, shows both current position and destination on screen. The Navigation Page, right, will also show navigation information.

To stop navigating to the cursor, use the Cancel Navigation command: press **MENU** | ↓ to **CANCEL NAVIGATION** | **ENT** | ← to **YES** | **ENT**. iFINDER stops showing navigation information.

Navigate to a Point of Interest

For POIs that are in view on the map, you can easily use the Navigate to Cursor command above; just use the cursor to select the POI.

Another method involves searching for POIs with the Find Map Places command, launched with the **FIND** key. (See the searching example earlier in this section, or turn to Sec. 6, *Searching*, for detailed instructions on POI searches.)

After you have looked up an item with the Find Map Places command, use the ← to make sure the **Go To** command is highlighted at the bottom of the screen, then press **ENT**. iFINDER begins showing navigation information to the item.

To cancel navigation, press **MENU** | ↓ to **CANCEL NAVIGATION** | **ENT** | ← to **YES** | **ENT**. iFINDER stops showing navigation information.

Creating and Saving a Trail

A trail, or plot trail, is a history of the path you have taken. On the screen, trails are represented by a solid line extending from the back of the current position arrow.

By default, the trail flashes once a second, making it easier to see against the background map. With the default auto setting, iFINDER creates a trail by placing a dot (trail point) on the screen every time you change directions. (The method used for creating a trail and the trail update rate can both be adjusted in Advanced Mode. See Sec. 5 for *Trail Options*.)

In Easy Mode, this unit automatically creates a plot trail when turned on, and this trail is automatically saved in memory when the unit is turned off. iFINDER continues recording the *same* trail until you "clear the trail," which *erases* the old trail and starts creation of a new trail.

NOTE:

iFINDER can record up to 9,999 points per trail, which can be adjusted in Advanced Mode. The default setting is a maximum of 2,000 points. When trail length exceeds the maximum setting, the unit begins recording the trail over itself.

In Advanced Mode, you can save and recall up to 10 different plot trails, which can also be copied to your MMC for archiving.

Caution:

You also have the option of turning off trail recording in Advance Mode. If the option is left turned off, it will cancel the automatic trail creation feature in Easy Mode.

Displaying a Saved Trail

The trail is automatically displayed in Easy Mode by default. Trail display can be selectively turned off and on only in Advanced Mode.

Navigating or Backtracking a Trail

There are two methods for following your back trail. The simplest requires no menu commands at all, but provides no navigation information during the trip, such as the time to your destination. The other requires only three key strokes and provides a full range of navigation data. Try both methods and see which you prefer. When hiking at walking speed, we often just use visual back trailing because it is better at following each little turn on a foot path. At faster speeds, such as the highway or on the water, the Navigate Trail command is handy.

Visual Back Trailing

1. On the Map Page, zoom (**ZIN** or **ZOUT**) so your flashing trail is visible.
2. Begin moving and watch the Map Page (or Navigation Page, if you prefer). Simply walk or steer so that your current position arrow traces along the trail you have just made.

Navigate a Back Trail

1. Press **MENU** | ↓ to **NAVIGATE TRAIL** | **ENT**.
2. Now, begin moving and follow your iFINDER.

NOTE:

If you are already located at or near the beginning of your back trail, the arrival alarm will go off as soon as you hit Enter. Just press **EXIT** to clear the alarm and proceed.

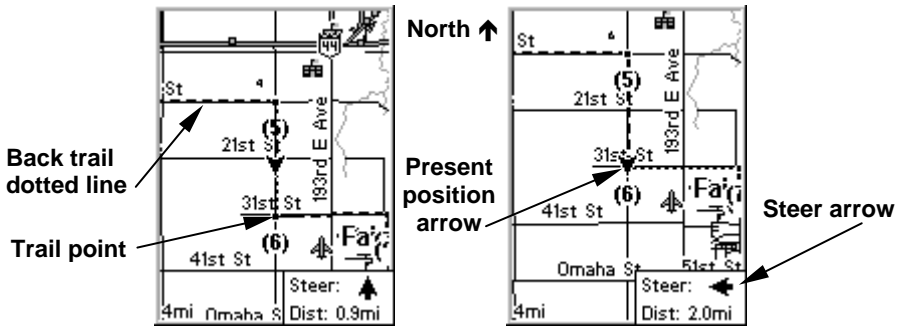


Navigate Trail menu.

On the map, your original trail is visible as a flashing solid line, along with a roughly parallel dotted line indicating the back trail to follow. The map contains a steer arrow in the lower right corner. This arrow shows you where to steer to reach the next waypoint on your back trail.

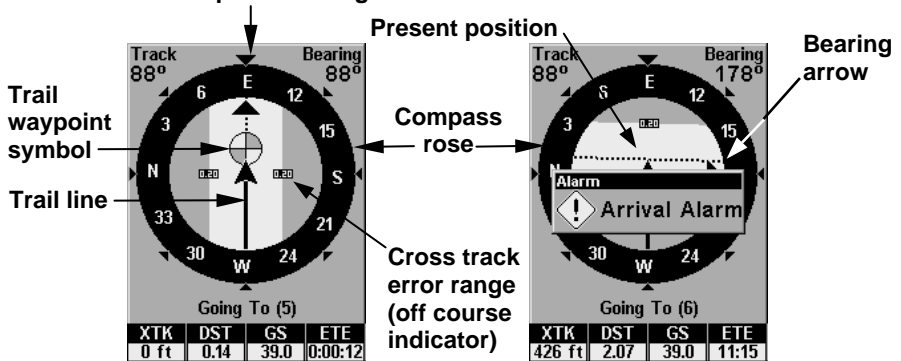
The Navigation Page will also show the trail line and a bearing arrow, which points to the next waypoint on the trail.

As you travel, the arrival alarm will go off when you near a trail waypoint, and the steer arrow (on the map) and bearing arrow (on the compass rose) will swing around and point to the next trail waypoint. Press **EXIT** to clear the alarm.



Navigate trail, map views: at left driver is southbound heading straight toward trail point 6; steer arrow says steer straight. At right, southbound driver has reached point 6 and must turn east to follow trail. Steer arrow swings around to say turn left (east), toward the next trail waypoint (arrival alarm message turned off for clarity.)

Track or compass heading indicator



Navigate trail, navigation page (compass rose) views: at left, driver is eastbound heading straight toward trail point 5; bearing arrow shows the trail point is due east (straight ahead.) At right, driver has reached trail point 5 and must turn south to follow the trail. Arrival alarm goes off and bearing arrow swings around to say turn right (south), toward the next waypoint, trail point 6. iFINDER now shows navigation information to point 6, which is 2.07 miles away.

3. When you reach your destination, be sure to cancel your navigation: press **MENU** | **↓** to **CANCEL NAVIGATION** | **ENT**. iFINDER asks if you're sure; press **←** | **ENT**.

Clearing or Erasing a Trail

You can erase the current trail and automatically begin recording a new one by using the Clear Trail command.

WARNING:

Clearing a trail will erase the trail from iFINDER's memory. You will not be able to backtrack to that trail head if the trail is erased. If you need to preserve the trail, switch to Advanced Mode and use the instructions in Sec. 4 for *Creating and Saving a Trail*.

1. Press **MENU** | ↓ to **CLEAR TRAIL** | **ENT**. iFINDER asks if you're sure; press ← | **ENT**.
2. Return to the page by pressing **EXIT**.

Transfer Custom Maps and GPS Data Files

Custom Maps:

Custom maps work only from the MMC card or SD card. When a card containing a Custom Map File is loaded into the unit, iFINDER automatically loads the map into memory when the unit is turned on.

Instructions for copying Custom Map Files to an MMC are contained in the instruction manual for your MMC card reader and MapCreate 6 software. For instructions on inserting an MMC into iFINDER, see Sec. 2, *Installation/Accessories*.

GPS Data Files:

GPS Data files contain waypoints, routes, trails and event marker icons. Instructions for copying GPS Data Files between your computer and an MMC are contained in the instruction manual for your MMC card reader and MapCreate 6 software.

GPS data automatically recorded in the unit's internal memory must be saved to the MMC (as a GPS Data File) in order to store it on your personal computer. GPS Data Files stored on an MMC must be copied from the card to the iFINDER's internal memory before the unit can read them. Here's how:

1. Insert the MMC into your unit. Press **MENU** | ↓ to **TRANSFER MY DATA** | **ENT** and the screen below appears.



The Transfer My Data submenu asks if you want to save data to the MMC or load data from the MMC into iFINDER's memory.

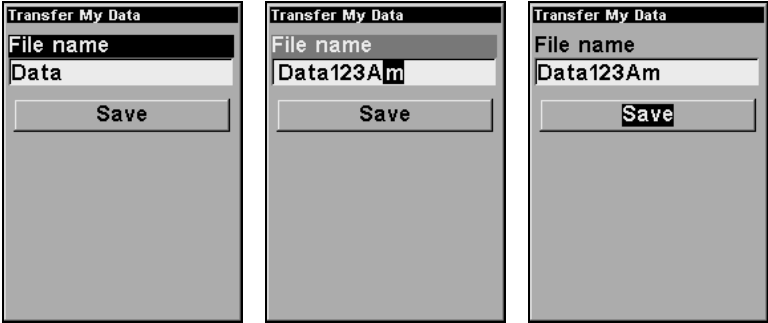
2. The Transfer My Data menu includes a message which tells you if an MMC is present or not. If no MMC is present, you must first insert a card into iFINDER in order to activate the Load or Save commands.

To transfer data *from iFINDER to the MMC*: press **ENT** (for **SAVE**.)

To transfer data *from the MMC to iFINDER*: press **→** to **LOAD | ENT**.

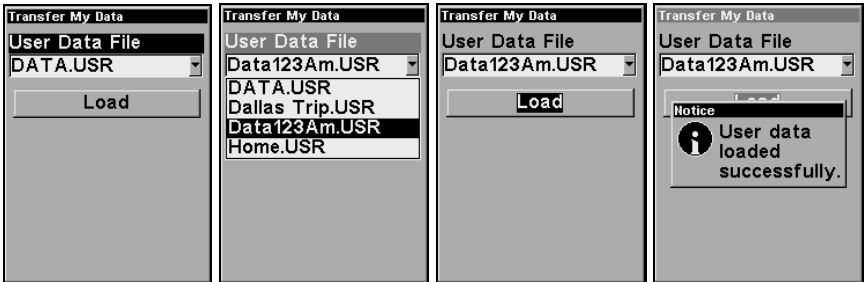
3. **Saving**: To accept the default name "Data" for the GPS Data File, press **↓** to **SAVE | ENT**. If you wish to rename the file (as in the example below), press **ENT** to activate the selection box. Press **↑** or **↓** to change the first character, then press **→** to the next character and repeat until the name is correct. Then, press **ENT | ↓** to **SAVE | ENT**.

The unit will display first a progress then a completion message when the data transfer is finished. To return to the Page view, press **EXIT | EXIT**.



From left to right, these figures show the menu sequence for naming and saving a GPS Data File from an MMC into iFINDER's memory.

4. **Loading**: There may be more than one GPS Data File (*.USR) on the card. To select a file, press **ENT** to activate the selection box, use **↓** or **↑** to highlight the file, then press **ENT** to accept the selection. Next, press **↓** to **LOAD | ENT**. The unit will display a completion message when the data transfer is finished. To return to the Page view, press **EXIT | EXIT**.



From left to right, these figures show the menu sequence for loading a GPS Data File from an MMC into iFINDER's memory.

Switch to Advanced Mode

To leave Easy Mode and switch to Advanced Mode:

1. Press **MENU** | ↓ to **ADVANCED MODE** | **ENT**.
2. Unit asks "Are you sure you want to enter Advanced Mode?"
3. press ← | **ENT** and the unit switches to Advanced Mode.

Switch Back to Easy Mode from Advanced Mode

To leave Advanced Mode and switch back to Easy Mode:

1. Press **MENU** | **MENU** | ↓ to **EASY MODE** | **ENT**.
2. Unit asks "Are you sure you want to turn on Easy Mode?"
press ← | **ENT** and the unit switches to Easy Mode.

Section 4: Advanced Mode Operation

Keypad



iFINDER H2O keypad.

1. **PWR/LIGHT** (Power & Light) – The PWR key turns the unit on and off and activates the backlight.
2. **PAGES** – Pressing this key switches the unit between the four different page screens in Advanced Mode. (Satellite, Position, Navigation and Map.) Each page represents one of the unit's major operation modes.
3. **MENU** – Press this key to show the menus, which allow you to select or adjust a feature from a list.
4. **ARROW KEYS** – These keys are used to navigate through the menus, make menu selections, move the chart cursor and enter data.
5. **ENT/SAVE** (Enter & Save) – This key allows you to save data, accept values or execute menu commands.
6. **EXIT** – The Exit key lets you return to the previous screen, clear data or erase a menu.
7. **FIND** – The Find key launches the iFINDER search menus and some navigation functions.
8. **ZOUT** – (Zoom Out) – This key lets you zoom the screen out to see a larger geographic area on the map. Less detail is seen as you zoom out.
9. **ZIN** – (Zoom In) – This key lets you zoom the screen in to see greater detail in a smaller geographic area on the map.

Power/lights on and off

To turn on the unit, press **PWR**. To turn on the backlight, press **PWR** again. Pressing **PWR** once again will turn off the backlight. (Press **EXIT** to clear any message or alarm displays.)

Turn off the unit by pressing and holding the **PWR** key for 3 seconds.

Main Menu

Advanced Mode has a single Main Menu, which contains some function commands and some setup option commands. The instructions in this section will deal only with functions, the basic commands that make iFINDER do something. iFINDER will work fine for these instructions right out of the box with the factory default settings. But, if you want to learn about the various options, see *Sec. 5, System Setup and GPS Setup Options*.

1. To get to the main menu from any page: press **MENU|MENU**. To clear the menu screen and return to the page display, press **EXIT**.



Main Menu, Advanced Mode.

Pages

Advanced Mode has four Page displays that represent the four major operating modes. They are the Satellite Status Page, the Position Page, the Navigation Page and the Map Page. They are accessed by pressing the **PAGES** key. Pressing **PAGES** repeatedly scrolls between the four screens in an endless circular loop.

Each Page has a submenu screen associated with it. You access a Page Submenu by pressing the **MENU** key one time while the page is displayed. (Pressing the Menu key twice takes you to the Main Menu.)

Satellite Status Page

This page provides detailed information on the status of iFINDER's satellite lock-on and position acquisition. No matter what page you are

on, a flashing current position indicator/question mark symbol and flashing GPS data displays indicate that satellite lock has been lost and there is no position confirmed. This page shows you the quality and accuracy of the current satellite lock-on and position calculation.

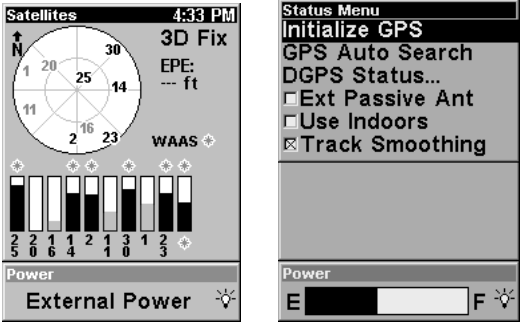
WARNING:

Do not begin navigating with this unit until the numbers have stopped flashing!

NOTE:

Refer to Sec. 2, *Easy Mode Operation*, for further explanation and more illustrations of the Satellite Page.

- 1. To get to the Satellite Status Page: press **PAGE** repeatedly until the page you want appears.
- 2. To get to Satellite Status Menu: press **MENU**.



Satellite Status Page, left, Satellite Status Menu, right.

Status Menu

The Satellite Status Menu allows you to set your own GPS options such as track smoothing, and whether you want the GPS engine to stop searching (a power-saving function for use indoors).

Position Page

This page provides detailed information on the position of iFINDER's cursor. From this page you can determine your latitude, longitude, altitude, travel time, speed, and other useful information about your position and trip.

- 1. To get to Position Page: press **PAGE** repeatedly until the page you want appears.
- 2. To get to Position Page Sub Menu: press **MENU**.

Position		Position Menu	
Degrees/Minutes: N 36°08.971' W 95°50.579'		Coordinate System... Customize... W 95°50.579'	
Speed 0.0 mph	Distance 285.3 mi	Speed 0.0 mph	Distance ----- mi
Bearing 33° mag	Track 33° mag	Bearing ----° true	Track 0° true
Off Course 0 R ft	Closing Spd 0.0 mph	Off Course ----- mi	Closing Spd ----- mph
Altitude 0 ft	Travel Time 99:99:99	Altitude 700 ft	Travel Time -:-:-:-

Position Page, left, Position Menu, right.

Position Menu

The Position Menu allows you to set your own coordinate system, change your map datum or even set your local time.

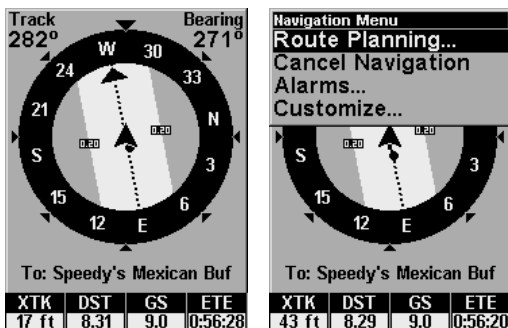
Navigation Page

This screen has a compass rose that not only shows your direction of travel, but also the direction to a recalled waypoint. The navigation screen looks like the one below when you're navigating to a waypoint. Your position is shown by an arrow in the center of the screen. Your trail history, or path you've taken is depicted by the line extending from the arrow. The large arrow pointing down at the top of the compass rose indicates the current track (direction of travel) you are taking.

