



MONTANA™ 600 series owner's manual

for use with models 600, 650, 650t



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Model: 01102524

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Getting Started

WARNING

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

When using your device the first time, you should complete these tasks to set up the device and get to know the basic features.

1. Install the batteries ([page 2](#)).
2. Turn on the device ([page 4](#)).
3. Register the device ([page 5](#)).
4. Acquire satellites ([page 4](#)).
5. Calibrate the compass ([page 19](#)).
6. Mark a waypoint ([page 8](#)).
7. Create a route ([page 11](#)).
8. Record a track ([page 13](#)).
9. Navigate to a destination ([page 16](#)).

Device Overview



①	Camera lens (650 and 650t only)
②	 Power key
③	microSD™ card slot (under battery door) (page 49)
④	Auto mount power connector
⑤	Stereo headphone jack (page 18)
⑥	Mini-USB port (under weather cap)
⑦	Battery cover D-ring
⑧	MCX port for external GPS antenna (under weather cap)

Battery Information

WARNING

This product contains a lithium-ion battery. To prevent the possibility of personal injury or product damage caused by battery exposure to extreme heat, store the device out of direct sunlight.

The temperature rating for the device ([page 45](#)) 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 temperature decreases. Therefore, use lithium batteries when operating the device in below-freezing conditions.

The device operates on the included lithium-ion battery pack or three AA batteries. For tips on maximizing battery life and other battery information, see [page 46](#).

Installing the Lithium-ion Battery Pack

1. Turn the D-ring counter-clockwise, and pull up to remove the cover.
2. Locate the battery  that came in the product box.



3. Align the metal contacts on the battery with the metal contacts in the battery compartment.

4. Insert the battery into the compartment, contacts first.
5. Gently press the battery into place.
6. Replace the battery cover, and turn the D-ring clockwise.

Charging the Lithium-ion Battery Pack

NOTICE

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

Before you use the device the first time, fully charge the battery. Charging a depleted battery takes 4½ hours. The device will not charge when outside the temperature range of 32°F to 113°F (0°C to 45°C).

1. Plug the AC charger into a standard wall outlet.

2. Pull up the weather cap ① from the mini-USB port ②.



3. Plug the small end of the AC charger into the mini-USB port.
4. Charge the device completely. The device may feel warm when charging.

Removing the Lithium-ion Battery Pack

⚠ WARNING

Do not use a sharp object to remove batteries.

1. Remove the battery cover.
2. Pull up on the side of the battery that is closer to the  key.

Installing AA Batteries

Instead of the lithium-ion battery pack, you can use alkaline, NiMH, or lithium batteries. This is especially useful when you are on the trail and cannot charge the lithium-ion battery pack. Use NiMH or lithium batteries for best results.

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



3. Replace the battery cover, and turn the D-ring clockwise.
4. Hold  (page 1).
5. Select  > **Setup** > **System** > **AA Battery Type**.

6. Select **Alkaline**, **Lithium**, or **Rechargeable NiMH**.

Turning the Device On or Off

Hold  (page 1).

Satellite Signals

After the device is turned on, it begins acquiring satellite signals. The device may need a clear view of the sky to acquire satellite signals. When the  bars turn green, your device has acquired satellite signals. The time and date are set automatically based on the GPS position. To adjust the time settings, see [page 39](#).

For more information about GPS, go to www.garmin.com/aboutGPS.

Registering Your Device

- Go to <http://my.garmin.com>.
- Keep the original sales receipt, or a photocopy, in a safe place.

About the Main Menu



①	Status bar
②	Current time and date
③	Application icons
④	Application drawer containing more application icons

Using the Touchscreen

- Select to open the application drawer.
- Select to close the page and return to the previous page.
- Select to return to the previous page.
- Select to save changes and close the page.
- Select and to scroll.
- Select to open a menu.
- Select to search by name.

Locking the Screen

Lock the screen to prevent inadvertent screen touches.

1. Press .
2. Select .

Unlocking the Screen

1. Press .
2. Select .

Rotating the Screen

To lock the screen orientation, see [page 36](#).

Rotate your device to view in horizontal (landscape) or vertical (portrait) mode.



Turning On the Backlight

The backlight will turn off after a period of inactivity. To change the backlight timeout, see [page 7](#).

Touch the screen.

Alerts and messages also activate the backlight.

Adjusting the Backlight Brightness

NOTE: The backlight brightness may be limited when the remaining capacity in the batteries is low.

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

1. While the device is on, press .
2. Use the backlight slider bar to adjust the brightness level.

The device may feel warm when the backlight setting is high.

Adjusting the Backlight Timeout

You can decrease the backlight timeout to maximize battery power.

Select  > **Setup** > **Display** > **Backlight Timeout**.

Adjusting the Volume

When you are using headphones or an auto mount, you can adjust the volume.

1. While the device is on, press .
2. Use the volume slider bar to adjust the volume level.

Profiles

Profiles are a collection of settings that optimize your device based on how you are using it. For example, your settings and views can be different when you are using the device for geocaching and for navigating on water.

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.

Selecting a Profile

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

Waypoints, Routes, and Tracks

Waypoints

Waypoints are locations you record and store in the device.

Creating a Waypoint

You can save your current location as a waypoint.

