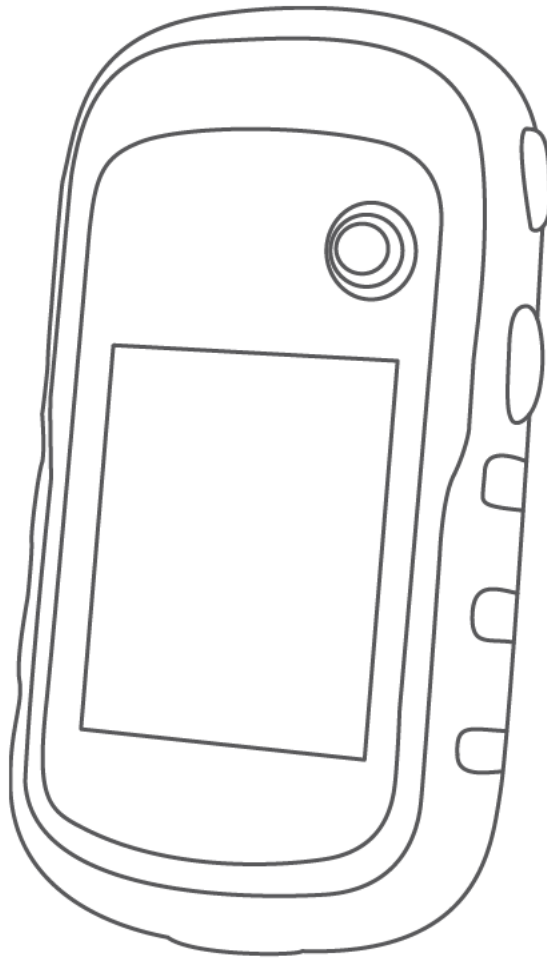


GARMIN.



ETREX[®] 22X/32X

Owner's Manual

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Introduction

⚠ WARNING

See the *Important Safety and Product Information* guide in the product box for product warnings and other important information.

Device Overview



①	Zoom keys. Press to zoom in and out.
②	Back key. Press to return to the previous menu.
③	Thumb Stick™ controller. Move directionally to scroll or highlight an item. Press to select an item.
④	Menu key. Press to open the menu for a page. Press twice to return to the main menu.
⑤	⏻ Press to adjust the backlight. Hold to turn the device on or off.
⑥	Mini-USB port (under weather cap).
⑦	Battery cover.
⑧	Battery cover locking ring.
⑨	Mounting spine.

Battery Information

⚠ WARNING

The temperature rating for the device may exceed the usable range of some batteries. Alkaline batteries can rupture at high temperatures.

NOTICE

Alkaline batteries lose a significant amount of their capacity as the temperature decreases. Use lithium batteries when operating the device in below freezing conditions.

Maximizing Battery Life

You can do several things to extend the life of the batteries.

- Reduce the backlight brightness (*Adjusting the Backlight Brightness*, page 6).
- Reduce the backlight timeout (*Display Settings*, page 8).
- Use battery save mode (*Turning On Battery Save Mode*, page 1).
- Decrease the map drawing speed (*Map Settings*, page 3).
- Turn off GLONASS or GALILEO (*GPS and Other Satellite Systems*, page 8).

Turning On Battery Save Mode

You can use battery save mode to prolong the battery life.

Select **Setup > Display > Battery Save > On**.

In battery save mode, the screen shuts off when the backlight times out. You can select ⏻ to turn on the screen, and you can double tap ⏻ to view the status page.

Long-Term Storage

When you do not plan to use the device for several months, remove the batteries. Stored data is not lost when batteries are removed.

Installing AA Batteries

The handheld device operates on two AA batteries (not included). Use NiMH or lithium batteries for best results.

- 1 Turn the D-ring counter-clockwise, and pull up to remove the cover.
- 2 Insert two AA batteries, observing polarity.



- 3 Replace the battery cover, and turn the D-ring clockwise.

Selecting the Battery Type

- 1 From the main menu, select **Setup > System > Battery Type**.
- 2 Select **Alkaline**, **Lithium**, or **Rechargeable NiMH**.

Turning On the Device

Hold ⏻.

Acquiring Satellite Signals

It may take 30 to 60 seconds to acquire satellite signals.

- 1 Go outdoors to an open area.
- 2 If necessary, turn on the device.
- 3 Wait while the device searches for satellites.
? flashes while the device determines your location.
■■■■ shows the satellite signal strength.

Opening the Main Menu

The main menu gives you access to tools and setup screens for waypoints, activities, routes, and more (*Additional Main Menu Tools*, page 6).

From any page, select menu twice.

Turning On the Backlight

Select any key to turn on the backlight.

The backlight turns on automatically when alerts and messages are displayed.

Waypoints, Routes, and Tracks

Waypoints

Waypoints are locations you record and store in the device. Waypoints can mark where you are, where you are going, or where you have been. You can add details about the location, such as name, elevation, and depth.

You can add a .gpx file that contains waypoints by transferring the file to the GPX folder (*Transferring Files to Your Device*, page 10).

Creating a Waypoint

You can save your current location as a waypoint.

- 1 Select **Mark Waypoint**.
- 2 If necessary, select a field to make changes to the waypoint.

- 3 Select **Done**.

Finding a Location by Name

- 1 Select **Where To? > Waypoints > menu > Spell Search**.
- 2 Enter the name or part of the name.
- 3 Select **Go**.

Projecting a Waypoint

You can create a new location by projecting the distance and bearing from a marked location to a new location.