NOTE:

Refer to Sec. 2, *Easy Mode Operation*, for further explanation and more illustrations of the Navigation Page.

1. To get to Navigation Page: press **PAGE** repeatedly until the page you want appears.
2. To get to Navigation Page Sub Menu: press **MENU**.



Navigation Page, left, Navigation Menu, right.

Navigation Menu

The Navigation Menu allows you to cancel navigation, set up alarms, and plan or edit your route.

Map Page

The map screens show your course and track from a “bird’s-eye” view. By default, this unit shows the map with north always at the top of the screen. (This can be changed. See the topic *Map Orientation*, in Sec. 5.) If you’re navigating to a waypoint, the map shows your starting location, present position, course line and destination. You don’t have to navigate to a waypoint, however, to use the map.

The Zoom In and Zoom Out keys zoom the map to enlarge or reduce its coverage area and the amount of mapping detail shown. There are 37 available map zoom ranges, from 0.05 miles to 4,000 miles.

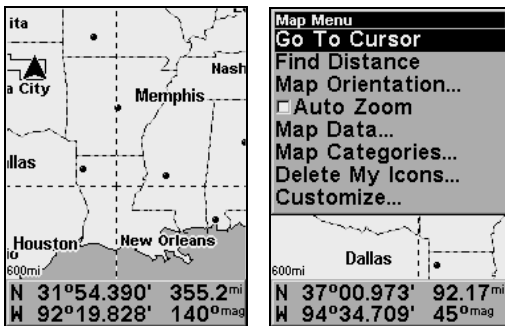
NOTE:

Refer to Sec. 3, *Easy Mode Operation*, for further explanation and more illustrations of the Map Page.

1. To get to Map Page: Map page is the default when iFINDER is turned on. To switch from another page to the Map Page, press **PAGE** repeatedly until the page you want appears.
2. To get to Map Page Menu: press **MENU**.

NOTE:

The screen shows an indicators of what iFINDER's microprocessor is doing, similar to the floppy drive light on a PC. In the lower right corner of the screen, a special icon (MMC symbol) will appear and disappear from time to time. When this icon appears, iFINDER is reading information from the MMC.



Map Page, left, Map Menu, right.

Map Menu

The map menu has many options. The map menu allows you to find distances, change the orientation of your map, view map data, and other helpful map functions.

Moving Around the Map: Zoom & Cursor Arrow Keys

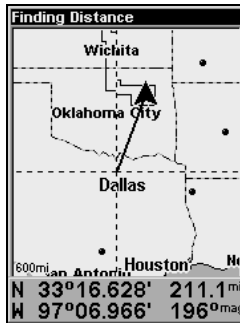
The map is presented from a bird's-eye view perspective. The current zoom range shows in the lower left corner of the screen. If the zoom range says "4 mi," the map shows an area 4 miles wide from the left edge of the screen to the right edge of the screen.

1. Press the **ZIN** key (zoom in) to move in closer and see greater detail in a smaller geographic area.
2. Press the **ZOUT** key (zoom out) to move farther away and see less map detail, but a larger geographic area.

You can pan or scroll the map northward, southward, eastward or westward by using the arrow keys, which launches the cross-hair map cursor. To clear the cursor, press **EXIT**, which jumps the map back to the current position or the last known position.

Find Distance From Current Position To Another Location

1. While on the Map page press: **MENU** | ↓ to **FIND DISTANCE** | **ENT**.
2. Center your cursor over the position you want to find the distance to. A rubber band line appears, connecting your current position to the cursor's location. The distance along that line will appear in the lower left-hand corner of the screen.
3. Press **EXIT** to return to regular operation.



The distance to Dallas from the starting point is 211.1 miles.

Find Distance From Point to Point

You can also measure distance between two other points on the map.

1. While on the Map page press: **MENU** | ↓ to **FIND DISTANCE** | **ENT**.
2. Center your cursor over the first position. (A rubber band line appears, connecting your *current* position to the cursor's location.) Press **ENT** to set the first point, and the rubber band line disappears.

3. Move the cursor to the second position. The rubber band line reappears, connecting the first point you set to the cursor. The distance along that line will appear in the lower left-hand corner of the screen.
4. Press **EXIT** to clear the command and return to the page screen.

Find Your Current Position

Finding your current position is as simple as turning iFINDER on. Under clear sky conditions, the unit automatically searches for satellites and calculates its position in approximately one minute or less.

NOTE:

"Clear sky" means open sky, unobstructed by terrain, dense foliage or structures. Clouds do not restrict GPS signal reception.

If for some reason satellite acquisition takes longer, you may be inside a structure or vehicle or in terrain that is blocking signal reception. To correct this, be sure you are positioned so that the unit has as clear a view of the sky as possible, then turn the unit off and back on again.

If you have the cursor activated, any information the unit gives you will be based on the cursor position, not your own. If you want to find where you are, just press **EXIT** until the cursor goes away and the map snaps back to center on your position.

Icons

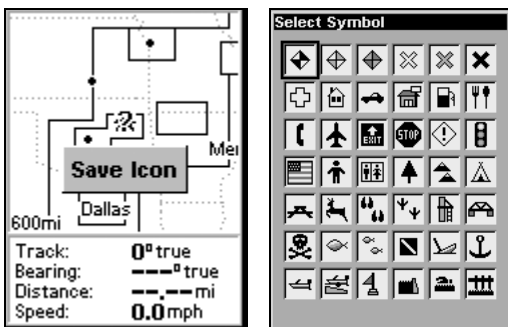
Icons are graphic symbols used to mark some location, personal point of interest or event. They can be placed on the map screen, saved and recalled later for navigation purposes. These are sometimes referred to as event marker icons. iFINDER has 42 different symbols you can pick from when creating an icon.

Icons are similar to waypoints, but they do not store as much information (like names) as waypoints do. You can't use a menu to navigate to icons as you can with waypoints. (But, you *can* use the map cursor and navigate to any icon on the map.)

You can create an icon at the cursor position on the map, or at your current position while you are navigating.

Create Icon on Map

1. Use the arrow keys to move the cursor to the place where you want to make an icon.
2. Press and *hold* **ENT** until the screen shows a "Save Icon" menu, then *release* the **ENT** key.
3. Press ← or ↑ or → or ↓ to select your icon symbol, then press **ENT**. The icon appears on the map.



Save icon menu, left, Select symbol menu, right.

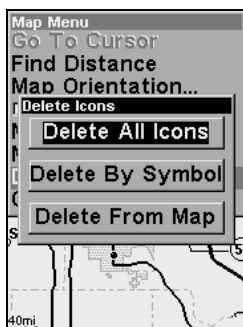
Create Icon at Current Position

1. While you are traveling, press and *hold* **ENT** until the screen shows a "Save Icon" menu, then *release* the **ENT** key.
3. Press ← or ↑ or → or ↓ to select your icon symbol, then press **ENT**. The icon appears on the map.

Delete an Icon

To delete an icon, you must be in Advanced Mode. You can delete all the icons at one time, you can delete all icons represented by a particular symbol, or you can use the cursor to delete a selected icon from the map.

1. Press **MENU** | ↓ to **DELETE MY ICONS** | **ENT**.
2. Press ↓ to **DELETE ALL ICONS**, **DELETE BY SYMBOL**, or **DELETE FROM MAP** and press **ENT**.

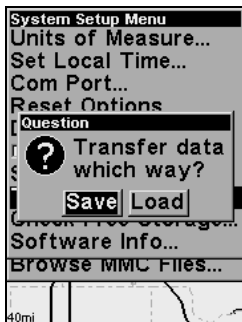


Delete icons menu.

Load GPS Data Files from an MMC

GPS Data files, containing waypoints, routes, trails and event marker icons, must be copied from an MMC to iFINDER's internal memory before iFINDER can read them. Here's how:

1. Press **MENU | MENU | ↓** to **SYSTEM SETUP | ENT | ↓** to **TRANSFER MY DATA | ENT** and the screen below appears.



The Transfer My Data submenu asks if you want to save data to the MMC or load data from the MMC into iFINDER's memory.

2. The Transfer My Data menu includes a message which tells you if an MMC is present or not. If no MMC is present, you must first insert a card into iFINDER in order to activate the Load or Save commands.

To load data from the MMC to iFINDER: press **→** to **LOAD | ENT**.

3. **Loading:** There may be more than one GPS Data File (*.USR) on the card. To select a file, press **ENT** to activate the selection box, use **↓** or **↑** to highlight the file, then press **ENT** to accept the selection. Next, press **↓** to **LOAD | ENT**. The unit will display a completion message when the data transfer is finished. To return to the Page view, press **EXIT | EXIT | EXIT**.

Navigate

Navigation is one of the most powerful reasons for owning an iFINDER. With the navigation options available you can get accurate information about where you want to go, how to get there, how long it will take, and other useful trip information.

Navigate Back Home

You can navigate to the "Home" waypoint created in Easy Mode, but you must use Advanced Mode's procedure for navigating to a waypoint. See the entry later in this section on *Navigate to a Waypoint*.

Navigate Back to Man Overboard Waypoint

This unit has a man overboard feature that shows navigation data to the location where the feature was activated. To activate it, press the **ZOUT** and **ZIN** keys at the same time. Your position at the time these keys are pressed is used as the man overboard position. The unit automatically begins navigating to the MOB waypoint. For further details, see this subject in Sec. 3, *Easy Mode Operation*.

Cancel Navigation

In Easy Mode:

Press **MENU** | ↓ to **CANCEL NAVIGATION** | **ENT** | ← to **YES** | **ENT**.

In Advanced Mode

Press **MENU** | **MENU** | ↓ to **CANCEL NAVIGATION** | **ENT** | ← to **YES** | **ENT**.

Navigate a Route

1. From the **NAVIGATION PAGE**, press **MENU** | **ENT** or from the **MAP PAGE**, press **MENU** | **MENU** | ↓ to **ROUTE PLANNING** | **ENT**.

2. Press ↓ to select *route name* | **ENT** | **ENT**.

3. Upon arrival at your destination, cancel navigation: press **MENU** | **MENU** | ↓ to **CANCEL NAVIGATION** | **ENT** | ← to **YES** | **ENT**.

Navigate to Cursor Position on Map

1. Use arrow keys to center cursor cross-hair over the map object or location.

2. To navigate to the selected location: press **MENU** | **ENT** | **EXIT**. Follow steering arrow on Map Page or compass bearing arrow on Navigation Page.

Navigate to an Icon

Use the Navigate to Cursor command above, and use the cursor to select the icon.

Navigate to Point of Interest (POI)

For POIs that are in view on the map, you can easily use the Navigate to Cursor command above; just use the cursor to select the POI. The other method involves searching for POIs with the Find command. (see Sec. 6, *Searching*, for detailed instructions on POI searches.)

Whenever you locate a POI, the Point of Interest information screen appears (with phone number, position, etc.) and the **Go To** command is automatically highlighted in the command box. To navigate to that POI, press **ENT** and **iFINDER** begins displaying navigation information to that location.

Navigate to a Waypoint

You can select any waypoint visible on the Map Page with the cursor, then use the Navigate to Cursor command. However, you can avoid scrolling the map to pick your waypoint if you use the Find commands:

1. Press **FIND** | **ENT**. To look up the nearest waypoint, press **ENT**, or to look by name (and scroll through the entire waypoint list), press ↓ | **ENT**. For this example, look by name.

2. If your waypoint list is a long one, you can spell out the waypoint name in the **FIND BY NAME** box to search for it. (Press ↑ or ↓ to change the first character, then press → to move the cursor to the next character and repeat until the name is correct, then press **ENT** to jump to the list below.)

- If the list is short, you can jump directly to the **FIND IN LIST** box by pressing **ENT**. Use **↑** or **↓** to select the waypoint name, press **ENT** and the waypoint information screen appears with the **Go To** command selected.
- To begin navigating to the waypoint, press **ENT**.

Navigate a Trail

- Press **MENU | MENU | ↓** to **MY TRAILS | ENT** and a screen similar to the one below appears.



Trails Menu, Advanced Mode.

- Press **↓** then use **↓** or **↑** to select a trail to navigate.
- With the trail name highlighted, press **ENT | ↓** to **NAVIGATE | ENT**.
- Wait while **iFINDER** creates a route from the trail. When the progress message disappears, the unit displays a trail information screen, with the **NAVIGATE** command highlighted in the top command box.

Tip: Back Track a Trail

Simply running the **Navigate** command will lead you along the trail from its starting point to its ending point — forward order. You can also *back track* a trail, or follow it in *reverse* order (from its ending point to its starting point.) In **Easy Mode**, this is done automatically with the most recently created active trail. In **Advanced Mode** you must first select the **Reverse** command to reverse the trail point order before you start navigating: press **→** to **REVERSE | ENT | ←** to **NAVIGATE**.

- To follow the trail, press **ENT**. The unit begins showing navigation data along the trail. Follow the steering arrow on the **Map Page** or the compass bearing arrow on the **Navigation Page**.

NOTE:

If you are at or near the start of the trail, the arrival alarm will go off as soon as navigation begins because of your proximity to the trail's first point. Just press **EXIT** to clear the alarm.

- Upon arrival at your destination, cancel navigation: press **MENU | MENU | ↓** to **CANCEL NAVIGATION | ENT | ←** to **YES | ENT**.

Backtrack a Trail

See the "tip" paragraph in the previous entry, *Navigate a Trail*.

Routes

A route is a series of waypoints, linked together in an ordered sequence, that's used to mark a course of travel. You can visualize a route as a string of beads: The beads represent waypoints and the string represents the course of travel connecting waypoint to waypoint.

The course from one waypoint to the next is a leg; routes are composed of one or more legs. The legs of all GPS routes are based on straight lines between waypoints.

A route provides the automatic capability to navigate through several waypoints without having to reprogram the unit after arriving at each waypoint. Once programmed into the GPS unit, a route provides the option of navigating forward through the route waypoints or in reverse order (you can even begin navigating in the middle of a route!).

Create and Save a Route

In iFINDER, routes can be created, edited and navigated only in Advanced Mode. You have the option of creating a route in the unit, or on your computer if you have purchased our MapCreate 6 software.

PC-created Routes

MapCreate is the easiest method for preparing a route, simply because your PC's larger screen, keyboard and mouse are easier to manipulate than the pocket-sized iFINDER.

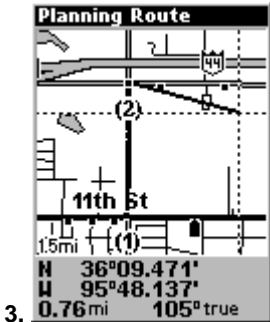
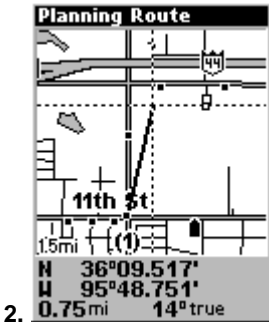
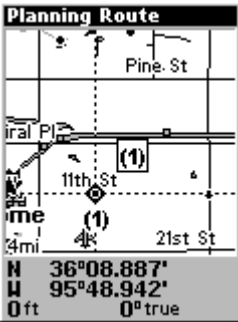
To load a MapCreate route into iFINDER, follow instructions in MapCreate's manual for creating a route and saving it as part of a GPS Data File (file format *.usr). Copy the GPS Data File to an MMC and insert the MMC in iFINDER. (See Sec. 2 for instructions on installing MMCs. To load the GPS Data File into iFINDER memory, see the entry on *Transferring GPS Data Files between iFINDER and a Computer* in this section.)

Routes Created in iFINDER

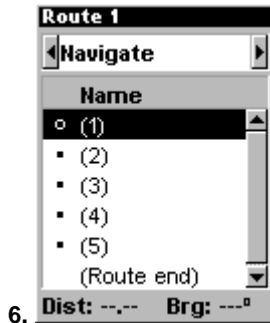
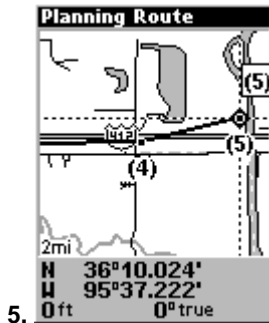
You can create a route by selecting existing waypoints from the waypoint list or you can set a series of route waypoints on the map with cursor arrows and the Enter key. In this example, we'll create a route from the map.

1. From the **NAVIGATION PAGE**, press **MENU|ENT** or from the **MAP PAGE**, press **MENU|MENU|↓** to **ROUTE PLANNING|ENT**.

2. Press **ENT** | ↓ to **(ROUTE END)** | **ENT** | ↓ to **ADD FROM MAP** | **ENT**. The Map Page appears with the cursor showing.
3. Use the Zoom keys and arrow keys to move the map and cursor until the cursor is centered on the spot where you want your route to begin. (If you are starting at your current position or the current cursor position, you are already at the starting spot.)
4. Set the first route waypoint: press **ENT**. In this example we moved to the intersection of 11th Street and 145th E. Ave. to start our route to a public hunting area next to a river.



Route creation sequence, from left: Fig. 1. Set route waypoint (1) at 11th St. & 145th Ave. Fig. 2. Zoom in; move cursor north to set point (2) at 145th & Admiral. Fig. 3. With point (2) set, move cursor east to mark interstate on-ramp with waypoint (3). In figures 2 and 3, notice the rubber band line extending from the previously set waypoint to the cursor. This line will become the course for the route.



