Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for GARMIN ETREX. You'll find the answers to all your questions on the GARMIN ETREX in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

GARMIN

eTrex®

personal navigator™

owner's manual

Manual abstract:

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. Welcome To get the most out of your new eTrex, take the time to read through this Owner's Manual to understand the operating features of the unit. This manual has been designed to provide all that you need to know to operate your eTrex. eTrex Registration Help us to better support you by completing your on-line registration today! Why should you register your eTrex purchase? · Notification of Product Updates · Notification of New Products Connect to our web site (www.garmin.com) and look for the Product Registration link on the home page. If your eTrex contains an 8-digit serial number, it can be found inside the battery compartment. Thanks for choosing the Garmin eTrex. If you have any questions or comments regarding the use of the eTrex you can visit our web site (www.garmin.
com) or contact our Customer Service Department: M-F, 8:00-5:00 CST (except holidays) at 1-800-800-1020. 1 Introduction Table of Contents

2 Introduction WARNING: If you choose to use the eTrex in a vehicle, it is the sole responsibility of the owner/operator of the eTrex to secure the GPS unit so that it will not cause damage or personal injury in the event of an accident.

Do not mount the eTrex over airbag panels or in a place where the driver or passengers are likely to have an impact with it in an accident or collision. WARNING: If you choose to use the eTrex in a vehicle, it is the sole responsibility of the operator of the vehicle to operate the vehicle in a safe manner, maintain full surveillance of all driving conditions at all times, and never become distracted by the eTrex to the exclusion of safe operating practices. It is unsafe to operate the eTrex while you are driving. Failure by the operator of a vehicle equipped with an eTrex to pay full attention to operating the vehicle and road conditions while the vehicle is in motion could result in an accident or collision with property damage and personal injury. CAUTION: IT IS THE USER'S RESPONSIBILITY TO USE THIS PRODUCT PRUDENTLY. THIS PRODUCT IS INTENDED TO BE USED ONLY AS A TRAVEL AID AND MUST NOT BE USED FOR ANY PURPOSE REQUIRING PRECISE MEASUREMENT OF DIRECTION, DISTANCE, LOCATION, OR TOPOGRAPHY. CAUTION: The Global Positioning System (GPS) is operated by the government of the United States, which is solely responsible for its accuracy and maintenance. The system is subject to changes which could affect the accuracy and performance of all GPS equipment. Although the eTrex is a precision electronic NAVigation AID (NAVAID), any NAVAID can be misused or misinterpreted and, therefore, become unsafe. CAUTION: Electronics are protected if immersed, but the battery compartment may get wet.

Make sure the batteries and compartment are dry before using. 3 Warnings and Cautions Remove the batteries from your eTrex if you don't expect to use it for several months. Be sure to observe the proper polarity when re-installing batteries. Follow the battery manufacturer's instructions on the proper care and handling of the batteries. Introduction FCC Compliance Statement The eTrex complies with Part 15 of the FCC limits for Class B digital devices. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular instance. If this equipment does cause harmful interference to other equipment, try to correct the problem by relocating the equipment. Consult an authorized Garmin dealer or other qualified service technician if the problem cannot be corrected. Operation is subject to the following conditions: (1) This device cannot cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The eTrex does not contain any user-serviceable parts. Repairs should be made only by an authorized Garmin service center. Unauthorized repairs can void the warranty. California's Proposition 65 WARNING: This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65.

If you have any questions or would like additional information, please refer to our web site at www.garmin.com/prop65. 4 Introduction The eTrex is a six ounce, 12 channel, hand held GPS receiver. It has a built-in GPS antenna and five user-buttons.

All buttons are located on the sides of the unit, allowing for simple, one-handed operation that won't obstruct your view of the display. It runs for 22 hours on two AA alkaline batteries in battery save mode. In addition to determining your location, the eTrex creates, names and saves a location (as an electronic waypoint) in its memory, allowing you to navigate back to this point any time you want. And once you start moving, your GPS provides other data, like speed, direction of movement, time and distance to destination, and more. From these basic features, your Garmin GPS can provide one more critical benefit; peace of mind, because, with GPS you know where you are, where you've been and where you're going.

And since you always know the way back home, you can concentrate on what you set out to do and enjoy the great outdoors. Other features include: Waypoints: Tracks: 500 with name and graphic symbol. Automatic track log; 10 saved tracks let you retrace your path in both directions. Allows you to navigate a course of up to 50 waypoints in sequence. Current speed, average speed, maximum speed, direction of movement, bearing, elevation, time of sunrise/sunset, trip timer and trip odometer.

eTrex Features NOTE: You should always be prepared for and capable of navigating without the eTrex. It is designed to augment other forms of basic navigation, not entirely replace them. Route: Trip Computer: 5 Introduction eTrex Buttons Operating the eTrex is as simple as pressing a button! The UP/DOWN Buttons: · Select options on pages and menus · Adjust display contrast on Satellite Page · Zoom in and out on Map Page · Cycle through trip data on NavigationPage The ENTER Button: · Confirms data entry or menu selections · Displays options on main pages · Pressing and holding the ENTER button activates the Mark Waypoint Page The PAGE Button: · Switches between pages and moves you out of pages. If you start to do something and you don't want to continue, you can stop by pressing the PAGE Button. The POWER Button: · Turns the unit on and off · Turns the display backlight on and off 6 Introduction Internal GPS Antenna eTrex Description PAGE Button UP Button DOWN Button POWER Button ENTER Button LCD Display (with backlight) External Power and Data Connector Waterproof Case Battery Compartment 7 Introduction Accessories Standard Accessories Lanyard Attaches to a slot on the bottom of the unit for convenient carrying. Owner's Manual Auto Power Adapter - Converts 12VDC output from the lighter to 3VDC input to the eTrex. Not interchangeable with power adapters for Garmin VHF 720, 725, and 725e, or GPS 170, 175, 190, and 195. Quick Start Guide Optional Accessories Carrying Case Protects the eTrex when not in use. Belt Clip Allow easy access to the eTrex when clipped to a belt..

Auto Power Adapter Provides eTrex operation from an automobile cigarette lighter. PC Data Cable Allows for transfer of data from a PC to an eTrex. Data Cable Bicycle Mounting Kit Wiring harness. Connections for data input/output. Bicycle Mounting Kit Allows the eTrex to be mounted on a bicycle handle bar. PC Interface Cable with Auto Power Adapter PC Cable/Auto Power Adapter Allows transfer of waypoints and routes from a PC to the eTrex and provides unit operation from an automobile cigarette lighter. MapSource® Map Data CD-ROMs An excellent tool for creating waypoints and routes on your PC using a background map and downloading them to your eTrex. See your Garmin dealer for MapSource details. Installing the Batteries The eTrex operap Page shows where you are (the animated figure) and provides a real picture of where you are going. As you travel (the animated figure "walks") and leaves a "trail" (track log).

