# Table of Contents

**Introduction** ................................................. 1
Device Overview ................................................. 1
Home Screen Overview ........................................ 1
Viewing Edge Widgets ........................................... 1
Using the Touchscreen ......................................... 1
Locking the Touchscreen ........................................ 1
Pairing Your Smartphone ....................................... 1
Charging the Device .............................................. 1
About the Battery ................................................ 2
Installing the Standard Mount ............................... 2
Installing the Out-Front Mount ............................. 2
Relasing the Edge .................................................. 2
Installing the Mountain Bike Mount ....................... 2
Acquiring Satellite Signals ..................................... 3
Using the Backlight .............................................. 3

**Training** ...................................................... 3
Going for a Ride ................................................. 3
Using Virtual Partner® ......................................... 4
Segments ............................................................. 4
  Strava™ Segments ............................................ 4
  Following a Segment From Garmin Connect .......... 4
  Enabling Segments .......................................... 4
  Racing a Segment ............................................ 4
  Viewing Segment Details ................................... 4
  Segment Options ............................................. 4
  Deleting a Segment ......................................... 4
Workouts ........................................................... 5
  Creating a Workout .......................................... 5
  Repeating Workout Steps .................................. 5
  Following a Workout From the Web ....................... 5
  Starting a Workout ........................................... 5
  Stopping a Workout .......................................... 5
  Editing a Workout ............................................ 5
  Deleting a Workout .......................................... 5
About the Training Calendar .................................. 5
  Using Garmin Connect Training Plans .................... 5
Interval Workouts ............................................... 5
  Creating an Interval Workout ............................. 5
  Starting an Interval Workout .............................. 6
Training Indoos .................................................... 6
  Pairing Your ANT+® Indoor Trainer ....................... 6
  Using an ANT+® Indoor Trainer .......................... 6
  Setting Resistance .......................................... 6
  Setting Target Power ....................................... 6
Setting a Training Target ..................................... 6
Personal Records ................................................ 6
  Viewing Your Personal Records .......................... 6
  Reverting a Personal Record .............................. 6
  Deleting a Personal Record ............................... 6
Training Zones ................................................. 7

**Navigation** ................................................ 7
Locations ........................................................ 7
  Marking Your Location .................................... 7
  Saving Locations from the Map ......................... 7
  Navigating to a Location .................................. 7
  Navigating to Known Coordinates ....................... 7
  Navigating Back to Start .................................. 7
  Stopping Navigation ....................................... 7
  Projecting a Location ...................................... 7
  Editing Locations .......................................... 7
  Deleting a Location ........................................ 7
Courses ............................................................ 7
  Planning and Riding a Course ............................ 7
Creating and Riding a Round-Trip Course ................. 8
Following a Course From Garmin Connect ............... 8
Tips for Riding a Course .................................... 8
Viewing Course Details ........................................ 8
  Displaying a Course on the Map ....................... 8
  Course Options ............................................ 8
  Stopping a Course ......................................... 9
  Deleting a Course ......................................... 9
Route Settings .................................................. 9
  Selecting an Activity for Route Calculation .......... 9
  Map Settings ............................................... 9
  Changing the Map Orientation ......................... 9

**Bluetooth Connected Features** .......................... 9
Starting a GroupTrack Session ............................ 9
Tips for GroupTrack Sessions ................................ 10
Transferring Files to Another Edge Device ............. 10
Playing Audio Prompts on Your Smartphone ............ 10
Incident Detection and Assistance Features .......... 10
  Incident Detection ......................................... 10
  Assistance ................................................... 10
  Setting Up the Incident Detection and Assistance Features .................. 10
  Viewing Your Emergency Contacts ..................... 11
  Requesting Assistance .................................. 11
  Turning Incident Detection On and Off ................ 11
  Cancelling an Automated Message ....................... 11
  Sending a Status Update After an Incident ............ 11

**Wireless Sensors** .......................................... 11
Putting On the Heart Rate Monitor ........................ 11
Recovery Advisor .............................................. 11
  Viewing Your Recovery Time ............................. 11
  About VO2 Max. Estimates .............................. 11
  Getting Your VO2 Max. Estimate ....................... 11
  Tips for Cycling VO2 Max. Estimates ................. 12
  Viewing Your Stress Score .............................. 12
  Setting Your Heart Rate Zones ......................... 12
  About Heart Rate Zones .................................. 12
  Fitness Goals .............................................. 12
  Tips for Erratic Heart Rate Data ....................... 12
Installing the Speed Sensor .................................. 12
Installing the Cadence Sensor .............................. 13
  About the Speed and Cadence Sensors ................. 13
  Data Averaging for Cadence or Power ................. 13
Pairing Your Wireless Sensors .............................. 13
Training with Power Meters ................................ 13
  Setting Your Power Zones ............................... 13
  Calibrating Your Power Meter ......................... 13
  Pedal-Based Power ........................................ 14
  Cycling Dynamics ......................................... 14
  Using Cycling Dynamics ................................ 14
  Updating the Vector Software Using the Edge Device 14
  Getting Your FTP Estimate .............................. 14
  Conducting an FTP Test ................................ 14
  Automatically Calculating FTP ......................... 14
Using Electronic Shifters .................................... 15
Situational Awareness ....................................... 15

**History** .................................................... 15
Viewing Your Ride ............................................ 15
  Viewing Your Time in Each Training Zone ............. 15
  Viewing Data Totals ...................................... 15
Deleting a Ride ................................................ 15
Sending Your Ride to Garmin Connect .................... 15
Garmin Connect ............................................... 15
Wi-Fi® Connected Features ................................ 15
  Setting Up Wi-Fi Connectivity ......................... 15
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troubleshooting</td>
<td>20</td>
</tr>
<tr>
<td>Device Information</td>
<td>19</td>
</tr>
<tr>
<td>Index</td>
<td>26</td>
</tr>
</tbody>
</table>
Introduction

WARNING
See the Important Safety and Product Information guide in the product box for product warnings and other important information.
Always consult your physician before you begin or modify any exercise program.

Device Overview

1. Select to enter sleep mode and wake the device. Hold to turn the device on and off and lock the touchscreen.
2. Select to mark a new lap.
3. Select to start and stop the activity timer.
4. Charge using an Edge external battery pack accessory.

NOTE: Go to www.buy.garmin.com to purchase optional accessories.

Home Screen Overview
The home screen gives you quick access to all the features of the Edge device.

- : Select to go for a ride. Use the arrows to change your activity profile.
- : Select to mark a location, search for locations, and create or navigate a course.
- : Select to access your segments, workouts, and other training options.
- : Select to access your history, personal records, contacts, and settings.
- : Select to access your Connect IQ™ apps, widgets, and data fields.

Viewing Edge Widgets
1. From the home screen, swipe down from the top of the screen.
2. Swipe left or right to view more widgets.
   The next time you swipe down to view the widgets, the last widget you viewed appears.

Using the Touchscreen
- When the timer is running, tap the screen to view the timer overlay.
  The timer overlay allows you to return to the home screen during a ride.
- Select to return to the home screen.
- Swipe or select the arrows to scroll.
- Select to return to the previous page.
- Select to save your changes and close the page.
- Select to close the page and return to the previous page.
- Select to search near a location.
- Select to delete an item.
- Select for more information.

Locking the Touchscreen
You can lock the screen to prevent inadvertent screen touches.
- Hold , and select Lock Screen.
- During an activity, select .

Pairing Your Smartphone
To use the connected features of the Edge device, it must be paired directly through the Garmin Connect™ app, instead of from the Bluetooth® settings on your smartphone.
1. From the app store on your smartphone, install and open the Garmin Connect app.
2. Hold to turn on the device.
   The first time you turn on the device, you will select the device language. The next screen prompts you to pair with your smartphone.
   TIP: You can swipe down on the home screen to view the settings widget, and select Phone > Pair Smartphone to manually enter pairing mode.
3. Select an option to add your device to your Garmin Connect account:
   - If this is the first device you have paired with the Garmin Connect app, follow the on-screen instructions.
   - If you have already paired another device with the Garmin Connect app, from the or menu, select Garmin Devices > Add Device, and follow the on-screen instructions.
After you pair successfully, a message appears, and your device syncs automatically with your smartphone.

Charging the Device

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

The device is powered by a built-in lithium-ion battery that you can charge using a standard wall outlet or a USB port on your computer.

NOTE: The device will not charge when outside the approved temperature range (Edge Specifications, page 19).
1. Pull up the weather cap from the USB port .
2 Plug the small end of the USB cable into the USB port on the device.
3 Plug the large end of the USB cable into an AC adapter or a computer USB port.
4 Plug the AC adapter into a standard wall outlet.
   When you connect the device to a power source, the device turns on.
5 Charge the device completely.
   After you charge the device, close the weather cap.

About the Battery

**WARNING**
This device contains a lithium-ion battery. See the Important Safety and Product Information guide in the product box for product warnings and other important information.

Installing the Standard Mount

For the best GPS reception, position the bike mount so the front of the device is oriented toward the sky. You can install the bike mount on the stem or the handlebars.

1 Select a secure location to mount the device where it does not interfere with the safe operation of your bike.
2 Place the rubber disk \(1\) on the back of the bike mount. The rubber tabs align with the back of the bike mount so it stays in place.
3 Place the bike mount on the bike stem.
4 Attach the bike mount securely using the two bands \(2\).
5 Align the tabs on the back of the device with the bike mount notches \(3\).
6 Press down slightly and turn the device clockwise until it locks into place.

7 Press down slightly and turn the Edge device clockwise until it locks into place.

**Releasing the Edge**
1 Turn the Edge clockwise to unlock the device.
2 Lift the Edge off the mount.

Installing the Out-Front Mount

**NOTE:** If you do not have this mount, you can skip this task.

1 Select a secure location to mount the Edge device where it does not interfere with the safe operation of your bike.
2 Use the hex key to remove the screw \(1\) from the handlebar connector \(2\).
3 Place the rubber pad around the handlebar:
   • If the handlebar diameter is 25.4 mm, use the thicker pad.
   • If the handlebar diameter is 31.8 mm, use the thinner pad.
4 Place the handlebar connector around the rubber pad.
5 Replace and tighten the screw.
   **NOTE:** Garmin\textsuperscript{®} recommends tightening the screw so the mount is secure, with a maximum torque specification of 7 lbf-in. (0.8 N-m). You should check the tightness of the screw periodically.
6 Align the tabs on the back of the Edge device with the bike mount notches \(3\).

Installing the Mountain Bike Mount

**NOTE:** If you do not have this mount, you can skip this task.

1 Select a secure location to mount the Edge device where it does not interfere with the safe operation of your bike.
2 Use the 3 mm hex key to remove the screw \(1\) from the handlebar connector \(2\).
3 Select an option:
   • If the handlebar diameter is 25.4 mm, place the thicker pad around the handlebar.
   • If the handlebar diameter is 31.8 mm, place the thinner pad around the handlebar.
   • If the handlebar diameter is 35 mm, do not use a rubber pad.