- 1 Select **Waypoint Manager**.
- 2 Select a waypoint.
- 3 Select **menu > Project Waypoint**.
- 4 Enter the bearing, and select **Done**.
- 5 Select a unit of measure.
- 6 Enter the distance, and select **Done**.
- 7 Select **Save**.

Navigating to a Waypoint

- 1 Select **Where To? > Waypoints**.
- 2 Select a waypoint.
- 3 Select **Go**.

Editing a Waypoint

- 1 Select **Waypoint Manager**.
- 2 Select a waypoint.
- 3 Select an item to edit, such as the name.
- 4 Enter the new information, and select **Go**.

Deleting a Waypoint

- 1 Select **Waypoint Manager**.
- 2 Select a waypoint.
- 3 Select **menu > Delete**.

Waypoint Averaging

You can refine a waypoint location for more accuracy. When averaging, the device takes several readings at the same location and uses the average value to provide more accuracy.

- 1 Select **Waypoint Manager**.
- 2 Select a waypoint.
- 3 Select **menu > Average Location**.
- 4 Move to the waypoint location.
- 5 Select **Start**.
- 6 Follow the on-screen instructions.
- 7 When the confidence status bar reaches 100%, select **Save**.

For best results, collect four to eight samples for the waypoint, waiting at least 90 minutes between samples.

Routes

A route is a sequence of waypoints or locations that leads you to your final destination.

Creating a Route

- 1 Select **Route Planner > Create Route > Select First Point**.
- 2 Select a category.
- 3 Select the first point in the route.
- 4 Select **Use**.
- 5 Select **Select Next Point** to add additional points to the route.
- 6 Select **back** to save the route.

Viewing a Route on the Map

- 1 Select **Route Planner**.

- 2 Select a route.

- 3 Select **View Map**.

Navigating a Saved Route

- 1 Select **Where To? > Routes**.
- 2 Select a route.
- 3 Select **Go**.

Viewing the Active Route

- 1 While navigating a route, select **Active Route**.
- 2 Select a point in the route to view additional details.

Editing the Name of a Route

- 1 Select **Route Planner**.
- 2 Select a route.
- 3 Select **Change Name**.
- 4 Enter the new name.

Editing a Route

- 1 Select **Route Planner**.
- 2 Select a route.
- 3 Select **Edit Route**.
- 4 Select a point.
- 5 Select an option:
 - To view the point on the map, select **Review**.
 - To change the order of the points on the route, select **Move Up** or **Move Down**.
 - To insert an additional point on the route, select **Insert**. The additional point is inserted before the point you are editing.
 - To remove the point from the route, select **Remove**.
- 6 Select **back** to save the route.

Deleting a Route

- 1 Select **Route Planner**.
- 2 Select a route.
- 3 Select **Delete Route**.

Reversing a Route

You can switch the start and end points of your route to navigate the route in reverse.

- 1 Select **Route Planner**.
- 2 Select a route.
- 3 Select **Reverse Route**.

Stopping Navigation

Select **Where To? > Stop Navigation**.

Tracks

A track is a recording of your path. The track log contains information about points along the recorded path, including time, location, and elevation for each point. By default, the device creates a track log while you move with the device turned on.

Recording Track Logs

- 1 From the Main Menu, select **Setup > Tracks > Track Log**.
- 2 Select **Record, Do Not Show** or **Record, Show On Map**. If you select **Record, Show On Map**, a line on the map indicates your track.
- 3 Select **Record Method**.
- 4 Select an option:
 - To record tracks at a variable rate that creates an optimum representation of your tracks, select **Auto**.
 - To record tracks at a specified distance, select **Distance**.

- To record tracks at a specified time, select **Time**.

5 Select **Recording Interval**.

6 Complete an action:

- If you selected **Auto** for the **Record Method**, select an option to record tracks more or less often.

NOTE: Using the Most Often interval provides the most track detail, but fills up the device memory quicker.

- If you selected **Distance** or **Time** for the **Record Method**, enter a value.

As you move with the device turned on, a track log is created.

Viewing the Current Track

1 Select **Track Manager > Current Track**.

2 Select an option:

- To show the current track on the map, select **View Map**.
- To show the elevation plot for the current track, select **Elevation Plot**.

Saving the Current Track

1 Select **Track Manager > Current Track**.

2 Select an option:

- Select **Save Track** to save the entire track.
- Select **Save Portion**, and select a portion.

Navigating a Saved Track

1 Select **Where To? > Tracks**.

2 Select a saved track.

3 Select **Go**.

Clearing the Current Track

Select **Track Manager > Current Track > Clear Current Track**.

Deleting a Track

1 Select **Track Manager**.

2 Select a track.

3 Select **Delete**.

Tracks Settings

Select **Setup > Tracks**.

Track Log: Turns track recording on or off.

Record Method: Sets a track recording method. Auto records the tracks at a variable rate to create an optimum representation of your tracks.

Recording Interval: Sets a track log recording rate. Recording points more frequently creates a more-detailed track, but fills the track log faster.

Auto Archive: Sets an automatic archive method to organize your tracks. Tracks are saved and cleared automatically.

Color: Changes the color of the track line on the map.

Purchasing Additional Maps

1 Go to your device product page at www.garmin.com.

2 Click the **Maps** tab.

3 Follow the on-screen instructions.

Finding an Address

You can use optional City Navigator® maps to search for addresses.

1 Select **Where To? > Addresses**.

2 Select the country or state, if necessary.

3 Enter the city or postal code.

NOTE: Not all map data provides postal code searching.