Waypoint names and symbols are also shown on the map. We will show you how to record your location by marking a waypoint in the "Discovering GPS Navigation" section. To help you better visualize the "real world", the eTrex automatically rotates the map as you move, so that waypoints that are ahead of you are always displayed in front of the animated figure. The North Pointer always shows you where north is. To make sure you can see your entire trip, you can change the map scale (from 200 feet to 800 miles!) by pressing and holding the UP Button to view a larger area, and the DOWN Button for viewing a smaller area. 11 The Map Page showing different symbols and waypoints. Getting Started Page Basics Navigation Page Basics Waypoint (Location) Name Time to reach the Destination On the Navigation Page, the UP and DOWN Buttons are used to cycle through different trip data. Moving Direction Line Compass Ring Direction Arrow (follow this) Straight Line Distance to the Destination Speed The Navigation Page Destination Symbol The eTrex is not a magnetic compass. You must be moving in order for it to track your movement. The Navigation Page helps guide you to a destination.

When you're moving with no particular destination in mind, the Navigation Page shows you your moving direction and speed. When you're moving towards a specific destination, the Navigation Page shows you the name of the location, the distance and time to go, and displays a direction arrow in the compass ring. To navigate, simply follow the arrow. By pressing the UP or DOWN Buttons, you can cycle through other trip computer information such as average speed, maximum speed, moving direction (heading), bearing, position coordinates, elevation, time of sunrise/sunset, trip timer and trip odometer. NOTE: The direction arrow, destination symbol and bearing information only appear on the Navigation Page when you have started a GOTO, a Route or a TracBack. 12 Getting Started Main Menu Basics Page Basics Menu Options Time and Date Battery Capacity The Main Menu Page Backlight Indicator From the Main Menu Page, the UP and DOWN Buttons are used to cycle through menu options and access advanced features. The Main Menu gives you access to the eTrex's more advanced features. With the Main Menu you can create and view waypoints, create a route, save and view track logs or access the system setup features. Information on all these advanced features is included in the reference section of this manual. Changing the Time Zone Practice using the Main Menu and change the time zone.

To change the time zone: 1. Press the PAGE Button and switch to the ´MENU' Page. Press the UP or DOWN Button and highlight ´SETUP'. Press ENTER. The ´SETUP' Menu appears.

2. Press the UP or DOWN Button and highlight ´TIME' and press ENTER. 3. Press the UP or DOWN Button and select the ´TIME ZONE' field and press ENTER. 4.

Press the UP or DOWN Button, scroll through the selections, and press ENTER when you have found the correct zone. Press PAGE to get back to the page of your choice. You can choose from 30 time zones, plus `other'. 13 Getting Started Let the Fun Begin! This completes a basic explanation of the page features of the eTrex. Discovering GPS Navigation Discovering how to use your eTrex is as easy as taking a quick walk around an open outdoor area. In this brief exercise, you'll mark your current location (your home for example), travel a short distance away, and then have the eTrex guide you back to where you started (to get the most out of this exercise, make sure to walk for at least the time noted for each step). Creating a Waypoint You'll find the MARK option on the ´MENU' Page. The first step in the exercise is to mark your location as a waypoint so you can return to it later.

NOTE: The eTrex must state "READY TO NAVIGATE" before you mark a waypoint. To Mark a Waypoint: 1.

Press the PAGE Button and switch to the `MENU' Page. 2. Press the UP or DOWN Button and highlight the `MARK' field. 3. Press ENTER. The `MARK WAYPOINT' Page appears with `OK?' highlighted. The Elevation and Position Coordinates are displayed at the bottom of the `MARK WAYPOINT' Page and the `REVIEW WAYPOINT' Page. Before we actually mark the waypoint, let's change the symbol to a house and the name `001' to something a little more meaningful such as HOME. To change the waypoint symbol: 1. On the `MARK WAYPOINT' Page, press the UP or DOWN Button to highlight the small flag symbol and press ENTER.
Using the UP or DOWN Button, scroll through the symbols and highlight the house symbol. Press ENTER. 14 Getting Started To change the waypoint name: 1. On the `MARK WAYPOINT' Page, press the UP or DOWN Button to highlight the Waypoint Name `001'. 2.
Press ENTER. The `EDIT WAYPOINT NAME' Page appears. 3. Press ENTER. Using the UP or DOWN Button, scroll through the letter selections. Select `H' and press ENTER. Repeat this process and finish the word `HOME'. 4. Press the UP or DOWN Button to highlight the `OK' field and press ENTER. The `MARK WAYPOINT' Page appears. 5. Press the UP or DOWN Button to highlight the `OK' field and press ENTER. Your location, named `HOME', is now marked and stored in memory. Edit Waypoints NOTE: As a shortcut, press and hold ENTER to mark a waypoint. You can create or edit a waypoint on the `EDIT LOCATION' Page.

From the `MARK WAYPOINT' Page, highlight the Position Coordinates field and press ENTER. Then follow the on-screen instructions. Now that you've marked your location, it's time to go for a brisk walk. Press the PAGE Button and switch to the Map Page. Walk in a straight line for 3-4 minutes at a fast pace and watch the Map Page. Your location is shown by the figure in the middle of the screen. As you move, watch the animated figure walk, and a line--called a "track"--appear along the path you have just covered. Now take a sharp right turn and walk at a brisk pace for another 3-4 minutes. The `EDIT WAYPOINT NAME' Page. You can see your change in direction displayed on the Map .
15 Getting Started Follow the Arrow Guidance by Garmin The eTrex guides you to a destination using a GOTO (GOTO means GOing TO a destination in a direct line). Now let's use the GOTO feature and the Navigation Page to travel back to our starting location. To Start a GOTO: 1. Press the PAGE Button and switch to the `MENU' Page. 2.
Press the UP or DOWN Button and highlight `WAYPOINTS'. 3. Press ENTER. The `WAYPOINTS' Page appears. 4.
Press the UP or DOWN Button and select the tab containing `HOME' and press ENTER. 5. Press the UP or DOWN Button to select `HOME' and press ENTER. The `REVIEW WAYPOINT' Page appears. 6. Press the UP or DOWN Button to highlight the `GOTO', and press ENTER. The arrow tells you what direction you should move. When the arrow is pointing right as shown here, just move right until the arrow is pointing straight up and points to the moving direction line (see picture below). The Navigation Page appears and you're now ready for the eTrex to guide you back to your starting location! Heading in the Right Direction The eTrex will guide you back to where you started using the Navigation Page. The arrow tells you the direction to the destination.