Route creation sequence, continued: Fig. 4. Point (3) set at on-ramp turn. Fig. 5. Waypoint (4) set at highway exit to frontage road leading to river. Waypoint (5) ends the route at a tree stand in the hunting area. Fig. 6. Press **EXIT** to save the route and you return to this screen.

5. Move the cursor to the next point in the route, a spot where you need to turn or change direction, and press **ENT** to set the next waypoint.
6. Repeat step five until the route reaches your destination.

7. To save your route, press **EXIT**. iFINDER reverts to the Route screen, with the route automatically named "Route 1" and stored in iFINDER's internal memory.

8. You can edit the name if you wish. Press \uparrow to select the screen's command box, then press \rightarrow to **EDIT NAME|ENT**. Press \uparrow or \downarrow to change the first character, then press \rightarrow to move the cursor to the next character and repeat until the name is correct, then press **ENT**.

9. You can execute other route commands, such as **NAVIGATE**. With the command box active, just press \rightarrow to highlight a different command, then press **ENT**.

10. If you are finished with the route for now, you can return to the last page displayed by pressing **EXIT|EXIT|EXIT**.

Delete a Route

1. From the **NAVIGATION PAGE**, press **MENU|ENT** or from the **MAP PAGE** press **MENU|MENU| \downarrow** to **ROUTE PLANNING|ENT**.

2. Press \downarrow to the route list|press \downarrow or \uparrow to select *route name*|**ENT**.

3. Press \leftarrow to **DELETE|ENT| \leftarrow** to **YES|ENT**.

Save GPS Data Files to an MMC

1. Press **MENU|MENU| \downarrow** to **SYSTEM SETUP|ENT| \downarrow** to **TRANSFER MY DATA|ENT**.

2. The Transfer My Data menu includes a message which tells you if an MMC is present. If no MMC is present, you must first insert a card into iFINDER in order to activate the Save command.

3. To save data *from* iFINDER *to* the MMC: press **ENT** (for **SAVE**).

4. To accept the default name "Data" for the GPS Data File, press \downarrow to **SAVE|ENT**. (If you wish to rename the file, press **ENT** to activate the selection box. Press \uparrow or \downarrow to change the first character, then press \rightarrow to the next character and repeat until the name is correct. Then, press **ENT| \downarrow** to **SAVE|ENT**.)

The unit will display first a progress then a completion message when the data transfer is finished. To return to the Page view, press **EXIT|EXIT|EXIT**.

Searching

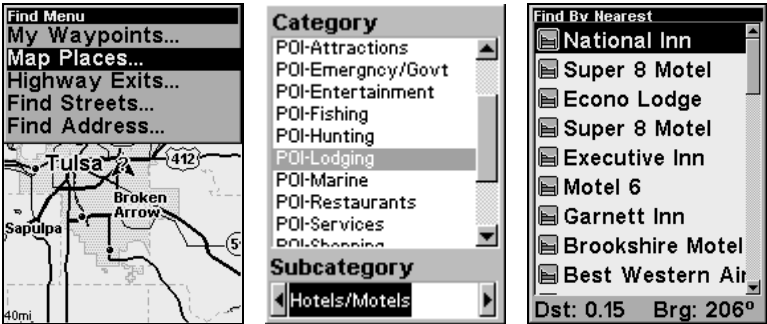
In this example, we'll look for the *nearest* hotel or motel. For more information on different types of searches, refer to *Sec. 6, Searching*.

NOTE:

This example requires the Point of Interest (POI) database included with iFINDER Express and MapCreate 6.

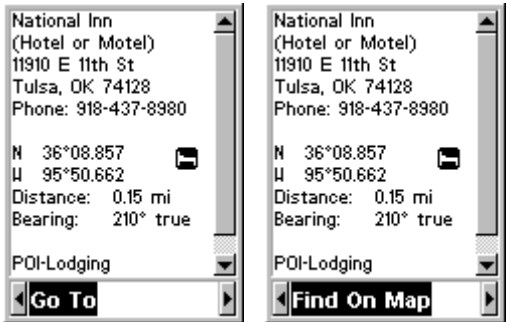
After iFINDER has acquired a position:

1. Press **FIND** | ↓ to **MAP PLACES** | **ENT** | ↓ to **POI-LODGING**.
2. You could search the entire lodging category, but in this example we will narrow our search. Press → to **HOTELS/MOTELS** | **ENT** | **ENT**.
3. iFINDER says it is calculating, then a list of hotels and motels appears, with the closest at the top of the list, and the farthest at the bottom of the list. The nearest is highlighted.



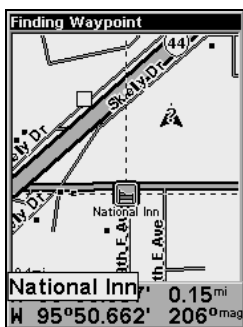
Find Map Places Menu, left; Category Selection menu, center; and list of the nearest motels, right.

4. If you wish, you could scroll ↑ or ↓ here to select another motel or hotel, but for now we will just accept the nearest one. Press **ENT**.
5. The POI information screen appears. (This is what makes iFINDER handy as a business phone directory!) If you wanted to navigate there, you could press Enter, since the Go To command is highlighted. But we just want to see it on the map, so press → to **FIND ON MAP** | **ENT**.



POI information screen on fast food restaurant nearest this position. Screen shows name, street address, phone number, latitude/longitude, distance to the restaurant and its compass bearing. Figure at left shows Go To command; right figure shows Find On Map command.

6. iFINDER's map appears, with the cross-hair cursor highlighting the restaurant's POI symbol. A pop-up name box identifies the POI. A data box at the bottom of the screen continues to display the location's latitude and longitude, distance and bearing.



Map screen showing Finding Waypoint, the result of a lodging search.

7. To clear the search and return to the last page displayed, press **EXIT | EXIT | EXIT**. Press **EXIT** one more time if you want to clear the cursor and let the map return to the current or last known position. (Before you completely exited out of the Search menus, you could have gone looking for another place.)

Switch to Easy Mode

To leave Advanced Mode and switch to Easy Mode:

1. Press **MENU | MENU | ↓** to **EASY MODE | ENT**.
2. Unit asks, "Are you sure you want to turn on Easy Mode?"
3. Press **← | ENT** and the unit switches to Easy Mode.

Switch Back to Advanced Mode from Easy Mode

To leave Easy Mode and switch back to Advanced Mode:

1. Press **MENU | ↓** to **ADVANCED MODE | ENT**.
2. Unit asks, "Are you sure you want to enter Advanced Mode?"
3. Press **← | ENT** and the unit switches to Advanced Mode.

Trails

A trail, or plot trail, is a string of position points plotted by iFINDER as you travel. It's a travel history, a record of the path you have taken. Trails are useful for repeating a journey along the same track. They are particularly handy when you are trying to retrace your trip and go back the way you came.

Easy Mode only allows you to work with one trail. But Advanced Mode lets you save up to 10 trails in iFINDER's memory. Since you can copy these trails to MMCs in the form of GPS Data Files (*.usr format), the only true limit on the number of trails you can record is the number of MMCs you can carry in your pockets.

(For various trail options, see the *Trail Options* entry in Sec. 5.)

Create and Save a Trail

iFINDER is set at the factory to automatically create and record a trail while the unit is turned on. It will continue recording the trail until the length reaches the maximum trail point setting (default is 2,000, but the unit can record trails 9,999 points long). When the point limit is reached, iFINDER begins recording the trail over itself.

To preserve a trail from point A to point B, you must "turn off" the trail by making it inactive before heading to point C or even back to point A. When a trail is set inactive, iFINDER automatically creates and begins recording a new trail.

Clear a Trail

This is the command Easy Mode uses to erase the active trail and immediately begin recording a new one. It's only available in Easy Mode.

1. Press **MENU** | ↓ to **CLEAR TRAIL** | **ENT** | ← to **YES** | **ENT**.

Delete a Trail

This is the command Advanced Mode uses to erase or delete a trail: Press **MENU** | **MENU** | ↓ to **MY TRAILS** | **ENT** | ↓ to *trail name* | **ENT** | ↓ to **DELETE TRAIL** | **ENT** | ← to **YES** | **ENT**.

Edit a Trail Name

To edit a trail name: press **MENU** | **MENU** | ↓ to **MY TRAILS** | **ENT** | ↓ to *trail name* | **ENT** | **ENT**. Press ↑ or ↓ to change the first character, then press → to the next character and repeat until the name is correct. Press **EXIT** | **EXIT** | **EXIT** | **EXIT** to return to the previous page display.

Transfer Custom Maps and GPS Data Files

Custom Maps:

Custom maps work only from the MMC card or SD card. When a card containing a Custom Map File is loaded into the unit, it automatically loads the map into memory when the unit is turned on.

Instructions for copying Custom Map Files to an MMC are contained in the instruction manual for your MMC card reader and MapCreate 6 software. For instructions on inserting an MMC into the iFINDER, see *Sec. 2, Installation/Accessories*.

GPS Data files:

GPS Data Files contain waypoints, routes, trails and event marker icons. Instructions for copying GPS Data Files between your computer and an MMC are contained in the instruction manual for your MMC card reader and MapCreate 6 software.

GPS data automatically recorded in the unit's internal memory must be saved to the MMC (as a GPS Data File) in order to store it on your personal computer. GPS Data Files stored on an MMC must be copied from the card to the iFINDER's internal memory before the unit can read them. Here's how:

1. Insert the MMC into your unit. Press **MENU|MENU|↓** to **SYSTEM SETUP|ENT|↓** to **TRANSFER MY DATA|ENT**.

2. The Transfer My Data menu includes a message which tells you if an MMC is present or not. If no MMC is present, you must first insert a card into the iFINDER in order to activate the Load or Save commands.

To transfer data *from the iFINDER to the MMC*: press **ENT** (for **SAVE**.)

To transfer data *from the MMC to the iFINDER*: press **→** to **LOAD|ENT**.

3. **Saving to MMC**: To accept the default name "Data" for the GPS Data File, press **↓** to **SAVE DATA|ENT**. If you wish to rename the file, press **ENT** to activate the selection box. Press **↑** or **↓** to change the first character, then press **→** to the next character and repeat until the name is correct. Then, press **ENT|↓** to **SAVE DATA|ENT**.

The unit will display first a progress then a completion message when the data transfer is finished. To return to the Page view, repeatedly press **EXIT**.

4. **Loading to unit memory**: There may be more than one GPS Data File (*.USR) on the card. To select a file, press **ENT** to activate the selection box, use **↓** or **↑** to highlight the file, then press **ENT** to accept the selection. Next, press **↓** to **LOAD|ENT**. The unit will display a completion message when the data transfer is finished. To return to the Page view, press **EXIT|EXIT|EXIT|EXIT**.

Utilities

Utilities are useful tools for traveling or for outdoor activities.

Alarm Clock

To get to the alarm clock menu: press **MENU|MENU|↓** to **UTILITIES|ENT|↓** to **ALARM CLOCK|ENT**.

Sun/Moon Rise & Set Calculator

To get to the Sun/Moon menu: press **MENU | MENU | ↓** to **UTILITIES | ENT | ENT**.

Trip Calculator

To get to the Calculator menu: press **MENU | MENU | ↓** to **UTILITIES | ENT | ↓** to **TRIP CALCULATOR | ENT**.

Trip Down Timer

To get to the Down Timer menu: press **MENU | MENU | ↓** to **UTILITIES | ENT | ↓** to **DOWN TIMER | ENT**.

Trip Up Timer

To get to the Up Timer menu: press **MENU | MENU | ↓** to **UTILITIES | ENT | ↓** to **UP TIMER | ENT**.

Waypoints

A waypoint is simply an electronic "address," based on the latitude and longitude of a position on the earth. A waypoint represents a location, spot, or destination that can be stored in memory, then be recalled and used later on for navigation purposes. Simply think of it as an electronic address. You can create a waypoint at the cursor position on the map, or at your current position while you are navigating.

Create a Waypoint

These techniques use the Quick Save method, the fastest and easiest way to create a waypoint.

Create Waypoint on Map

1. Use the arrow keys to move the cursor to the place where you want to make a waypoint.
2. Press **ENT | ENT**. The waypoint is saved and automatically given a name with a sequential number, such as "waypoint 001." The waypoint symbol and number appear on the map.

Create Waypoint at Current Position

1. While you are traveling, press **ENT | ENT**. The waypoint is saved and automatically given a name with a sequential number, such as "waypoint 002." The waypoint symbol and number appear on the map.

Create a Man Overboard Waypoint

This unit has a man overboard feature that shows navigation data to the location where the feature was activated. To activate it, press the **ZOUT** and **ZIN** keys at the same time. Your position at the time these keys are pressed is used as the man overboard position. The unit automatically begins navigating to the MOB waypoint. For further details, see this subject in the Easy Mode Operation section.

Create a Waypoint by Average Position

This feature sets a waypoint at the current position after taking several position readings and averaging them. This boosts waypoint position accuracy by helping to eliminate errors caused by atmospheric conditions and other factors.

1. Press **ENT** | \downarrow to **AVERAGE POSITION** | **ENT** | (cursor jumps to highlight **CREATE**) | **ENT**.
2. Wait while the unit takes points to average for the position. (The greater the number of points, the greater the accuracy.) When the desired number of points accumulates, press **ENT** to create and save the waypoint.
3. The Edit Waypoint menu appears. You can simply save the waypoint by pressing **EXIT** | **EXIT** or you can edit the waypoint.

Create a Waypoint by Projecting a Position

This feature sets a waypoint at a point located a specific distance and bearing from a reference position. The reference position can be selected from your waypoint list, a map feature or from the Points of Interest list.

1. Press **ENT** | \downarrow to **PROJECTED POSITION** | **ENT** | (cursor jumps to highlight **CREATE**) | **ENT**.
2. Press \downarrow to **SET REFERENCE** | **ENT**. Use \uparrow and \downarrow to select a waypoint, map feature or Point of Interest. When the point has been selected, press **ENT** and the point's position appears as the reference position.
3. Press \uparrow to **DISTANCE** | **ENT**. Press \uparrow or \downarrow to change the first character, then press \rightarrow to the next character and repeat until the distance is correct. Press **ENT**.
4. Press \uparrow to **BEARING** | **ENT**. Press \uparrow or \downarrow to change the first character, then press \rightarrow to the next character and repeat until the bearing is correct. Press **ENT**.
5. Press \downarrow to **PROJECT** | **ENT**. The Edit Waypoint menu appears. You can simply save the new projected waypoint by pressing **EXIT** | **EXIT** or you can edit the waypoint. (Press **EXIT** | **ENT** if you want to immediately begin navigating to the new waypoint.)

Select a Waypoint

To select a waypoint on the map (for navigating to, for editing, etc.) use the arrow keys and center the cursor over the waypoint. A highlighted halo will appear around the waypoint.

Delete a Waypoint

To delete a waypoint: press **FIND|ENT|↓** to **NAME|ENT|ENT|↓** to *waypoint name*|**ENT|→** to **DELETE|ENT|←** to **YES|ENT**. To return to the previous page, press **EXIT|EXIT**.

Edit a Waypoint

Waypoint Name

To edit waypoint name: press **FIND|ENT|↓** to **NAME|ENT|ENT|↓** to *waypoint name*|**ENT|→** to **DELETE|ENT|←** to **YES|ENT**. To return to the previous page, press **EXIT|EXIT**.

Waypoint Symbol

To edit waypoint symbol: 1. Press **FIND|ENT|↓** to **NAME|ENT|ENT|↓** to *waypoint name*|**ENT|→** to **EDIT SYMBOL|ENT**. 2. Use arrow keys to select desired symbol and press **ENT**. To return to the previous page, press **EXIT|EXIT|EXIT**.

Waypoint Position

To edit waypoint position: 1. Press **FIND|ENT|↓** to **NAME|ENT|ENT|↓** to *waypoint name*|**ENT|→** to **EDIT POSITION|ENT**.

2. Latitude: press **ENT**, then press **↑** or **↓** to change the first character, then press **→** to the next character and repeat until the latitude is correct. Press **EXIT**.

3. Longitude: press **↓|ENT**, then press **↑** or **↓** to change the first character, then press **→** to the next character and repeat until the latitude is correct. Press **EXIT**.

4. When latitude and longitude are correct, return to the previous page: press **EXIT|EXIT|EXIT|EXIT**.

Waypoint Altitude

To edit waypoint altitude: 1. Press **FIND|ENT|↓** to **NAME|ENT|ENT|↓** to *waypoint name*|**ENT|→** to **EDIT ALTITUDE|ENT**.

2. Press **ENT**, then press **↑** or **↓** to change the first character, then press **→** to the next character and repeat until the altitude is correct. Press **EXIT**.

3. To return to the previous page: press **EXIT|EXIT|EXIT**.

Notes

Section 5:

System & GPS Setup Options

Alarms

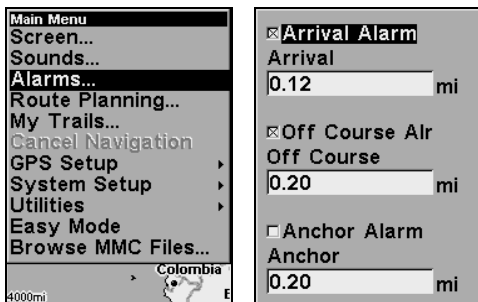
This unit has several GPS alarms. The factory default setting has all the alarms turned on. You can turn the alarms off and on and change their distance settings.

You can set an arrival alarm to flash a warning message and sound a tone when you cross a preset distance from a waypoint. For example, if you have the arrival alarm set to 0.1 mile, then the alarm will flash a message when you come within 0.1 mile of the recalled waypoint.