4 Select the city.

5 Enter the house number.

6 Enter the street.

Navigation

You can navigate to a route, track, waypoint, geocache, or any saved location in the device. You can use the map or the compass to navigate to your destination.

Map

▲ represents your location on the map. As you travel, ▲ moves and leaves a track log (trail). Waypoint names and symbols appear on the map. When you are navigating to a destination, your route is marked with a colored line on the map.

Changing the Map Orientation

1 From the map, select **menu**.

2 Select **Setup Map > Orientation**.

3 Select an option:

- Select **North Up** to show north at the top of the page.
- Select **Track Up** to show your current direction of travel at the top of the page.
- Select **Automotive Mode** to show an automotive perspective with the direction of travel at the top.

Measuring Distance on the Map

You can measure the distance between two locations.

1 From the map, select a location.

2 Select **menu > Measure Distance**.

3 Move the pin to another location on the map.

Map Settings

Select **Setup > Map**.

Orientation: Adjusts how the map is shown on the page. North Up shows north at the top of the page. Track Up shows a top-down view with your current direction of travel toward the top of the page. Automotive Mode shows an 3D automotive view with the direction of travel at the top.

Guidance Text: Sets when the guidance text appears on the map.

Data Fields: Customizes the data fields and dashboards of the map, compass, elevation plot, and trip computer.

Map Information: Enables or disables the maps currently loaded on the device.

Advanced Map Settings

Select **Setup > Map > Advanced Map Setup**.

Auto Zoom: Automatically selects the appropriate zoom level for optimal use on your map. When Off is selected, you must zoom in or out manually.

Zoom Levels: Adjusts the zoom level at which map items will appear. The map items will not appear when the map zoom level is higher than the selected level.

Text Size: Selects the text size for map items.

Detail: Selects the amount of detail shown on the map. Showing more detail may cause the map to redraw more slowly.

Shaded Relief: Shows detail relief on the map (if available) or turns off shading.

Compass

When navigating, ▲ points to your destination, regardless of the direction you are moving. When ▲ points toward the top of the electronic compass, you are traveling directly toward your destination. If ▲ points any other direction, turn until it points toward the top of the compass.

Calibrating the Compass

The device has a 3-axis electronic compass (eTrex 32x devices only). You should calibrate the compass after moving long distances, experiencing temperature changes, or changing the batteries.

- 1 Go outside, away from objects that influence magnetic fields, such as cars, buildings, or overhead power lines.
- 2 From the compass, select **menu**.
- 3 Select **Calibrate Compass > Start**.
- 4 Follow the on-screen instructions.

Using the Compass

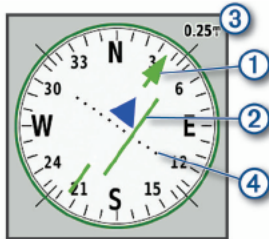
You can use the compass to navigate an active route.

- 1 Select **PAGE**.
- 2 Hold the device level.
- 3 Follow ▲ to your destination.

Course Pointer

The course pointer is most useful when you are navigating on water or where there are no major obstacles in your path. It can also help you avoid hazards near the course, such as shoals or submerged rocks.

To enable the course pointer, from the compass, select **menu > Setup Heading > Go To Line/Pointer > Course (CDI)**.



The course pointer ① indicates your relationship to the course line leading to the destination. The course deviation indicator (CDI) ② provides the indication of drift (right or left) from the course. The scale ③ refers to the distance between dots ④ on the course deviation indicator, which tell you how far off course you are.

Navigating with Sight 'N Go

You can point the device at an object in the distance, lock in the direction, and navigate to the object.

NOTE: Sight 'N Go is available only with eTrex 32x devices.

- 1 Select **Sight 'N Go**.
- 2 Point the device at an object.
- 3 Select **Lock Direction > Set Course**.
- 4 Navigate using the compass.

Heading Settings

You can customize the compass settings.

Select **Setup > Heading**.

Display: Sets the type of directional heading shown on the compass.

North Reference: Sets the north reference used on the compass.

Go To Line/Pointer: Sets the behavior of the pointer that appears on the map. Bearing points in the direction of your destination. Course shows your relationship to the course line leading to the destination.

Compass: Automatically switches from an electronic compass to a GPS compass when you are traveling at a higher rate of speed for a period of time.

Calibrate Compass: See [Calibrating the Compass, page 4](#).

Elevation Plot

NOTE: The elevation plot is available only with eTrex 32x devices.

By default, the elevation plot displays the elevation over the distance traveled. You can customize elevation plot settings ([Elevation Plot Settings, page 4](#)). You can select any point on the plot to view details about that point.

Elevation Plot Settings

From the elevation plot, select **menu**.

Change Plot Type: Sets the type of data shown on the elevation plot.

Elevation/Time: Records elevation changes over a period of time.

Elevation/Distance: Records elevation changes over a distance.

Barometric Pressure: Records barometric pressure changes over a period of time.

Ambient Pressure: Records ambient pressure changes over a period of time.

Adjust Zoom Ranges: Adjusts the zoom ranges shown on the elevation plot page.

Change Data Fields: Customizes the elevation plot data fields.

Reset: Resets the elevation plot data, including waypoint, track, and trip data.

Calibrate Altimeter: See ([Calibrating the Barometric Altimeter, page 4](#)).

Restore Defaults: Restores the elevation plot to factory default settings.

Calibrating the Barometric Altimeter

You can manually calibrate the barometric altimeter if you know the correct elevation or the correct barometric pressure.

NOTE: The barometric altimeter is available only with eTrex 32x devices.