Walk in the direction the arrow is pointing until the arrow points to the top of the compass ring. If the arrow points to the right, you need to go to the right. If the arrow points to the left, go left. When the arrow is pointing straight up, you are on the correct track! When the arrow points straight up as shown, you're on track! 16 Getting Started The destination name, distance to the destination and time to reach your destination are displayed at the top of the screen. The speed you are traveling is shown at the bottom of the screen. When you are nearing to your destination, the eTrex will display the message "ARRIVING DESTINATION". Cancelling A GOTO Anytime you want to stop a GOTO: 1. Press the PAGE Button and switch to the `NAVIGATION' Page. Press ENTER. 2.
Highlight `STOP NAVIGATION' on the `OPTIONS' Page and press ENTER. You've Made It! Clearing a Cluttered Map Display After you've used the eTrex for a few trips, the map display will become a bit messy from keeping track of your movements. You can clean up the screen by clearing the track log (the lines left on the Map Page): To clear the track log: 1. Press the PAGE Button and switch to the `MENU' Page. 2.
Press the UP or DOWN Button and highlight Highlight STOP NAVIGATION and press ENTER on the Options Page to stop a GOTO. `TRACKS'. 3. Press ENTER. You are now on the `TRACK LOG' Page.
Use the UP Button and highlight `CLEAR'. Press ENTER. 4. Use the DOWN Button and highlight `YES'. Press ENTER. Press the PAGE Button to select any page. You've now gone through the basic operation of the eTrex and you're ready to navigate! To turn the eTrex off, press and hold the POWER Button. Clear the Track Log when the Map Page gets too cluttered. 17 Reference Map Page Options Introduction This section covers the remaining features of the eTrex that were not covered in the Getting Started section. Map Page Options In addition to the basic aspects of the Map Page that were covered on page 11, there is a `MAP OPTIONS' feature which allows you to customize the Map Page.

The following options are available: · Orient Map Ahead/Northward: When `AHEAD' is selected, the top of the map is oriented in the direction you are currently moving. When `NORTHWARD' is selected, the map is always oriented to the north. · Auto Zoom On/Off: When `AUTO ZOOM' is turned on, the map automatically adjusts its scale to display your entire navigating route. When it's turned off, you must press the UP or DOWN Buttons to select the appropriate map scale. · Show/Hide Waypoints: Allows you to view the map with or without waypoints. · Show Course Line/Bearing Line: `SHOW COURSE LINE' displays the path from your starting point to your destination. `SHOW BEARING LINE' displays the path from your current location to your destination. · Stop Navigation: `STOP NAVIGATION' stops any active navigation (navigation means there is a destination waypoint, page 16). This option cannot be selected if there is no active navigation. To select a Map Page option: 1.
Press the ENTER Button on the `MAP' Page. 2. The Map Options Menu appears. Press the UP or DOWN Button and highlight the desired option and press ENTER. Once you press ENTER, the change is made and the Options Menu disappears.

Selecting `Orient Map Ahead' from the Map Page options orients the map to the direction you are moving. When you select `Orient Map Northward' the figure icon is replaced by a `direction' triangle. The tip of the triangle tells you the general direction you are moving. 18 Reference You will notice on the Map Page the little grey "man". The man stands still when you are not moving, he moves when you move, and a blinking "?" means the eTrex has lost satellite reception (weak signals).

You should relocate the eTrex or move to a place that has a clear view of the sky. Navigation Page Options Navigation Page Options In addition to the Navigation Page basics that were covered on page 12, the following Navigation Page options are available: · Reset Max Speed: this resets the Maximum Speed achieved during a trip. · Reset Trip: the trip time, trip distance (odometer) and average speed are reset to zeros. · Stop Navigation: stops any active navigation. To select a Navigation Page option: 1. Press the ENTER Button on the `NAVIGATION' Page. 2. The Options Menu appears. Press the UP or DOWN Button, highlight the desired option, and press ENTER. Once you press ENTER, the change is made and the Options Menu disappears.

The Navigation Page allows you to display eleven types of different data, such as `Elevation'. You can also change the fields at the bottom of the Navigation Page to display different data: Speed--like the speedometer in your car, `SPEED' tells you how fast you are going regardless of whether or not you are on the right track. Average Speed--the average speed traveled since last trip reset. Max Speed--the maximum speed traveled since last reset. Heading--the direction you are traveling. 19 The eTrex will tell you the time of sunrise and sunset at your current location. Reference Main Menu Selections Bearing--the compass direction from your location to a destination. Elevation--the measurement of height above mean sea level. Location--shows your current position coordinates. Sunrise--the time of sunrise at your present location.

Sunset--the time of sunset at your present location. Trip Time--the total time you have traveled since the last trip reset. Trip Odometer--like the odometer in your car, `TRIP ODOMETER' tells you how far you've gone since the last trip reset. The `MAIN MENU' Page allows you to customize the eTrex's features. To change a data field: 1.

On the `POINTER' Page, press the UP or DOWN Button and scroll through the available options, stopping on the data you want the eTrex to display. Main Menu Selections The Main Menu turns the eTrex into a powerful navigation tool. From the Main Menu you can customize the display, transfer information from a computer to the eTrex and back again, and manage and organize all of your waypoints. Now take a look at each of the Main Menu selections. Mark Waypoint Page Remember that pressing and holding the ENTER Button displays your location on the `MARK WAYPOINT' Page.

The `MARK WAYPOINT' Page allows you to change the waypoint symbol, name, elevation and location (latitude and longitude). The information on page 14-15 explains how to change the waypoint symbol and name. 20 Reference To change the location (position coordinates): 1. Press the PAGE Button and switch to the `MENU' Page. Press the UP or DOWN Button and highlight `MARK'. Press ENTER. The `MARK WAYPOINT' Page appears. 2. Press the UP or DOWN Button and highlight the `POSITION COORDINATES' field and press ENTER. The `EDIT LOCATION' Page appears.

3. Scroll through the position places using the UP and DOWN Button (UP Button to move right to left, DOWN Button to move left to right). When you reach the position place you want to change, stop and press ENTER. Using the UP or DOWN Button, scroll through the choices and highlight the one you want. Press ENTER. The position place is now changed. 4. Press the UP or DOWN Button to highlight the `OK' field and press ENTER. The `MARK WAYPOINT' Page appears. 5.

Press the UP or DOWN Button to highlight the `OK' field and press ENTER. Your location with the new position coordinates are now stored in memory. Mark Waypoint Page The `EDIT LOCATION' Page displays on-screen instructions on how to edit the waypoint location. To change the elevation: 1. Press the PAGE Button and switch to the `MENU' Page.

Press the UP or DOWN Button and highlight `MARK'. Press ENTER. The `MARK WAYPOINT' Page appears. 2. Press the UP or DOWN Button and highlight the `ELEV' field and press ENTER.

The `ENTER CORRECT ELEVATION' Page appears. 3. Use the UP or DOWN Button to highlight the desired digit and press ENTER. A selection window appears. Press the UP or DOWN Button to select a new number and press ENTER. Repeat until all numbers are changed. 4. Press the UP or DOWN Button to highlight the `OK' field and press ENTER. The `MARK WAYPOINT' Page appears with the correct elevation displayed. The `ENTER CORRECT ELEVATION' Page allows you to change the elevation for the waypoint.