4 Place the handlebar connector around the handlebar, so that the mount arm is above the bike stem.

5 Use the 3 mm hex key to loosen the screw on the mount arm, position the mount arm, and tighten the screw.
   **NOTE:** Garmin recommends tightening the screw so the mount arm is secure, with a maximum torque specification of 20 lbf-in. (2.26 N-m). You should check the tightness of the screw periodically.

6 If necessary, use the 2 mm hex key to remove the two screws on the back side of the mount, remove and rotate the connector, and replace the screws to change the orientation of the mount.

7 Replace and tighten the screw on the handlebar connector.
   **NOTE:** Garmin recommends tightening the screw so the mount is secure, with a maximum torque specification of 7 lbf-in. (0.8 N-m). You should check the tightness of the screw periodically.

8 Align the tabs on the back of the Edge device with the bike mount notches.

9 Press down slightly and turn the Edge device clockwise until it locks into place.

6 Acquiring Satellite Signals
   The device may need a clear view of the sky to acquire satellite signals. The time and date are set automatically based on the GPS position.
   1 Go outdoors to an open area.
      The front of the device should be oriented toward the sky.
   2 Wait while the device locates satellites.
      It may take 30–60 seconds to locate satellite signals.

   **Using the Backlight**
   You can tap the touchscreen to turn on the backlight.
   **NOTE:** You can adjust the backlight timeout (Display Settings, page 18).
   1 From the home screen or a data screen, swipe down from the top of the screen.
   2 Select an option:
      • To manually adjust the brightness, select ☀️, and use the slider bar.
      • To allow the device to automatically adjust the brightness based on the ambient light, select Auto.

   **Training**

   **Going for a Ride**
   If you are using a wireless sensor or accessory, it can be paired and activated during initial setup (Pairing Your Wireless Sensors, page 13). If your device was packaged with a wireless sensor, they are already paired and can be activated during initial setup.
   1 Hold 🆕 to turn on the device.
   2 Go outside, and wait while the device locates satellites.
      The satellite bars turn green when the device is ready.
   3 From the home screen, select ◀ or ◁ to select an activity profile.
   4 Select 🌆.
   5 Select ◁ to start the activity timer.

   **NOTE:** History is recorded only while the activity timer is running.
   6 Swipe left or right to view additional data screens.
      You can swipe down from the top of the data screens to view the widgets.
   7 If necessary, tap the screen to view the timer overlay.
   8 Select ◁ to stop the activity timer.
      **TIP:** Before you save this ride and share it on your Garmin Connect account, you can change the ride type. Accurate ride type data is important for creating bike friendly courses.
   9 Select Save Ride.
   10 Select ✔️.
Using Virtual Partner®
Your Virtual Partner is a training tool designed to help you meet your goals.
1 Go for a ride.
2 Scroll to the Virtual Partner page to see who is leading.
3 If necessary, use + and - to adjust the speed of the Virtual Partner during your ride.

Segments
Following a segment: You can send segments from your Garmin Connect account to your device. After a segment is saved to your device, you can follow the segment.

NOTE: When you download a course from your Garmin Connect account, all segments in the course are downloaded automatically.

Racing a segment: You can race a segment, trying to match or exceed your personal record or other cyclists who have ridden the segment.

Strava™ Segments
You can download Strava segments to your Edge 830 device. Follow Strava segments to compare your performance with your past rides, friends, and pros who have ridden the same segment.

To sign up for a Strava membership, go to the segments widget in your Garmin Connect account. For more information, go to www.strava.com.

The information in this manual applies to both Garmin Connect segments and Strava segments.

Following a Segment From Garmin Connect
Before you can download and follow a segment from Garmin Connect, you must have a Garmin Connect account (Garmin Connect, page 15).
1 Connect the device to your computer using the USB cable.

NOTE: If you are using Strava segments, your favorite segments are transferred automatically to your device when it is connected to Garmin Connect Mobile or your computer.
2 Go to connect.garmin.com.
3 Create a new segment, or select an existing segment.
4 Select Send to Device.
5 Disconnect the device, and turn it on.
6 Select Training > Segments.
7 Select the segment.
8 Select Map > Ride.

Enabling Segments
You can enable segment racing and prompts that alert you to approaching segments.
1 Select Training > Segments.
2 Select a segment.
3 Select Enable.

NOTE: Prompts alerting you to approaching segments appear only for enabled segments.

Racing a Segment
Segments are virtual race courses. You can race a segment, and compare your performance to past activities, other riders' performance, connections in your Garmin Connect account, or other members of the cycling community. You can upload your activity data to your Garmin Connect account to view your segment position.

NOTE: If your Garmin Connect account and Strava account are linked, your activity is automatically sent to your Strava account so you can review the segment position.
1 Select ➤ to start the activity timer, and go for a ride.
When your path crosses an enabled segment, you can race the segment.
2 Start racing the segment.
The segment data screen appears automatically.
3 If necessary, use the arrows to change your goal during your race.
You can race against the segment leader, your past performance, or other riders (if applicable). The goal automatically adjusts based on your current performance.
A message appears when the segment is complete.

Viewing Segment Details
1 Select Training > Segments.
2 Select a segment.
3 Select an option:
• Select Map to view the segment on the map.
• Select Elevation to view an elevation plot of the segment.
• Select Leaderboard to view the ride times and average speeds for the segment leader, group leader or challenger, your personal best time and average speed, and other riders (if applicable).

TIP: You can select a leaderboard entry to change your segment race goal.

Segment Options
Select Training > Segments > ▀

Turn Guidance: Enables or disables turn prompts.

Auto Select Effort: Enables or disables automatic goal adjustment based on your current performance.

Search: Allows you to search for saved segments by name.

Enable/Disable: Enables or disables the segments currently loaded on the device.

Delete: Allows you to delete all or multiple saved segments from the device.

Deleting a Segment
1 Select Training > Segments.
2 Select a segment.
3 Select ☒ > ✔.
Workouts
You can create custom workouts that include goals for each workout step and for varied distances, times, and calories. You can create workouts using Garmin Connect, and transfer them to your device. You can also create and save a workout directly on your device.

You can schedule workouts using Garmin Connect. You can plan workouts in advance and store them on your device.

Creating a Workout
1 Select Training > Workouts > Create New.
2 Enter a workout name, and select ✓.
3 Select Step Type to specify the type of workout step. For example, select Rest to use the step as a rest lap. During a rest lap, the timer continues to run and data is recorded.
4 Select Duration to specify how the step is measured. For example, select Distance to end the step after a specific distance.
5 If necessary, enter a custom value for the duration.
6 Select Target to choose your goal during the step. For example, select Heart Rate Zone to maintain a consistent heart rate during the step.
7 If necessary, select a target zone or enter a custom range. For example, you can select a heart rate zone. Each time you exceed or drop below the specified heart rate, the device beeps and displays a message.
8 Select ✓ to save the step.
9 Select Add New Step to add additional steps to the workout.
10 Select ✓ to save the workout.

Repeating Workout Steps
Before you can repeat a workout step, you must create a workout with at least one step.
1 Select Add New Step.
2 Select Step Type.
3 Select an option:
   • Select Repeat to repeat a step one or more times. For example, you can repeat a 5-mile step ten times.
   • Select Repeat Until to repeat a step for a specific duration. For example, you can repeat a 5-mile step for 60 minutes or until your heart rate reaches 160 bpm.
4 Select Back to Step, and select a step to repeat.
5 Select ✓ to save the step.

Following a Workout From the Web
Before you can download a workout from Garmin Connect, you must have a Garmin Connect account (Garmin Connect, page 15).
1 Connect the device to your computer.
2 Go to www.garminconnect.com.
3 Create and save a new workout.
4 Select Send to Device, and follow the on-screen instructions.
5 Disconnect the device.

Starting a Workout
1 Select Training > Workouts.
2 Select a workout.
3 Select Ride.
After you begin a workout, the device displays each step of the workout, the target (if any), and current workout data. An audible alarm sounds when you are about to finish a workout step. A message appears, counting down the time or distance until a new step begins.

Stopping a Workout
• At any time, select to end a workout step and begin the next step.
• At any time, swipe up from the bottom of the screen, and select Restart Step to end a workout step and restart it.
• At any time, select to stop the activity timer.
• At any time, swipe down from the top of the screen, and on the controls widget, select Press to Stop ✓ to end the workout.

Editing a Workout
1 Select Training > Workouts.
2 Select a workout.
3 Select ✓.
4 Select a step, and select Edit Step.
5 Change the step attributes, and select ✓.
6 Select ✓ to save the workout.

Deleting a Workout
1 Select Training > Workouts.
2 Select a workout.
3 Select ✓ > 🗑 > ✓.

About the Training Calendar
The training calendar on your device is an extension of the training calendar or schedule you set up in Garmin Connect. After you have added a few workouts to the Garmin Connect calendar, you can send them to your device. All scheduled workouts sent to the device appear in the training calendar list by date. When you select a day in the training calendar, you can view or do the workout. The scheduled workout stays on your device whether you complete it or skip it. When you send scheduled workouts from Garmin Connect, they overwrite the existing training calendar.

Using Garmin Connect Training Plans
Before you can download and use a training plan from Garmin Connect, you must have a Garmin Connect account (Garmin Connect, page 15).
You can browse Garmin Connect to find a training plan, schedule workouts and courses, and download the plan to your device.
1 Connect the device to your computer.
2 Go to www.garminconnect.com.
3 Select and schedule a training plan.
4 Review the training plan in your calendar.
5 Select 📕, and follow the on-screen instructions.

Interval Workouts
You can create interval workouts based on distance or time. The device saves your custom interval workout until you create another interval workout. You can use open intervals when you are riding a known distance. When you select , the device records an interval and moves to a rest interval.

Creating an Interval Workout
1 Select Training > Intervals > Edit > Intervals > Type.
2 Select Distance, Time, or Open.
   TIP: You can create an open-ended interval by setting the type to Open.
3 If necessary, enter a distance or time interval value for the workout, and select ✓.
4 Select Rest.
Pairing Your ANT+ Indoor Trainer

1. Bring the device within 3 m (10 ft.) of the ANT+ indoor trainer.
2. Select Training > Indoor Trainer > Pair ANT+ Bike Trainer.
3. Select the indoor trainer to pair with your device.
4. Select Add.

When the indoor trainer is paired with your device, the indoor trainer appears as a connected sensor. You can customize your data fields to display sensor data.

Using an ANT+ Indoor Trainer

Before you can use a compatible ANT+ indoor trainer, you must mount your bike on the trainer and pair it with your device (Pairing Your ANT+ Indoor Trainer, page 6).

You can use your device with an indoor trainer to simulate resistance while following a course, activity, or workout. While using an indoor trainer, GPS is turned off automatically.

1. Select Training > Indoor Trainer.
2. Select an option:
   - Select Follow a Course to follow a saved course (Courses, page 7).
   - Select Follow an Activity to follow a saved ride (Going for a Ride, page 3).
   - Select Follow a Workout to follow a power-based workout downloaded from your Garmin Connect account (Workouts, page 5).
3. Select a course, activity, or workout.
4. Select Ride.
5. Select an activity profile.
6. Select to start the timer.

The trainer increases or decreases resistance based on the elevation information in the course or ride.

1. Select Training > Indoor Trainer > Set Target Power.
2. Set the target power value.
3. Select an activity profile.
4. Start pedaling.
5. If necessary, you can adjust the target power output during your activity.