- 1 Go to a location where the elevation or barometric pressure is known.
- 2 Select **PAGE > Elevation Plot > menu > Calibrate Altimeter**.
- 3 Follow the on-screen instructions.

Trip Computer

The trip computer displays your current speed, average speed, trip odometer, and other helpful statistics. You can customize the trip computer layout, dashboard, and data fields.

Trip Computer Settings

From the trip computer, select **menu**.

Reset: Resets all the trip computer values to zero. For accurate information, reset the trip information before beginning a trip.

Big Numbers: Changes the size of the numbers shown on the trip computer page.

Change Data Fields: Customizes the trip computer data fields.

Change Dashboard: Changes the theme and information displayed on the dashboard.

NOTE: Your customized settings are remembered by the dashboard. Your settings are not lost when you change profiles ([Profiles, page 8](#)).

Restore Defaults: Restores the trip computer to factory default settings.

Restoring Default Page Settings

- 1 Open a page for which you will restore the settings.
- 2 Select **menu > Restore Defaults**.

Main Menu Features and Settings

Geocaches

Geocaching is a treasure hunting activity in which players hide or search for hidden caches using clues and GPS coordinates.

Downloading Geocaches Using a Computer

You can load geocaches manually onto your device using a computer (*Transferring Files to Your Device*, page 10). You can place the geocache files into a GPX file and import them into the GPX folder on the device. With a premium membership to geocaching.com, you can use the "pocket query" feature to load a large group of geocaches onto your device as a single GPX file.

- 1 Connect the device to your computer using a USB cable.
- 2 Go to www.geocaching.com.
- 3 If necessary, create an account.
- 4 Sign in.
- 5 Follow the instructions at geocaching.com to find and download geocaches to your device.

Navigating to a Geocache

- 1 Select **Geocaches**.
- 2 Select a geocache.
- 3 Select **Go**.

Logging the Attempt

After you have attempted to find a geocache, you can log your results. You can verify some geocaches at www.geocaching.com.

- 1 Select **Geocaches > Log Attempt**.
- 2 Select **Found**, **Did not Find**, **Needs Repair**, or **Unattempted**.
- 3 Select an option:
 - To stop logging, select **Done**.
 - To begin navigation to the geocache nearest you, select **Find Next Closest**.
 - To enter a comment about looking for the cache or about the cache itself, select **Add Comment**, enter a comment, and select **Done**.

If you are signed in to www.geocaching.com, the log uploads to your www.geocaching.com account automatically.

chirp™

A chirp is a small Garmin® accessory that is programmed and left in a geocache. You can use your device to find a chirp in a geocache. For more information about the chirp, see the *chirp Owner's Manual* at www.garmin.com.

Enabling chirp Searching

- 1 Select **Setup > Geocaches**.
- 2 Select **chirp™ Searching > On**.

Sending and Receiving Data Wirelessly

NOTE: This feature is available only with eTrex 32x devices.

Before you can share data wirelessly, you must be within 3 m (10 ft.) of a compatible device.

Your device can send and receive data when paired with another compatible device using Bluetooth® or ANT+® wireless technology. You can share waypoints, geocaches, routes, and tracks.

- 1 Select **Share Wirelessly**.
- 2 Select an option:
 - Select **Send**, and select a type of data.

- Select **Receive** to receive data from another device. The other compatible device must be attempting to send data.

- 3 Follow the on-screen instructions.

Setting a Proximity Alarm

Proximity alarms alert you when you are within a specified range of a particular location.

- 1 Select **Proximity Alarms > Create Alarm**.
- 2 Select a category.
- 3 Select a location.
- 4 Select **Use**.
- 5 Enter a radius.

When you enter an area with a proximity alarm, the device sounds a tone.

Area Calculation

Calculating the Size of an Area

- 1 Select **Area Calculation > Start**.
- 2 Walk around the perimeter of the area you want to calculate.
- 3 Select **Calculate** when finished.

Satellite Page

The satellite page shows your current location, GPS accuracy, satellite locations, and signal strength.

GPS Satellite Settings

Select **Satellite > menu**.

NOTE: Some settings are only available when Use Demo Mode is enabled.

Use Demo Mode: Allows you to turn the GPS off.

Use Satellite System: Allows you to turn the GPS on.

Track Up: Indicates whether satellites are shown with rings oriented with north toward the top of the screen or oriented with your current track toward the top of the screen.

Single Color: Allows you to select whether the satellite page is displayed in multicolor or single color.

Set Location On Map: Allows you to mark your current location on the map. You can use this location to create routes or search for saved locations.

AutoLocate Position: Calculates your GPS position using the Garmin AutoLocate® feature.

Garmin Adventures

You can create adventures to share your journeys with family, friends, and the Garmin community. You can group related items together as an adventure. For example, you can create an adventure for your latest hiking trip. The adventure could contain the track log of the trip, photos of the trip, and geocaches you hunted. You can use BaseCamp™ to create and manage your adventures. For more information, go to adventures.garmin.com.

Sending Files to BaseCamp

- 1 Open BaseCamp.
- 2 Connect the device to your computer.

On Windows® computers, the device appears as a removable drive or a portable device, and the memory card may appear as a second removable drive. On Mac® computers, the device and memory card appear as mounted volumes.

NOTE: Some computers with multiple network drives may not display device drives properly. See your operating system documentation to learn how to map the drive.

- 3 Open the **Garmin** or memory card drive or volume.

4 Select an option:

- Select an item from a connected device and drag it to My Collection or to a list.
- From BaseCamp, select **Device > Receive from Device**, and select the device.