1. Select **Mark Waypoint**.
2. Select an option:
 - To save the waypoint without changes, select **Save**.
 - To make changes to the waypoint, select **Edit**, make changes to the waypoint, and select **Save**.

Finding a Waypoint

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

Editing a Waypoint

Before you can edit a waypoint, you must create a waypoint.

1. Select  > **Waypoint Manager**.
2. Select a waypoint.
3. Select an item to edit.
4. Enter the new information.
5. Select .

Deleting a Waypoint

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

Increasing the Accuracy of a Waypoint Location

Waypoint Averaging allows you to increase the accuracy of a waypoint location by collecting multiple samples of the waypoint location.

1. Select  > **Waypoint Averaging**.
2. Select a waypoint.
3. Move to the location.
4. Select **Start**.
5. When the Sample 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.

Projecting a Waypoint

1. Select  > **Sight 'N Go**.
2. Point the device at an object or in the direction of a location.
3. Select **Lock Direction** > **Project Waypoint**.
4. Select a unit of measure.
5. Enter the distance to the object, and select .
6. Select **Save**.

Using Sight 'N Go

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

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

Where To? Menu

You can use the Where To? menu to find a destination to navigate to. Not all Where To? categories are available in all areas and maps.

Additional Maps

You can use additional maps in the device, such as BirdsEye™ satellite imagery, BlueChart® g2, and City Navigator® detailed maps. Detailed maps may contain additional points of interest, such as restaurants or marine services. For more information, go to <http://buy.garmin.com> or contact your Garmin dealer.

Finding a Location by Name

Depending on the maps loaded on your device, you can search for cities, geographic points, and various points of interest (POIs), such as restaurants, hotels, and auto services.

1. Select **Where To?**.
2. Select a category.
3. Select .
4. Enter the name or part of the name.
5. Select .

Finding a Location Near Another Location

1. Select **Where To?** >  > **Search Near**.
2. Select an option.
3. If necessary, select a location.

Finding an Address

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

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

Routes

A route is a sequence of waypoints 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 > Select Next Point**.
5. Repeat steps 2–4 until the route is complete.
6. Select  to save the route.

Editing the Name of a Route

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

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 point on the route, select **Move Down** or **Move Up**.
 - To add 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  to save the route.

Viewing a Route on the Map

1. Select  > **Route Planner**.
2. Select a route.
3. Select **View Map**.

Deleting a Route

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

Viewing the Active Route

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

Reversing a Route

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

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.

Recording Track Logs

1. 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 **Interval**.
 6. Complete an action:
 - 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.
 - Enter a time or distance, and select .
- As you move with the device turned on, a track log is created.

Saving the Current Track

The track being recorded is called the current track.

1. Select  > **Track Manager** > **Current Track**.
2. Select what you want to save:
 - Select **Save Track**.
 - Select **Save Portion**, and select a portion.

Viewing Track Information

1. Select  > **Track Manager**.
2. Select a track.
3. Select **View Map**.

The beginning and the end of the track are marked by flags.
4. Select the information bar on the top of the screen.

Information about the track is listed.

Viewing the Elevation Plot of a Track

1. Select  > **Track Manager**.
2. Select a track.
3. Select **Elevation Plot**.

Saving a Location on a Track

1. Select  > **Track Manager**.
2. Select a track.
3. Select **View Map**.
4. Select a location on the track.
5. Select the information bar on the top of the screen.
6. Select .
7. Select **OK**.

Changing the Track Color

1. Select  > **Track Manager**.
2. Select a track.
3. Select **Set Color**.
4. Select a color.

Archiving a Saved Track

You can archive saved tracks to save memory space.

1. Select  > **Track Manager**.
2. Select a saved track.
3. Select **Archive**.

Clearing the Current Track

Select  > **Setup** > **Reset** > **Clear Current Track** > **Yes**.

Deleting a Track

1. Select  > **Track Manager**.
2. Select a track.
3. Select **Delete** > **Yes**.

Adventures

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.

Creating an Adventure

1. Select  > **Setup** > **Adventures** > **Create Adventure**.
2. Select **Add Item**.
3. Select an item.
4. Select **Use**.
5. Repeat steps 2–4.

Reviewing and Editing an Adventure

1. Select  > **Adventures**.
2. Select an adventure.
3. If necessary, select .

Navigation

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

Navigating to a Destination

You can navigate to a destination using the map or compass.

1. Select **Where To?**.
2. Select a category.
3. Select a destination.
4. Select **Go**.

The map page opens with your route marked with a magenta line.

5. Navigate using the map ([page 17](#)) or compass ([page 19](#)).

Starting a TracBack®

You can navigate back to the beginning of a track. This can be helpful when finding your way back to camp or the trail head.

1. Select  > **Track Manager** > **Current Track** > **View Map**.
2. Select **TracBack**.

The map page opens with your route marked with a magenta line.

3. Navigate using the map ([page 17](#)) or compass ([page 19](#)).

Marking and Starting Navigation to a Man Overboard Location

You can save a man overboard (MOB) location, and automatically start navigation back to it.

1. Select  > **Man Overboard** > **Start**.

The map page opens with your route marked with a magenta line.

2. Navigate using the map ([page 17](#)) or compass ([page 19](#)).

Stopping Navigation

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

Map

The ▲ position icon represents your location on the map. As you travel, the position icon moves. When you are navigating to a destination, your route is marked with a magenta line on the map.