Setting a Training Target

The training target feature works with the Virtual Partner feature so you can train toward a set distance, distance and time, or distance and speed goal. During your training activity, the device gives you real-time feedback about how close you are to achieving your training target.

1. Select Training > Set a Target.
2. Select an option:
   - Select Distance Only to select a preset distance or enter a custom distance.
   - Select Distance and Time to select a distance and time target.
   - Select Distance and Speed to select a distance and speed target.

The training target screen appears, indicating your estimated finish time. The estimated finish time is based on your current performance and the time remaining.

3. Select ✓.
4. Select to start the activity timer.
5. If necessary, scroll to view the Virtual Partner screen.

6. After you complete your activity, select > Save Ride.

Personal Records

When you complete a ride, the device displays any new personal records you achieved during that ride. Personal records include your fastest time over a standard distance, longest ride, and most ascent gained during a ride. When paired with a compatible power meter, the device displays the maximum power reading recorded during a 20-minute period.

Viewing Your Personal Records

Select > My Stats > Personal Records.

Reverting a Personal Record

You can set each personal record back to the one previously recorded.

1. Select > My Stats > Personal Records.
2. Select a record to revert.
3. Select Previous Record > ✓.

NOTE: This does not delete any saved activities.

Deleting a Personal Record

1. Select > My Stats > Personal Records.
2. Select a personal record.
3. Select > ✓.
Training Zones
• Heart rate zones (Setting Your Heart Rate Zones, page 12)
• Power zones (Setting Your Power Zones, page 13)

Navigation
Navigation features and settings also apply to navigating courses (Courses, page 7) and segments (Segments, page 4).
• Locations and finding places (Locations, page 7)
• Planning a course (Courses, page 7)
• Route settings (Route Settings, page 9)
• Map settings (Map Settings, page 9)

Locations
You can record and store locations in the device.

Marking Your Location
Before you can mark a location, you must locate satellites.
If you want to remember landmarks or return to a certain spot, you can mark a location.

1 Go for a ride.
2 Select Navigation > 📍 > Mark Location > ✓.

Saving Locations from the Map
1 Select Navigation > 📍 > Select Search Area > A Map Point.
2 Browse the map for the location.
3 Select the location. Location information appears at the top of the map.
4 Select the location information.
5 Select ⬅ > ✓.

Navigating to a Location
1 Select Navigation.
2 Select an option:
   • Select Search Tools to navigate to a point of interest, city, intersection, or known coordinates.
     TIP: You can select 🌍 to narrow your search area.
   • Select Addresses to enter a specific address.
   • Select Saved Locations to navigate to a saved location.
     TIP: You can select 🔍 to enter specific search information.
   • Select Recent Finds to navigate to one of the last 50 locations you have found.
   • Select 📍 > Select Search Area to narrow your search area.
3 Select a location.
4 Select Ride.
5 Follow the on-screen instructions to your destination.

Navigating to Known Coordinates
1 Select Navigation > Search Tools > Coordinates.
2 Enter the coordinates, and select ✓.
3 Follow the on-screen instructions to your destination.

Navigating Back to Start
At any point during your ride, you can return to the starting point.
1 Go for a ride (Going for a Ride, page 3).
2 During your ride, select anywhere on the screen to view the timer overlay.
3 Select 🏆 > Navigation > Back to Start.
4 Select Along Same Route or Most Direct Route.
5 Select Ride.
   The device navigates you back to the starting point of your ride.

Stopping Navigation
1 Scroll to the map.
2 Select ❌ > ✓.

Projecting a Location
You can create a new location by projecting the distance and bearing from a marked location to a new location.
1 Select Navigation > Saved Locations.
2 Select a location.
3 Select the location information at the top of the screen.
4 Select ✔ > Project Location.
5 Enter the bearing and distance to the projected location.
6 Select ✓.

Editing Locations
1 Select Navigation > Saved Locations.
2 Select a location.
3 Select the information bar at the top of the screen.
4 Select ✔.
5 Select an attribute.
   For example, select Change Elevation to enter a known altitude for the location.
6 Enter the new information, and select ✓.

Deleting a Location
1 Select Navigation > Saved Locations.
2 Select a location.
3 Select the location information at the top of the screen.
4 Select ✔ > Delete Location > ✓.

Courses
Following a previously recorded activity: You can follow a saved course simply because it is a good route. For example, you can save and follow a bike friendly commute to work.
Racing against a previously recorded activity: You can also follow a saved course, trying to match or exceed previously set performance goals. For example, if the original course was completed in 30 minutes, you can race against a Virtual Partner trying to complete the course in under 30 minutes.
Following an existing ride from Garmin Connect: You can send a course from Garmin Connect to your device. Once it is saved to your device, you can follow the course or race against the course.

Planning and Riding a Course
You can create and ride a custom course. A course is a sequence of waypoints or locations that leads you to your final destination.
Creating and Riding a Round-Trip Course

The device can create a round-trip course based on a specified distance, starting location, and direction of navigation.

1. Select Navigation > Courses > Round-Trip Course.
2. Select Distance, and enter the total distance for the course.
3. Select Start Location.
4. Select an option:
   - To select your current location on the map, select Current Location.
   - To select a location on the map, select Use Map, and select a location.
   - To select a saved location, select Saved Locations, and select a location.
   - To browse for and select a point of interest, select POI Categories, and select a nearby point of interest.
   - To select a city, select Cities, and select a nearby city.
   - To select an address, select Addresses, and enter the address.
   - To select an intersection, select Intersections, and enter the street names.
   - To use coordinates, select Coordinates, and enter the coordinates.
5. Select Start Direction, and select a direction heading.
   TIP: You can select ⌘ to search again.
7. Select a course to view it on the map.
   TIP: You can select ‹ and › to view the other courses.
8. Select Ride.

Following a Course From Garmin Connect

Before you can download a course from Garmin Connect, you must have a Garmin Connect account (Garmin Connect, page 15).

1. Select an option:
   - Open the Garmin Connect app.
   - Go to connect.garmin.com.
2. Create a new course, or select an existing course.
3. Select Send to Device.
4. Follow the on-screen instructions.
5. On the Edge device, select Navigation > Courses > Saved Courses.
6. Select the course.
7. Select Ride.

Tips for Riding a Course

- Use turn guidance (Course Options, page 8).
- If you include a warmup, select ⏢ to begin the course, and warm up as normal.
- Stay away from your course path as you warm up. When you are ready to begin, head toward your course. When you are on any part of the course path, a message appears.
- Scroll to the map to view the course map.
  If you stray from the course, a message appears.

Viewing Course Details

1. Select Navigation > Courses > Saved Courses.
2. Select a course.
3. Select an option:
   - Select Summary to view details about the course.
   - Select Map to view the course on the map.
   - Select Elevation to view an elevation plot of the course.
   - Select Laps to select a lap and view additional information about each lap.

Displaying a Course on the Map

For each course saved to your device, you can customize how it appears on the map. For example, you can set your commute course to always display on the map in yellow. You can have an alternate course display in green. This allows you to see the courses while you are riding, but not follow or navigate a particular course.

1. Select Navigation > Courses > Saved Courses.
2. Select the course.
3. Select Settings.
4. Select Always Display to make the course appear on the map.
5. Select Color, and select a color.
6. Select Course Points to include course points on the map.

Course Options

Select Navigation > Courses > Saved Courses > ⬇️

- Turn Guidance: Enables or disables turn prompts.
- Off Crs. Warnings: Alerts you if you stray from the course.
- Search: Allows you to search for saved courses by name.
- Filter: Allows you to filter by course type, such as Strava courses.
- Delete: Allows you to delete all or multiple saved courses from the device.
Stopping a Course
1. Scroll to the map.
2. Select ☑ > ✓.

Deleting a Course
1. Select Navigation > Courses > Saved Courses.
2. Select a course.
3. Select ☑ > ✓.

Route Settings
Select ☐ > Activity Profiles, select a profile, and select Navigation > Routing.

Popularity Routing: Calculates routes based on the most popular rides from Garmin Connect.

Routing Mode: Sets the transportation method to optimize your route.

Calculation Method: Sets the method used to calculate your route.

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

Avoidance Setup: Sets the road types to avoid while navigating.

Recalculation: Automatically recalculates the route when you deviate from the route.

Selecting an Activity for Route Calculation
You can set the device to calculate the route based on activity type.

1. Select ☐ > Activity Profiles.
2. Select a profile.
4. Select an option to calculate your route.
   
   For example, you can select Road Cycling for on-road navigation or Mountain Biking for off-road navigation.

Map Settings
Select ☐ > Activity Profiles, select a profile, and select Navigation > Map.

Orientation: Sets how the map is shown on the page.
Auto Zoom: Automatically selects a zoom level for the map. When Off is selected, you must zoom in or out manually.
Guide Text: Sets when the turn-by-turn navigation prompts are shown (requires routable maps).
Map Visibility: Allows you to set advanced map features.
Map Information: Enables or disables the maps currently loaded on the device.

Changing the Map Orientation
1. Select ☐ > Activity Profiles.
2. Select a profile.
4. 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 3D Mode to display the map in three dimensions.

Bluetooth Connected Features
The Edge device has several Bluetooth connected features for your compatible smartphone using the Garmin Connect and Connect IQ apps. Go to www.garmin.com/apps for more information.

Activity uploads to Garmin Connect: Automatically sends your activity to Garmin Connect as soon as you finish recording the activity.

Assistance: Allows you to send an automated text message with your name and GPS location to your emergency contacts using the Garmin Connect app.

Audio prompts: Allows the Garmin Connect app to play status announcements on your smartphone during a ride.

Bike alarm: Allows you to enable an alarm that sounds on the device and sends an alert to your smartphone when the device detects motion.

Connect IQ downloadable features: Allows you to download Connect IQ features from the Connect IQ app.

Course, segment, and workout downloads from Garmin Connect: Allows you to search for activities on Garmin Connect using your smartphone and send them to your device.

Device to device transfers: Allows you to wirelessly transfer files to another compatible Edge device.

Find my Edge: Locates your lost Edge device that is paired with your smartphone and currently within range.

GroupTrack: Allows you to keep track of other riders in your group using LiveTrack directly on screen and in real time. You can send preset messages to other riders in your GroupTrack session who have a compatible Edge device.

Incident detection: Allows the Garmin Connect app to send a message to your emergency contacts when the Edge device detects an incident.

LiveTrack: Allows friends and family to follow your races and training activities in real time. You can invite followers using email or social media, allowing them to view your live data on a Garmin Connect tracking page.

Messages: Allows you to reply to an incoming call or text message with a preset text message. This feature is available with compatible Android™ smartphones.

Notifications: Displays phone notifications and messages on your device.

Social media interactions: Allows you to post an update to your favorite social media website when you upload an activity to Garmin Connect.

Weather updates: Sends real-time weather conditions and alerts to your device.

Starting a GroupTrack Session
Before you can start a GroupTrack session, you must have a smartphone with the Garmin Connect Mobile app paired to your device (Pairing Your Smartphone, page 1).

During a ride, you can see the riders in your GroupTrack session on the map.