Creating an Adventure

Before you can create an adventure and send it to your device, you must download BaseCamp to your computer and transfer a track from your device to your computer ([Sending Files to BaseCamp](#), page 5).

- 1 Open BaseCamp.
- 2 Select **File > New > Garmin Adventure**.
- 3 Select a track, and select **Next**.
- 4 If necessary, add items from BaseCamp.
- 5 Complete the required fields to name and describe the adventure.
- 6 If you want to change the cover photo for the adventure, select **Change**, and select a different photo.
- 7 Select **Finish**.

Starting an Adventure

Before you can start an adventure, you must send an adventure from BaseCamp to your device ([Sending Files to BaseCamp](#), page 5).

- 1 Select **Adventures**.
- 2 Select an adventure.
- 3 Select **Start**.

VIRB® Remote

NOTE: The VIRB Remote feature is available only with eTrex 32x devices.

Before you can use the VIRB Remote function, you must enable the remote setting on your VIRB camera.

The VIRB Remote function allows you to control your VIRB camera from a distance.

- 1 Select **VIRB Remote**.
- 2 Select an option:
 - Select **REC** to record video.
 - Select **Take Photo** to take a photograph.

Additional Main Menu Tools

Select menu.

Alarm Clock: Sets an audible alarm. If you are not currently using the device, you can set the device to turn on at a specific time.

Calculator: Displays a calculator.

Calendar: Displays a calendar.

Hunt and Fish: Displays the predicted best dates and times for hunting and fishing at your current location.

Stopwatch: Allows you to use a timer, mark a lap, and time laps.

Sun and Moon: Displays sunrise and sunset times, along with the moon phase, based on your GPS position.

Customizing the Device

Adjusting the Backlight Brightness

Extensive use of screen backlighting can significantly reduce battery life. You can adjust the backlight brightness to maximize the battery life.

NOTE: The backlight brightness may be limited when the battery is low.

- 1 Select .
- 2 Use the slider to adjust the backlight level.
The device may feel warm when the backlight setting is high.

Customizing the Main Menu

You can move, add, and delete items in the main menu.

- 1 From the main menu, select **menu > Change Item Order**.
- 2 Select a menu item.
- 3 Select an option:
 - Select **Move** to change the placement of the item in the list.
 - Select **Insert** to add a new item to the list.
 - Select **Remove** to delete an item from the list.

Changing the Page Sequence

Before you can change the order of the page sequence, you must add pages to the sequence.

- 1 Select **Setup > Page Sequence**.
- 2 Select a page.
- 3 Select **Move**.
- 4 Move the page up or down in the list.
- 5 Press the Thumb Stick controller.

Adding a Page

- 1 Select **Setup > Page Sequence**.
- 2 Select **Add Page**.
- 3 Select a page to add.

Removing a Page

- 1 Select **Setup > Page Sequence**.
- 2 Select a page.
- 3 Select **Remove**.
- 4 Select **ENTER**.

Customizing the Data Fields

You can customize the data fields displayed on each main page.

- 1 Open the page for which you will change the data fields.
- 2 Select **menu**.
- 3 Select **Change Data Fields**.
- 4 Select the new data field.
- 5 Follow the on-screen instructions.

Data Fields

Some data fields require you to be navigating or require ANT+ accessories to display data.

24hr Max Temperature: The maximum temperature recorded in the last 24 hours. Your device must be connected to a wireless temperature sensor for this data to appear.

24hr Min Temperature: The minimum temperature recorded in the last 24 hours. Your device must be connected to a wireless temperature sensor for this data to appear.

Accuracy Of GPS: The margin of error for your exact location. For example, your GPS location is accurate to within +/- 12 ft. (3.65 m).

Alarm Timer: The current time of the countdown timer.

Ambient Pressure: The uncalibrated environmental pressure.

Ascent - Average: The average vertical distance of ascent since the last reset.

Ascent - Maximum: The maximum rate of ascent in feet per minute or meters per minute since the last reset.

Ascent - Total: The total elevation distance ascended since the last reset.

Average Lap: The average lap time for the current activity.

Barometer: The calibrated current pressure.

Battery Level: The remaining battery power.

Bearing: The direction from your current location to a destination. You must be navigating for this data to appear.

Cadence: The number of revolutions of the crank arm or number of strides per minute. Your device must be connected to a cadence accessory for this data to appear.

Compass Heading: The direction you are moving based on the compass.

Course: The direction from your starting location to a destination. Course can be viewed as a planned or set route. You must be navigating for this data to appear.

Current Lap: The stopwatch time for the current lap.

Date: The current day, month, and year.

Depth: The depth of the water. Your device must be connected to a NMEA® 0183 or NMEA 2000® device capable of acquiring the water depth.

Descent - Average: The average vertical distance of descent since the last reset.

Descent - Maximum: The maximum rate of descent in feet per minute or meters per minute since the last reset.

Descent - Total: The total elevation distance descended since the last reset.

Distance To Destination: The remaining distance to the final destination. You must be navigating for this data to appear.

Distance To Next: The remaining distance to the next waypoint on the route. You must be navigating for this data to appear.

Elevation: The altitude of your current location above or below sea level.

Elevation Above Ground: The altitude of your current location above ground level (if maps contain sufficient elevation information).

Elevation - Maximum: The highest elevation reached since the last reset.

Elevation - Minimum: The lowest elevation reached since the last reset.

ETA At Destination: The estimated time of day when you will reach the final destination (adjusted to the local time of the destination). You must be navigating for this data to appear.

ETA At Next: The estimated time of day when you will reach the next waypoint on the route (adjusted to the local time of the waypoint). You must be navigating for this data to appear.