The off course alarm warns you when your track drifts too far to the right or left of the course line to the waypoint. For example, if the alarm is set to 0.1 mile, then the alarm flashes a message if you drift 0.1 mile or more to the right or left of the line to the waypoint.

The anchor alarm is triggered when you drift outside of a preset radius. Again, using the 0.1 mile as an example, if you're anchored and your boat moves more than 0.1 mile, the alarm will flash a message and sound a tone.

You can only adjust alarm distance settings or turn alarms off or on in Advanced Mode. (Switch from Easy to Advanced: **MENU** | ↓ to **ADVANCED MODE** | **ENT** | ← | **ENT**.)



Alarms command, left; Alarm menu, right.

To change alarm settings:

1. Press **MENU** | **MENU** | ↓ to **ALARMS** | **ENT**.
2. Scroll ↓ or ↑ to select the desired category, then press **ENT** to check or clear the enabled box. This turns the alarm on (checked) or off (unchecked).
3. To change distance settings, scroll ↑ or ↓ to select the desired category, then press **ENT** to activate the distance dialog box. Press ↑ or ↓ to change the first character, then press → to the next character and repeat until the distance is correct.

4. When your adjustments are finished, return to the last page displayed by repeatedly pressing **EXIT**.

IMPORTANT ALARM NOTES:

Anchor Alarm – The anchor alarm may be triggered even when you're sitting still. This typically happens when using small (less than 0.05 mile) anchor alarm ranges.

Arrival Alarm – If you set the arrival alarm's distance to a small number and you run a route (see the Navigate Routes segment), this unit may not show navigation data to the next waypoint, once you arrive at the first one, since you may not be able to come close enough to the first waypoint to trip the arrival alarm.

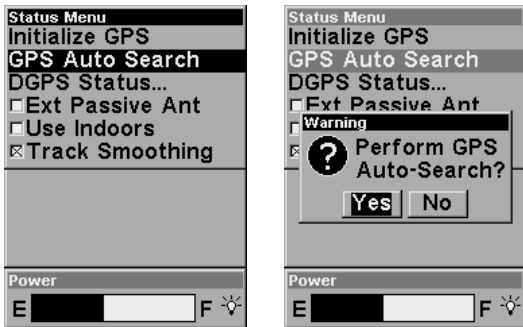
Auto Satellite Search

To lock onto the satellites, the GPS receiver needs to know its current position, UTC time and date. (Elevation (altitude) is also used in the equation, but it's rarely required to determine a position.) It needs this data so that it can calculate which satellites should be in view. It then searches for only those satellites.

When your GPS receiver is turned on for the first time, it doesn't know what your position or elevation (altitude) is. The unit begins searching for the satellites using data that it acquired the last time it was turned on. This was probably at the factory. Since it's almost certain that you're not at our factory, it's probably looking for the wrong satellites.

If it doesn't find the satellites it's looking for after a short time, it switches to Auto Search. The receiver looks for any satellite in the sky. Due to advanced technology, the auto search time has shrunk significantly from the early days of GPS.

Once the unit locks onto the satellites, it should take less than a minute to find your position the next time it's turned on, provided you haven't moved more than approximately 100 miles from the last location it was used.



Satellite Status Menu.

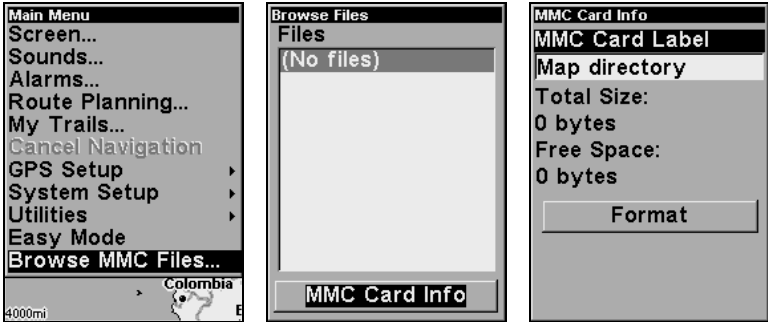
You can force the unit to immediately kick into auto search mode. Here's how:

1. While in Advanced Mode press **PAGES** until you are on the "Satellites" screen.
2. Press **MENU** | ↓ to **AUTO SEARCH** | **ENT** then ← to **YES** | **ENT**.

Check MMC Files and Storage Space

To check MMC Files:

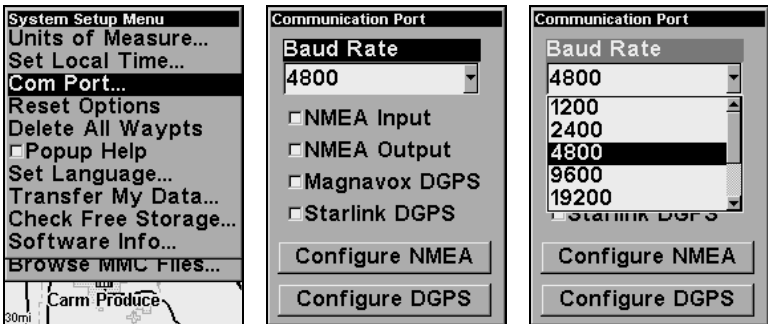
1. In Advanced Mode, press **MENU** | **MENU** | ↓ to **MMC FILES** | **ENT**.



Main Menu, left, MMC File Browser, center & right.

Com Port Configuration

iFINDER has one NMEA 0183 version 2.0 compatible communication port, or com port for short. The Com Port Menu, which is accessed from the System Setup Menu in Advanced Mode, allows you to configure the communications port to send data to another electronic device, such as an autopilot.



Menus for changing Com Port settings.

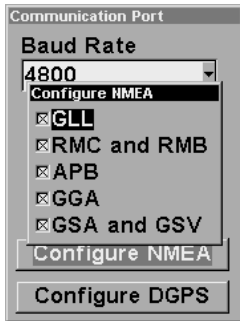
For connectors and wiring information for another device, consult the factory; phone numbers are in the back of this manual. To set Com Port Configuration:

1. Press **MENU | MENU | ↓** to **SYSTEM SETUP | ENT.**
2. Press **↓** to **COM PORT | ENT.**

Configure NMEA

You can configure the unit to use specific NMEA sentences.

1. Press **MENU | MENU | ↓** to **SYSTEM SETUP | ENT.**
2. Press **↓** to **COM PORT | ENT | ↓** to **CONFIGURE NMEA | ENT.**
3. A menu appears showing the prefixes of the available NMEA sentences. A check mark next to a prefix means the prefix is in use. Use **↑ ↓ → ←** to select a prefix, then press **ENT** to turn off the prefix. (Press **ENT** again to check the box and turn a prefix on.)



Configure NMEA menu, showing all prefixes turned on (checked).

NOTE:

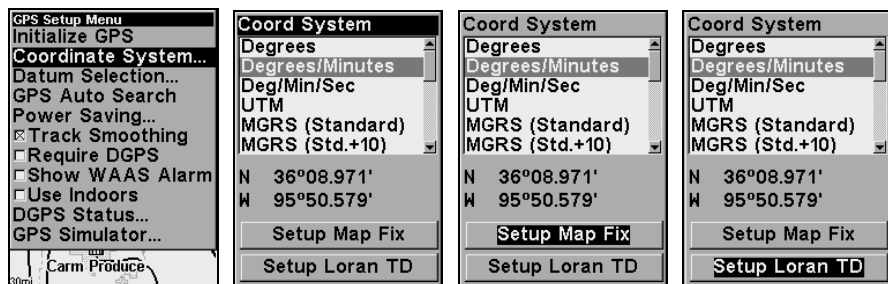
The names of the NMEA sentences are abbreviated in this menu. These are the functions of the various selectable prefixes:

- GLL transmits latitude and longitude of present position, time of position fix, and status.
- RMC and RMB transmits navigation information messages.
- APB transmits autopilot information.
- GGA transmits time, position, and fix related data.
- GSA and GSV transmits fix mode, DOP values, and satellites in view information.

4. When the desired prefixes are checked or unchecked, press **EXIT | EXIT | EXIT | EXIT** to return to the previous page.

Coordinate System Selection

The Coordinate System Menu lets you select the coordinate system to use when displaying and entering position coordinates. Access this function only in Advanced Mode.



Menus for changing coordinate system used to display positions.

To get to Coordinate System Selection:

1. Press **MENU | MENU | ↓** to **GPS SETUP | ↓** to **COORDINATE SYSTEM | ENT.**
2. Press **↓** to **COORD SYSTEM | ENT.**

This unit can show a position in degrees (36.14952°); degrees, minutes and thousandths of a minute ($36^\circ 28.700'$); or degrees, minutes, seconds and tenths of a second ($36^\circ 28' 40.9''$). It can also show position in: UTM (Universal Transverse Mercator) projection; MGRS (Standard); MGRS (Standard + 10); Map Fix; Loran TD; British, Irish, Finnish, German, New Zealand, Swedish, Swiss, Taiwan, Greek and Military grids.

UTM's are marked on USGS topographic charts. This system divides the Earth into 60 zones, each 6 degrees wide in longitude.

British, Irish, Finnish, German, New Zealand, Swedish, Swiss, Taiwan, and Greek grid systems are the national coordinate system used only in their respective countries. In order to use these grid systems, you must be in the respective country. This unit will pick the matching datum for you when you select the grid. See the entry on Map Datum/Sec for more information.

The military grid reference system (MGRS) uses two grid lettering schemes, which are referred to as standard and alternate MGRS on this unit. Your position and datum in use determines which one to use. If you use standard, and your position is off significantly, then try the alternate.

NOTE: When the position format is changed, it affects the way all positions are shown on all screens. This includes waypoints.

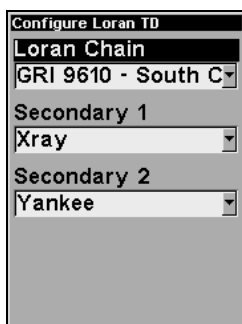
To select a coordinate system:

To change the coordinate system, press **ENT** while **COORDINATE SYSTEM** is highlighted. Press the **↑** or **↓** arrow keys to highlight the desired format. Press **ENT** to select it. Press **EXIT** to erase the menus.

To setup Loran TD:

NOTE:

If the Loran TD conversion is chosen, you must enter the local Loran chain identification for the master and slaves. Do this by selecting "Setup Loran TD" at the bottom of the "Coordinate System" menu and select the ID. Press **EXIT** to erase this menu.



Configure Loran TD menu.

Map Fix

Map Fix is used with charts or maps. This system asks for a reference position in latitude/longitude, which you take from a marked location on the map. It then shows the present position as distance on the map from that reference point.

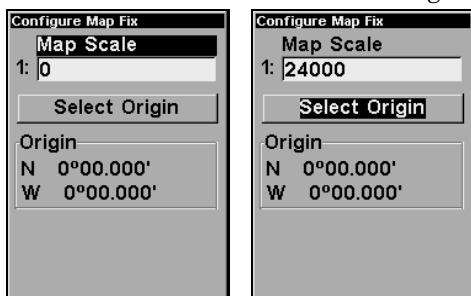
For example, if it shows a distance of UP 4.00" and LEFT 0.50", you then measure up four inches and to the left a half-inch from the reference point on the map to find your location.

To configure a map fix:

To use this format, you need to follow these steps in order. First, take your map of the area and determine a reference latitude/longitude. (Note: in order for this system to work, the latitude/longitude lines must be parallel with the edge of the map. USGS maps are parallel, others may not be. Also, this works better with smaller scale maps.) The reference position can be anywhere on the map, but the closer it is to your location, the smaller the numbers will be that you'll have to deal with.

Once you've decided on a reference position, you can save it as a waypoint. See the waypoint section for information on saving a waypoint. Save the reference position as a waypoint. Exit from the waypoint screens.

Now press **MENU|MENU|↓** to **GPS SETUP|ENT|↓** to **COORDINATE SYSTEM|ENT|↓** to **SETUP MAP FIX|ENT**. The following screens appear, and **MAP SCALE** is highlighted. Press **ENT** and enter the map's scale. This is generally at the bottom of the paper map. It's shown as a ratio, for example 1:24000. Press **EXIT** and the unit returns to the Configure Map Fix screen.



Configure a map fix so iFINDER can find your position on a printed chart or topographical map.

Press **↓** to **SELECT ORIGIN|ENT|ENT (MY WAYPOINTS)** if you saved the reference point as a waypoint. Select the waypoint name that you assigned to the reference point and press **ENT**. The unit displays a waypoint information screen with the command **SET AS ORIGIN** selected; press **ENT** and the unit returns to the Configure Map Fix menu. Finally, press **EXIT** to erase this menu. Now press **↑** to **COORD SYSTEM|ENT**, select **MAP Fix** from the list and press **ENT**. All position information now shows as a distance from the reference point you chose.

Customize Page Displays

The Position, Navigation, and Map pages all have customizable options that are available in Advanced Mode. These options decide which information is viewable on each page.

Customize Position Page

This page has nine boxes you can customize. While on the Position Page, press **MENU|↓** to **CUSTOMIZE|ENT**. The topmost data box begins flashing. Use the arrow keys to select the box you want to change. With the display box highlighted and flashing, press **ENT** to open a list of options. Scroll **↓** or **↑** to select a different data option, then press **ENT**.

You can repeat these steps to change the display in another box. When all your changes are finished, press **EXIT** to return to the page display.

Customize Navigation Page

While on the Navigation Page press **MENU|↓** to **CUSTOMIZE|ENT**. Press **↓** or **↑** to select a display option. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After all options are set, press **EXIT** to return to the page display.

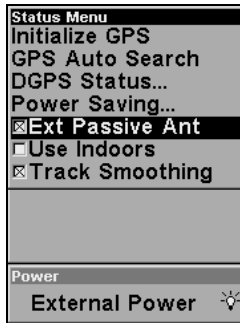
Customize Map Page

While on the Map Page press **MENU** | ↓ to **CUSTOMIZE** | **ENT**. Press ↓ or ↑ to select a display option. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After all options are set, press **EXIT** to return to the page display.

External Passive Antenna

The iFINDER H2O can be used with an optional external antenna. While we recommend the powerful external active antenna, the unit can operate with an external *passive* antenna as well. To do this, you have to let the unit know it's looking for the antenna's signals in a different way.

To do this, from the Satellite Status page, press **MENU** | ↓ to **EXT PASSIVE ANT**. Press **ENT** to turn on (check) or turn off (uncheck) the command.



Remote Passive Antenna command on the Satellite Status Menu.

WARNING:

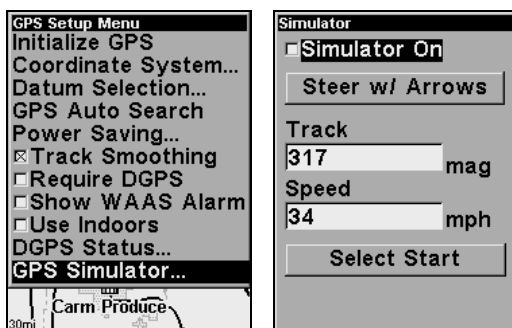
As long as the External Passive Antenna command is activated, the iFINDER will *only* monitor GPS signals from an external passive antenna. If you have this command activated and are *not* using an external passive antenna, the unit will not be able to accurately lock on. To switch back to using the iFINDER's internal antenna (or to use an optional external *active* antenna), be sure to turn off this command. From the Status page, press **MENU** | ↓ to **EXT PASSIVE ANT**. Press **ENT** to uncheck the box next to the command.

GPS Simulator

The GPS simulator lets you use the unit as if you were outdoors navigating somewhere. You can set the starting location in latitude/longitude (Starting Position) or from a stored waypoint, map place or POI location (Select Starting Waypoint). You can steer your position on the map by using the arrow keys (**STEER W/ ARROWS**) or by setting the track and speed in the boxes provided on simulator screen.

To get to the GPS Simulator:

1. Press **MENU | MENU | ↓** to **GPS SETUP | ENT**.
2. Press **↓** to **GPS SIMULATOR | ENT**.



GPS Setup Menu, left, GPS Simulator Menu, right.

Make the desired settings, then turn the simulator on by highlighting the **SIMULATOR ON** box and pressing **ENT** key. Press **EXIT** to erase this menu. A message appears periodically, reminding you that the simulator is on. To turn the simulator off, repeat the above steps or turn the unit off.

While in simulator mode, you can press **EXIT** to clear the steering and speed boxes from the screen while continuing the simulation. This will allow you to use the map cursor during a simulation. To turn steering and speed boxes back on again, return to the GPS Simulator menu, select the **STEER WITH ARROWS** command, and press **ENT**, then press **EXIT | EXIT | EXIT** to return to the previous page.

Simulating Trail or Route Navigation

In Simulator mode, your unit can automatically follow a trail or route without manual steering if you use these steps:

1. From the Map Page, go to the simulator menu. Pick a **STARTING POSITION** at or near the beginning of your trail/route. Enter an approximate **TRACK** (shown in compass degrees) that will point you toward the start of the trail/route.
2. Set **SPEED** to zero. Select **STEER WITH ARROWS** command and press **ENT**, which turns on the simulator and returns you to the Map Page.
3. Begin navigating along the trail/route. (If you are close enough to the first waypoint, the arrival alarm will usually go off as soon as navigation begins. Press **EXIT** to clear the alarm.) When navigation starts, press **↑** (since you're using the Simulator's **STEER WITH ARROWS** command) to increase speed to the desired setting.

4. Press **EXIT** to turn off the steering and speed boxes. The unit will now automatically "steer" along the trail or route. When you arrive at your "destination," cancel navigation as you normally do.