For information about customizing the map settings, see [page 37](#). For information about customizing the map dashboard and data fields, see [page 33](#).

Browsing the Map

1. Select **Map**.
2. Select one or more options:
 - Drag the map to view different areas.
 - Select + and - to zoom in and out of the map.
 - Select a location on the map, and select the information bar at the top of the screen to view information about the selected location (represented by a pin).

Navigating a Driving Route

CAUTION

You can permanently damage your ears and lose hearing if you listen to the device, earbuds, or headphones at high volume. Limit the amount of time you listen at high volume. If you experience ringing in your ears or muffled speech, stop listening and have your hearing checked.

Before you can use the map, you must purchase and load City Navigator maps. If you plan to use an auto mount accessory with the device, you must also purchase and install the mount in your vehicle.

1. Select an option:
 - If you are using a mount with the device, install the device in the mount.

Automotive profile is selected automatically.

- If you are not using a mount with the device, select  > **Profile Change > Automotive.**
2. If you are not using a mount with the device, connect headphones or an audio line-out cable to the stereo headphone jack.
 3. Use the map to navigate to the destination.
 4. Listen to the voice prompts.
NOTE: If nothing is connected to the headphone jack, audio tones will replace the voice prompts.
 5. Follow the turns in the text bar along the top of the map.

Compass

The device has a 3-axis compass. You can use a bearing pointer or a course pointer to navigate to your destination.

NOTE: When the device is in an auto mount, the compass displays GPS heading, not magnetic heading.

Calibrating the Compass

NOTICE

Calibrate the electronic compass outdoors. To improve heading accuracy, do not stand near objects that influence magnetic fields, such as cars, buildings, or overhead power lines.

You should calibrate the compass after moving long distances, experiencing temperature changes, or changing the batteries.

1. Select **Compass** >  > **Calibrate Compass** > **Start**.
2. Follow the on-screen instructions.

Navigating with the Bearing Pointer

When navigating to a destination, the ▲ bearing pointer points to your destination, regardless of the direction you are moving.

1. Begin navigation to a destination (page 16).
2. Select **Compass**.
3. Turn until ▲ points toward the top of the compass, and continue moving in that direction to the destination.

Elevation Plot

By default, the elevation plot displays the elevation for an elapsed time.

To customize the elevation plot, see [page 40](#).

Select  > **Elevation Plot**.

Changing the Plot Type

You can change the elevation plot to display pressure and elevation over time or distance.

1. Select  > **Elevation Plot** >  > **Change Plot Type**.
2. Select an option.

Viewing Details about a Point on the Plot

Select an individual point on the plot.

Details about the point appear in the upper-left corner of the plot.

Resetting the Elevation Plot

Select  > **Elevation Plot** > 
> **Reset** > **Clear Current Track**
> **Yes**.

Calibrating the Barometric Altimeter

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

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

Trip Computer

The trip computer displays your current speed, average speed, maximum speed, trip odometer, and other helpful statistics.

To customize the trip computer, see [page 33](#).

Resetting the Trip Data

For accurate information, reset the trip information before beginning a trip.

Select  > **Trip Computer** > 
> **Reset Trip Data** > **Yes**.

All of the trip computer values are set to zero.

Camera and Photos

You can take photos with the Montana 650 and 650t. When you take a photo, the geographic location is automatically saved in the photo information. You can navigate to the location like a waypoint.

Taking a Photo

1. Select  > **Camera**.
2. Turn the device horizontally or vertically to change the orientation of the photo.
3. If necessary, select + or - to zoom in or out.
4. Hold  to focus.
5. Release  to take a photo.

Setting the Camera for Low Light

Select  > **Camera** >  > **Low Light Mode**.

Viewing Photos

You can view photos you have taken with the camera ([page 23](#)) and photos you have transferred to the device ([page 50](#)).

1. Select  > **Photo Viewer**.
2. Select  and  to view all the photos.
3. Select a photo to see a larger view of it.

Viewing a Slideshow

1. Select  > **Photo Viewer**.
2. Select a photo.
3. Select  > **View Slideshow**.

Sorting Photos

1. Select  > **Photo Viewer** >  > **Sort Photos**.
2. Select **Most Recently, Near a Location, or On a Specific Date**.

Viewing the Location of a Photo

1. Select  > **Photo Viewer**.
2. Select a photo.
3. Select  > **View Map**.

Setting a Photo as Wallpaper

1. Select  > **Photo Viewer**.
2. Select a photo.
3. Select  > **Set as Wallpaper**.

Deleting a Photo

1. Select  > **Photo Viewer**.
2. Select a photo.
3. Select  > **Delete Photo** > **Yes**.

Navigating to a Photo

1. Select  > **Photo Viewer**.
2. Select a photo.
3. Select  > **View Information** > **Go**.
4. Navigate using the map ([page 17](#)) or compass ([page 19](#)).

Uploading and Downloading Photos from Garmin Connect

1. Connect your device to a computer ([page 49](#)).
2. Go to <http://my.garmin.com>.
3. If necessary, create an account.
4. Sign in.
5. Follow the on-screen directions to upload or download photos.

Geocaches

A geocache is like a hidden treasure. Geocaching is when you hunt for hidden treasures using GPS coordinates posted online by those hiding the geocache.