1. On the Edge device, select ☐ > Settings > GroupTrack to enable viewing connections on the map screen.
2. In the Garmin Connect Mobile app, from the settings menu, select LiveTrack > GroupTrack.
3. Select Visible to > All Connections.
   
   NOTE: If you have more than one compatible device, you must select a device for the GroupTrack session.
4. Select Start LiveTrack.
5. On the Edge device, select ▶, and go for a ride.
6. Scroll to the map to view your connections.
You can tap an icon on the map to view location and heading information for other riders in the GroupTrack session.

7 Scroll to the GroupTrack list.
   You can select a rider from the list, and that rider appears centered on the map.

Tips for GroupTrack Sessions
The GroupTrack feature allows you to keep track of other riders in your group using LiveTrack directly on the screen. All riders in the group must be your connections in your Garmin Connect account.

- Ride outside using GPS.
- Pair your Edge 830 device with your smartphone using Bluetooth technology.
- In the Garmin Connect Mobile app, from the settings menu, select Connections to update the list of riders for your GroupTrack session.
- Make sure all of your connections pair to their smartphones and start a LiveTrack session in the Garmin Connect Mobile app.
- Make sure all your connections are in range (40 km or 25 mi.).
- During a GroupTrack session, scroll to the map to view your connections.
- Stop riding before you attempt to view location and heading information for other riders in the GroupTrack session.

Transferring Files to Another Edge Device
You can transfer courses, segments, and workouts wirelessly from one compatible Edge device to another using Bluetooth technology.

1 Turn on both Edge devices, and bring them within range (3 m) of each other.
2 From the device that contains the files, select ☑ > Settings > Device Transfers > Share Files.
3 Select a file type to share.
4 Select one or more files to transfer.
5 From the device that receives the files, select ☑ > Settings > Device Transfers.
6 Select a nearby connection.
7 Select one or more files to receive.
A message appears on both devices after the file transfer is complete.

Playing Audio Prompts on Your Smartphone
Before you can set up audio prompts, you must have a smartphone with the Garmin Connect Mobile app paired to your Edge device.
You can set the Garmin Connect Mobile app to play motivational status announcements on your smartphone during a ride or other activity. Audio prompts include the lap number and lap time, navigation, power, pace or speed, and heart-rate data.

During an audio prompt, the Garmin Connect mobile app mutes the primary audio of the smartphone to play the announcement. You can customize the volume levels on the Garmin Connect Mobile app.

1 From the settings in the Garmin Connect Mobile app, select Garmin Devices.
2 Select your device.
3 Select Device Settings > Audio Prompts.

Incident Detection and Assistance Features

Incident Detection

⚠️ CAUTION
Incident detection is a supplemental feature primarily designed for road use. Incident detection should not be relied on as a primary method to obtain emergency assistance. The Garmin Connect Mobile app does not contact emergency services on your behalf.

When an incident is detected by your Edge device with GPS enabled, the Garmin Connect Mobile app can send an automated text message and email with your name and GPS location to your emergency contacts.

A message appears on your device and paired smartphone indicating your contacts will be informed after 30 seconds have elapsed. If assistance is not needed, you can cancel the automated emergency message.

Before you can enable incident detection on your device, you must set up emergency contact information in the Garmin Connect Mobile app. Your paired smartphone must be equipped with a data plan and be in an area of network coverage where data is available. Your emergency contacts must be able to receive text messages (standard text messaging rates may apply).

Assistance

⚠️ CAUTION
Assistance is a supplemental feature and should not be relied on as a primary method to obtain emergency assistance. The Garmin Connect Mobile app does not contact emergency services on your behalf.

When your Edge device with GPS enabled is connected to the Garmin Connect Mobile app, you can send an automated text message with your name and GPS location to your emergency contacts.

Before you can enable the assistance feature on your device, you must set up emergency contact information in the Garmin Connect Mobile app. Your Bluetooth paired smartphone must be equipped with a data plan and be in an area of network coverage where data is available. Your emergency contacts must be able to receive text messages (standard text messaging rates may apply).

A message appears on your device indicating your contacts will be informed after a countdown has elapsed. If assistance is not needed, you can cancel the message.

Setting Up the Incident Detection and Assistance Features

1 From the app store on your smartphone, install and open the Garmin Connect Mobile app.
2 Pair your smartphone with your device (Pairing Your Smartphone, page 1).
3 From the app settings in the Garmin Connect Mobile app, select Emergency Contacts, and enter your rider information and your emergency contacts.
Your selected contacts receive a message identifying them as emergency contacts.
NOTE: When you enter emergency contacts, incident detection is automatically enabled on your device.

4 Enable GPS on your Edge device (Changing the Satellite Setting, page 17).

Viewing Your Emergency Contacts

Before you can view your emergency contacts on your device, you must set up your rider information and emergency contacts in the Garmin Connect Mobile app.

Select ☰ > Contacts.

Your emergency contacts’ names and phone numbers appear.

Requesting Assistance

Before you can request assistance, you must enable GPS on your Edge device.

1 Hold ⊞ for four seconds to activate the assistance feature.

The device beeps, and sends the message after the five-second countdown is complete.

2 If necessary, select Send to send the message immediately.

Turning Incident Detection On and Off

Select ☰ > Settings > System > Incident Detection.

Cancelling an Automated Message

When an incident is detected by your device, you can cancel the automated emergency message on your device or your paired smartphone before it is sent to your emergency contacts.

Select Cancel ⊆ before the end of the 30-second countdown.

Sending a Status Update After an Incident

Before you can send a status update to your emergency contacts, your device must detect an incident and send an automated emergency message to your emergency contacts.

You can send a status update to your emergency contacts informing them you are not in need of assistance.

From the status page, select Incident Detected > I’m Okay.

A message is sent to all emergency contacts.

Wireless Sensors

Your device can be used with wireless ANT+ or Bluetooth sensors. For more information about compatibility and purchasing optional sensors, go to buy.garmin.com.

Putting On the Heart Rate Monitor

NOTE: If you do not have a heart rate monitor, you can skip this task.

You should wear the heart rate monitor directly on your skin, just below your sternum. It should be snug enough to stay in place during your activity.

1 Snap the heart rate monitor module 1 onto the strap.

The Garmin logos on the module and the strap should be right-side up.

2 Wet the electrodes 2 and the contact patches 3 on the back of the strap to create a strong connection between your chest and the transmitter.

The Garmin logos should be right-side up.

The estimate may seem inaccurate at first. The device requires a few rides to learn about your cycling performance.

1 Ride at a steady, high intensity for at least 20 minutes outdoors.

VO2 max. is the maximum volume of oxygen (in milliliters) you can consume per minute per kilogram of body weight at your maximum performance. In simple terms, VO2 max. is an indication of athletic performance and should increase as your level of fitness improves. VO2 max. estimates are provided and supported by Firstbeat. You can use your Garmin device paired with a compatible heart rate monitor and power meter to display your cycling VO2 max. estimate.

Getting Your VO2 Max. Estimate

Before you can view your VO2 max. estimate, you must put on the heart rate monitor, install the power meter, and pair them with your device (Pairing Your Wireless Sensors, page 13). If your device was packaged with a heart rate monitor, the device and sensor are already paired. For the most accurate estimate, complete the user profile setup (Setting Up Your User Profile, page 16), and set your maximum heart rate (Setting Your Heart Rate Zones, page 12).

NOTE: The estimate may seem inaccurate at first. The device requires a few rides to learn about your cycling performance.

1 Select ☰ > My Stats > Recovery Advisor > Enable.

2 Go for a ride.

3 After your ride, select Save Ride.

The recovery time appears. The maximum time is 4 days, and the minimum time is 6 hours.

About VO2 Max. Estimates

VO2 max. is the maximum volume of oxygen (in milliliters) you can consume per minute per kilogram of body weight at your maximum performance. In simple terms, VO2 max. is an indication of athletic performance and should increase as your level of fitness improves. VO2 max. estimates are provided and supported by Firstbeat. You can use your Garmin device paired with a compatible heart rate monitor and power meter to display your cycling VO2 max. estimate.

Getting Your VO2 Max. Estimate

Before you can view your VO2 max. estimate, you must put on the heart rate monitor, install the power meter, and pair them with your device (Pairing Your Wireless Sensors, page 13). If your device was packaged with a heart rate monitor, the device and sensor are already paired. For the most accurate estimate, complete the user profile setup (Setting Up Your User Profile, page 16), and set your maximum heart rate (Setting Your Heart Rate Zones, page 12).

NOTE: The estimate may seem inaccurate at first. The device requires a few rides to learn about your cycling performance.

1 Ride at a steady, high intensity for at least 20 minutes outdoors.
Tips for Cycling VO2 Max. Estimates

The success and accuracy of the VO2 max. calculation improves when your ride is a sustained and moderately hard effort, and where heart rate and power are not highly variable.

- Before your ride, check that your device, heart rate monitor, and power meter are functioning properly, paired, and have good battery life.
- During your 20 minute ride, maintain your heart rate at greater than 70% of your maximum heart rate.
- During your 20 minute ride, maintain a fairly constant power output.
- Avoid rolling terrain.
- Avoid riding in groups where there is a lot of drafting.

Viewing Your Stress Score

Before you can view your stress score, you must put on a chest heart rate monitor and pair it with your device (Pairing Your Wireless Sensors, page 13).

Stress score is the result of a three-minute test performed while standing still, where the Edge device analyzes heart rate variability to determine your overall stress. Training, sleep, nutrition, and general life stress all impact how an athlete performs. The stress score range is 1 to 100, where 1 is a very low stress state, and 100 is a very high stress state. Knowing your stress score can help you decide if your body is ready for a tough workout or yoga.

TIP: Garmin recommends that you measure your stress score at approximately the same time and under the same conditions every day.

1. Select My Stats > Stress Score > Measure.
2. Stand still, and rest for 3 minutes.

Setting Your Heart Rate Zones

The device uses your user profile information from the initial setup to determine your heart rate zones. You can manually adjust the heart rate zones according to your fitness goals (Fitness Goals, page 12). For the most accurate calorie data during your activity, you should set your maximum heart rate, resting heart rate, and heart rate zones.

1. Select My Stats > Training Zones > Heart Rate Zones.
2. Enter your maximum, lactate threshold, and resting heart rate values.

VO2 max. data and analysis is provided with permission from The Cooper Institute. For more information, see the appendix (VO2 Max. Standard Ratings, page 24), and go to www.CooperInstitute.org.

Tips for Erratic Heart Rate Data

If the heart rate data is erratic or does not appear, you can try these tips.

- Reapply water to the electrodes and contact patches (if applicable).
- Tighten the strap on your chest.
- Warm up for 5 to 10 minutes.
- Follow the care instructions (Caring for the Heart Rate Monitor, page 19).

TIP: Garmin recommends that you measure stress score automatically, but you can also edit each value manually.

About Heart Rate Zones

Many athletes use heart rate zones to measure and increase their cardiovascular strength and improve their level of fitness. A heart rate zone is a set range of heartbeats per minute. The five commonly accepted heart rate zones are numbered from 1 to 5 according to increasing intensity. Generally, heart rate zones are calculated based on percentages of your maximum heart rate.