Map Auto Zoom

This receiver has an auto zoom feature that eliminates much of the button pushing that other brands of GPS receivers force you to make. It works in conjunction with the navigation features.

First, start navigation to a waypoint. (See the waypoint section for more information on navigating to a waypoint.) Then, with the auto zoom mode on, the unit zooms out until the entire course shows, from the present position to the destination waypoint. As you travel toward the destination, the unit automatically begins zooming in — one zoom range at a time — always keeping the destination on the screen.

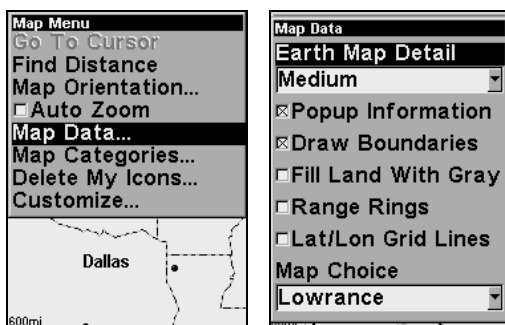
To turn this feature on, from the **MAP PAGE**, press **MENU** | ↓ to **AUTO ZOOM** | **ENT**. Repeat these steps to turn it off.

Map Data

This menu lets you turn the map off, if desired (which turns the map screen into a GPS plotter); turn off or on the pop-up map info boxes; draw the map boundaries or boxes around the areas of detail; or fill land areas with gray. You can also turn on or off Map Overlays, which display latitude and longitude grid lines or range rings on the map. This menu lets you select Navionics Maps; for instructions, see the *Navionics Charts* entry in this section.

To get to Map Data:

1. From the Map Page, press **MENU** | ↓ to **MAP DATA** | **ENT**.



Map Menu, left, Map Data Menu, right.

Show Map Data

Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press **ENT** to enter the **EARTH MAP DETAIL** selection list, and choose how much detail you want, from Off (so the

unit operates like a GPS plotter) to High. After the option is set, press **EXIT** to return to the page display.

Popup Map Information

Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press ↓ to **POPUP INFORMATION**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT** to return to the page display.

Draw Boundaries

Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press ↓ to **DRAW BOUNDARIES**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT** to return to the page display.

Fill Land With Gray

Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press ↓ to **FILL LAND WITH GRAY**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT** to return to the page display.

Map Overlays (Range Rings; Lat/Long Grid)

The map screen can be customized with four range rings and/or grids that divide the plotter into equal segments of latitude and longitude.

Range rings are handy for visually estimating distances on the map. The ring diameters are based on the current zoom range. For example: at the 100 mile zoom, the screen will show two rings with your current position in the center. The large ring touching the left and right sides of the screen is 100 miles in diameter (same as the zoom range). The second smaller ring is 50 miles in diameter (always 1/2 the zoom range).

The distance from your current position to the smaller ring (the ring's radius) is 25 miles (always 1/4 the zoom range). With the arrow keys and map cursor, you can scroll the map to see the third and fourth rings. In this example, the distance to the third ring is 75 miles and distance to the fourth ring is 100 miles from your current position.

To set range rings: Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press ↓ to **RANGE RINGS**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT** to return to the page display.

To set Lat/Lon Grid: Press **MENU** | ↓ to **MAP DATA** | **ENT**. Press ↓ to **LAT/LON GRID**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT** to return to the page display.

Map Datum Selection

Maps and charts are based on a survey of the area that's covered by the map or chart. These surveys are called "Datums." Maps that are cre-

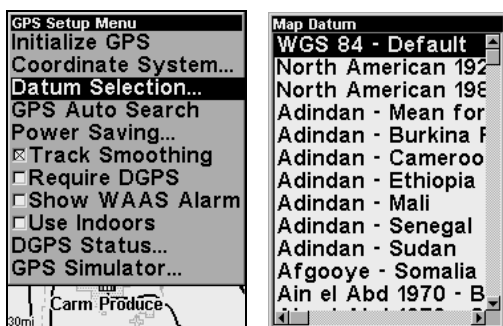
ated using different datums will show the same latitude/longitude in slightly different locations.

All datums are named. The GPS system is based on the WGS-84 datum, which covers the entire world. Other datums may also cover the entire world, or just a small portion of it. By default, your position shows using the WGS-84 datum. However, it can show your position using one of 191 different datums.

Different datums can be selected only in Advanced Mode. (Switch from Easy to Advanced: **MENU** | ↓ to **ADVANCED MODE** | **ENT** | ← | **ENT**.) To change the datum:

1. Press **MENU** | **MENU** | ↓ to **GPS SETUP** | **ENT** | ↓ to **DATUM SELECTION** | **ENT**.
2. Scroll ↓ or ↑ to select the desired datum, then press **ENT**.
3. To return to the last page displayed, press **EXIT** | **EXIT**.

A list of the datums used by this unit is in the back of this manual.



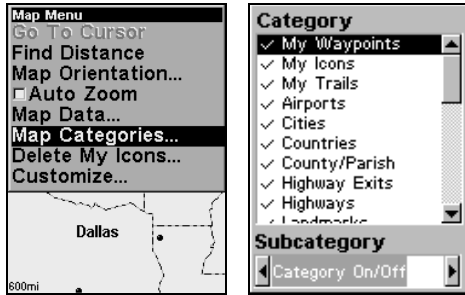
GPS Setup Menu, left, Map Datum Menu, right.

Map Detail Category Selection

This menu determines which of the mapping features are shown on the screen. This includes, waypoints, trails, icons, cities, highways, etc. You can selectively turn on or off any of these items, customizing the map to your needs. Map Detail Categories can be turned off and on only in Advanced Mode. (Switch from Easy to Advanced: **MENU** | ↓ to **ADVANCED MODE** | **ENT** | ← | **ENT**.)

To get to Map Categories:

1. Press **MENU** | ↓ to **MAP CATEGORIES** | **ENT**.
2. Press ↑ or ↓ to select a category or subcategory. Press **ENT** to turn it off (no check) or on (checked).
3. To return to the last page displayed, press **EXIT** | **EXIT**.

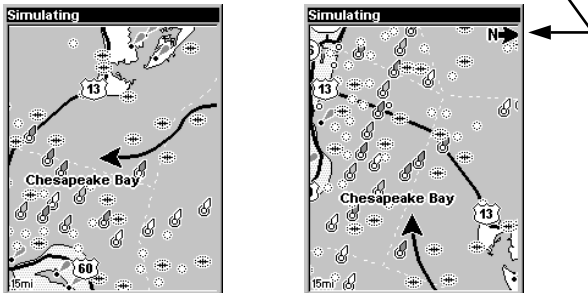


Map Menu, left, Map Categories Menu, right.

Map Orientation

By default, this receiver shows the map with north always at the top of the screen. This is the way most maps and charts are printed on paper. However, you can change the map orientation to Track Up or Course Up if you switch to Advanced Mode.

In Track Up mode, map shows "N" and arrow to indicate north.



Map orientation at left is shown in north up and at right, track up.

The default North Up setting is fine if you're always traveling due north. What you see to your left corresponds to the left side of the map, what you see to your right is shown on the right side of the map, and so on. However, if you travel any other direction, the map doesn't line up with your view of the world.

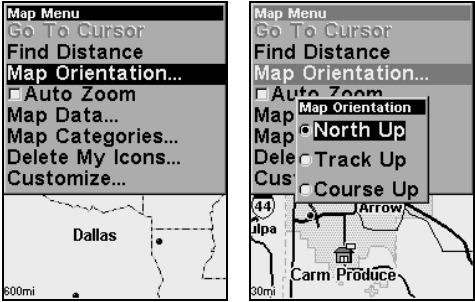
To correct this problem, a track-up mode rotates the map as you turn. Thus, what you see on the left side of the screen should always be to your left, and so on.

Another option is course-up mode, which keeps the map at the same orientation as the initial bearing to the waypoint. When either the track-up or course-up mode is on, an "N" shows on the map screen to help you see which direction is north.

Which option you use is a matter of personal taste; we sometimes switch back and forth depending on the circumstances. For example, when we are in an area we know fairly well, we usually run the unit in

default North Up. But, we'll sometimes switch to Track Up when we're in an unfamiliar area and want to instantly coordinate what we see out the window with what we see on the screen. Try all three modes to find what works best for you.

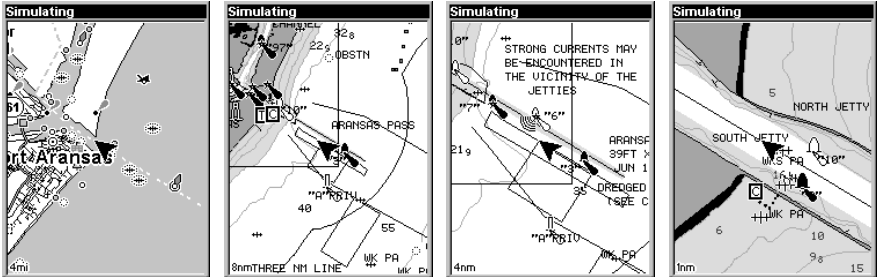
To change map orientation: from the Map Page, press **MENU** | \downarrow to **MAP ORIENTATION** | **ENT**. Press \uparrow or \downarrow to select an orientation option, then press **ENT**. Press **EXIT** | **EXIT** to return to the page display.



Map Menu, left; Map Orientation menu with the North Up map orientation option selected, right.

Navionics® Charts

Your unit can display Navionics® electronic charts on MMCs. Both the GOLD™ and CLASSIC™ format charts are accepted. They work just like a MapCreate custom map on an MMC.



Left, entrance to Aransas Pass in a MapCreate 6 custom map, 4 mile zoom. Remaining images, from left to right: same position on Navionics GOLD™ chart at 8 mile, 4 mile and 1 mile zoom ranges.

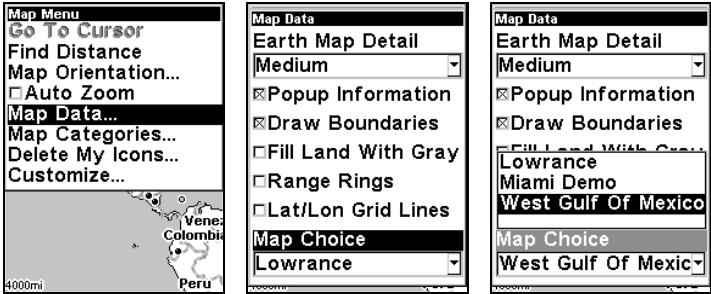
WARNING:

You should never format the MMC containing your Navionics chart. Formatting the MMC will permanently erase the chart from the card.

To display a Navionics chart:

1. Install the Navionics MMC in the memory card compartment and turn on the unit. (For full card install instructions, see Sec. 2.)

2. From the Map Page, press **MENU** | ↓ to **MAP DATA** | **ENT** | ↓ to **MAP CHOICE** | **ENT**. Use ↑ or ↓ to select the *Map Name*, then press **ENT** | **EXIT** | **EXIT**.



These figures show menu sequence (from left to right) for selecting a Navionics chart for the West Gulf of Mexico area.

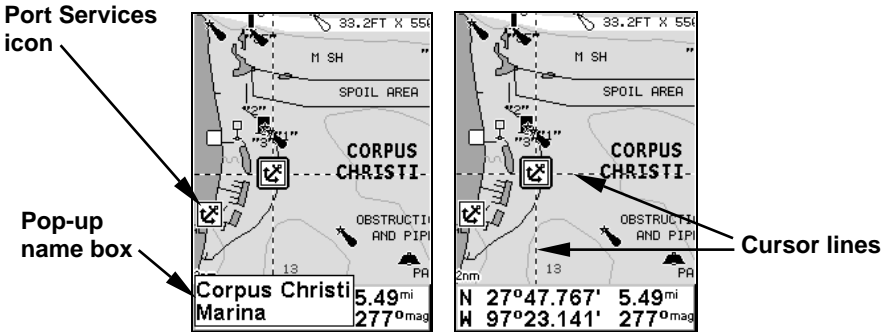
3. To turn off a Navionics chart, From the Map Page, press **MENU** | ↓ to **MAP DATA** | **ENT** | ↓ to **MAP CHOICE** | **ENT**. Use ↑ or ↓ to select **LOWRANCE**, then press **ENT** | **EXIT** | **EXIT**.

Port Information

Navionics charts contain Port Services information, represented by anchor icons on the map display. These icons appear at the 2 nautical mile zoom range. An example is displayed in the following figures.

To view Port Services information:

1. Use the arrow keys to move the cursor over a Port Services icon. When selected, a pop-up name box appears.
2. Press **FIND** | **FIND** to display the Port Services Information screen.



Navionics chart showing Port Services icon selected by cursor. When first highlighted, the Pop-Up name box appears. After a few seconds, the name box disappears, and the position, distance and bearing are displayed at the bottom of the screen.

The Port Services information screen has two windows. The top window lists the various service categories. The lower window lists the detailed services available in each basic category.

3. To scroll through the Service Categories window: press **ENT** then use **↑** or **↓** to see the types of services available. As you highlight a different category, the list in the lower window changes. To return to the Map Page, press **EXIT | EXIT**.



Port Services information screens.

4. Depending on the location, the Detailed Services window may have a long list of services under the General Services category. To scroll through the Detailed Services window: from **SERVICE CATEGORIES**, press **↓** to **DETAILED SERVICES | ENT**, then use **↑** or **↓** to read the list of available services. To return to the Map Page, press **EXIT | EXIT**. To return to the top service category window, press **ENT | ↑**.

Tidal Current Information

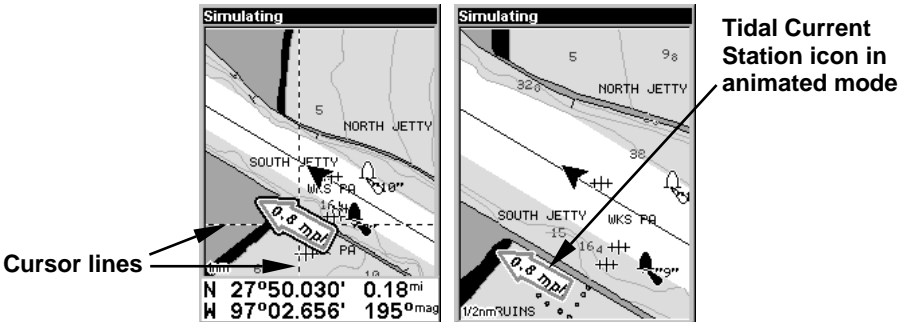
Navionics charts contain Tidal Current information, represented at large zoom ranges by a box icon with the letter "C." The icon stands for a Tidal Current Station location. An example is displayed at right.



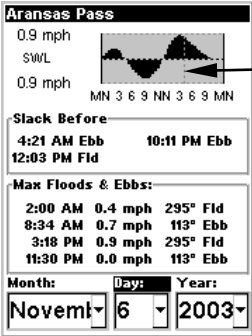
When you zoom in to a sufficiently small zoom range (1/2 nautical mile), the icon itself becomes an animated arrow showing tidal current velocity and direction *for the selected tidal station* at the present time. At larger zoom ranges, you can select the boxed "C" icon and it becomes an animated arrow with a pop-up name box (the name box disappears after a few seconds). Examples are displayed in the following figures.

To view Tidal Current information:

1. Use the arrow keys to move the cursor over a Tidal Current Station icon. When selected, a pop-up name box appears.
2. Press **FIND | FIND** to display the Tidal Current Information screen.



Left, Navionics chart showing Tidal Current Station icon selected by cursor. Right, the icon animates automatically without selecting it at the 1/2 mile zoom range. The tidal current is flowing toward the northwest at a velocity of 0.8 mph.



Line indicates current status

Current Information screen.

The Tidal Current Information screen displays daily tidal current data for this station on this date at the present time. The graph at the top of the screen is an approximate view of the flood and ebb pattern for the day, from midnight (MN), to noon (NN) to midnight (MN). The velocity

scale at the top left side of the graph changes dynamically based upon the maximum velocity of the current for that day.

Slack water, the period of little or no current, is represented by the Slack Water Line (SWL). The flood appears above the SWL and the ebb appears below the SWL.

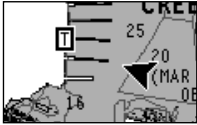
You can look up tidal current data for other dates by changing the month, day and year selection boxes. To select another date:

1. Use → and ← to highlight month, day or year, then press **ENT**.
2. Use ↑ and ↓ to select the desired month, day or year, then press **ENT**.

To clear the information screen, press **EXIT**.

Tide Information

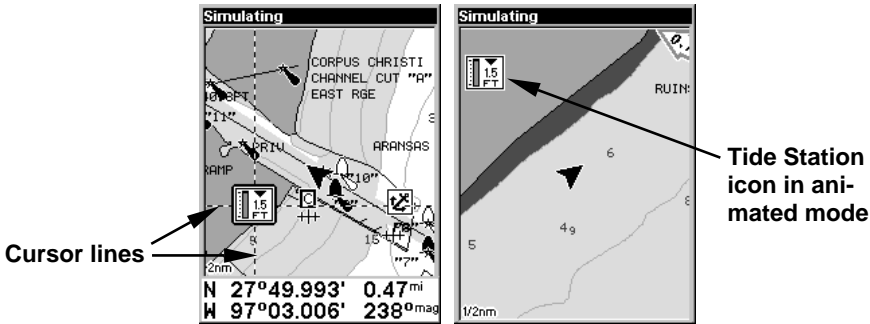
Navionics charts contain Tidal Information, represented at large zoom ranges by a box icon with the letter "T." The icon stands for a Tidal Station location. An example is displayed at right.