Downloading Geocaches

1. Connect your device to a computer ([page 49](#)).
2. Go to www.OpenCaching.com.
3. If necessary, create an account.
4. Sign in.
5. Follow the on-screen instructions to find and download geocaches to your device.

Filtering the Geocache List

You can filter your geocache list based on certain factors, such as the level of difficulty.

1. Select  > **Geocaching > Quick Filter**.
2. Select items to filter.
3. Select an option:
 - To apply the filter to the geocache list, select **Search**.
 - To save the filter, select .

Creating and Saving a Geocache Filter

You can create and save custom filters for geocaches based on specific factors you select. After you set up the filter, you can apply it in the geocaches list.

1. Select  > **Setup > Geocaching > Filter Setup > Create Filter**.

Geocaches

2. Select items to filter.
3. Select an option:
 - To apply the filter to the geocache list, select **Search**.
 - To save the filter, select .

After it is saved, the filter is automatically named. You can access the custom filter from the geocaches list.

Editing a Custom Geocache Filter

1. Select  > **Setup** > **Geocaching** > **Filter Setup**.
2. Select a filter.
3. Select an item to edit.

Navigating to a Geocache

1. Select  > **Geocaching**.
2. Select **Find a Geocache**.
3. Select a geocache.
4. Select **Go**.
5. Navigate using the map ([page 17](#)) or compass ([page 19](#)).

Logging the Attempt

After you have attempted to find a geocache, you can log your results.

1. Select  > **Geocaching** > **Log Attempt**.
2. Select **Found**, **Did Not Find**, or **Needs Repair**.
3. Select an option:
 - To begin navigation to a geocache nearest you, select **Find Next Closest**.

- To end the logging, select **Done**.
- To enter a comment about looking for the cache or the cache itself, select **Edit Comment**, enter a comment, and select .
- To rate the geocache, select **Rate Geocache**, and select an item to rate.

chirp™

A chirp is a small Garmin accessory that you can program and leave in a geocache. Only the owner of the chirp can program a chirp, but anyone can find a chirp in a geocache. For more information about programming a chirp, see the *chirp Owner's Manual* at www.garmin.com.

Enable chirp Searching

1. Select  > **Setup** > **Geocaching**.
2. Select **chirp™ Searching** > **On**.

Finding a Geocache with a chirp

1. Select  > **Geocaching** > **Show chirp™ Details**.
2. Begin navigating to a geocache ([page 26](#)).

When you are within 32.9 feet (10 m) of the geocache that contains a chirp, details about the chirp appear.

3. If available, select **Go!** to navigate to the next stage of the geocache.

Applications

Using the 3D View

1. Select  > 3D View.



2. Select an option:
 - To increase the angle of elevation, select - .
 - To decrease the angle of elevation, select + .
 - To pan the 3D map forward, select .

- To pan the 3D map backward, select .
- To rotate the view to the left, select .
- To rotate the view to the right, select .

About Sharing Data

Your device can send or receive data when connected to another compatible device. You can share waypoints, geocaches, routes, and tracks.

Sending and Receiving Data Wirelessly

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

1. Select  > **Share Wirelessly**.
2. Select **Send** or **Receive**.
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**.
2. Select **Create Alarm**.
3. Select a category.
4. Select a location.
5. Select **Use**.
6. Enter a radius.
7. Select .

When you enter a proximity alarm area, the device will sound a tone.

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.

Using the Calculator

The device has a standard calculator and a scientific calculator.

1. Select  > **Calculator**.
2. Complete an action:
 - Use the standard calculator.
 - Select  > **Scientific** to use the scientific calculator functions.
 - Select  > **Degrees** to calculate degrees.

Viewing the Calendar and Almanacs

You can view device activity, such as a waypoint was saved, and almanac information for the sun and moon, and hunting and fishing.

1. Select .
2. Select an option:
 - To view device activity for specific days, select **Calendar**.
 - To view the sunrise, sunset, moonrise, and moonset information, select **Sun and Moon**.
 - To view the predicted best times for hunting and fishing, select, **Hunt and Fish**.
3. If necessary, select  or  to view a different month.
4. Select a day.

Setting an Alarm

If you are not currently using the device, you can set the device to turn on at a specific time.

1. Select  > **Alarm Clock**.
2. Select + and - to set the time.
3. Select **Turn Alarm On**.
4. Select an option.

The alarm sounds at the selected time. If the device is off at the alarm time, the device turns on and sounds the alarm.

Starting the Countdown Timer

1. Select  > **Alarm Clock** >  > **Timer**.
2. Select + and - to set the time.
3. Select **Start Timer**.

Opening the Stopwatch

Select  > **Stopwatch**.

Satellite Page

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

Changing the Satellite View

1. Select  > **Satellite** > .
2. If necessary, select **Track Up** to change the view of the satellites to be oriented with your current track toward the top of the screen.
3. If necessary, select **Multicolor** to assign a specific color to the satellite in the view and to the signal strength bar of that satellite.

Turning Off GPS

Select  > **Satellite** >  > **Use With GPS Off**.

Simulating a Location

1. Select  > **Satellite** >  > **Use With GPS Off**.
2. Select  > **Set Location On Map**.
3. Select a location.
4. Select **Use**.