Fitness Goals

Knowing your heart rate zones can help you measure and improve your fitness by understanding and applying these principles.

- Your heart rate is a good measure of exercise intensity.
- Training in certain heart rate zones can help you improve cardiovascular capacity and strength.

If you know your maximum heart rate, you can use the table (Heart Rate Zone Calculations, page 24) to determine the best heart rate zone for your fitness objectives. If you do not know your maximum heart rate, use one of the calculators available on the Internet. Some gyms and health centers can provide a test that measures maximum heart rate. The default maximum heart rate is 220 minus your age.

TIP: Garmin recommends that you secure your bike on a stand while installing the sensor.

1. Place and hold the speed sensor on top of the wheel hub.
2. Pull the strap around the wheel hub, and attach it to the hook on the sensor.
The sensor may be tilted when installed on an asymmetrical hub. This does not affect operation.

3 Rotate the wheel to check for clearance.
   The sensor should not contact other parts of your bike.
   NOTE: The LED flashes green for five seconds to indicate activity after two revolutions.

### Installing the Cadence Sensor

NOTE: If you do not have this sensor, you can skip this task.

TIP: Garmin recommends you secure your bike on a stand while installing the sensor.

1 Select the band size that fits your crank arm securely.
   The band you select should be the smallest one that stretches across the crank arm.
2 On the non-drive side, place and hold the flat side of the cadence sensor on the inside of the crank arm.
3 Pull the bands around the crank arm, and attach them to the hooks on the sensor.
4 Rotate the crank arm to check for clearance.
   The sensor and bands should not contact any part of your bike or shoe.
   NOTE: The LED flashes green for five seconds to indicate activity after two revolutions.
5 Take a 15 minute test ride and inspect the sensor and bands to ensure there is no evidence of damage.

### About the Speed and Cadence Sensors

Cadence data from the cadence sensor is always recorded. If no speed and cadence sensors are paired with the device, GPS data is used to calculate the speed and distance. Cadence is your rate of pedaling or “spinning” measured by the number of revolutions of the crank arm per minute (rpm).

### Data Averaging for Cadence or Power

The non-zero data-averaging setting is available if you are training with an optional cadence sensor or power meter. The default setting excludes zero values that occur when you are not pedaling. You can change the value of this setting (Data Recording Settings, page 18).

### Pairing Your Wireless Sensors

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

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

1 Bring the device within 3 m (10 ft.) of the sensor.
   NOTE: Stay 10 m (33 ft.) away from other riders' sensors while pairing.
2 Select > Sensors > Add Sensor.
3 Select an option:
   • Select a sensor type.
   • Select Search All to search for all nearby sensors.

A list of available sensors appears.
4 Select one or more sensors to pair with your device.
5 Select Add.

When the sensor is paired with your device, the sensor status is Connected. You can customize a data field to display sensor data.

### Training with Power Meters

- Go to www.garmin.com/intosports for a list of ANT+ sensors that are compatible with your device (such as Vector™).
- For more information, see the owner's manual for your power meter.
- Adjust your power zones to match your goals and abilities (Setting Your Power Zones, page 13).
- Use range alerts to be notified when you reach a specified power zone (Setting Range Alerts, page 17).
- Customize the power data fields (Customizing the Data Screens, page 17).

### Setting Your Power Zones

The values for the zones are default values and may not match your personal abilities. You can manually adjust your zones on the device or using Garmin Connect. If you know your functional threshold power (FTP) value, you can enter it and allow the software to calculate your power zones automatically.

1 Select > My Stats > Training Zones > Power Zones.
2 Enter your FTP value.
3 Select Based On:
4 Select an option:
   • Select watts to view and edit the zones in watts.
   • Select % FTP to view and edit the zones as a percentage of your functional threshold power.

### Calibrating Your Power Meter

Before you can calibrate your power meter, you must install it, pair it with your device, and begin actively recording data with it. For calibration instructions specific to your power meter, see the manufacturer's instructions.

1 Select > Settings > Sensors.
2 Select your power meter.
3 Select Calibrate.
4 Keep your power meter active by pedaling until the message appears.
5 Follow the on-screen instructions.
Pedal-Based Power
Vector measures pedal-based power. Vector measures the force you apply a few hundred times every second. Vector also measures your cadence or rotational pedaling speed. By measuring the force, the direction of force, the rotation of the crank arm, and time, Vector can determine power (watts). Because Vector independently measures left and right leg power, it reports your left-right power balance.

NOTE: The Vector S system does not provide left-right power balance.

Cycling Dynamics
Cycling dynamics metrics measure how you apply power throughout the pedal stroke, and where you apply power on the pedal, allowing you to understand your particular way of riding. Understanding how and where you produce power allows you to train more efficiently and evaluate your bike fit.

NOTE: You must have a dual sensing Edge system to use cycling dynamics metrics.

For more information, go to www.garmin.com/cyclingdynamics.

Using Cycling Dynamics
Before you can use cycling dynamics, you must pair the Vector power meter with your device (Pairing Your Wireless Sensors, page 13).

NOTE: Recording cycling dynamics uses additional device memory.

1 Go for a ride.
2 Scroll to the cycling dynamics screen to view your power phase data (1), total power (2), and platform center offset (3).

3 If necessary, hold a data field (4) to change it (Customizing the Data Screens, page 17).

NOTE: The two data fields at the bottom of the screen can be customized.

You can send the ride to the Garmin Connect Mobile app to view additional cycling dynamics data (Sending Your Ride to Garmin Connect, page 15).

Power Phase Data
Power phase is the pedal stroke region (between the start crank angle and the end crank angle) where you produce positive power.

Platform Center Offset
Platform center offset is the location on the pedal platform where you apply force.

Customizing Vector Features
Before you can customize Vector features, you must pair a Vector power meter with your device.

1 Select \[\text{Settings} \] > \[\text{Sensors}\].
2 Select the Vector power meter.
3 Select \[\text{Sensor Details} \] > \[\text{Vector Features}\].
4 Select an option.
5 If necessary, select the toggle switches to turn on or off torque efficiency, pedal smoothness, and cycling dynamics.

Updating the Vector Software Using the Edge Device
Before you can update the software, you must pair your Edge device with your Vector system.

1 Send your ride data to your Garmin Connect account (Sending Your Ride to Garmin Connect, page 15).
2 Bring your Edge device within range (3 m) of the sensor.
3 Rotate the crank arm a few times. The Edge device prompts you to install all pending software updates.
4 Follow the on-screen instructions.

Getting Your FTP Estimate
The device uses your user profile information from the initial setup to estimate your functional threshold power (FTP). For a more accurate FTP value, you can conduct an FTP test using a paired power meter and heart rate monitor (Conducting an FTP Test, page 14).

Select \[\text{FTP} \] > \[My Stats \] > \[FTP\].

Your FTP estimate appears as a value measured in watts per kilogram, your power output in watts, and a position on the color gauge.

4.35 W/kg
320 W

For more information, see the appendix (FTP Ratings, page 23).

Conducting an FTP Test
Before you can conduct a test to determine your functional threshold power (FTP), you must have a paired power meter and heart rate monitor (Pairing Your Wireless Sensors, page 13).

1 Select \[\text{FTP} \] > \[My Stats \] > \[FTP Test \] > \[Ride\].
2 Select \[\text{FTP} \] to start the timer.

After you begin your ride, the device displays each step of the test, the target, and current power data. A message appears when the test is complete.

3 Select \[\text{FTP} \] to stop the timer.
4 Select \[\text{Save Ride}\].

Your FTP appears as a value measured in watts per kilogram, your power output in watts, and a position on the color gauge.

Automatically Calculating FTP
Before the device can calculate your functional threshold power (FTP), you must have a paired power meter and heart rate monitor (Pairing Your Wireless Sensors, page 13).

1 Select \[\text{FTP} \] > \[My Stats \] > \[FTP\] > \[Enable Auto Calculation\].
2 Ride at a steady, high intensity for at least 20 minutes outdoors.
3 After your ride, select \[\text{Save Ride}\].
4 Select \[\text{FTP} \].
Your FTP appears as a value measured in watts per kilogram, your power output in watts, and a position on the color gauge.

### Using Electronic Shifters
Before you can use compatible electronic shifters, such as Shimano® D12™ shifters, you must pair them with your device (Pairing Your Wireless Sensors, page 13). You can customize the optional data fields (Customizing the Data Screens, page 17). The Edge 830 device displays current adjustment values when the sensor is in adjustment mode.

### Situational Awareness
Your Edge device can be used with the Varia Vision™ device, Varia™ smart bike lights, and rearview radar to improve situational awareness. See the owner's manual for your Varia device for more information.

**NOTE:** You may need to update the Edge software before pairing Varia devices (Updating the Software Using Garmin Express, page 21).

### History
History includes time, distance, calories, speed, lap data, elevation, and optional ANT+ sensor information.

**NOTE:** History is not recorded while the timer is stopped or paused.

When the device memory is full, a message appears. The device does not automatically delete or overwrite your history. Upload your history to Garmin Connect periodically to keep track of all your ride data.

### Viewing Your Ride
1. Select ▪ History > Rides.
2. Select a ride.
3. Select an option.

#### Viewing Your Time in Each Training Zone
Before you can view your time in each training zone, you must pair your device with a compatible heart rate monitor or power meter, complete an activity, and save the activity.

Viewing your time in each heart rate and power zone can help you adjust your training intensity. You can adjust your power zones (Setting Your Power Zones, page 13) and your heart rate zones (Setting Your Heart Rate Zones, page 12) to match your goals and abilities. You can customize a data field to display your time in training zones during your ride (Customizing the Data Screens, page 17).

1. Select ▪ History > Rides.
2. Select a ride.
3. Select an option:
   - If your ride has data from one sensor, select Time in HR Zone or Time in Power Zone.
   - If your ride has data from both sensors, select Time in Zone, and select Heart Rate Zones or Power Zones.

#### Viewing Data Totals
You can view the accumulated data you have saved to the device, including the number of rides, time, distance, and calories.

- Select ▪ History > Totals.

### Deleting a Ride
1. Select ▪ History > Rides.
2. Select a ride.
3. Select ▪ ✔

### Sending Your Ride to Garmin Connect
- Sync your Edge device with the Garmin Connect Mobile app on your smartphone.
- Use the USB cable that came with your Edge device to send ride data to your Garmin Connect account on your computer.

### Garmin Connect
You can connect with your friends on Garmin Connect. Garmin Connect gives you the tools to track, analyze, share, and encourage each other. Record the events of your active lifestyle including runs, walks, rides, swims, hikes, triathlons, and more. You can create your free Garmin Connect account when you pair your device with your phone using the Garmin Connect Mobile app, or you can go to connect.garmin.com.

**Store your activities:** After you complete and save an activity with your device, you can upload that activity to Garmin Connect and keep it as long as you want.

**Analyze your data:** You can view more detailed information about your activity, including time, distance, elevation, heart rate, calories burned, cadence, an overhead map view, pace and speed charts, and customizable reports.

**NOTE:** Some data requires an optional accessory such as a heart rate monitor.

### Wi-Fi® Connected Features
The Edge device has Wi-Fi connected features. The Garmin Connect Mobile application is not required for you to use Wi-Fi connectivity.