Glide Ratio: The ratio of horizontal distance traveled to the change in vertical distance.

Glide Ratio To Dest: The glide ratio required to descend from your current position to the destination elevation. You must be navigating for this data to appear.

GPS Elevation: The altitude of your current location using GPS.

GPS Heading: The direction you are moving based on GPS.

GPS Signal Strength: The strength of the GPS satellite signal.

Grade: The calculation of rise (elevation) over run (distance). For example, if for every 10 ft. (3 m) you climb you travel 200 ft. (60 m), the grade is 5%.

Heading: The direction you are moving.

Heart Rate: Your heart rate in beats per minute (bpm). Your device must be connected to a compatible heart rate monitor.

Lap Distance: The distance traveled for the current lap.

Laps: The number of laps completed for the current activity.

Last Lap Time: The stopwatch time for the last completed lap.

Location (lat/lon): The current position in latitude and longitude regardless of the selected position format setting.

Location (selected): The current position using the selected position format setting.

Location of Destination: The position of your final destination. You must be navigating for this data to appear.

Odometer: A running tally of distance traveled for all trips. This total does not clear when resetting the trip data.

Off Course: The distance to the left or right by which you have strayed from the original path of travel. You must be navigating for this data to appear.

Pointer: An arrow points in the direction of the next waypoint or turn. You must be navigating for this data to appear.

Speed: The current rate of travel.

Speed Limit: The reported speed limit for the road. Not available in all maps and in all areas. Always rely on posted road signs for actual speed limits.

Speed - Maximum: The highest speed reached since the last reset.

Speed - Moving Avg.: The average speed while moving since the last reset.

Speed - Overall Avg.: The average speed while moving and stopped since the last reset.

Stopwatch Timer: The stopwatch time for the current activity.

Sunrise: The time of sunrise based on your GPS position.

Sunset: The time of sunset based on your GPS position.

Temperature: The temperature of the air. Your body temperature affects the temperature sensor. Your device must be connected to a wireless temperature sensor for this data to appear.

Temperature - Water: The temperature of the water. Your device must be connected to a NMEA 0183 device capable of acquiring the water temperature.

Time of Day: The current time of day based on your current location and time settings (format, time zone, daylight saving time).

Time To Destination: The estimated time remaining before you reach the destination. You must be navigating for this data to appear.

Time To Next: The estimated time remaining before you reach the next waypoint in the route. You must be navigating for this data to appear.

To Course: The direction in which you must move to get back on the route. You must be navigating for this data to appear.

Total Lap: The stopwatch time for all the completed laps.

Track Distance: The distance traveled for the current track.

Trip Odometer: A running tally of the distance traveled since the last reset.

Trip Time: A running tally of the total time spent moving and not moving since the last reset.

Trip Time - Moving: A running tally of the time spent moving since the last reset.

Trip Time - Stopped: A running tally of the time spent not moving since the last reset.

Turn: The angle of difference (in degrees) between the bearing to your destination and your current course. L means turn left. R means turn right. You must be navigating for this data to appear.

Velocity Made Good: The speed at which you are closing on a destination along a route. You must be navigating for this data to appear.

Vertical Dist to Dest: The elevation distance between your current position and the final destination. You must be navigating for this data to appear.

Vertical Speed: The rate of ascent or descent over time.

Vertical Speed To Dest: The rate of ascent or descent to a predetermined altitude. You must be navigating for this data to appear.

Waypoint At Dest: The last point on the route to the destination. You must be navigating for this data to appear.

Waypoint At Next: The next point on the route. You must be navigating for this data to appear.

Profiles

Profiles are a collection of settings that optimize your device based on how you are using it. For example, the settings and views are different when you use the device for hunting than when geocaching.

When you are using a profile and you change settings, such as data fields or units of measurement, the changes are saved automatically as part of the profile.

Creating a Custom Profile

You can customize your settings and data fields for a particular activity or trip.

- 1 Select **Setup > Profiles > Create Profile > OK**.
- 2 Customize your settings and data fields.

Selecting a Profile

When you change activities, you can change the setup of the device by changing the profile.

- 1 Select **Profile Change**.
- 2 Select a profile.

Editing a Profile Name

- 1 Select **Setup > Profiles**.
- 2 Select a profile.
- 3 Select **Edit Name**.
- 4 Enter the new name.

Deleting a Profile

NOTE: Before you can delete the active profile, you must activate a different profile. You cannot delete a profile while it is active.

- 1 Select **Setup > Profiles**.
- 2 Select a profile.
- 3 Select **Delete**.

System Settings

Select **Setup > System**.

Satellite System: Sets the satellite system to GPS, GPS + GLONASS, GPS + GALILEO or Demo Mode (GPS off).

WAAS/EGNOS: Enables the system to use Wide Area Augmentation System/European Geostationary Navigation Overlay Service (WAAS/EGNOS) data.

Language: Sets the text language on the device.

NOTE: Changing the text language does not change the language of user-entered data or map data, such as street names.

Interface: Sets the format of the serial interface.

Battery Type: Allows you to change the type of AA battery you are using.

NOTE: This setting is disabled when the NiMH battery pack is installed.

GPS and Other Satellite Systems

The default satellite system setting is GPS. The GPS + GLONASS or GPS + GALILEO options offer increased performance in challenging environments and faster position acquisition. Using GPS and another satellite system together can reduce battery life more quickly than using GPS only.

Display Settings

Select **Setup > Display**.

Backlight Timeout: Adjusts the length of time before the backlight turns off.

Battery Save: Saves the battery power and prolongs the battery life by turning off the screen when the backlight times out.