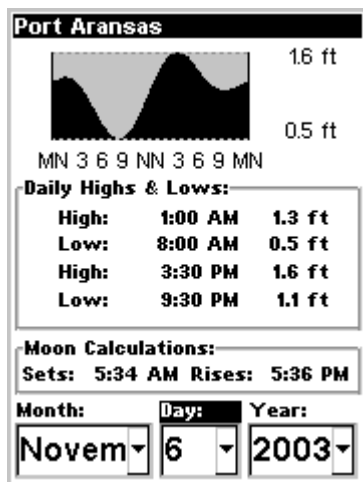
When you zoom in to a sufficiently small zoom range (1/2 nautical mile), the icon itself becomes an animated gauge showing a rising or falling tidal height *for the selected station* at the present time. At larger zoom ranges, you can select the boxed "T" icon and it becomes an animated gauge with a pop-up name box. Examples are displayed in the following figures.

To view tide information:

1. Select a Tide Station icon: use the arrow keys to move the cursor over an icon. When it is selected, a pop-up name box appears.
2. After selecting the Tide Station icon, press **FIND | FIND** to display the Tide Information screen.



At left, Navionics chart showing Tide Station icon selected by cursor. Right, icon animates automatically without selection at the 1/2 mile zoom range. In the example above, the tide is at 1.5 feet and falling, as shown by the down arrow at the top of the icon.



Tide Information screen.

The Tide Information screen displays daily tidal data for this station on this date at the present time. The graph at the top of the screen is an approximate view of the tidal range pattern for the day, from midnight (MN), to noon (NN) to midnight (MN). The dotted line across the graph is the Mean Lower Low Water line (MLLW).

The height scale on the top right side of the graph changes, based upon the maximum *range* of the tide for that day. The MLLW line also adjusts its position as the height scale changes.

You can look up tidal data for other dates by changing the month, day and year selection boxes. To select another date:

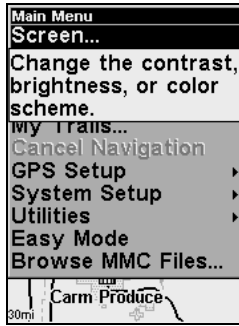
1. Use → and ← to highlight month, day or year, then press **ENT**.
2. Use ↑ and ↓ to select the desired month, day or year, then press **ENT**.

To clear the information screen, press **EXIT**.

Pop-up Help

Help is available for virtually all of the menu labels on this unit. By highlighting a menu item and leaving it highlighted for a few seconds, a "pop-up" message appears that describes the function of the menu item. This feature is on by default.

To set up Pop-up Help: Press **MENU|MENU|↓** to **SYSTEM SETUP|ENT|↓** to **POPUP HELP**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.) After the option is set, press **EXIT|EXIT** to return to the page display.



This example shows the Pop-up Help message for the Screen command, located on the Main Menu in Advanced Mode.

Reset Options

To reset all features to their factory defaults:

In Advanced Mode

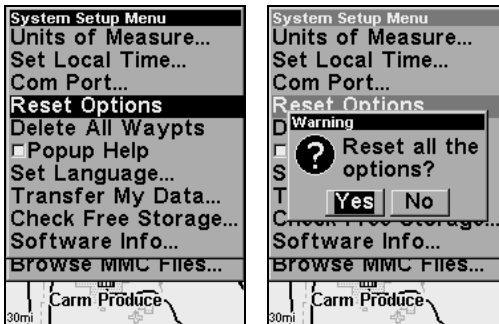
1. Press **MENU** | **MENU** | **↓** to **SYSTEM SETUP** | **ENT** | **↓** to **RESET OPTIONS** | **ENT** | **←** to **YES** | **ENT**.

In Easy Mode

Hold down the **PAGES** key while you press **PWR** to turn the unit on.

NOTE:

Reset Options does *not* erase any waypoints, routes, icons or plot trails.



Advanced Mode's Reset Options command, left, and the Reset Options Menu, right.

Screen Contrast and Brightness

The adjustments work the same in both Easy and Advanced Mode, but you access the **SCREEN** command differently in each mode:

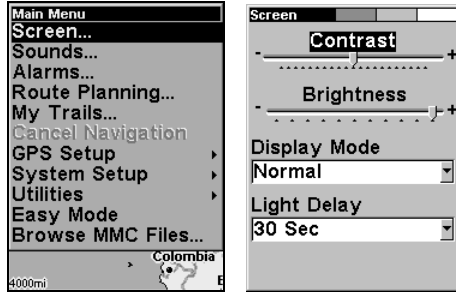
In Easy Mode, you first press **MENU** | **↓** to **SCREEN** | **ENT**.

In Advanced Mode, you first press **MENU** | **MENU** | **ENT**.

Once in the Screen menu:

To adjust the display's contrast:

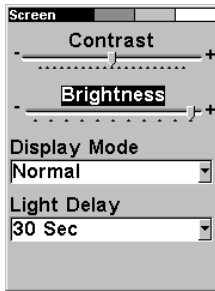
1. The **CONTRAST** slider bar is already selected. Press → or ← to move the bar. The left end of the scale is minimum contrast; the right end is maximum contrast.



Screen Command, left, and Contrast bar, right.

To adjust the display's brightness:

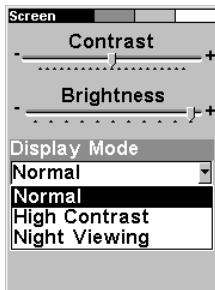
1. Press ↓ to **BRIGHTNESS**. Press → or ← to move the bar. The left end of the scale is minimum contrast; the right end is maximum contrast.



Screen Command, left, and Contrast bar, right.

To adjust the screen's display mode:

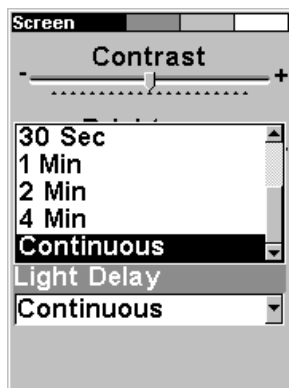
1. Press ↓ to **DISPLAY MODE** | ENT then press ↑ or ↓ to select *mode* | EXIT.



Display Mode menu.

To adjust the display's back light delay options:

1. Press **↓** to **LIGHT DELAY | ENT** | press **↑** or **↓** to select *mode* | **EXIT**.
2. To leave screen settings and return to the last page displayed, press **EXIT** | **EXIT**.



Light Delay menu. Setting shown is "continuous," which is ideal for night travel in a vehicle on external power.

Set Language

This unit's menus are available in 10 languages: English, French, German, Spanish, Italian, Danish, Swedish, Russian, Dutch and Finnish. To select a different language:

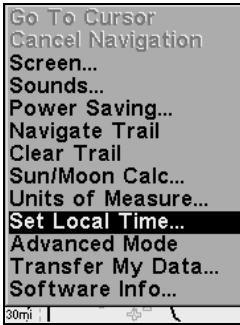
1. Press **MENU | MENU | ↓** to **SYSTEM SETUP | ENT**.
2. Press **↓** to **SET LANGUAGE... | ENT**.
3. Use **↓** or **↑** to select a different language and press **ENT**. All menus now appear in the language you selected.

Set Local Time

The local time and date are saved when a waypoint is created. The adjustments work the same in both Easy and Advanced Mode, but you access the **SET LOCAL TIME** command differently in each mode:

In Easy Mode, you first press **MENU | ↓** to **SET LOCAL TIME | ENT**.

In Advanced Mode, you first press **MENU | MENU | ↓** to **SYSTEM SETUP | ENT | ↓** to **SET LOCAL TIME | ENT**.



Set Local Time Command: left, Easy Mode; center Advanced. At right, the Time Settings menu.

Once in the Time Settings menu:

To set Local Time: Press **ENT**. Press **↑** or **↓** to change the first character, then press **→** to move the cursor to the next character. Repeat until the time is correct, then press **ENT**.

To set the Month: Press **↓** to **MONTH|ENT**. Press **↑** or **↓** to select the month, then press **ENT**.

To set the Day: Press **↓** to **DAY|ENT**. Press **↑** or **↓** to select the day, then press **ENT**.

To set the Year: Press **↓** to **YEAR|ENT**. Press **↑** or **↓** to select the year, then press **ENT**.



Adjusting the time, left, Adjusting the month, right.

The last field in this menu is **CONFIG DST**. This feature allows your unit to automatically adjust with the time change caused by Daylight Saving Time (you should only have to set it once). You may select which set of rules matches DST in your region, or simply accept the default.

Once you have each field set the way you want, press **EXIT** repeatedly until you return to the previous page.

Software Version Information

From time to time, Lowrance updates the operating system software in some of its products. These software upgrades are usually offered to customers as free downloads from our web site, www.lowrance.com. These upgrades make the unit perform better or introduce a new feature or function. You can find out what software version is running in your iFINDER by using the Software Info command.



Software Info command: left, Easy Mode; center Advanced. At right, the Software Info screen.

The command works the same in both Easy and Advanced Mode, but you access the Software Info command differently in each mode:

In **Easy Mode**, you:

1. Press **MENU** | ↓ to **SOFTWARE INFO** | **ENT**.
2. Read the information displayed on the screen.
3. To return to the previous page, press **EXIT** | **EXIT**.

In **Advanced Mode**, you:

1. Press **MENU** | **MENU** | ↓ to **SYSTEM SETUP** | **ENT** | ↓ to **SOFTWARE INFO** | **ENT**.
2. Read the information displayed on the screen.
3. To return to the previous page, press **EXIT** | **EXIT**.

Sounds and Alarm Sound Styles

Sounds triggered by key strokes and alarms can be adjusted. The adjustments work the same in both Easy and Advanced Mode, but you access the Sounds command differently in each mode:

In **Easy Mode**, you first press **MENU** | ↓ to **SOUNDS** | **ENT**.

In **Advanced Mode**, you first press **MENU** | **MENU** | ↓ to **SOUNDS** | **ENT**.



Sounds command: left, Easy Mode; center Advanced.
At right, the Sounds menu.

Once in the Sounds menu:

To set Key Sounds: With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off). After the option is set, press **EXIT|EXIT** to return to the page display.

To set Alarm Sounds: Press **↓** to **ALARM SOUNDS**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off). After the option is set, press **EXIT|EXIT** to return to the page display.

To set Alarm Style: Press **↓** to **ALARM STYLE|ENT**. Press **↑** or **↓** to change the style, then press **ENT**. After the option is set, press **EXIT|EXIT** to return to the page display.

Track Smoothing

This is a factory setting that *should always be left on*. When stopped or traveling at slow speeds (such as walking or trolling), Track Smoothing prevents wandering of trails, the steering arrow, compass rose and a map in track-up mode.



Track Smoothing option, turned on.

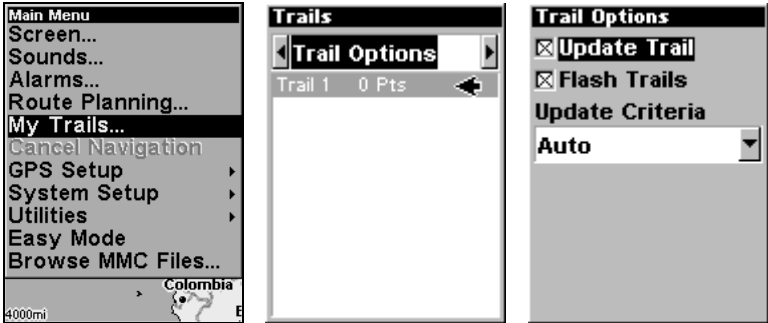
Trail Options

There are several options you can use with trails. Some affect all trails, other options can be applied to a particular trail. You can change the way trails are updated, you can display or hide trails, make them flash on the screen or not flash, create a new trail, delete a trail, etc. These options are only available in Advanced Mode, but option changes made in Advanced will affect the appearance of trails in Easy Mode.

General Trail Options

To access the Trails Menu:

1. Press **MENU | MENU | ↓** to **MY TRAILS | ENT | ENT**.



Main Menu, left, Trails Menu, center, Trail Options, right.

Delete All Trails

To remove all of the trails from memory: from the Trails Menu, press → to **DELETE ALL | ENT | ←** to **YES | ENT**.

Flash Trails on Screen Option

Press ↓ to **FLASH TRAILS**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.)



Trail Options menu: Flash Trails.

Update Trail Option

This menu lets you change the way the trail updates occur.



Trail Options menu.

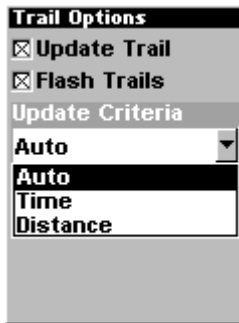
WARNING:

If you *uncheck* the Update Trail option, automatic trail creation and recording will be turned *off* in both Advanced and Easy modes, and you must turn it back on to record trails. The default setting is on.

Press ↓ or ↑ to **UPDATE TRAILS**. With the option highlighted, press **ENT** to check it (turn on) and uncheck it (turn off.)

Update Trail Criteria (Auto, Time, Distance)

The options are automatic, time, or distance. When it's in the default automatic mode, the unit doesn't update the plot trail while you're traveling in a straight line. Once you deviate from a straight line, the unit "drops" a plot point (trail waypoint) onto the trail. This conserves plot trail points. If a plot trail uses all of the available points allotted to it, the beginning points are taken away and placed at the end of the trail.



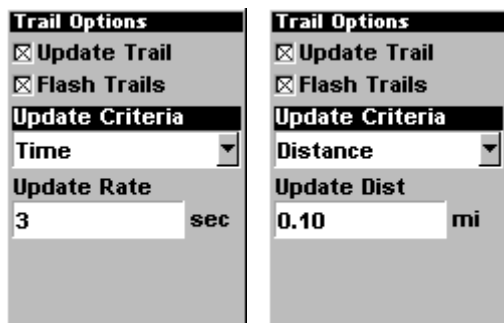
Trail Options menu.

Press ↓ to **UPDATE CRITERIA** | **ENT** | press ↓ or ↑ to select *criteria type* | **ENT**.

Trail Update Rate (Time, Distance)

You can update a trail by time, with a range from 1 second to 9999 seconds; the default is 3 seconds. You can update by distance, with a range from 0.01 mile/nm/km to 9.99 mile/nm/km; the default is 0.10 mile.

With Update Criteria selected, press ↓ to either the rate or distance data entry boxes and press **ENT**. Press ↑ or ↓ to change the first character, then press → to the next character and repeat until the entry is correct. Press **EXIT | EXIT** to return to the Trail Options Menu.



Trail Options menu.

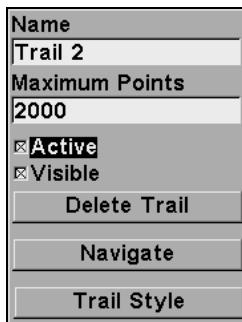
Specific Trail Options

Delete Trail

To delete a specific trail: From the Trails menu, press ↓ to *trail name* | **ENT**. The Edit Trail menu appears as seen in the following figure. Press ↓ to **DELETE TRAIL** | **ENT** | ← to **YES** | **ENT**.

New Trail

To manually start a new trail or delete a trail: From the Trail Options Menu, press → to **NEW TRAIL** | **ENT**. The trail menu appears as seen below:



Trail menu.

Trail Visible/Invisible and Other Trail Options

The name, maximum number of points in the trail, activity, and visibility are all changed on the Edit Trail screen. The Active setting determines whether or not iFINDER is recording new points for a particular trail.

On the Edit Trail menu, press ↓ or ↑ to highlight the section you wish to change, then press **ENT**. Make your changes, then press **EXIT** to erase this menu.

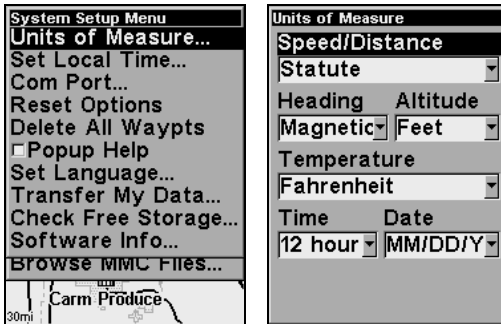
You can also change the trail line color and pattern. For instructions, see the entries on Edit a Trail Color and Edit a Trail Pattern in Sec. 4, Advanced GPS Operations.

Units of Measure

This menu (shown below) sets the speed and distance (statute or nautical miles, meters), depth (feet, fathoms, or meters), temperature (degrees Fahrenheit or Celsius) and heading (true or magnetic) units. To change the units:

In **Easy Mode**, you first press **MENU** | ↓ to **UNITS OF MEASURE** | **ENT**.

In **Advanced Mode**, you first press **MENU** | **MENU** | ↓ to **SYSTEM SETUP** | **ENT** | **ENT**.



At left, Units of Measure command on System Setup menu. At right, Units of Measure Menu.

To set Speed/Distance Unit of Measure: Press **ENT**. Press ↑ or ↓ to change the Speed/Distance, then press **ENT**. After the option is set, press **EXIT** | **EXIT** to return to the page display.

To set Heading: Press ↓ to **HEADING** | **ENT**. Press ↑ or ↓ to change the heading, then press **ENT**. After the option is set, press **EXIT** | **EXIT** to return to the page display.

To set Time Format: Press ↓ to **TIME FORMAT|ENT**. Press ↑ or ↓ to change the time format, then press **ENT**. After the option is set, press **EXIT|EXIT** to return to the page display.