Customizing Your Device

Customizing the Main Menu and the Application Drawer

- Select and drag any icon on the main menu or application drawer to a new location.
- Open the application drawer and drag an icon up to the main menu.
- To drag an icon to a new menu page, select and drag the icon over the left or right arrows.
- Select  > **Main Menu** to edit the main menu and application drawer.

Creating Shortcuts

1. Select  > **Shortcuts** > **Create Shortcut**.
2. Enter a name for the shortcut.
3. Select the item you want to open with this shortcut.

Adding a Shortcut to the Menu

Before you can add a shortcut to the main menu or application drawer, you must create a shortcut.

1. Select  > **Shortcuts**.
2. Select the shortcut.
3. Select **Add to Menu**.
4. Select **Main Menu** or **Drawer**.

Customizing Specific Pages

Data fields display information about your location or other specified data. Dashboards are a custom grouping of data that can be helpful to a specific or general task, such as geocaching.

You can customize the data fields and dashboards of the map, compass, and trip computer.

Enabling the Map Data Fields

1. Select **Map** >  > **Setup Map** > **Dashboard**.
2. Select **Small Data Fields** or **Large Data Field**.

Changing the Data Fields

Before you can change the map data fields, you must enable them ([page 33](#)).

1. Open the page for which you will change the data fields.
2. Select a data field to customize.
3. Select a data field type.

For data field descriptions, see [page 54](#).

Customizing Dashboards

1. Open the page for which you want to customize the dashboard.
2. Select an option:
 - From the map, select  > **Setup Map** > **Dashboard**.
 - From the compass or trip computer, select  > **Change Dashboard**.
3. Select a dashboard.

Creating a Custom Profile

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

1. Customize the settings as necessary (pages 32–44).
2. Customize the data fields as necessary (page 33).
3. Select  > **Setup** > **Profiles**.
4. Select **Create New Profile** > **OK**.

Editing a Profile Name

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

Deleting a Profile

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

System Settings

Select  > **Setup** > **System**.

- **GPS**—sets the GPS to **Normal**, **WAAS/EGNOS** (Wide Area Augmentation System/European Geostationary Navigation Overlay Service), or **Demo Mode** (GPS off). For information about WAAS, go to www.garmin.com/aboutGPS/waas.html.
- **Text 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.

- **Voice Language**—sets the voice for the vocal prompts.
- **Interface**—sets the format of the serial interface:
 - **Garmin Spanner**—allows you to use the device USB port with most NMEA 0183-compliant mapping programs by creating a virtual serial port.
 - **Garmin Serial**—Garmin proprietary format used to exchange waypoint, route, and track data with a computer.
 - **NMEA In/Out**—provides standard NMEA 0183 output and input.
 - **Text Out**—provides simple ASCII text output of location and velocity information.
 - **RTCM**—Radio Technical Commission for Maritime Services allows the device to accept Differential Global Positioning System (DGPS) information from a device supplying RTCM data in an SC-104 format.
- **AA Battery Type**—allows you to select the type of AA battery you are using ([page 4](#)). This setting is disabled when the lithium-ion battery pack is installed.

Display Settings

Select  > **Setup** > **Display**.

- **Backlight Timeout**—adjusts the length of time before the backlight turns off.

NOTE: To adjust the backlight brightness, see [page 6](#).

- **Orientation Lock**—locks the screen orientation in portrait or landscape mode, or allows the screen to change orientation automatically based on the device orientation.
- **Screen Capture**—allows you to take screen captures on the device.
- **Battery Save**—saves battery power and prolongs the battery life.
- **Calibrate Screen**—[page 36](#).

Calibrating the Touchscreen

The screen does not normally require calibration. However, if the screen does not seem to be responding properly, calibrate the touchscreen.

1. Select  > **Setup** > **Display** > **Calibrate Screen**.
2. Follow the on-screen instructions.

Appearance Settings

Select  > **Setup** > **Appearance**.

- **Mode**—sets a light background (**Day**), a dark background (**Night**), or automatically switches between the two based on the sunrise time and the sunset time for your current location (**Auto**).
- **Day Background**—sets the background image used in day mode.
- **Night Background**—sets the background image used in night mode.
- **Day Highlight Color**—sets the color for selections in day mode.
- **Night Highlight Color**—sets the color for selections in night mode.
- **Landscape Controls**—places the controls on the left or right side of the screen when in landscape mode.

Setting the Device Tones

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

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

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 your current direction of travel toward the top of the page.
 - **Automotive Mode**—shows an automotive perspective with the direction of travel at the top.
- **Guidance Text**—allows you to select when to show guidance text on the map.
- **Dashboard**—selects a dashboard to display on the map. Each dashboard shows different information about your route or your location.
- **Advanced Map Setup**—sets the zoom levels, the text size, and the detail level of the map.
 - **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**—selects the zoom level for map items.
 - **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.
- **Vehicle**—allows you to select the position icon, which represents your position on the map.
- **Map Information**—allows you to enable or disable the maps currently loaded on the device. To purchase additional maps, see [page 10](#).
- **Map Speed**—adjusts the speed at which the map is drawn.

Camera Settings

Select  > **Setup** > **Camera**.

- **Photo Resolution**—changes the resolution of the photos you will take.
- **Save Photos To**—allows you to select the storage location.
- **Camera Instructions**—displays brief directions on taking a photo with the camera.