21 Reference Waypoints Page Waypoints Page The Waypoints Page organizes all of your waypoints in alphabetical order for easy selection. It also allows you to select nine of the `NEAREST WAYPOINTS' for a separate list, and if you want, delete all waypoints. To select a waypoint: 1. Press the PAGE Button and switch to the `MENU' Page. Press the UP or DOWN Button and highlight `WAYPOINTS'. Press ENTER. The `WAYPOINTS' Page appears. 2. Press the UP or DOWN Button and highlight the alphabetical tab containing the desired waypoint. Press ENTER.

Press the UP or DOWN Button to select the desired waypoint. Press ENTER. The `REVIEW WAYPOINT' Page appears. The nine closest waypoints appear in a list showing their name and the distance from your location (four shown here). To view the 'NEAREST' waypoints page: 1.

On the `WAYPOINTS' Page, press the UP or DOWN Button and highlight `NEAREST'. Press the ENTER Button. The `NEAREST WAYPOINTS' Page appears. The nine closest waypoints within 250 miles appear in a list showing their name and the distance from your location. You can select a waypoint from this list by pressing the UP or DOWN Button and selecting the desired waypoint.

Once selected, press ENTER. The `REVIEW WAYPOINT' appears allowing you to edit the waypoint if you desire. To delete all waypoints: 1. On the `WAYPOINT' Page, press the UP or DOWN Button and highlight `DELETE ALL'. Press the ENTER Button. A confirmation message box appears asking if you really want to delete all waypoints. If you do, press the UP or DOWN Button and highlight `YES'. Press ENTER. If you change your mind and do not want to delete the waypoint, press the UP or DOWN Button and highlight `NO'. Press ENTER (or press the PAGE Button).

The confirmation message box disappears and all of the waypoints remain in memory.

MAKE SURE you want to delete all of the waypoints before you press ENTER! 22 Reference Review Waypoint Page Review Waypoint Page The Review Waypoint Page allows you to change the waypoint symbol, name, elevation and location (just like on the Mark Waypoint Page). You can also delete the waypoint, display the waypoint on the Map Page, and start a GOTO. To delete a waypoint: 1. On the ´REVIEW WAYPOINT' Page, press the UP or DOWN Button and highlight ´DELETE'. Press the ENTER Button. A confirmation message box appears asking if you really want to delete the waypoint. If you do, press the UP or DOWN Button, highlight ´YES' and press ENTER. If you change your mind and do not want to delete the waypoint, press the UP or DOWN Button, highlight ´NO' and press ENTER. The confirmation message box disappears and the waypoint remains in memory (you can also press the PAGE Button to exit).

The ´REVIEW WAYPOINT' Page allows you to delete a waypoint. To start a GOTO: 1. On the ´REVIEW WAYPOINT' Page, press the UP or DOWN Button and highlight ´GOTO'. Press the ENTER Button. The ´GOTO' is activated with the selected waypoint as the destination.

To view the selected waypoint on the Map Page: 1. On the ´REVIEW WAYPOINT' Page, press the UP or DOWN Button and highlight ´MAP'. Press the ENTER Button. The selected waypoint is displayed on a map with bearing and distance. You can use the UP or DOWN Buttons to zoom in and out on the map.

Press the PAGE Button and switch back to the ´WAYPOINTS' Page. You can start a GOTO from the ´REVIEW WAYPOINT' Page. 23 Reference Review Waypoint Page Using the Project feature can create a waypoint at a specified distance and bearing using a new or existing waypoint as a reference. This works best when using a map and compass to determine distance and bearing. You can also change the name, symbol and elevation on this page. Projecting a waypoint: 1. To project a waypoint from a waypoint on the waypoint list (in order to insert a new waypoint in a route, for example), select the route waypoint from the list on the ´WAYPOINTS' Page and press ENTER. The ´REVIEW WAYPOINT' Page displays. To project a waypoint from your current location (i.e.

, in order to travel to a location sighted in the distance), press and hold the OK Button to mark your location and save it as a waypoint. Then, select it from the waypoints list, and press ENTER to display the ´REVIEW WAYPOINT' Page. 2. Using the UP or DOWN Button, highlight the ´PROJECT' field and press ENTER. The ´PROJECT WAYPOINT' Page displays and a numeric name is assigned to the new waypoint. 3. The distance field is highlighted by default. Press ENTER to display the ´EDIT NUMBER' Page. 4. On the ´EDIT NUMBER' Page, pressing the DOWN Button moves the highlight to the next number in the field.

@@5. @@@@6. Using the DOWN Button, highlight the bearing field and press ENTER to display the ´EDIT ANGLE' Page. 7. On the ´EDIT ANGLE' Page, pressing the DOWN Button moves the highlight to the next number in the field.

@@8. @@@@9. @@@@@@@@@@@@@@@@@@@@@@You can then use the Navigation page to give you steering guidance. @@Use existing waypoints that reside in the eTrex. @@2.

@@@@A single waypoint route is only a normal waypoint, not a route. @@@@@@@Press the PAGE Button and switch to the ´MENU' Page. Press the UP or DOWN Button and highlight ´ROUTE'. Press ENTER. The ´ROUTE' Page appears. Press ENTER. The ´ADD WAYPOINT TO ROUTE' Page appears. 2. @@The waypoint you selected is placed in the first field on the ´ROUTE' Page. Repeat this process until all of the waypoints you want are entered into the route list.

Press PAGE to get back to the page of your choice. Press ´FOLLOW' to activate a route. 26 There are two ways to insert a waypoint into an existing route. One way is to insert the waypoint before an existing waypoint in a route. The other way is to insert the waypoint at the end of the waypoint list in a route. Reference To insert a waypoint into an existing route: 1. From the Route page, press the UP or DOWN Button to select the entry point for the new waypoint. Stop at the waypoint on the route list that you want to follow the new waypoint or use the last open slot if you want the new point at the end of the route. Press ENTER. The ´ADD WAYPOINT TO ROUTE' Page appears.

2. @@The waypoint you selected is placed in the desired field on the ´ROUTE' Page. Routes To activate a route: 1. Press the PAGE Button and switch to the ´MENU' Page. Press the UP or DOWN Button and highlight ´ROUTE'.

Press ENTER. The ´ROUTE' Page appears. 2. Press the UP or DOWN Button and highlight ´FOLLOW' and press ENTER. The choices are the first (beginning) waypoint and the last (end) waypoint.

3. Press the UP or DOWN Button and select the desired waypoint and press ENTER. The ´Navigation' Page appears giving you steering guidance to the destination waypoint. The eTrex draws an electronic breadcrumb trail as you travel. To remove a waypoint from the ´ROUTE' list: 1. Press the PAGE Button and switch to the ´MENU' Page. Press the UP or DOWN Button and highlight ´ROUTE'. Press ENTER. The ´ROUTE' Page appears. Press the UP or DOWN Button and highlight the waypoint you want to remove.