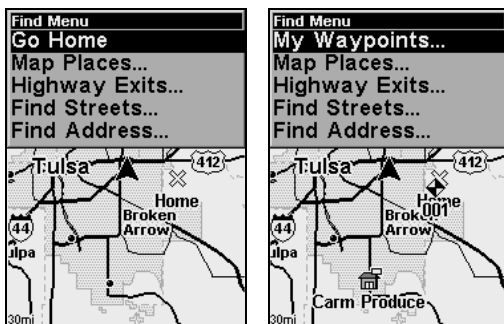
To set Date Format: Press ↓ to **DATE FORMAT|ENT**. Press ↑ or ↓ to change the date format, then press **ENT**. After the option is set, press **EXIT|EXIT** to return to the page display.

Section 6: Searching

NOTE:

The background map loaded in your unit lets you search for U.S. Interstate Highway exits and exit services, as well as some land features, including cities and lakes. For a full set of searchable land features, including landmarks, streets, addresses and Points of Interest, you must load your own high-detail custom map produced with our MapCreate 6 software. For a complete description of what detail is found in the background map and custom MapCreate maps, see the discussion beginning on page 24.

Whether you are in Easy Mode or Advanced Mode, iFINDER's search functions all begin with the **FIND** key, and the search menus work the same in each mode. However, the Go Home command works only in Easy Mode and the Find Waypoints command works only in Advanced Mode. (You can still find a "Home" waypoint in Advanced mode — you just search for it using the Find Waypoints command.)



Easy Mode Find menu, left; Advanced Mode Find menu, right.

NOTE:

You can search for items even if iFINDER hasn't acquired a position yet, or start from a position other than your own. When you do a search, distance and bearing to the selected item will be calculated from iFINDER's current position. If iFINDER hasn't acquired a position, it will use the last known position. If the cursor is active, iFINDER will always begin the search at the cursor. You can look up items by name, or search for the item nearest to you.

Find Addresses

1. Press **FIND** | ↓ to **ADDRESSES** | **ENT**.
2. Press **ENT** to search in the Address field.

Find Address	
Address	0
Street	None
City	Any
Find Address	

Find Address Menu.

3. To enter an address number, press \uparrow or \downarrow to change the first number, then press \rightarrow to move the cursor to the next number and repeat until the number is correct, then press **ENT**. To return to the previous page, press **EXIT**.

4. To enter a street name, press \downarrow to **STREET|ENT**. There are two options: **A**. You can **spell out** the name in the top selection box. Press \uparrow or \downarrow to change the first letter, then press \rightarrow to move the cursor to the next letter and repeat until the name is correct, then press **ENT|ENT**. **B**. Jump down to the lower selection list by pressing **ENT**, then press \downarrow or \uparrow to select a street name from the list, then press **ENT**. The street name you selected is now in the street field. To return to the previous page, press **EXIT**.

Tip:

When entering a street name, do *not* enter the street's compass direction (N, S, E or W) in the street name field. Just enter the number, or name. If the example below had been a search for "324 E. 9th St," you would enter "9th" and press **ENT**. The iFINDER will generate a list of all possible 9th streets, and let you choose the one you want.

Find Address	
Address	324
Street	0
City	Any
Find Address	

Find By Name	
9th	
Find In List	80 (Interstate) \uparrow
	9th <input type="checkbox"/>
	9 B (State Highw
	9 (Access Rd)
	9 (County Highwa
	9 (County I-)
	9 (County Road 0
	9 (County Road)
	9 (County StHwv) \downarrow

Find Address	
Address	324
Street	9th
City	Any
Find Address	

Find street field, left, Find street by name menu, center, Street entry complete, right.

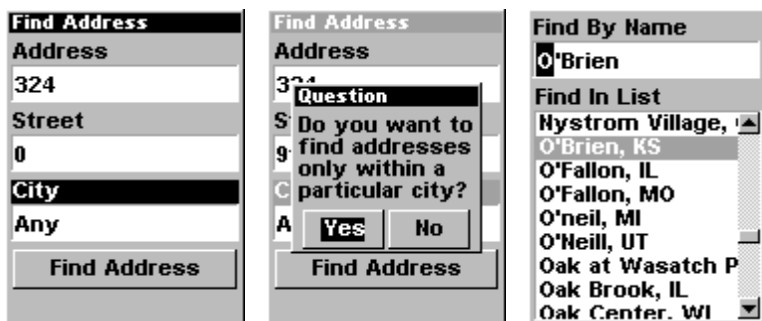
5. To enter a city name, press \downarrow to **CITY|ENT**. You will be asked if you want to find addresses only within a particular city. This option is de-

signed so you can limit an address search to a single city if necessary (see the note below).

If you select yes, there are two options: **A.** You can **spell out** the city name in the top selection box. Press \uparrow or \downarrow to change the first letter, then press \rightarrow to move the cursor to the next letter and repeat until the name is correct, then press **ENT|ENT**. **B.** Jump down to the lower selection list by pressing **ENT**, then press \downarrow or \uparrow to select a city name from the list, then press **ENT**. The city name you selected is now in the city field. To return to the previous page, press **EXIT**.

NOTE:

We recommend that you do *not* enter a city name unless the list you are given is too large when you try searching without it. iFINDER can actually search quicker without a city and you save time by not entering a city name.



Find city field, left, Search in particular city only option, center, Find City by name, right.

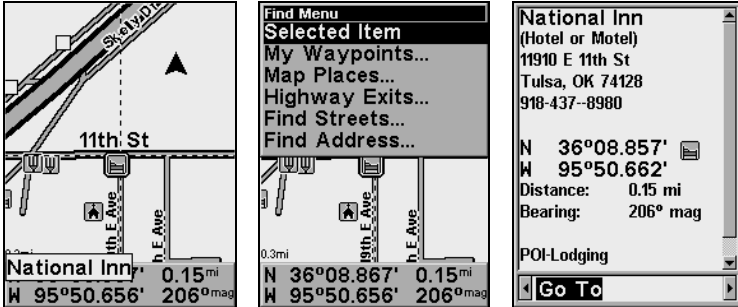
6. When the necessary search fields are filled in, press \downarrow to **FIND ADDRESS|ENT**. Your units asks you to wait while it searches for the address. (If an address is not in the database, a message appears saying the address could not be found.)

7. The unit will display a list of addresses. If the address you are looking for is highlighted at the top of the list, press **ENT**. If not, use \downarrow and \uparrow to select the correct address from the list, then press **ENT**. The Map Page will then appear with the location selected by the cursor.

8. To navigate to the address, press **MENU|ENT|EXIT** and your iFINDER will begin showing navigation information to the address pointed out by the cursor. If you are only looking up an address (not navigating), just press **EXIT** to return to the previous page.

Find Any Item Selected by Map Cursor

With a POI or map feature selected by the cursor, press **FIND|ENT**. To return to the previous page, press **EXIT**.



A POI selected by the cursor, left, The Find Menu, center, POI information screen, right.

NOTE:

Since the Go To command is highlighted, you can navigate to the selected POI by pressing **ENT** while in the POI Waypoint Information screen.

Find Home Waypoint

The Home Waypoint is a unique waypoint created when using the iFINDER in Easy Mode.

To search for the Home Waypoint in Easy Mode: simply press **FIND|↓** to **Go HOME|ENT**.



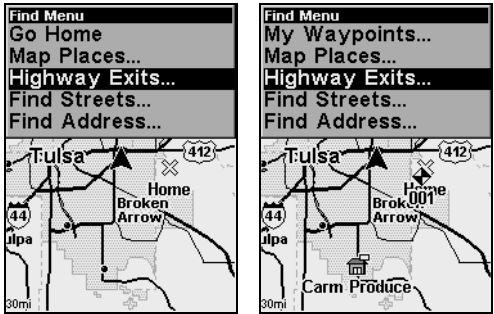
The Easy Mode Find Menu.

In Advanced Mode, you still have access to a Home Waypoint created in Easy Mode. It will simply show up in your waypoints list under the name "Home." You can search for the Home Waypoint, navigate to it, add it to a route, or otherwise use it exactly like any other waypoint.

Details on searching for waypoints in Advanced Mode can be found later in this section, in the segment *Find Waypoints*.

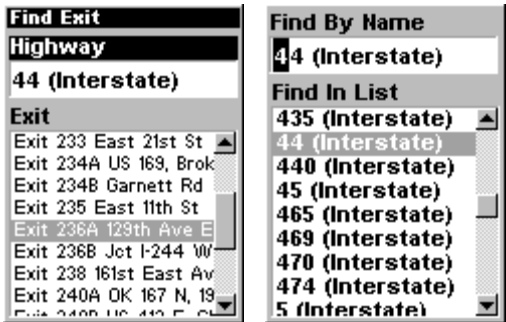
Find Interstate Highway Exits

1. Press **FIND** | ↓ to **HIGHWAY EXITS** | **ENT**, which calls up the Find Exit Menu.



Easy Mode Find menu, left; Advanced Mode Find menu, right.

2. First, select a highway name by pressing **ENT**, which calls up the Find By Name menu. There are two highway search options: **A**. You can **spell out** the highway name in the top selection box. Press ↑ or ↓ to change the first letter, then press → to move the cursor to the next letter and repeat until the name is correct, then press **ENT** | **ENT**. **B**. Jump down to the lower selection list by pressing **ENT**, then press ↓ or ↑ to select a highway from the list, then press **ENT**.



Find Exit using the Highway Name.

3. Once you have selected a highway name you can then select an exit. Press ↓ to switch to the Exit List, then press ↓ or ↑ until you highlight the exit you want, then press **ENT**.



Selected exit.

4. In the Exit Information screen you have two choices. **A.** Press **ENT** to navigate or "go to" the exit. **B.** Press **→|ENT** to find the exit on the map.



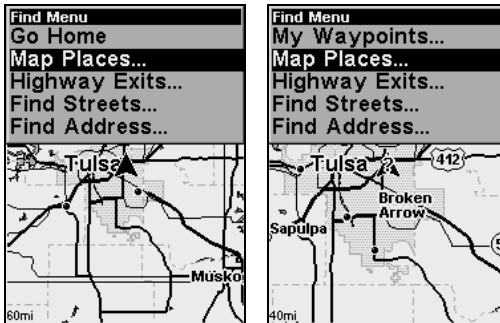
"Go To" option, left, "Find On Map" option, right.

Tip:

You can also look up some additional information on the Exit Services located near this exit. Press **↓** to **SERVICES|↓** or **↑** to select *service name|ENT*.

Find Map Places or Points of Interest (POI)

1. Press **FIND|↓** to **MAP PLACES|ENT**.



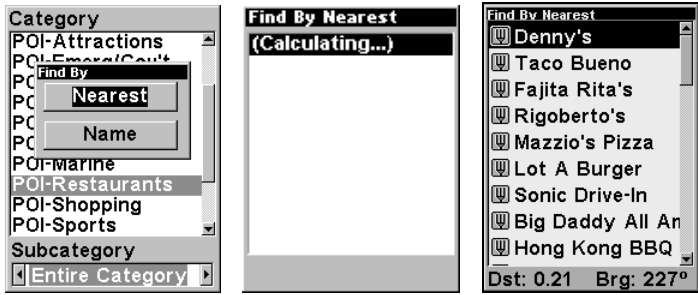
Easy Mode Find menu, left; Advanced Mode Find menu, right.

2. Press ↓ or ↑ to select a Map Place or POI category then press **ENT**. (To narrow your search, press ← or → to select a subcategory before pressing **ENT**.) You will be given two options: Search by Name or by Nearest.



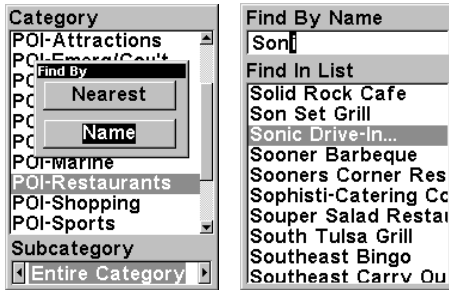
Map Places category menu.

3. **Search by nearest POI.** At the Find By menu, press **ENT**. The Find by Nearest menu will show a "calculating" screen then a list of nearest POIs will appear. Press ↓ or ↑ to select the POI you want and press **ENT** to call up the POI's Waypoint Information screen.



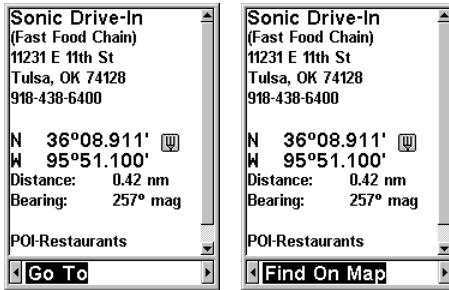
Find by nearest option, left, Calculating screen, center, POI list, right.

4. **Search by name of POI.** At the Find By menu, press ↓|**ENT**. There are two options: **A.** You can **spell out** the POI in the top selection box. Press ↑ or ↓ to change the first letter, then press → to move the cursor to the next letter and repeat until the name is correct, then press **ENT|ENT**. **B.** Jump down to the lower selection list by pressing **ENT**, then press ↓ or ↑ to select a POI from the list, then press **ENT** to call up the POI's Waypoint Information screen.



Find by name option, left, Find by name menu, right.

5. When the POI's Waypoint Information screen appears, you can choose to "Go To" the POI by pressing **ENT** or find it on the map by pressing **→** | **ENT**.

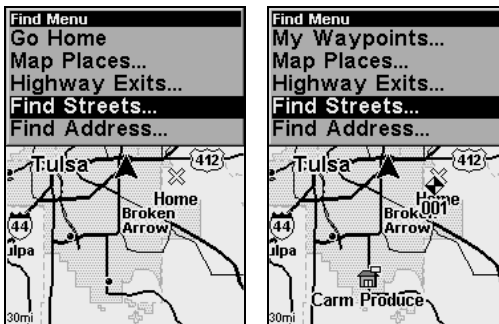


"Go To" POI option, left, "Find on Map" POI option, right.

Find Streets or Intersections

Find a Street

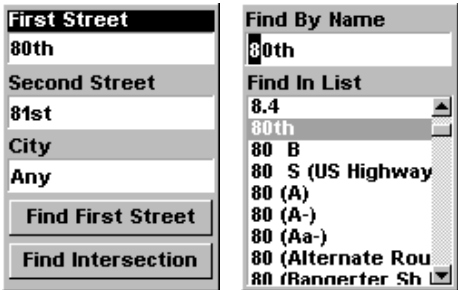
1. Press **FIND** | **↓** to **STREETS** | **ENT** and the Find Streets menu appears.



Easy Mode Find menu, left; Advanced Mode Find menu, right.

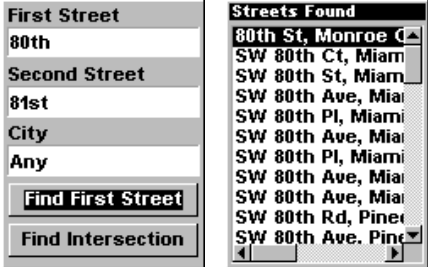
2. You must first fill in a street name in the First Street dialog box. Press **ENT** to display the Find By Name menu. There are two options: **A**. You

can **spell out** the street in the top selection box. Press \uparrow or \downarrow to change the first letter, then press \rightarrow to move the cursor to the next letter and repeat until the name is correct, then press **ENT|ENT**. **B**. Jump down to the lower selection list by pressing **ENT**, then press \downarrow or \uparrow to select a street from the list, then press **ENT**.



Find streets or intersections menu, left, Find street by name, right.

3. The Find Streets menu reappears with the street you're searching for in the First Street box. (In this example, it's 80th Street.) To search for that street, press \downarrow to **FIND FIRST STREET|ENT**. A message appears asking you to wait while the unit finds the street. When the Streets Found list appears, press \uparrow or \downarrow to the street you are searching for and press **ENT**.



Find first street, left, Street found, right.

If you want to navigate to the found street at the cursor location, just press **MENU|ENT|EXIT**.

Find an Intersection

You must enter one street in the First Street dialog box and enter the next street in the Second Street dialog box.

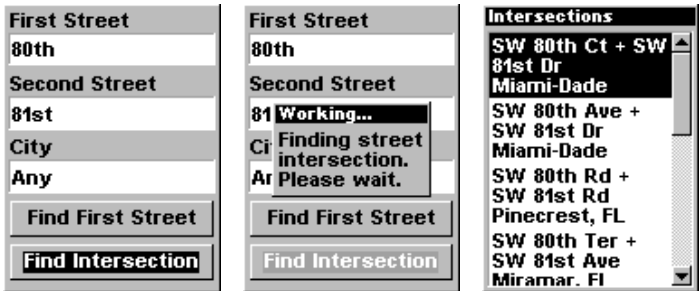
1. Press **FIND| \downarrow to STREETS|ENT** and the Find Streets menu appears.
2. You must first fill in a street name in the First Street dialog box. Press **ENT** to display the Find By Name menu. There are two options: **A**. You can **spell out** the street in the top selection box. Press \uparrow or \downarrow to change

the first letter, then press → to move the cursor to the next letter and repeat until the name is correct, then press ENT|ENT. B. Jump down to the lower selection list by pressing ENT, then press ↓ or ↑ to select a street from the list, then press ENT.

3. The Find Streets menu reappears with the street you're searching for in the First Street box.

4. Now fill in the second street. Press ↓ to SECOND STREET|ENT and the Find by Name menu appears again. Just like before, there are two options: A. You can spell out the street in the top selection box. Press ↑ or ↓ to change the first letter, then press → to move the cursor to the next letter and repeat until the name is correct, then press ENT|ENT. B. Jump down to the lower selection list by pressing ENT, then press ↓ or ↑ to select the second street from the list, then press ENT.