Tracks Settings

Select  > **Setup** > **Tracks**.

- **Track Log**—turns track recording on or off.
- **Record Method**—selects a track recording method. **Auto** records the tracks at a variable rate to create an optimum representation of your tracks.

- **Interval**—selects a track log recording rate. Recording points more frequently creates a more-detailed track, but fills the track log faster.
- **Auto Archive**—selects an automatic archive method to organize your tracks. Tracks are saved and cleared automatically based on the user setting.
- **Color**—changes the color of the track line on the map.

Changing the Units of Measure

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

1. Select  > **Setup** > **Units**.
2. Select a measurement type.
3. Select a unit of measure for the setting.

Time Settings

Select  > **Setup** > **Time**.

- **Time Format**—allows you to select a 12-hour or a 24-hour display time.
- **Time Zone**—allows you to select the time zone for the device. You can select **Automatic** to set the time zone automatically based on your GPS position.

Position Format Settings

NOTE: Do 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 given 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.
- **Go To Line/Pointer**—allows you to select how the course appears.
 - **Bearing (Small or Large)**—the direction to your destination.
 - **Course (CDI)**—the course deviation indicator displays your relationship to a course line leading to a destination.
- **Compass**—switches from an electronic compass to a GPS compass when you are traveling at a higher rate of speed for a set period of time (**Auto**), or turns the compass off.
- **Calibrate Compass**—[page 19](#).

Heading Settings

You can customize the compass settings.

Select  > **Setup** > **Heading**.

- **Display**—sets the type of directional heading on the compass.
- **North Reference**—sets the north reference of the compass.

Altimeter Settings

Select  > **Setup** > **Altimeter**.

- **Auto Calibration**—allows the altimeter to self-calibrate each time you turn the device 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. Therefore, the barometric pressure should only change due to weather.
- **Pressure Trending**
 - **Save When Power On**—records pressure data only when the device is turned on. This can be useful when you are watching for pressure fronts.
 - **Save Always**—records pressure data every 15 minutes, even when the device is turned off.
- **Plot Type**
 - **Elevation/Time**—records elevation changes over a period of time.
 - **Elevation/Distance**—records elevation changes over a distance.
 - **Barometric Pressure**—records barometric pressure over a period of time.
 - **Ambient Pressure**—records ambient pressure changes over a period of time.
- **Calibrate Altimeter**—[page 21](#).

Geocaching Settings

Select  > Setup > Geocaching.

- **Geocache List**—allows you to display the geocache list by names or codes.

- **Found Geocaches**—allows you to edit the number of geocaches found. This number automatically increases as you log a find (page 26).
- **chirp™ Searching**—page 27.
- **Program chirp™**—programs the chirp accessory. See the *chirp Owner's Manual* at www.garmin.com.
- **Filter**—page 25.
- **Route Transitions**—available only for some activities.
 - **Auto**—automatically routes you to the next point.
 - **Manual**—allows you to select the next point on the route.
 - **Distance**—routes you to the next point on the route when you are within a specified distance of your current point.
- **Calculation Method**—(available only for some activities) selects a preference for calculating routes.
- **Lock On Road**—locks the position icon, which represents your position on the map, onto the nearest road.
- **Avoidance Setup**—(available only for some activities) allows you to select the road type you want to avoid.

Routing Settings

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

Select  > **Setup** > **Routing**.

- **Activity**—allows you to select an activity for routing.

Marine Map Settings

Select  > **Setup** > **Marine**.

- **Marine Chart Mode**—allows you to select a nautical chart or a fishing chart:
 - **Nautical**—displays various map features in different colors so that the marine POIs are more readable. The nautical chart reflects the drawing scheme of paper charts.
 - **Fishing**—(requires marine maps) displays a detailed view of bottom contours and depth soundings. Simplifies map presentation for optimal use while fishing.
- **Appearance**—allows you to set the appearance of marine navigation aids on the map.

- **Marine Alarm Setup**

- **Anchor Drag Alarm**—alarm sounds when you exceed a specified drift distance while anchored.
- **Off Course Alarm**—alarm sounds when you are off course by a specified distance.
- **Deep Water/Shallow Water**—alarm sounds 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.
5. Select .

Fitness

For more information on optional fitness accessories, see [page 52](#).

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.

Restoring Specific Settings to Defaults

1. Select  > **Setup**.
2. Select an item to reset.
3. Select  > **Restore Defaults**.

Restoring Specific Page Settings

You can restore the settings for the map, compass, and trip computer.

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

Restoring All Default Settings

You can reset all the setup values to the original settings.

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

Device Information

Updating the Software

Before you can update the software, you must connect the device to your computer ([page 49](#)).

1. Go to www.garmin.com/products/webupdater.
2. Follow the on-screen instructions.

NOTE: Updating the software does not erase any of your data or settings.

Viewing Device Information

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

Select  > **Setup** > **About**.