**NOTE:** Your device must be connected to a wireless network to take advantage of these features.

**Activity uploads to Garmin Connect:** Automatically sends your activity to Garmin Connect as soon as you finish recording.

**Courses, workouts, and training plans:** Activities previously selected from Garmin Connect are sent wirelessly to your device.

**Software updates:** Your device wirelessly downloads the latest software update. The next time you turn on the device, you can follow the on-screen instructions to update the software.

### Setting Up Wi-Fi Connectivity
1. Select an option:
   - Download the Garmin Connect Mobile app, and pair your smartphone (Pairing Your Smartphone, page 1).
   - Go to www.garmin.com/express, and download the Garmin Express™ application.

2. Follow the on-screen instructions to set up Wi-Fi connectivity.
**Data Recording**

The device uses smart recording. It records key points where you change direction, speed, or heart rate. When a power meter is paired, the device records points every second. Recording points every second provides an extremely detailed track, and uses more of the available memory. For information about data averaging for cadence and power, see *Data Averaging for Cadence or Power*, page 13.

**Data Management**

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

### Connecting the Device to Your Computer

1. Pull up the weather cap from the USB port.
2. Plug the small end of the USB cable into the USB port.
3. Your device appears as a removable drive in My Computer on Windows computers and as a mounted volume on Mac computers.

### 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. On Mac computers, the device appears as a mounted volume.
   - **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.
4. Select *Edit > Copy*.
5. Open the portable device, drive, or volume for the device.
6. Browse to a folder.
7. Select *Edit > Paste*.

   The file appears in the list of files in the device memory.

### Deleting Files

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

**NOTE:** Other Wi-Fi settings appear only when Wi-Fi is enabled.

**Auto Upload:** Allows you to upload activities automatically over a known wireless network.

**Add Network:** Connects your device to a wireless network.

### Customizing Your Device

#### Connect IQ Downloadable Features

You can add Connect IQ features to your device from Garmin and other providers using the Connect IQ Mobile app.

**Data Fields:** Allow you to download new data fields that present sensor, activity, and history data in new ways. You can add Connect IQ data fields to built-in features and pages.

**Widgets:** Provide information at a glance, including sensor data and notifications.

**Apps:** Add interactive features to your device, such as new outdoor and fitness activity types.

#### Downloading Connect IQ Features Using Your Computer

1. Connect the device to your computer using a USB cable.
2. Go to apps.garmin.com, and sign in.
3. Select a Connect IQ feature, and download it.
4. Follow the on-screen instructions.

#### Profiles

The Edge has several ways for you to customize the device, including profiles. Profiles are a collection of settings that optimize your device based on how you are using it. For example, you can create different settings and views for training and mountain biking.

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.

**Activity Profiles:** You can create activity profiles for each type of biking. For example, you can create a separate activity profile for training, for racing, and for mountain biking. The activity profile includes customized data pages, activity totals, alerts, training zones (such as heart rate and speed), training settings (such as Auto Pause* and Auto Lap*), and navigation settings.

**User Profile:** You can update your gender, age, weight, and height settings. The device uses this information to calculate accurate ride data.

#### Setting Up Your User Profile

You can update your gender, age, weight, and height settings. The device uses this information to calculate accurate ride data.

1. Select 📊 > My Stats > User Profile.
2. Select an option.

#### About Training Settings

The following options and settings allow you to customize your device based on your training needs. These settings are saved...
to an activity profile. For example, you can set time alerts for your racing profile and you can set an Auto Lap position trigger for your mountain biking profile.

**Updating Your Activity Profile**

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

1. Select ☁ > Activity Profiles.
2. Select an option:
   - Select a profile.
   - Select Create New to add or copy a profile.
3. If necessary, edit the name and color for the profile.
4. Select an option:
   - Select Data Screens to customize the data screens and data fields (Customizing the Data Screens, page 17).
   - Select Default Ride Type to set the type of ride that is typical for this activity profile, such as commuting.
   - **TIP:** After a ride that is not typical, you can manually update the ride type. Accurate ride type data is important for creating bike friendly courses.
   - Select Segments to turn on your enabled segments (Enabling Segments, page 4).
   - Select Alerts to customize your training alerts (Alerts, page 17).
   - Select Auto Features > Auto Lap to set how laps are triggered (Marking Laps by Position, page 17).
   - Select Auto Features > Auto Pause to change when the activity timer automatically pauses (Using Auto Pause, page 18).
   - Select Auto Features > Auto Sleep to automatically enter sleep mode after five minutes of inactivity (Using Auto Sleep, page 18).
   - Select Auto Features > Auto Scroll to customize the display of the training data screens when the activity timer is running (Using Auto Scroll, page 18).
   - Select Timer Start Mode to customize how the device detects the start of a ride and automatically starts the activity timer (Starting the Timer Automatically, page 18).
   - Select Nutrition/Hydration...
   - Select Navigation > Map to customize the map settings (Map Settings, page 9).
   - Select Navigation > Routing to customize the routing settings (Route Settings, page 9).
   - Select Navigation > Navigation Prompts to customize the... 
   - Select Navigation > Sharp Bend Warnings...
   - Select GPS Mode to turn off GPS (Training Indoors, page 6) or change the satellite setting (Changing the Satellite Setting, page 17).

   All changes are saved to the activity profile.

**Customizing the Data Screens**

1. Select ☁ > Settings > Activity Profiles.
2. Select a profile.
3. Select Data Screens.
4. Select a data screen.
5. If necessary, enable the data screen.
6. Select the number of data fields to appear on the screen.
7. Select ✓.
8. Select a data field to change it.
9. Select ✓.

**Changing the Satellite Setting**

For increased performance in challenging environments and faster GPS position location, you can enable GPS+GLONASS or GPS+GALILEO. Using GPS and another satellite together reduces battery life more quickly than using only GPS.

1. Select ☁ > Activity Profiles.
2. Select a profile.
3. Select GPS Mode.
4. Select an option.

**Alerts**

You can use alerts to train toward specific time, distance, calorie, heart rate, cadence, and power goals. Alert settings are saved with your activity profile.

**Setting Range Alerts**

If you have an optional heart rate monitor, cadence sensor, or power meter, you can set up range alerts. A range alert notifies you when the device measurement is above or below a specified range of values. For example, you can set the device to alert you when your cadence is below 40 RPM and over 90 RPM. You can also use a training zone for the range alert (Training Zones, page 7).

1. Select ☁ > Activity Profiles.
2. Select a profile.
3. Select Alerts.
4. Select Heart Rate Alert, Cadence Alert, or Power Alert.
5. Select the minimum and maximum values, or select zones.
6. If necessary, select ✓.

   Each time you exceed or drop below the specified range, a message appears. The device also beeps if audible tones are turned on (Turning the Device Tones On and Off, page 19).

**Setting a Recurring Alert**

A recurring alert notifies you each time the device records a specified value or interval. For example, you can set the device to alert you every 30 minutes.

1. Select ☁ > Activity Profiles.
2. Select a profile.
3. Select Alerts.
4. Select an alert type.
5. Turn on the alert.
6. Enter a value.
7. Select ✓.

   Each time you reach the alert value, a message appears. The device also beeps if audible tones are turned on (Turning the Device Tones On and Off, page 19).

**Auto Lap**

**Marking Laps by Position**

You can use the Auto Lap feature to mark the lap at a specific position automatically. This feature is helpful for comparing your performance over different parts of a ride (for example, a long climb or training sprints). During courses, you can use the By Position option to trigger laps at all of the lap positions saved in the course.

1. Select ☁ > Activity Profiles.
2. Select a profile.
3. Select Auto Features > Auto Lap > Auto Lap Trigger > By Position > Lap At.
4. Select an option:
   - Select Lap Press Only to trigger the lap counter each time you select ☐ and each time you pass any of those locations again.
• Select **Start and Lap** to trigger the lap counter at the GPS location where you select ▶️ and at any location during the ride where you select ◇.

• Select **Mark and Lap** to trigger the lap counter at a specific GPS location marked before the ride and at any location during the ride where you select ◇.

5 If necessary, customize the lap data fields (Customizing the Data Screens, page 17).

**Marking Laps by Distance**
You can use the Auto Lap feature to mark the lap at a specific distance automatically. This feature is helpful for comparing your performance over different parts of a ride (for example, every 10 miles or 40 kilometers).

1 Select ▪️ > Activity Profiles.
2 Select a profile.
3 Select Auto Features > Auto Lap > Auto Lap Trigger > By Distance > Lap At.
4 Enter a value.
5 If necessary, customize the lap data fields (Customizing the Data Screens, page 17).

**Using Auto Pause**
You can use the Auto Pause feature to pause the timer automatically when you stop moving or when your speed drops below a specified value. This feature is helpful if your ride includes stop lights or other places where you need to slow down or stop.

**NOTE:** History is not recorded while the timer is stopped or paused.

1 Select ▪️ > Activity Profiles.
2 Select a profile.
3 Select Auto Features > Auto Pause.
4 Select an option:
   • Select **When Stopped** to pause the timer automatically when you stop moving.
   • Select **Custom Speed** to pause the timer automatically when your speed drops below a specified value.

5 If necessary, customize optional time data fields (Customizing the Data Screens, page 17).

**Using Auto Sleep**
You can use the Auto Sleep feature to automatically enter sleep mode after 5 minutes of inactivity. During sleep mode, the screen is turned off and the ANT+ sensors, Bluetooth, and GPS are disconnected.

Wi-Fi continues to run while the device is asleep.

1 Select ▪️ > Activity Profiles.
2 Select a profile.
3 Select Auto Features > Auto Sleep.

**Using Auto Scroll**
You can use the Auto Scroll feature to automatically cycle through all of the training data screens while the timer is running.

1 Select ▪️ > Activity Profiles.
2 Select a profile.
3 Select Auto Features > Auto Scroll.
4 Select a display speed.

**Starting the Timer Automatically**
This feature automatically detects when your device has acquired satellites and is moving. It starts the activity timer or reminds you to start the activity timer so you can record your ride data.

1 Select ▪️ > Activity Profiles.
2 Select a profile.
3 Select Timer Start Mode.
4 Select an option:
   • Select **Manual**, and select ▶️ to start the activity timer.
   • Select **Prompted** to display a visual reminder when you reach the start notice speed.
   • Select **Auto** to start the activity timer automatically when you reach the start speed.

**Phone Settings**
Select ▪️ > Connected Features > Phone.

Enable: Enables Bluetooth wireless technology.

**NOTE:** Other Bluetooth settings appear only when Bluetooth wireless technology is enabled.

Friendly Name: Allows you to enter a friendly name that identifies your devices with Bluetooth wireless technology.

Pair Smartphone: Connects your device with a compatible Bluetooth enabled smartphone. This setting allows you to use Bluetooth connected features, including LiveTrack and activity uploads to Garmin Connect.

Call and Text Alerts: Allows you to enable phone notifications from your compatible smartphone.

Missed Calls and Texts: Displays missed phone notifications from your compatible smartphone.

Text Reply Signature: Enables signatures in your text message replies.