5. The Find Streets menu reappears with the first and second streets dialog boxes filled in. In this example we selected 81st Street as our second street. You could now use similar techniques to select a city or Zip Code, but your search will probably be faster if you leave those boxes blank. (You can specify a city and/or Zip Code later on to narrow the search, if the resulting list is too long.)



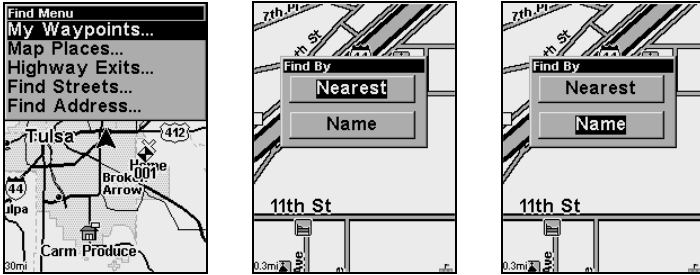
Find intersection, left, and "Working" menu, center, Intersection list, right.

6. To search for the intersection of the two streets, press ↓ to FIND INTERSECTION|ENT. A message appears asking you to wait while the unit finds the intersection. When the Intersections Found list appears, press ↑ or ↓ to select the intersection you are searching for and press ENT. (In the previous example, we selected the intersection of SW 80th Court and SW 81st Drive in Miami, Fla.)

If you want to navigate to the found intersection, just press MENU|ENT|EXIT.

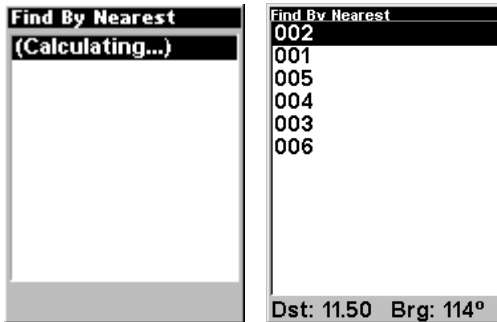
Find Waypoints (*Advanced Mode only*)

1. Press **FIND | ENT**.
2. If searching for the *Nearest* waypoint, press **ENT**. If searching for a waypoint *By Name*, press ↓ to **NAME | ENT**. (To search by name, jump to step 5 below.)



Find menu, left, and Find By Nearest, center, Find by Name, right.

3. If you're looking for nearest, iFINDER says it is calculating, then a list of waypoints appears. The closest is highlighted at the top of the list and the farthest is at the bottom of the list.

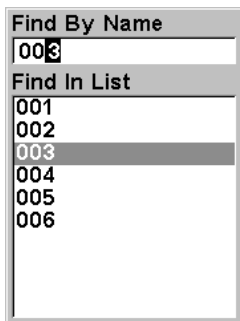


Calculating message, left, and list of the nearest waypoints, right.

4. To see location information on the closest (highlighted) waypoint, press **ENT** and the Waypoint Information screen appears. (If you wanted to, you could select another waypoint from the list with the ↑ or ↓ keys.)
 - A. *To navigate* to the waypoint, press **ENT**. (The Go To Waypoint command is already highlighted.) The unit will show navigation information to the waypoint.
 - B. *To find* the waypoint, press → to **FIND ON MAP | ENT**. The Map Page appears with the cursor highlighting the found waypoint.

To clear these menus and return to the previous page, press **EXIT** repeatedly.

5. If you're looking by name, there are two options: **A.** You can **spell out** the name in the top selection box. Press \uparrow or \downarrow to change the first letter, then press \rightarrow to move the cursor to the next letter and repeat until the name is correct, then press **ENT|ENT**. **B.** Jump down to the lower selection list by pressing **ENT**, then press \downarrow or \uparrow to select a waypoint from the list, then press **ENT**. The Waypoint Information screen appears.



Find By Name menu.

A. *To navigate* to the waypoint, press press **ENT**. (The **Go To Waypoint** command is already highlighted.) The unit will show navigation information to the waypoint.

B. *To find* the waypoint, press \rightarrow to **FIND ON MAP|ENT**. The Map Page appears with the cursor highlighting the found waypoint.

To clear these menus and return to the previous page, press **EXIT** repeatedly.

Section 7: Supplemental Material

Datums Used by This Unit

WGS 1984 Default	Zaire, Zambia and Zimbabwe	Australian Geodetic 1984 - Australia & Tasmania
Adindan Mean for Ethiopia, Sudan	Arc 1950 - Botswana Arc 1950 - Burundi	Ayabelle Lighthouse - Djibouti
Adindan Burkina Faso	Arc 1950 - Lesotho Arc 1950 - Malawi	Bellevue (IGN) - Efate & Erromango Islands
Adindan Cameroon	Arc 1950 - Swaziland	Bermuda 1957 - Bermuda
Adindan Ethiopia	Arc 1950 - Zaire Arc 1950 - Zambia	Bissau - Guinea- Bissau Bogota Observatory - Colombia
Adindan Mali	Arc 1950 - Zimbabwe	
Adindan Senegal	Arc 1960 - Mean for Kenya, Tanzania	Bukit Rimpah - Indo- nesia (Bangka & Be- litung Islands)
Adindan Sudan	Ascension Island 1958 - Ascension Island	Camp Area Astro - Antarctica (McMurdo Camp Area)
Afgooye Somalia	Astro Beacon E 1945 - Iwo Jima	Campo Inchauspe - Argentina
Ain el Abd 1970 Bahrain	Astro DOS 71/4 - St. Helena Island	Canton Astro 1966 - Phoenix Islands
Ain el Abd 1970 Saudi Arabia	Astro Tern Island (FRIG) 1961 - Tern Island	Cape - South Africa
Anna 1 Astro 1965 Cocos Islands	Astronomical Station 1952 - Marcus Island	Cape Canaveral - Bahamas, Florida
Antigua Island Astro 1943; Antigua (Lee- ward Islands)	Australian Geodetic 1966 - Australia & Tasmania	Carthage - Tunisia
Arc 1950; Mean for Botswana, Lesotho, Malawi, Swaziland,		Switzerland
		Chatham Island Astro 1971; New Zealand (Chatham Island)

Chua Astro Paraguay	European 1950 England, Channel Islands, Ireland, Scotland, Shetland Islands	L.C. 5 Astro 1961 Cayman Brac Island
Corrego Alegre Brazil		Leigon Ghana
Dabola Guinea	European 1950 Finland, Norway	Liberia 1964 Liberia
Djakarta (Batavia) Indonesia (Sumatra)	European 1950 Greece	Luzon Philippines (Exclud- ing Mindanao)
DOS 1968 New Georgia Islands (Gizo Island)	European 1950 Iran	Luzon Philippines (Min- danao)
Easter Island 1967 Easter Island	European 1950 (Sicily)	Mahe 1971 Mahe Island
European 1950 Mean for Austria, Belgium, Denmark, Finland, France, West Germany, Gi- braltar, Greece, Italy, Luxembourg, Neth- erlands, Norway, Portugal, Spain, Sweden, Switzerland	European 1950 Malta	Massawa Ethiopia (Eritrea)
	Ireland 1965 Ireland	Merchich Morocco
	ISTS 061 Astro 1968 South Georgia Is- lands	Midway Astro 1961 Midway Islands
	ISTS 073 Astro 1969 Diego Garcia	Minna Cameroon
European 1950 Mean for Austria, Denmark, France, West Germany, Netherlands, Swit- zerland	Johnston Island 1961 Johnston Island	Minna Nigeria
European 1950 Mean for Iraq, Israel, Jordan, Lebanon, Kuwait, Saudi Arabia, Syria	Kandawala Sri Lanka	Montserrat Island Astro 1958; Montser- rat (Leeward Islands)
	Kerguelen Island 1949 Kerguelen Island	M'Poraloko Gabon, Nahrwan, Oman (Masirah Is- land)
European 1950 Cyprus	Kertau 1948 West Malaysia & Singapore	Nahrwan Saudi Arabia
European 1950 Egypt	Kusaie Astro 1951 Caroline Islands	Nahrwan United Arab Emirates

Naparima BWI Trinidad & Tobago	North American 1927 Canada (Alberta, British Columbia)	Old Hawaiian Mean for Hawaii, Kauai, Maui, Oahu
North American 1927 Mean for Antigua, Barbados, Barbuda, Caicos Islands, Cuba, Dominican Republic, Grand Cayman, Jamaica, Turks Islands	North American 1927 Canada (Manitoba, Ontario)	Old Hawaiian Hawaii
North American 1927 Mean for Belize, Costa Rica, El Sal- vador, Guatemala, Honduras, Nicaragua	North American 1927 Canada (New Brunswick, New- foundland, Nova Scotia, Quebec)	Old Hawaiian Kauai
North American 1927 Mean for Canada	North American 1927 Canada (Northwest Territories, Sas- katchewan)	Old Hawaiian Maui
North American 1927 Mean for CONUS (Continental United States)	North American 1927 Canada (Yukon)	Old Hawaiian Oahu
North American 1927 Mean for CONUS (East of Mississippi River) including Lou- isiana, Missouri, Min- nesota	North American 1927 Cuba	Oman Oman
North American 1927 Mean for CONUS (West of Mississippi River)	North American 1927 Greenland (Hayes Peninsula)	Ordinance Survey Great Britain 1936 - Mean for England, Isle of Man, Scotland, Shetland Islands, Wales
North American 1927 Alaska	North American 1927 Mexico	Ordinance Survey Great Britain 1936 - England
North American 1927 Bahamas (Except San Salvador Island)	North American 1983 Alaska, Canada, CONUS	Ordinance Survey Great Britain 1936 - England, Isle of Man, Wales
North American 1927 Bahamas (San Sal- vador Island)	North American 1983 Central America, Mexico	Ordinance Survey Great Britain 1936 - Scotland, Shetland Islands
	Observaorio Metereo 1939; Azores (Corvo & Flores Islands)	Ordinance Survey Great Britain 1936 - Wales
	Old Egyptian 1907 Egypt	Pico de las Nieves Canary Islands
		Pitcairn Astro 1967 Pitcairn Island

Point 58		Tokyo
Sweden	South American 1969 Chile	Mean for Japan, Korea, Okinawa
Santo (DOS) 1965 Espirito Santo Island	South American 1969 Colombia	Tokyo Japan
Sao Braz Azores (Sao Miguel, Santa Maria Islands)	South American 1969 Ecuador	Tokyo Korea
Sapper Hill 1943 East Falkland Island	South American 1969 Ecuador (Baltra, Galapagos)	Tokyo Okinawa
Schwarzeck Nambia	South American 1969 Guyana	Tristan Astro 1968 Tristan da Cunha
Selvagem Grande Salvage Islands	South American 1969 Paraguay South American 1969 Peru	Viti Levu 1916 Fiji (Viti Levu Island) Wake
SGS 85 Soviet Geodetic System 1985	South American 1969 Trinidad & Tobago	Eniwetok 1960 Marshall Islands
South American 1969 Mean for Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Trinidad & Tobago, and Venezuela	South American 1969 Venezuela South Asia	Wake Island Astro 1952 Wake Atoll
South American 1969 Argentina	Singapore Tananarive Observatory 1925; Madagascar	WGS 1972 Global Definition Yacare Uruguay
South American 1969 Bolivia	Timbalai 1948 Brunei, East Malaysia (Sabah, Sarawak)	Zanderij Suriname
South American 1969 Brazil		

FCC Compliance

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

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the factory customer service department for help.

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"We", "our", or "us" refers to Lowrance Electronics, Inc., the manufacturer of this product. "You" or "your" refers to the first person who purchases the product as a consumer item for personal, family, or household use. The Databases Limited Warranty applies to the one or more databases that your product may contain. We refer to each of these as a "Database" or together as the "Databases." Your product may thus include the "WBS Database" which contains worldwide background surface mapping data, the "SmartMap Database" which contains inland mapping data, or other Databases.

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

This warranty does NOT apply in the following circumstances: (1) when the product has been serviced or repaired by anyone other than us; (2) when the product has been connected, installed, combined, altered, adjusted, or handled in a manner other than according to the instructions furnished with the product; (3) when any serial number has been effaced, altered, or removed; or (4) when any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, or carelessness, or from any failure to provide reasonable and necessary maintenance in accordance with the instructions of the owner's manual for the product.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

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

Your remedies under this warranty will be available so long as you can show in a reasonable manner that the defect occurred within one (1) year from the date of your original purchase, and we must receive your warranty claim no later than 30 days after such 1-year period expires. Your claim must be substantiated by a dated sales receipt or sales slip.

LOWRANCE ELECTRONICS FULL ONE-YEAR WARRANTY

"We," "our," or "us" refers to LOWRANCE ELECTRONICS, INC., the manufacturer of this product. "You" or "your" refers to the first person who purchases this product as a consumer item for personal, family or household use.

We warrant this product against defects or malfunctions in materials and workmanship, and against failure to conform to this product's written specifications, all for one (1) year from the date of original purchase by you. WE MAKE NO OTHER EXPRESS WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER CONCERNING THIS PRODUCT. Your remedies under this warranty will be available so long as you can show in a reasonable manner that any defect or malfunction in materials or workmanship, or any non-conformity with the product's written specifications, occurred within one year from the date of your original purchase, which must be substantiated by a dated sales receipt or sales slip. Any such defect, malfunction, or non-conformity which occurs within one year from your original purchase date will either be repaired without charge or be replaced with a new product identical or reasonably equivalent to this product, at our option, within a reasonable time after our receipt of the product. If such defect, malfunction, or non-conformity remains after a reasonable number of attempts to repair by us, you may elect to obtain without charge a replacement of the product or a refund for the product. THIS REPAIR, OR REPLACEMENT OR REFUND (AS JUST DESCRIBED) IS THE EXCLUSIVE REMEDY AVAILABLE TO YOU AGAINST US FOR ANY DEFECT, MALFUNCTION, OR NON-CONFORMITY CONCERNING THE PRODUCT OR FOR ANY LOSS OR DAMAGE RESULTING FROM ANY OTHER CAUSE WHATSOEVER. WE WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO ANYONE FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR OTHER INDIRECT DAMAGE OF ANY KIND.

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

This warranty does NOT apply in the following circumstances: (1) when the product has been serviced or repaired by anyone other than us; (2) when the product has been connected, installed, combined, altered, adjusted, or handled in a manner other than according to the instructions furnished with the product; (3) when any serial number has been effaced, altered, or removed; or (4) when any defect, problem, loss, or damage has resulted from any accident, misuse, negligence, or carelessness, or from any failure to provide reasonable and necessary maintenance in accordance with the instructions of the owner's manual for the product.

We reserve the right to make changes or improvements in our products from time to time without incurring the obligation to install such improvements or changes on equipment or items previously manufactured.

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

REMINDER: You must retain the sales slip or sales receipt proving the date of your original purchase in case warranty service is ever required.

**LOWRANCE ELECTRONICS
12000 E. SKELLY DRIVE, TULSA, OK 74128
(800) 324-1356**

How to Obtain Service...

...in the USA:

We back your investment in quality products with quick, expert service and genuine Lowrance parts. If you're in the United States and you have technical, return or repair questions, please contact the Factory Customer Service Department. Before any product can be returned, you must call customer service to determine if a return is necessary. Many times, customer service can resolve your problem over the phone without sending your product to the factory. To call us, use the following toll-free number:

800-324-1356

8 a.m. to 5 p.m. Central Standard Time, M-F

Lowrance Electronics may find it necessary to change or end our shipping policies, regulations, and special offers at any time. We reserve the right to do so without notice.

...in Canada:

If you're in Canada and you have technical, return or repair questions, please contact the Factory Customer Service Department. Before any product can be returned, you must call customer service to determine if a return is necessary. Many times, customer service can resolve your problem over the phone without sending your product to the factory. To call us, use the following toll-free number:

800-661-3983

905-629-1614 (not toll-free)

8 a.m. to 5 p.m. Eastern Standard Time, M-F

...outside Canada and the USA:

If you have technical, return or repair questions, contact the dealer in the country where you purchased your unit. To locate a dealer near you, visit our web site, www.lowrance.com and look for the Dealer Locator.

Accessory Ordering Information for all countries

To order Lowrance GPS accessories such as computer cables or MMC cards, please contact:

1) Your local marine dealer or consumer electronics store. Most quality dealers that handle marine electronic equipment or other consumer electronics should be able to assist you with these items.

To locate a Lowrance dealer near you, visit our web site, www.lowrance.com and click on Support and then click Dealer Locator. Or, you can consult your telephone directory for listings.

2) U.S. customers: LEI Extras Inc., PO Box 129, Catoosa, OK 74015-0129
Call 1-800-324-0045 or visit our web site www.lei-extras.com.

3) Canadian customers can write:

Lowrance/Eagle Canada, 919 Matheson Blvd. E. Mississauga, Ontario L4W2R7 or fax 905-629-3118.

Shipping Information

If it becomes necessary to send a product for repair or replacement, you must first receive a return authorization number from Customer Service. Products shipped without a return authorization will not be accepted. When shipping, we recommend you do the following:

1. Please do not ship the knobs or mounting bracket with your unit.
2. If you are sending a check for repair, please place your check in an envelope and tape it to the unit.
3. For proper testing, include a brief note with the product describing the problem. Be sure to include your name, return shipping address and a daytime telephone number. An e-mail address is optional but useful.
4. Pack the unit in a suitable size box with packing material to prevent any damage during shipping.
5. Write the Return Authorization (RA) number on the outside of the box underneath your return address.
6. For your security, you may want to insure the package through your shipping courier. Lowrance does not assume responsibility for goods lost or damaged in transit.

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