The ´INSERT/ REMOVE' window appears. Press the UP or DOWN Button and highlight ´REMOVE'. Press ENTER. To clear all route waypoints: 1. Press the PAGE Button and switch to the ´MENU' Page. Press the UP or DOWN Button and highlight ´ROUTE'. Press ENTER. The ´ROUTE' Page appears. 2. Highlight ´CLEAR ALL' and press ENTER.

The confirmation window appears asking you if you really want to clear all of the route waypoints. If you do, select ´YES'and press ENTER. The message ´ARRIVING DESTINATION' is displayed on every page when you are 15 seconds from reaching the destination. 27 Reference Track Logs What is a Track Log? The eTrex draws an electronic breadcrumb trail or ´track log' on the Map Page as you travel. The track log starts recording as soon as the eTrex gets a location fix.

If you want to keep a record of a certain track log before the track memory is filled and it begins to overwrite the earliest tracks, you can save it to the ´Saved Tracks' list. You can save a total of ten tracks in the eTrex. Saved tracks can be used for navigation later. After a track log is saved, the saved track will have a beginning (BEGIN) and ending (END) point. This simply shows the "when/where" of the starting and ending points of the saved track.

When you are ready to return to where you started, the eTrex will take you back by following the track log that you left behind. ´TracBack' allows you to return along a traveled path without marking any waypoints. If you want to keep a record of a certain track log or use the ´TracBack' feature, it is recommended that you clear the track log before you start traveling.

The percentage of memory used by the current track log is displayed at the top of the page. After the track log is `CLEARED', it will show zero percent. When the display shows 99%, the most recent track points will start overwriting the least recent track points. Thus, in order to avoid losing any track points, you should save the track log before it reaches 99% of memory usage. Clearing the current track log: 1. With the `MENU' Page displayed, press the UP and DOWN Buttons to highlight `TRACKS' and press ENTER. The `TRACK LOG' Page will appear.

2. Highlight the `CLEAR' Button and press ENTER. `CLEAR' the track log before starting a new trip. You need to save the track log first before you can use the TracBack feature. 3. You will be asked `DO YOU REALLY WANT TO CLEAR THE TRACK LOG?'. Use the DOWN Button to highlight `YES' and press ENTER to clear the current track log. 28 Reference To save a track for navigation later: 1. Press the PAGE Button and switch to the `MENU' Page. Press the UP or DOWN Button and highlight `TRACKS'.

Press ENTER. The `TRACK LOG' Page appears. 2. Press the UP or DOWN Button and highlight `SAVE' and press ENTER. The `SAVE BACK THROUGH' window appears giving you a time frame for saving a track or `ENTIRE LOG'.

Press the UP or DOWN Button and select the desired option. Press ENTER. The saved track appears graphically on a sub page. Press the UP or DOWN Button and select `OK'. Press ENTER.

3. The track is now saved and appears in the `SAVED TRACKS' list on the `TRACK LOG' Page. You can save a track from a specific time or save the entire track log. Track Logs NOTE: Saving a Track Log does not remove those points from the active memory. Renaming a saved track log: 1. With the `MENU' Page displayed, highlight `TRACKS' and press ENTER. The `TRACK LOG' Page will appear. 2. Place the highlight on a saved track and press ENTER. The saved track will be displayed on a map.

3. A default name will be displayed at the top of the map. Using the UP or DOWN Button, highlight the name and press ENTER. The `EDIT TRACK NAME' Page will be displayed. 4. With the `EDIT TRACK NAME' Page displayed, pressing the DOWN Button will move the highlight to the next place in the name field. When the desired place is selected, press ENTER to activate the drop-down alphanumeric list. 5. Using the UP or DOWN Button, select the correct character and press ENTER. When the name has been entered correctly, highlight `OK' and press ENTER.

The `EDIT TRACK NAME' Page. 29 Reference Track Logs To delete all tracks: 1. On the `TRACK LOG' Page, press the UP or DOWN Button and highlight `DELETE ALL'. Press ENTER. The verification window appears.

2. If you really want to delete all saved tracks, press the UP or DOWN Button and highlight `YES'. Press ENTER. If you change your mind, press the UP or DOWN Button and select `NO'. Press ENTER.

The tracks remain in memory (or press PAGE to exit). To delete a saved track: 1. On the `TRACK LOG' Page, press the UP or DOWN Button and highlight the saved track that you want to delete from the `SAVED TRACKS' list. Press ENTER. The saved track appears graphically. The `BEGIN' point is the point defining the starting point when saving a track log. `END' is the last point that was saved. Each saved track will always have a `BEGIN' and `END' point for navigation. The `BEGIN-END' pair imply the direction of the saved track. If you want to retrace the track, navigate to `END'.

If you want to track back to the starting point, navigate to `BEGIN'. 2. Press the UP or DOWN Button and highlight `DELETE'. Press ENTER. A confirmation window appears asking you if you really want to delete the saved track. If you do, press the UP or DOWN Button and highlight `YES'. Press ENTER. If you change your mind, press the UP or DOWN Button and select `NO'. Press ENTER (or you can press PAGE to exit). The tracks remain in memory.

To start TracBack Navigation: 1. On the `TRACK LOG' Page, press the UP or DOWN Button and highlight the saved track from the `SAVED TRACKS' that you want to travel. Press ENTER. The track graphically appears. 2.

Press the UP or DOWN Button and highlight `TRACBACK'. Press ENTER. The direction window appears asking you if you want the destination to be at the beginning of the track or the end of the track (see sidebar). Press the UP or DOWN Button and select the desired destination point. The `NAVIGATION' Page guides you to your destination.

30 You may not remember the original direction of the saved track, but by using `BEGIN' or `END', you can always select where you want to "TracBack to" without remembering the directions of the saved track. Reference Setup Menu Setup Menu The Setup Menu allows you to customize the eTrex. From the Setup Menu you can change coordinate systems, map datums, and distance units. You can also change the time format, north reference, operating mode, display contrast, and display back light timeout. Time Page The `Time' Page allows you to select a 12 hour or 24 hour time format, enter the proper time zone, and choose Daylight Savings Time. When you select 12 hour time formatting, the clock will read like a standard clock with 12 hour AM and 12 hour PM cycles. The 24 hour option sets the eTrex to display a 24 hour cycle (Military Time). To change the time format: 1. Press the PAGE Button and switch to the `MENU' Page. Press the UP or DOWN Button and highlight `SETUP'.