Specifications

Water resistance	Fully gasketed, high impact plastic alloy, waterproof to IEC 60529 IPX7
Battery type	Lithium-ion battery pack (010-11654-03) or three AA batteries (alkaline, NiMH, or lithium)
Battery life	Lithium-ion battery pack: up to 16 hours. AA batteries: up to 22 hours
Battery charging temperature range	From 32°F to 113°F (from 0 to 45°C)
Operating temperature range	From -4°F to 158°F (from -15 to 70°C)

Stereo headphone jack	3.5 mm NOTE: The device is not intended to be used to listen to music.
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About the Batteries

WARNING

This product contains a lithium-ion battery. To prevent the possibility of personal injury or product damage caused by battery exposure to extreme heat, store the device out of direct sunlight.

The temperature rating for the device (page 45) may exceed the usable range of some batteries. Alkaline batteries can rupture at high temperatures.

Do not use a sharp object to remove batteries.

CAUTION

Contact your local waste disposal department to properly recycle the batteries.

NOTICE

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

If you store a fully charged device in a location above 131°F (55°C), the battery will automatically discharge to prolong the lifetime of the battery.

Maximizing Battery Life

You can do various things to increase the battery life.

- Exit the camera application when you are not taking photos.

- Leave the backlight off when not needed.
- Lower the backlight brightness (page 6).
- Decrease the backlight timeout (page 7).
- Enable battery save mode (page 36).
- Set the **Map Speed** to **Normal** (page 38).

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.

Caring for the Device

NOTICE

Avoid chemical cleaners and solvents which can damage plastic components.

Never use a hard or sharp object to operate the touchscreen, or damage may result.

Cleaning the Device

1. Dampen a clean cloth with a mild detergent solution.
2. Wipe the device with the damp cloth.
3. If necessary, use a soft toothbrush to gently clean the vent holes on the back of the device.
4. Thoroughly dry the device.

Cleaning the Screen

1. Dampen a soft, clean, lint-free cloth with water, isopropyl alcohol, or eyeglass lens cleaner.
2. Wipe the screen with the cloth.
3. Thoroughly dry the screen.

Water Immersion

NOTICE

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

Extreme Temperatures

NOTICE

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

Data Management

NOTE: The device is not compatible with Windows® 95, 98, Me, or NT. It is also not compatible with Mac® OS 10.3 and earlier.

File Types

The device supports these file types.

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

Installing a microSD Card

Memory cards can be used for additional storage. Also, some maps are available preloaded on memory cards. Go to <http://buy.garmin.com> for more information.

1. Turn the D-ring counter-clockwise, and pull up to remove the cover.
2. Remove the batteries or battery.
3. Slide the card holder ① toward the top edge of the device and lift up, as instructed in the battery compartment.



4. Place the microSD card ② in the device with the gold contacts facing down.
5. Close the card holder.
6. Slide the card holder toward the bottom of the device to lock it.
7. Replace the batteries (page 2).
8. Replace the battery cover, and turn the D-ring clockwise.

Connecting the Device to a Computer

NOTICE

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

The lithium-ion battery pack will charge while connected to the computer.

Device Information

1. Connect the USB cable to a USB port on your computer.
2. Pull up the weather cap ① from the mini-USB port ②.



3. Plug the small end of the USB cable into the mini-USB port.

Your device and memory card (optional) appear as removable drives in My Computer on Windows computers and as mounted volumes on Mac computers.

Transferring Files to Your Computer

Before you can transfer files, you must connect the device to your computer ([page 49](#)).

1. Browse your computer for the file.
2. Select the file.
3. Select **Edit > Copy**.
4. Open the “Garmin” or memory card drive/volume.
5. Select **Edit > Paste**.

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. Be especially cautious of folders entitled “Garmin.”

Before you can delete files, you must connect the device to your computer ([page 49](#)).

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

Disconnecting the USB Cable

1. Complete an action:
 - For Windows computers, click the eject icon  in your system tray.
 - For Mac computers, drag the volume icon to the Trash .
2. Disconnect the device from your computer.

Appendix

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.

Optional Mounts

The AMPS Rugged Mount provides a mount and cable that provides power, serial data (NMEA-compliant), and audio.

The auto mounts kits contain a vehicle power cable and either a suction cup mount or a friction mount. When used with City Navigator maps, voice prompts are sounded through the speakers on the mount. The auto mounts are not waterproof.

Optional Maps

You can purchase additional maps, such as BirdsEye™ satellite imagery, Garmin custom maps, Inland lakes, Topo, BlueChart® g2 and City Navigator® maps.

Optional Fitness Accessories

Before you can use the fitness accessory with your device, you must install the accessory according to the instructions included with the accessory.

You can use optional fitness accessories including a heart rate monitor or a cadence sensor with your device. These accessories use ANT+™ wireless technology to send data to the device.

Using Optional Fitness Accessories

1. Bring the device within range (3 m) of the ANT+ accessory.
2. Select  > **Setup** > **Fitness**.
3. Select **Heart Rate Monitor** or **Bike Cadence Sensor**.
4. Select **Search for New**.
5. Customize your data fields to view the heart rate or cadence data ([page 33](#)).

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 (32.9 feet) away from other ANT+ accessories.

- Bring the Garmin device within range 3 m (10 feet) 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.

Data Field Options

Data Field	Description
Accuracy of GPS	The margin of error for your exact location. For example, your GPS location is accurate to within +/- 3.65 m (12 feet).
Ambient Pressure	The uncalibrated environmental pressure.
Ascent - Average	The average vertical distance of ascent.
Ascent - Maximum	The maximum ascent rate in feet or meters per minute.
Ascent - Total	The total elevation distance ascended.
Barometer	The calibrated current pressure.
Battery Level	The remaining battery power.