Colors: Changes the appearance of the display background and selection highlight.

Main, Setup, Find Style: Changes the style of the menu system.

Screen Capture: Allows you to save the image on the device screen.

Setting the Device Tones

You can customize tones for messages, keys, turn warnings, and alarms.

- 1 Select **Setup > Tones > Tones > On**.
- 2 Select a tone for each audible type.

Changing the Units of Measure

You can customize units of measure for distance and speed, elevation, depth, temperature, pressure, and vertical speed.

- 1 Select **Setup > Units**.
- 2 Select a measurement type.
- 3 Select a unit of measure.

Time Settings

Select **Setup > Time Settings**.

Time Format: Sets the device to show time in a 12-hour or 24-hour format.

Time Zone: Sets the time zone for the device. Automatic sets the time zone automatically based on your GPS position.

Position Format Settings

NOTE: You should not change the position format or the map datum coordinate system unless you are using a map or chart that specifies a different position format.

Select **Setup > Position Format**.

Position Format: Sets the position format in which a location reading appears.

Map Datum: Sets the coordinate system on which the map is structured.

Map Spheroid: Shows the coordinate system the device is using. The default coordinate system is WGS 84.

Routing Settings

The device calculates routes optimized for the type of activity you are doing. The available routing settings vary based on the activity selected.

Select **Setup > Routing**.

Activity: Sets an activity for routing. The device calculates routes optimized for the type of activity you are doing.

Route Transitions: Sets how the device routes from one point on the route to the next. This setting is available only for some activities. Distance routes you to the next point on the

route when you are within a specified distance of your current point.

Lock On Road: Locks the blue triangle, which represents your position on the map, onto the nearest road.

Altimeter Settings

NOTE: The altimeter is available only with eTrex 32x devices. Select **Setup > Altimeter**.

Auto Calibration: Automatically calibrates the altimeter each time the device is turned on.

Barometer Mode: Variable Elevation allows the barometer to measure changes in elevation while you are moving. Fixed Elevation assumes the device is stationary at a fixed elevation, so the barometric pressure should only change due to weather.

Pressure Trending: Sets how the device records pressure data. Save Always records all pressure data, which can be helpful when you are watching for pressure fronts.

Plot Type: Records elevation changes over a period of time or distance, records barometric pressure over a period of time, or records ambient pressure changes over a period of time.

Calibrate Altimeter: Calibrates the altimeter.

Marine Settings

Select **Setup > Marine**.

Marine Chart Mode: Sets the type of chart the device uses when displaying marine data. Nautical displays various map features in different colors so the marine POIs are more readable and so the map reflects the drawing scheme of paper charts. Fishing (requires marine maps) displays a detailed view of bottom contours and depth soundings and simplifies map presentation for optimal use while fishing.

Appearance: Sets the appearance of marine navigation aids on the map.

Marine Alarm Setup: Sets alarms for when you exceed a specified drift distance while anchored, when you are off course by a specified distance, and when you enter water of a specific depth.

Setting Up Marine Alarms

- 1 Select **Setup > Marine > Marine Alarm Setup**.
- 2 Select an alarm type.
- 3 Select **On**.
- 4 Enter a distance, and select **Go**.

Resetting Data

You can reset trip data, delete all waypoints, clear the current track, or restore default values.

- 1 Select **Setup > Reset**.
- 2 Select an item to reset.

Device Information

Product Updates

On your computer, install Garmin Express™ (www.garmin.com/express). On your smartphone, install the Garmin Connect™ app.

This provides easy access to these services for Garmin devices:

- Software updates
- Map updates
- Data uploads to Garmin Connect
- Product registration

Setting Up Garmin Express

- 1 Connect the device to your computer using a USB cable.
- 2 Go to www.garmin.com/express.
- 3 Follow the on-screen instructions.

Registering Your Device

Help us better support you by completing our online registration today. Keep the original sales receipt, or a photocopy, in a safe place.

- 1 Go to www.garmin.com/express.
- 2 Sign in to your Garmin account.

Viewing E-label Regulatory and Compliance Information

The label for this device is provided electronically. The e-label may provide regulatory information, such as identification numbers provided by the FCC or regional compliance markings, as well as applicable product and licensing information.

- 1 Select **Setup**.
- 2 Select **About**.

Device Care

NOTICE

Avoid chemical cleaners, solvents, and insect repellents that can damage plastic components and finishes.

Do not store the device where prolonged exposure to extreme temperatures can occur, because it can cause permanent damage.

The device is water resistant to IEC Standard 60529 IPX7. It can withstand accidental immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the device. After submersion, be certain to wipe dry and air dry the device before using or charging.

Thoroughly rinse the device with fresh water after exposure to chlorinated or salt water environments.

Cleaning the Device

NOTICE

Even small amounts of sweat or moisture can cause corrosion of the electrical contacts when connected to a charger. Corrosion can prevent charging and data transfer.

- 1 Wipe the device using a cloth dampened with a mild detergent solution.
- 2 Wipe it dry.

After cleaning, allow the device to dry completely.

Data Management

You can store files on your device. The device has a memory card slot for additional data storage.

NOTE: The device is compatible with Windows 7 and newer, and Mac OS 10.4 and newer.

File Types

The handheld device supports these file types.

- Files from BaseCamp or HomePort™. Go to www.garmin.com/trip_planning.
- GPX track files.
- GPX geocache files. Go to www.garmin.com/geocache.
- GGZ geocache files. Go to www.garmin.com/geocache.
- JPEG photo files.
- GPI custom POI files from the Garmin POI Loader. Go to www.garmin.com/products/poiloader.