Press ENTER. The `SETUP' Page appears. 2. Press the UP or DOWN Button and highlight `TIME' and press ENTER. 3. Press the UP or DOWN Button and select the `TIME FORMAT' field and press ENTER. 4. Press the UP or DOWN Button, select 12 or 24 hours and press ENTER. Press PAGE to get back to the page of your choice. The `SETUP' Menu Choose a 12 hour or 24 hour time setting.

31 Reference Setup Menu Time Zone The time zone can be set to any one of thirty pre-programmed zones or by entering the UTC Time Offset value in the UTC offset field below the time zone field. When you select the 24 hour time format, the letters `lcl' (local) appear next to the time. You can find time offset values for your longitude by following instructions and the Time Offset Chart (Appendix D). To change the time zone, follow the steps given on page 13. UTC Offset UTC stands for `Coordinated Universal Time' and replaced Greenwich Mean Time (GMT) as the World standard for time in 1986.

It is based on atomic measurements rather than the earth's rotation. When you select `OTHER' for the time zone, you can access the UTC Offset field and make a change to match the time zone you selected. Other than that, you can't change it. (Refer to the UTC Offset Chart on page 44.) Daylight Savings Time Daylight savings time can be set to `Automatic' (using the built-in almanac to automatically change the clock settings when daylight savings goes into or out of effect).

You can choose 'Yes' to manually add daylight savings or 'No' to remain on standard time. To change the Daylight Savings Field: 1. Press the PAGE Button and switch to the 'MENU' Page. Press the UP or DOWN Button and highlight 'SETUP'. Press ENTER. The 'SETUP' Page appears. 2. Press the UP or DOWN Button and highlight 'TIME' and press ENTER. 3. Press the UP or DOWN Button and select the 'DAYLIGHT SAVINGS' field and press ENTER.

4. Press the UP or DOWN Button, select 'AUTO', 'YES', or 'NO' and press ENTER. Press PAGE to get back to the page of your choice. The Daylight Savings time options. NOTE: Daylight Savings time settings will not affect the UTC offset number. 32 Reference Display Page The Display Page allows you to set the display backlight timeout (On all the time, 15 or 30 seconds, and 1 or 2 minutes) and the display contrast. To change the Light Timeout: 1. Press the PAGE Button and switch to the 'MENU' Page. Press the UP or DOWN Button and highlight 'SETUP'. Press ENTER.
The 'SETUP' Page appears. 2. Press the UP or DOWN Button and highlight 'DISPLAY' and press ENTER. Press ENTER on the 'LIGHT TIMEOUT' field. 3. Press the UP or DOWN Button and highlight your selection and press ENTER. Press PAGE to get back to the 'SETUP' page. Display and Units Pages To adjust the display contrast: 1. Press the PAGE Button and switch to the 'MENU' Page. Press the UP or DOWN Button and highlight 'SETUP'.
Press ENTER. The 'SETUP' Page appears. 2. Press the UP or DOWN Button and highlight 'DISPLAY' and press ENTER. Press the UP or DOWN Button and highlight the 'CONTRAST' slider bar and press ENTER. 3. Press the UP or DOWN Button to move the slider to adjust the contrast, then press ENTER. Press PAGE to get back to the 'SETUP' page. You can set the backlight to stay On all the time, but watch your battery power! Units Page Using your eTrex with a paper map increases the navigation power of both. If you are going to use a map in conjunction with the eTrex, you must select the position format (grid), map datum, map units, and north reference to match the map's units.

This is the purpose of the Units Page. Regarding position format, the eTrex allows you to choose from eighteen different grids. The eTrex supports the UTM/UPS and latitude/longitude grids because together they cover the world. The 'UNITS' Page allows you match the units of the eTrex to the units of a unique paper map you may be using. 33 Reference Map Datums Position Format The default position coordinates format (and the one most commonly used) for the eTrex is latitude and longitude in degrees and minutes (hddd° mm.mmm'). You may also choose from 17 other position formats. There is also a "User" position format which allows you to approximate custom-designed grids. For more information on grids and datums we recommend you visit the National Imagery and Mapping Agency at http://www.nima.
mil. To change the Position Format (grid): 1. Press the PAGE Button and switch to the 'MENU' Page. Press the UP or DOWN Button and highlight 'SETUP'. Press ENTER.
Use the UP or DOWN Button to select 'UNITS'. Press ENTER. The 'UNITS' Page appears. 2. Press the UP or DOWN Button and select the 'POSITION FRMT' field.
Press ENTER. 3. Press the UP or DOWN Button and select the desired format. Press ENTER. Press PAGE to get back to the page of your choice. Eighteen position formats are available in the eTrex. Map Datums Data Entry Pages exist for the User Grid Format and the User Datum Setup. These pages allow you to configure the eTrex for compatibility with custom designed grids. We recommend surfing the net for links to Garmin user-grid and user datum information. There are also excellent navigation and GPS articles available on-line which will enhance your overall knowledge of GPS.

A map datum is a reference model of the earth's shape. Every map uses a map datum. The map datum is usually listed in the title block of the map. If you are comparing GPS coordinates to a paper map or other reference, the map datum in the eTrex should match the horizontal map datum used to generate the chart or other reference. The default datum in the eTrex is WGS 84 (World Geodetic Survey, 1984). You should only change the datum if you are using maps or charts that specify a different datum than WGS 84. If no datum is specified, you can select each datum applicable to your region until you find the datum that provides the best positioning at a known point. You may also choose the "User" datum for use with custom-designed grids. 34 Reference To change the Map Datum: 1. Press the PAGE Button and switch to the 'MENU' Page.
Press the UP or DOWN Button and highlight 'SETUP'. Press ENTER. Use the UP or DOWN Buttons to select 'UNITS'. Press ENTER. The 'UNITS' Page appears.
2. Press the UP or DOWN Button and select the 'MAP DATUMS' field. Press ENTER. 3. Press the UP or DOWN Button to select the desired datum. Press ENTER. Press PAGE to select the page of your choice. Units of Measure Units of Measure The eTrex lets you select statute (the default setting), nautical, or metric units of measure for all speed and distance readouts. To change the Units of Measure: 1. Press the PAGE Button and switch to the 'MENU' Page. Use the UP and DOWN Button and highlight the 'SETUP' field. Press ENTER. The 'SETUP' Page appears. 2. Press the UP or DOWN Button to select 'UNITS'.

Press ENTER. The 'UNITS' Page appears. 3. Press the UP or DOWN Button and select the 'UNITS' field. Press ENTER. 4. Press the UP or DOWN Button to select the desired unit. Press ENTER. Press PAGE to select the page of your choice. You can select statute, nautical, or metric units of measurement from the 'UNITS' page.
The 'DEFAULTS' setting will reset the eTrex units to all of its factory settings. 35 Reference Units of Measure North Reference 'MAGNETIC' north is the default north reference setting. 'Reference' refers to the orientation of a map's grid. Map makers try to align the vertical lines on a map with 'True North'. True North is the direction from any location on the earth's surface to the "north pole".
Maps are typically referenced to true north. Because a compass points to magnetic north, not true north, maps indicate the difference between true and magnetic north with something called 'declination'. The amount of declination changes as you move around the earth. Magnetic North is the direction in which a compass needle points. The eTrex bearings will correspond to a compass if the eTrex is set to magnetic north.
Due to errors introduced when map makers flatten the earth's sphere onto paper, not all of the grid lines drawn on the map point exactly to the north pole, so the north indicated by the grid lines is called 'Grid North'. But, the difference is usually small enough that 'Grid' north can be considered the same as True North for travelling on land.