**System Settings**
Select ▪️ > Settings > System.

• Display Settings (Display Settings, page 18)
• Data Recording Settings (Data Recording Settings, page 18)
• Unit Settings (Changing the Units of Measure, page 19)
• Tone Settings (Turning the Device Tones On and Off, page 19)
• Language Settings (Changing the Device Language, page 19)

**Display Settings**
Select ▪️ > System > Display.

Auto Brightness: Automatically adjusts the backlight brightness based on the ambient light.

Brightness: Sets the backlight brightness.

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

Color Mode: Sets the device to display day or night colors. You can select the Auto option to allow the device to set day or night colors automatically based on the time of day.

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

**Data Recording Settings**
Select ▪️ > System > Data Recording.

Recording Interval: Controls how the device records activity data. The Smart option records key points where you change direction, speed, or heart rate. The 1 Sec option records points every second. It creates a very detailed record of your activity and increases the size of the stored activity file.

Cadence Averaging: Controls whether the device includes zero values for cadence data that occur when you are not pedaling (Data Averaging for Cadence or Power, page 13).
Specifications

Turning the Device Tones On and Off
Select > System > Tones.

Changing the Device Language
Select > System > Language.

Changing the Units of Measure
You can customize units of measure for distance and speed, elevation, temperature, weight, position format, and time format.
1. Select > System > Units.
2. Select a measurement type.
3. Select a unit of measure for the setting.

Turning the Device Tones On and Off
Select > Settings > System > Tones.

Changing the Device Language
Select > System > Language.

Time Zones
Each time you turn on the device and acquire satellites or sync with your smartphone, the device automatically detects your time zone and the current time of day.

Setting Up Extended Display Mode
You can use your Edge 830 device as an extended display to view data screens from a compatible Garmin multisport watch. For example, you can pair a compatible Forerunner® device to display its data screens on your Edge device during a triathlon.
1. From your Edge device, select > Settings > Extended Display Mode > Connect Watch.
2. From your compatible Garmin watch, select Settings > Sensors & Accessories > Add New > Extended Display.
3. Follow the on-screen instructions on your Edge device and Garmin watch to complete the pairing process.

Exiting Extended Display Mode
While the device is in Extended Display mode, tap the screen, and select Exit Extended Display Mode > ✓.

Device Information

Specifications

Edge Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery type</td>
<td>Rechargeable, built-in lithium-ion battery</td>
</tr>
<tr>
<td>Battery life</td>
<td>Up to 15 hr.</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>From -20° to 60°C (from -4° to 140°F)</td>
</tr>
<tr>
<td>Charging temperature range</td>
<td>From 0° to 45°C (from 32° to 113°F)</td>
</tr>
<tr>
<td>Wireless frequency/protocol</td>
<td>2.4 GHz @ 16.4 dBm nominal</td>
</tr>
<tr>
<td>Water rating</td>
<td>IEC 60529 IPX7*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water resistance</td>
<td>3 ATM*</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>From -5° to 50°C (from 23° to 122°F)</td>
</tr>
<tr>
<td>Radio frequency/protocol</td>
<td>2.4 GHz ANT+ wireless communications protocol</td>
</tr>
</tbody>
</table>

*The device withstands pressure equivalent to a depth of 30 m.
For more information, go to www.garmin.com/waterrating.

Speed Sensor and Cadence Sensor Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery type</td>
<td>User-replaceable CR2032, 3 V</td>
</tr>
<tr>
<td>Battery life</td>
<td>Approximately 12 mo. at 1 hr./day</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>From -20° to 60°C (from -4° to 140°F)</td>
</tr>
<tr>
<td>Wireless frequency/protocol</td>
<td>2.4 GHz @ 4 dBm nominal</td>
</tr>
<tr>
<td>Water rating</td>
<td>IEC 60529 IPX7*</td>
</tr>
</tbody>
</table>

*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.

Device Care

NOTICE
Do not store the device where prolonged exposure to extreme temperatures can occur, because it can cause permanent damage.
Never use a hard or sharp object to operate the touchscreen, or damage may result.
Avoid chemical cleaners, solvents, and insect repellents that can damage plastic components and finishes.
Secure the weather cap tightly to prevent damage to the USB port.

Cleaning the Device
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.

Caring for the Heart Rate Monitor

NOTICE
You must unsnap and remove the module before washing the strap.
A build up of sweat and salt on the strap can decrease the ability of the heart rate monitor to report accurate data.

- Go to www.garmin.com/HRMcare for detailed washing instructions.
- Rinse the strap after every use.
- Machine wash the strap after every seven uses.
- Do not put the strap in a dryer.
- When drying the strap, hang it up or lay it flat.
- To prolong the life of your heart rate monitor, unsnap the module when not in use.

User Replaceable Batteries

WARNING
See the Important Safety and Product Information guide in the product box for product warnings and other important information.
Replacing the Heart Rate Monitor Battery
1. Use a small Phillips screwdriver to remove the four screws on the back of the module.
2. Remove the cover and battery.
3. Wait 30 seconds.
4. Insert the new battery with the positive side facing up.
   **NOTE:** Do not damage or lose the O-ring gasket.
5. Replace the back cover and the four screws.
   **NOTE:** Do not overtighten.

After you replace the heart rate monitor battery, you may need to pair it with the device again.

Replacing the Speed Sensor Battery
The device uses one CR2032 battery. The LED flashes red to indicate a low battery level after two revolutions.
1. Locate the circular battery cover ① on the front of the sensor.
2. Twist the cover counter-clockwise until the cover is loose enough to remove.
3. Remove the cover and the battery ②.
4. Wait 30 seconds.
5. Insert the new battery into the cover, observing polarity.
   **NOTE:** Do not damage or lose the O-ring gasket.
6. Twist the cover clockwise until the marker points to unlocked and the cover is loose enough to remove.

Replacing the Cadence Sensor Battery
The device uses one CR2032 battery. The LED flashes red to indicate a low battery level after two revolutions.
1. Locate the circular battery cover ① on the back of the sensor.
2. Twist the cover counter-clockwise until the marker points to unlocked and the cover is loose enough to remove.
3. Remove the cover and the battery ②.
4. Wait 30 seconds.
5. Insert the new battery into the cover, observing polarity.
   **NOTE:** Do not damage or lose the O-ring gasket.
6. Twist the cover clockwise until the marker points to locked.
   **NOTE:** The LED flashes red and green for a few seconds after battery replacement. When the LED flashes green and then stops flashing, the device is active and ready to send data.

Troubleshooting

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

Hold  for 10 seconds.
The device resets and turns on.

**Restoring the Default Settings**
You can restore the default configuration settings and activity profiles. This will not remove your history or activity data, such as rides, workouts, and courses.

Select  > System > Device Reset > Reset Default Settings > ✔.

**Clearing User Data and Settings**
You can clear all user data and restore the device to its initial setup. This removes your history and data, such as rides, workouts, and courses, and resets the device settings and activity profiles. This will not remove any files you added to the device from your computer.

Select  > System > Device Reset > Delete Data and Reset Settings > ✔.

**Maximizing Battery Life**
- Turn on Battery Save Mode (*Turning On Battery Save Mode*, page 21).
- Decrease the backlight brightness (*Using the Backlight*, page 3) or shorten the backlight timeout (*Display Settings*, page 18).
- Select the Smart recording interval (*Data Recording Settings*, page 18).
- Turn on the Auto Sleep feature (*Using Auto Sleep*, page 18).
- Turn off the Bluetooth wireless feature (*Phone Settings*, page 18).
• Select the GPS setting (Changing the Satellite Setting, page 17).
• Remove wireless sensors that you no longer use.

**Turning On Battery Save Mode**

Battery save mode adjusts the settings automatically to extend the battery life for longer rides. During an activity, the screen turns off. You can enable automatic alerts and tap the screen to wake it up. Battery save mode records GPS track points and sensor data less frequently. Speed, distance, and track data accuracy are reduced.

**NOTE:** History is recorded in battery save mode when the timer is running.

1. Select ☐️ > Battery Save Mode > Enable.
2. Select the alerts that wake up the screen during an activity.

**My phone will not connect to the device**

If your phone will not connect to the device, you can try these tips.

• Turn off your smartphone and your device, and turn them back on again.
• Enable Bluetooth technology on your smartphone.
• Update the Garmin Connect app to the latest version.
• Remove your device from the Garmin Connect app to retry the pairing process.
• On your smartphone, open the Garmin Connect Mobile app, select ☐️ or •••, and select **Garmin Devices** > **Add Device** to enter pairing mode.
• On your smartphone, swipe down on the home screen to view the settings widget, and select **Phone** > **Pair Smartphone** to enter pairing mode.

**Improving GPS Satellite Reception**

• Frequent sync the device to your Garmin Connect account:
  ◦ Connect your device to a computer using the USB cable and the Garmin Express application.
  ◦ Sync your device to the Garmin Connect Mobile app using your Bluetooth enabled smartphone.
  ◦ Connect your device to your Garmin Connect account using a Wi-Fi wireless network.

While connected to your Garmin Connect account, the device downloads several days of satellite data, allowing it to quickly locate satellite signals.

• Take your device outside to an open area away from tall buildings and trees.
• Remain stationary for a few minutes.

**My device is in the wrong language**

1. Select ☐️.
2. Scroll down to the last item in the list, and select it.
3. Scroll down to the sixth item in the list, and select it.
4. Scroll down to your language, and select it.

**Setting Your Elevation**

If you have accurate elevation data for your present location, you can manually calibrate the altimeter on your device.

1. Select **Navigation** > ☐️ > **Set Elevation**.
2. Enter the elevation, and select ✔.

**Temperature Readings**

The device may display temperature readings that are higher than the actual air temperature if the device is placed in direct sunlight, held in your hand, or is charging with an external battery pack. Also, the device will take some time to adjust to significant changes in temperature.

**Replacement O-rings**

Replacement bands (O-rings) are available for the mounts.

**NOTE:** Use Ethylene Propylene Diene Monomer (EPDM) replacement bands only. Go to http://buy.garmin.com, or contact your Garmin dealer.

**Viewing Device Information**

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

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

**Updating the Software Using Garmin Express**

Before you can update your device software, you must have a Garmin Connect account, and you must download the Garmin Express application.

1. Connect the device to your computer using the USB cable.

   When new software is available, Garmin Express sends it to your device.

2. Follow the on-screen instructions.

3. Do not disconnect your device from the computer during the update process.

**NOTE:** If you have already set up your device with Wi-Fi connectivity, Garmin Connect can automatically download available software updates to your device when it connects using Wi-Fi.

**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

**Getting More Information**

• Go to support.garmin.com for additional manuals, articles, and software updates.
• Go to www.garmin.com/intosports.
• Go to www.garmin.com/learningcenter.
• Go to buy.garmin.com, or contact your Garmin dealer for information about optional accessories and replacement parts.

**Appendix**

**Data Fields**

Some data fields require ANT+ accessories to display data.

**Balance**:

The current left/right power balance.

**Balance - 10s Avg.**: The 10-second moving average of the left/right power balance.
Balance - 30s Avg.: The 30-second moving average of the left/right power balance.

Balance - 3s Avg.: The three-second moving average of the left/right power balance.

Balance - Avg.: The average left/right power balance for the current activity.