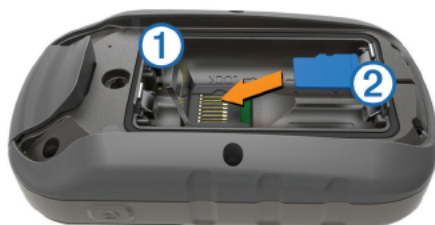
Installing a Memory Card

⚠ WARNING

Do not use a sharp object to remove user-replaceable batteries.

You can install a microSD® memory card in the handheld device for additional storage or pre-loaded maps.

- 1 Turn the D-ring counter-clockwise, and pull up to remove the cover.
- 2 Remove the battery.
- 3 Slide the card holder to the left and lift up.



- 4 Place the memory card with the gold contacts facing down.
- 5 Close the card holder.
- 6 Slide the card holder to the right to lock it.
- 7 Replace the battery and cover.

Connecting the Device to Your Computer

NOTICE

To prevent corrosion, thoroughly dry the USB port, the weather cap, and the surrounding area before charging or connecting to a computer.

Before you can operate your device while connected to your computer, you must install batteries. The computer USB port may not provide enough power to operate the device.

- 1 Pull up the weather cap from the mini-USB port.
- 2 Plug the small end of the USB cable into the mini-USB port.
- 3 Plug the large end of the USB cable into a computer USB port.

On Windows computers, the device appears as a removable drive or a portable device, and the memory card may appear as a second removable drive. On Mac computers, the device and memory card appear as mounted volumes.

Transferring Files to Your Device

- 1 Connect the device to your computer.

On Windows computers, the device appears as a removable drive or a portable device, and the memory card may appear as a second removable drive. On Mac computers, the device and memory card appear as mounted volumes.

NOTE: Some computers with multiple network drives may not display device drives properly. See your operating system documentation to learn how to map the drive.

- 2 On your computer, open the file browser.
- 3 Select a file.
- 4 Select **Edit > Copy**.
- 5 Open the portable device, drive, or volume for the device or memory card.
- 6 Browse to a folder.
- 7 Select **Edit > Paste**.

The file appears in the list of files in the device memory or on the memory card.

Deleting Files

NOTICE

If you do not know the purpose of a file, do not delete it. Your device memory contains important system files that should not be deleted.

- 1 Open the **Garmin** drive or volume.
- 2 If necessary, open a folder or volume.
- 3 Select a file.
- 4 Press the **Delete** key on your keyboard.

NOTE: If you are using an Apple® computer, you must empty the Trash folder to completely remove the files.

Disconnecting the USB Cable

If your device is connected to your computer as a removable drive or volume, you must safely disconnect your device from your computer to avoid data loss. If your device is connected to your Windows computer as a portable device, it is not necessary to safely disconnect the device.

- 1 Complete an action:
 - For Windows computers, select the **Safely Remove Hardware** icon in the system tray, and select your device.
 - For Apple computers, select the device, and select **File > Eject**.
- 2 Disconnect the cable from your computer.

Specifications

Battery type	NiMH battery pack or two AA batteries (1.5 V or lower alkaline, NiMH, or lithium)
Battery life	Up to 16 hr.
Water rating	IEC 60529 IPX7*
Operating temperature range	From -20° to 45°C (from -4° to 113°F)
Charging temperature range	From 0° to 40°C (from 32° to 104°F)
Compass-safe distance	17.5 cm (7 in.)
Wireless frequency/protocol	2.4 GHz @ 0 dBm nominal

*The device withstands incidental exposure to water of up to 1 m for up to 30 min. For more information, go to www.garmin.com/waterrating.

Appendix

Garmin Support Center

Go to support.garmin.com for help and information, such as product manuals, frequently asked questions, videos, and customer support.

Optional Accessories

Optional accessories, such as mounts, maps, fitness accessories, and replacement parts, are available at <http://buy.garmin.com> or from your Garmin dealer.

Pairing Your ANT+ Sensors

Before you can pair, you must put on the heart rate monitor or install the sensor.

Pairing is the connecting of ANT+ wireless sensors, for example, connecting a heart rate monitor with your device.

- 1 Bring the device within 3 m (10 ft.) of the sensor.

NOTE: Stay 10 m (30 ft.) away from other ANT+ sensors while pairing.
- 2 From the app drawer, select **Setup > ANT Sensor**.

3 Select your sensor.

4 Select **Search For New**.

When the sensor is paired with your device, the sensor status changes from Searching to Connected.

Tips for Pairing ANT+ Accessories with Your Garmin Device

- Verify that the ANT+ accessory is compatible with your Garmin device.
- Before you pair the ANT+ accessory with your Garmin device, move 10 m (33 ft.) away from other ANT+ accessories.
- Bring the Garmin device within range 3 m (10 ft.) of the ANT+ accessory.
- After you pair the first time, your Garmin device automatically recognizes the ANT+ accessory each time it is activated. This process occurs automatically when you turn on the Garmin device and only takes a few seconds when the accessories are activated and functioning correctly.
- When paired, your Garmin device receives data from only your accessory, and you can go near other accessories.

Troubleshooting

Restarting the Device

If the device stops responding, you may need to restart it. This does not erase any of your data or settings.

1 Remove the batteries.

2 Reinstall the batteries.

Viewing Device Information

You can view the unit ID, software version, regulatory information, and license agreement.

Select **Setup > About**.

Restoring All Default Settings

You can reset all settings back to the factory default settings.

Select **Setup > Reset > Reset All Settings > Yes**.

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