If necessary, you can correct for the difference between Grid North and True North manually. To change the North Reference: 1. Press the PAGE Button and switch to the `MENU' Page. Use the UP and DOWN Button and highlight the `SETUP' field. Press ENTER. The `SETUP' Page appears. 2. Press the UP or DOWN Button to select `UNITS'.

Press ENTER. The `UNITS' Page appears. 3. Press the UP or DOWN Button and select the `NORTH REF' field. Press ENTER. 4. Press the UP or DOWN Button to select the desired reference. Press ENTER. Press PAGE to return to the page of your choice. When you select the `DEFAULTS' field and press ENTER, the `UNITS' page returns to the factory settings.

36 Reference Interface Page Interface Page The Interface Page allows you to connect and use devices such as computers and differential GPS (DGPS) beacon receivers with the eTrex. Input/Output Settings The `Interface' Settings Page allows you to use your eTrex with external NMEA devices, DGPS beacon receivers, a personal computer, etc. You can choose from seven different input/output serial data formats, or none at all. Below is a description of each format: · Garmin - the proprietary format used to exchange waypoint, route, and track data with a PC. · Garmin DGPS - allows DGPS input using a Garmin beacon receiver and a standard RTCM SC-104 format and DGPS tuning.

· NMEA OUT - supports the output of standard NMEA 0183 version 3.0 data. · TEXT OUT - allows simple ASCII text output of location and velocity information, without any input capabilities. · RTCM IN - allows DGPS input using a standard RTCM SC-104 format without any output capabilities. · RTCM/NMEA- allows DGPS input using a standard RTCM SC-104 format and supports the output of standard NMEA 0183 version 3.

0 data. · RTCM/TEXT- allows DGPS input using a standard RTCM SC-104 format and simple ASCII text output of location and velocity information. · NONE - provides no interfacing capabilities. NOTE: Use the `RTCM IN' setting if your beacon receiver is self-tuning. NMEA stands for "National Marine Electronics Association" and RTCM stands for "Radio Technical Commission for Maritime Services". Both are involved in developing technical standards for the marine electronics industry. The interface options will allow you to use a PC to download waypoints, routes, and track logs. 37 Reference System Page If `Garmin DGPS' or `RTCM/NMEA' format is selected, additional fields are provided to control a Garmin differential beacon receiver (e.g. GBR 21) directly from your eTrex.

You can enter the beacon frequency and bit rate when you select `User' from the Beacon pop-up list to manually tune the receiver (you can also `scan' if you don't know what the nearby station is, but the unit could continue scanning if reception is temporarily lost). To select an I/O Format: 1. Press the PAGE Button and switch to the `MENU' Page. Use the UP and DOWN Button and highlight the `SETUP' field. Press ENTER. The `SETUP' Page appears. The `SYSTEM' Page shows you the software version, allowing you to update from Garmin's web site. 2. Press the UP or DOWN Button and select the `INTERFACE' field. Press ENTER.

The `INTERFACE' Page appears. 3. Press ENTER on the `I/O FORMAT' field. Press the UP or DOWN Button to select the desired format. Press ENTER. Press PAGE to return to the page of your choice. System Page The System Page shows you the eTrex's current software version and allows you to choose from three modes of operation: · Normal · Battery Save · Demo (Demonstration) A `BATTERY LOW' message appears at the bottom of every page when there are approximately ten minutes of battery life left (when using alkaline batteries). Normal Mode The GPS receiver is turned on all the time when it's in `NORMAL' mode. The normal mode is more sensitive to sudden turns or change of speed/acceleration. 38 Reference Battery Save Battery Save When the eTrex is in `BATTERY SAVE' mode, the GPS receiver is turned on and off alternatively to conserve power.

To select battery save mode: 1. Press the PAGE Button and switch to the `MENU' Page. Use the UP and DOWN Button and highlight the `SETUP' field. Press ENTER. The `SETUP' Page appears. 2. Press the UP or DOWN Button and select the `SYSTEM' field. Press ENTER. The `SYSTEM' Page appears. 3.

Press ENTER on the `MODE' field. Press the UP or DOWN Button to select `BATTERY SAVE'. Press ENTER. Press PAGE to return to the page of your choice. The eTrex's batteries will last up to 22 hours in `BATTERY SAVE' mode (when using alkaline batteries). Demo Mode The `DEMO' mode is designed for dealers to show the features and functions of the eTrex to potential customers inside a closed building where satellite reception is not possible. There is no navigation possible in `DEMO' mode. If you select the `DEMO' mode, a window appears at the bottom of the screen asking you to verify that you want to turn the GPS off (the unit's GPS receiver will turn off and stop tracking satellites, but the unit itself will not power off). To do so, press ENTER. Congratulations! You now know all there is to know about the Garmin eTrex.

Demo Mode The `DEMO' mode is designed for Garmin dealers. 39 Appendices Appendix A Specifications Physical Case: Size: Weight: Temperature Range: Fully-gasketed, high-impact plastic alloy, waterproof to IPX7 standards (waterproof to 1 meter for 30 minutes) 4.4"H x 2"W x 1.2"D Approx. 5.

3 ounces (150g) w/batteries 5° to 158°F (-15° to 70°C)3 (operating) Performance Receiver: Acquisition time: Differential-ready, 12 parallel channel Approx. 15 seconds (warm start) Approx. 45 seconds (cold start) Approx. 5 minutes (First Time/AutoLocateTM) 1/second, continuous 1-5 meters (3-15 ft) with DGPS corrections1 15 meters (49 ft) RMS2 Velocity Accuracy: Dynamics: Interfaces: Antenna: 0.1 knot RMS steady state Performs to specifications to 6 g's NMEA 0183 (versions 2.

00-2.30), RTCM 104 (for DGPS corrections) and RS-232 for PC interface Built-In Update Rate: Position Accuracy: Power Input: Battery Life: Two 1.5-volt AA batteries3 Up to 22 hours in Battery Save mode (with alkaline batteries)4 Specifications subject to change without notice. 1 2 With optional Garmin Differential Beacon Receiver Input (such as Garmin GBR 21). Subject to accuracy degradation to 100m 2DRMS under the U.S. DOD-imposed Selective Availability program. The temperature rating for the eTrex may exceed the usable range of some batteries. Alkaline bat teries can rupture at high temperatures. External power can only be applied using the Garmin Auto Power Adapter or PC Interface Cable with Auto Power Adapter (This cable contains a voltage regula tor).