Data Field	Description
Bearing	The direction from your current location to a destination.
Cadence (cadence accessory required)	Revolutions of the crank arm or strides per minute.
Course	The direction from your starting location to a destination.
Depth	The depth of the water. Requires a connection to a NMEA 0183 depth-capable device to acquire data (page 52).
Descent - Average	The average vertical distance of descent.
Descent - Maximum	The maximum descent rate in feet or meters per minute.
Descent - Total	The total elevation distance descended.

Data Field	Description
Distance to Destination	The distance to your final destination.
Distance to Next	The remaining distance to the next waypoint on the route.
Elevation	The altitude of your current location above or below sea level.
Elevation - Maximum	The highest elevation reached.
Elevation - Minimum	The lowest elevation reached.
ETA at Destination	The estimated time of day you will reach your final destination.
ETA at Next	The estimated time of day you will reach the next waypoint on the route.
Glide Ratio	The ratio of horizontal distance traveled to the change in vertical distance.

Data Field	Description
Glide Ratio to Dest.	The glide ratio required to descend from your current position and elevation to the destination elevation.
GPS Signal Strength	The strength of the GPS signal.
Heading	The direction you are moving.
**Heart Rate (heart rate monitor required)	Your heart rate in beats per minute (bpm).
Location (lat/lon)	Displays the current position in the default position format regardless of the selected settings.
Location (selected)	Displays the current position in the selected position format.

Appendix

Data Field	Description
Odometer	A running tally of distance traveled for all trips.
Off Course	The distance to the left or the right by which you have strayed from the original path of travel.
Pointer	The data field arrow points in the direction of the next waypoint or turn.
Speed	The current rate of speed at which you are moving since last reset.
Speed - Maximum	The maximum speed reached since last reset.
Speed - Moving Avg.	The average speed of the device while moving since last reset.

Data Field	Description
Speed - Overall Avg.	Your average speed since last reset.
Speed Limit	The reported speed limit for the road. Not available in all maps and areas. Always rely on posted road signs for actual speed limits.
Sunrise	The time of sunrise based on your GPS position.
Sunset	The time of sunset based on your GPS position.
Temperature - Water	The temperature of the water. Requires a connection to a NMEA 0183 temperature-capable device to acquire data (page 52).

Data Field	Description
Time of Day	The current time of day based on your time settings (format, time zone, and daylight saving time).
Time to Destination	The estimated time needed to reach your final destination.
Time to Next	The estimated time needed to reach the next waypoint on the route.
To Course	The direction in which you must move to return to the route.
Trip Odometer	A running tally of the distance traveled since the last reset.
Trip Time - Moving	A running tally of time since the last reset.
Trip Time - Stopped	The time spent not moving since the last reset.

Data Field	Description
Trip Time - Total	A running tally of distance traveled 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.
Velocity Made Good	The speed at which you are closing on a destination along a route.
Vert. Speed to Dest.	The measurement of your rate of ascent or descent to a predetermined altitude.
Vertical Speed	Your rate of altitude gain or loss over time.

Data Field	Description
Waypoint at Dest.	The last point on a route to your destination.
Waypoint at Next	The next point on your route.

Troubleshooting

Problem	Solution
The screen does not respond. How do I reset the device?	<ol style="list-style-type: none"> 1. Remove the batteries. 2. Reinstall the batteries. <p>NOTE: This does not erase any of your data or settings.</p>
I want to reset all the customized settings back to the factory defaults.	Select  > Setup > Reset > Reset All Settings .
My device does not acquire satellite signals.	<ol style="list-style-type: none"> 1. Take your device out of buildings and parking garages, and away from tall buildings and trees. 2. Turn on the device. 3. Remain stationary for several minutes.
My device will not charge.	<ul style="list-style-type: none"> • Ensure that the lithium-ion battery pack is properly installed (page 2). • Ensure the temperature is between 32°F and 113°F (from 0 to 45°C). • Turn down the backlight (page 6).
My battery gauge does not seem accurate.	<ol style="list-style-type: none"> 1. Leave the device on until the battery runs out. 2. Fully charge the battery without interrupting the charge cycle (page 3).
The batteries do not last long.	To learn how to maximize the battery life, see page 46 .

Problem	Solution
How do I know my device is in USB mass storage mode?	On the device, an image of the device connected to a computer appears. On your computer, you should see a new removable disk drive in My Computer on Windows computers and a mounted volume on Mac computers.
My device is connected to the computer, but it will not go into mass storage mode.	You may have loaded a corrupted file. <ol style="list-style-type: none">1. Disconnect the device from your computer.2. Turn off the device.3. Hold  while you connect the device to your computer.4. Continue holding  for 30 seconds or until the device goes into mass storage mode.
I cannot see any new removable drives in my list of drives.	If you have several network drives mapped on your computer, Windows may have trouble assigning drive letters to your Garmin drives. See the help file for your operating system to learn how to assign drive letters.
I need replacement parts or accessories.	Go to http://buy.garmin.com , or contact your Garmin dealer.
I want to buy an external GPS antenna.	Go to http://buy.garmin.com , or contact your Garmin dealer.

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