Alkaline batteries lose a significant amount of their capacity as temperature decreases. Use lithium batteries when operating the eTrex in below-freezing conditions. Extensive use of screen backlighting will significantly reduce battery life. 3 4 40 Appendices GPS - the Global Positioning System - is a navigation revolution. It's a technology that pinpoints a user's location anywhere in the world, 24 hours a day, regardless of the weather. Designed by the United States' Department of Defense for use by the military, the GPS System was made available to civilians for use in aviation, marine surveying and general outdoor/recreation markets. Today, millions of people utilize the accuracy and convenience of this amazing technology to hunt, fish, hike, fly, cruise and sail. GPS consists of a constellation of 24 satellites orbiting some 12,000 miles above the earth. These satellites transmit signals containing time and orbital data to calculate satellite position and almanac data.

Meanwhile, receivers used on the ground, sea and air search the sky for the satellites. The GPS unit needs to acquire good signals from at least three satellites to determine a position on the surface of the earth. A fourth signal is required to get three-dimensional positioning which determines elevation or altitude. Appendix B What is GPS? 41 Appendices Satellite Reception Tips Appendix C Reception Tips The basic steps in getting the eTrex `ready to navigate' was covered on page 9. If the eTrex has problems with receiving satellite signals, you will be prompted to answer some questions.

Please follow the steps that best describes your situation: A. You are trying to use the eTrex indoors: Clouds and weather do not affect the operation of the eTrex! 1. The message `TROUBLE TRACKING SATELLITES. ARE YOU INDOORS NOW?' will appear. Press the UP or DOWN Button to highlight `YES'. Press ENTER. The message will disappear. OR: 2. Go outside. The eTrex will keep tracking. B. You are not indoors and you have not moved hundreds of miles/km since you last used your eTrex: 1. The message `TROUBLE TRACKING SATELLITES. ARE YOU INDOORS NOW?' will appear. Press the UP or DOWN Button to highlight `NO'.

Press ENTER. 2. eTrex then asks: `HAVE YOU MOVED HUNDREDS OF MILES/KM SINCE LAST USE?' Press the UP or DOWN Button to highlight `NO'. Press ENTER. 3. eTrex asks: `IS TODAY dd-mmm-yy?' If you answer `YES' (the date matches the current date) the eTrex will continue tracking satellites and switch to the Satellite Page. 4. If you answer NO (the date is incorrect), the eTrex will do an `AUTOLOCATE' and switch to the satellite page. An `AUTOLOCATE' forces the eTrex to search for any available satellite(s) to determine its (your) location. 42 Appendices C.

You are not indoors, but you have moved hundreds of miles/km since you last used your eTrex: 1. The message `TROUBLE TRACKING SATELLITES. ARE YOU INDOORS NOW?' will appear. Press the UP or DOWN Button to highlight `NO'. Press ENTER.

2. eTrex then asks: `HAVE YOU MOVED HUNDREDS OF MILES/KM SINCE LAST USE?' Press the UP or DOWN Button to highlight `YES'. Press ENTER. 3. eTrex will do an `AUTOLOCATE' and switch to the Satellite Page.

This option is useful if you've relocated a distance greater than 500 miles from the last location the eTrex was used. The eTrex has a 12 parallel channel receiver for fast, accurate position fixes, even under heavy foliage and tree canopy. Appendix C Reception Tips 43 Appendices Appendix D Time Offset The table below gives approximate UTC time offset for various longitudinal zones. If you are in daylight savings time, add one hour to the offset. Longitudinal Zone W180.0º to W172.5º W172.5º to W157.5º W157.5º to W142.

5º W142.5º to W127.5º W127.5º to W112.5º W112.5º to W097.5º W097.5º to W082.5º W082.5º to W067.
5º W067.5º to W052.5º W052.5º to W037.5º W037.
5º to W022.5º W022.5º to W007.5º W007.5º to E007.
5° Offs e t - 12 - 11 - 10 -9 -8 -7 -6 Longitudinal Zone E007.5° to E022.5° E022.5° to E037.5° E037.5° to E052.5° E052.5° to E067.5° E067.5° to E082.

5° E082.5° to E097.5° E097.5° to E112.5° Offs e t +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12 -5 -4 -3 -2 -1 -0 E112.5° to E127.5° E127.5° to E142.5° E142.5° to E157.
5° E157.5° to E172.5° E172.5° to E180.0° A simple way to determine your local time offset is how many hours you are behind or ahead of UTC (also called `Greenwich' or `zulu' time) Example: EST (Eastern Standard Time) is 5 hours behind UTC, so your offset would be -5.
Adding one hour for daylight savings would make EDT (Eastern Daylight Time) -4. Subtract an hour for each time zone as you travel west. Offsets for Continental U.S. would be: EST: -5 EDT: -4 CST: -6 CDT: -5 MST: -7 MDT: -6 PST: -8 PDT: -7 44 Appendices Interface formats are selected from the `SETUP' Page.

The input/output lines on your eTrex are RS-232 compatible, allowing easy interface to a wide range of external devices, including PC's, differential beacon receivers, marine autopilots and/or a second GPS receiver. The NMEA 0183 version 2.0 interface format is supported by the eTrex and enables the unit to drive up to three NMEA devices. NMEA 0183 Version 3.0 Approved Sentences: Appendix E Wiring Diagram GPGGA, GPGLL, GPGSA, GPGSV, GPRMB, GPRMC, GPRTE, GPVTG, GPWPL, GPBOD Garmin Proprietary Sentences: PGRME (estimated error), PGRMM (datum string), PGRMZ (altitude), PSLIB (beacon receiver control) DGPS (Differential GPS) corrections are accepted in RTCM SC-104 version 2.0 format through the `Data In' line. The Garmin GBR 21 and GBR 23 is the recommended beacon receiver for use with the eTrex. Other beacon receivers with the correct RTCM format may be used, but may not correctly display status or allow tuning control from the GPS unit. The eTrex may be hard-wired to a serial connector using the Data Cable (see the Garmin web site www.garmin.

com for ordering information). Refer to the wiring diagram and the eTrex unit data connection illustrated below. The optional PC Interface Cable allows you to connect your eTrex to a PC-compatible computer's serial port. Ground (-) Power (+) Data Out Data In Data In Data Out Ground Green White Black eTrex Connector Data Cable 45 Appendices The eTrex does not turn on: 1. Check to see if the batteries are installed correctly and that the battery terminals are clean. Appendix F Troubleshooting It takes more than 10 minutes to get a location fix: 1. There may be large obstacles overhead; move to a new location with a clear view of the sky. 2. See "Satellite Reception Tips" on page 42. The arrow on the Navigation Page does not point to the destination: 1. Navigation information is based on your movement.