Balance - Lap: The average left/right power balance for the current lap.

Battery Level: The remaining battery power.

Battery Status: The remaining battery power of a bike light accessory.

Beam Angle Status: The headlight beam mode.

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

Cadence - Avg.: Cycling. The average cadence for the current activity.

Cadence - Lap: Cycling. The average cadence for the current lap.

Calories: The amount of total calories burned.

Calories to Go: During a workout, the remaining calories when you are using a calorie target.

Course Pt. Dist.: The remaining distance to the next point on the course.

Di2 Battery Level: The remaining battery power of a Di2 sensor.

Di2 Shift Mode: The current shift mode of a Di2 sensor.

Dist. - Lap: The distance traveled for the current lap.

Dist. - Last Lap: The distance traveled for the last completed lap.

Dist. to Dest.: The remaining distance to the final destination. You must be navigating for this data to appear.

Dist. to Go: During a workout or course, the remaining distance when you are using a distance target.

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

Distance: The distance traveled for the current track or activity.

Distance Ahead: The distance ahead or behind the Virtual Partner.

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

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.

Front Gear: The front bike gear from a gear position sensor.

Gear Battery: The battery status of a gear position sensor.

Gear Combo: The current gear combination from a gear position sensor.

Gear Ratio: The number of teeth on the front and rear bike gears, as detected by a gear position sensor.

Gears: The front and rear bike gears from a gear position sensor.

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

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

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

HR - %HRR: The percentage of heart rate reserve (maximum heart rate minus resting heart rate).

HR - %Max.: The percentage of maximum heart rate.

HR - Avg.: The average heart rate for the current activity.

HR - Avg. %HRR: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the current activity.

HR - Avg. %Max.: The average percentage of maximum heart rate for the current activity.

HR Graph: A line graph showing your current heart rate zone (1 to 5).

HR - Lap: The average heart rate for the current lap.

HR - Lap %HRR: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the current lap.

HR - Lap %Max.: The average percentage of maximum heart rate for the current lap.

HR - Last Lap: The average heart rate for the last completed lap.

HR to Go: During a workout, the amount you are above or below the heart rate target.

HR Zone: The current range of your heart rate (1 to 5). The default zones are based on your user profile and maximum heart rate (220 minus your age).

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

Light Mode: The light network configuration mode.

Lights Connected: The number of connected lights.

Location at Dest.: The last point on the route or course.

Location at Next: The next point on the route or course.

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

PCO: The platform center offset. Platform center offset is the location on the pedal platform where force is applied.

PCO - Avg.: The average platform center offset for the current activity.

PCO - Lap: The average platform center offset for the current lap.

Pedal Smoothness: The measurement of how evenly a rider is applying force to the pedals throughout each pedal stroke.

Performance Condition: The performance condition score is a real-time assessment of your ability to perform.

Power: The current power output in watts. Your device must be connected to a compatible power meter.

Power - FTP: The current power output as a percentage of functional threshold power.

Power - 10s Avg.: The 10-second moving average of power output.

Power - 30s Avg.: The 30-second moving average of power output.

Power - 3s Avg.: The 3-second moving average of power output.

Power - Avg.: The average power output for the current activity.

Power - IF: The Intensity Factor™ for the current activity.

Power - kJ: The accumulated work performed (power output) in kilojoules.

Power - Lap: The average power output for the current lap.

Power - Lap Max.: The top power output for the current lap.
Power - Last Lap: The average power output for the last completed lap.
Power - Max.: The top power output for the current activity.
Power - NP: The Normalized Power™ for the current activity.
Power - NP Lap: The average Normalized Power for the current lap.
Power - NP Last Lap: The average Normalized Power for the last completed lap.
Power Phase - L.: The current power phase angle for the left leg. Power phase is the pedal stroke region where positive power is produced.
Power Phase - L. Avg.: The average power phase angle for the left leg for the current activity.
Power Phase - L. Lap: The average power phase angle for the left leg for the current lap.
Power Phase - L. Peak: The current power phase peak angle for the left leg. Power phase peak is the angle range over which the rider produces the peak portion of the driving force.
Power Phase - L. Peak Avg.: The average power phase peak angle for the left leg for the current activity.
Power Phase - L. Peak Lap: The average power phase peak angle for the left leg for the current lap.
Power Phase - R.: The current power phase angle for the right leg. Power phase is the pedal stroke region where positive power is produced.
Power Phase - R. Avg.: The average power phase angle for the right leg for the current activity.
Power Phase - R. Lap: The average power phase angle for the right leg for the current lap.
Power Phase - R. Peak: The current power phase peak angle for the right leg. Power phase peak is the angle range over which the rider produces the peak portion of the driving force.
Power Phase - R. Peak Avg.: The average power phase peak angle for the right leg for the current activity.
Power Phase - R. Peak Lap: The average power phase peak angle for the right leg for the current lap.
Power - TSS: The Training Stress Score™ for the current activity.
Power - watts/kg: The amount of power output in watts per kilogram.
Power Zone: The current range of power output (1 to 7) based on your FTP or custom settings.
Rear Gear: The rear bike gear from a gear position sensor.
Reps to Go: During a workout, the remaining repetitions.
Speed: The current rate of travel.
Speed - Avg.: The average speed for the current activity.
Speed - Lap: The average speed for the current lap.
Speed - Last Lap: The average speed for the last completed lap.
Speed - Max.: The top speed for the current activity.
Sunrise: The time of sunrise based on your GPS position.
Sunset: The time of sunset based on your GPS position.
Target Power: The target power output during an activity.
Temperature: The temperature of the air. Your body temperature affects the temperature sensor.
Time: The stopwatch time for the current activity.
Time Ahead: The time ahead or behind the Virtual Partner.
Time - Avg. Lap: The average lap time for the current activity.
Time - Elapsed: The total time recorded. For example, if you start the timer and run for 10 minutes, then stop the timer for 5 minutes, then start the timer and run for 20 minutes, your elapsed time is 35 minutes.
Time in Zone: The time elapsed in each heart rate or power zone.
Time - Lap: The stopwatch time for the current lap.
Time - Last Lap: The stopwatch time for the last completed lap.
Time of Day: The time of day based on your current location and time settings (format, time zone, daylight saving time).
Time Seated: The time spent seated while pedaling for the current activity.
Time Seated Lap: The time spent seated while pedaling for the current lap.
Time Standing: The time spent standing while pedaling for the current activity.
Time Standing Lap: The time spent standing while pedaling for the current lap.
Time to Dest.: The estimated time remaining before you reach the destination. You must be navigating for this data to appear.
Time to Go: During a workout or course, the remaining time when you are using a time target.
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.
Torque Effectiveness: The measurement of how efficiently a rider is pedaling.
Total Ascent: The total elevation distance ascended since the last reset.
Total Descent: The total elevation distance descended since the last reset.
Trainer Resistance: The resistance force applied by an indoor trainer.
Vertical Speed: The rate of ascent or descent over time.
VS - 30s Avg.: The 30-second moving average of vertical speed.
Workout Step: During a workout, the current step out of the total number of steps.

**FTP Ratings**
These tables include classifications for functional threshold power (FTP) estimates by gender.

### Males

<table>
<thead>
<tr>
<th>FTP Ratings</th>
<th>Watts per Kilogram (W/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>5.05 and greater</td>
</tr>
<tr>
<td>Excellent</td>
<td>From 3.93 to 5.04</td>
</tr>
<tr>
<td>Good</td>
<td>From 2.79 to 3.92</td>
</tr>
<tr>
<td>Fair</td>
<td>From 2.23 to 2.78</td>
</tr>
<tr>
<td>Untrained</td>
<td>Less than 2.23</td>
</tr>
</tbody>
</table>

### Females

<table>
<thead>
<tr>
<th>FTP Ratings</th>
<th>Watts per Kilogram (W/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>4.30 and greater</td>
</tr>
<tr>
<td>Excellent</td>
<td>From 3.33 to 4.29</td>
</tr>
<tr>
<td>Good</td>
<td>From 2.36 to 3.32</td>
</tr>
<tr>
<td>Fair</td>
<td>From 1.90 to 2.35</td>
</tr>
<tr>
<td>Untrained</td>
<td>Less than 1.90</td>
</tr>
</tbody>
</table>

FTP ratings are based on research by Hunter Allen and Andrew Coggan, PhD, *Training and Racing with a Power Meter* (Boulder, CO: VeloPress, 2010).
Heart Rate Zone Calculations

<table>
<thead>
<tr>
<th>Zone</th>
<th>% of Maximum Heart Rate</th>
<th>Perceived Exertion</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50–60%</td>
<td>Relaxed, easy pace, rhythmic breathing</td>
<td>Beginning-level aerobic training, reduces stress</td>
</tr>
<tr>
<td>2</td>
<td>60–70%</td>
<td>Comfortable pace, slightly deeper breathing, conversation possible</td>
<td>Basic cardiovascular training, good recovery pace</td>
</tr>
<tr>
<td>3</td>
<td>70–80%</td>
<td>Moderate pace, more difficult to hold conversation</td>
<td>Improved aerobic capacity, optimal cardiovascular training</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>% of Maximum Heart Rate</th>
<th>Perceived Exertion</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>80–90%</td>
<td>Fast pace and a bit uncomfortable, breathing forceful</td>
<td>Improved anaerobic capacity and threshold, improved speed</td>
</tr>
<tr>
<td>5</td>
<td>90–100%</td>
<td>Sprinting pace, unsustainable for long period of time, labored breathing</td>
<td>Anaerobic and muscular endurance, increased power</td>
</tr>
</tbody>
</table>

VO2 Max. Standard Ratings

These tables include standardized classifications for VO2 max. estimates by age and gender.

### Males

<table>
<thead>
<tr>
<th>Percentile</th>
<th>20–29</th>
<th>30–39</th>
<th>40–49</th>
<th>50–59</th>
<th>60–69</th>
<th>70–79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>95</td>
<td>55.4</td>
<td>54</td>
<td>52.5</td>
<td>48.9</td>
<td>45.7</td>
</tr>
<tr>
<td>Excellent</td>
<td>80</td>
<td>51.1</td>
<td>48.3</td>
<td>46.4</td>
<td>43.4</td>
<td>39.5</td>
</tr>
<tr>
<td>Good</td>
<td>60</td>
<td>45.4</td>
<td>44</td>
<td>42.4</td>
<td>39.2</td>
<td>35.5</td>
</tr>
<tr>
<td>Fair</td>
<td>40</td>
<td>41.7</td>
<td>40.5</td>
<td>38.5</td>
<td>35.6</td>
<td>32.3</td>
</tr>
<tr>
<td>Poor</td>
<td>0–40</td>
<td>&lt;41.7</td>
<td>&lt;40.5</td>
<td>&lt;38.5</td>
<td>&lt;35.6</td>
<td>&lt;32.3</td>
</tr>
</tbody>
</table>

### Females

<table>
<thead>
<tr>
<th>Percentile</th>
<th>20–29</th>
<th>30–39</th>
<th>40–49</th>
<th>50–59</th>
<th>60–69</th>
<th>70–79</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>95</td>
<td>49.6</td>
<td>47.4</td>
<td>45.3</td>
<td>41.1</td>
<td>37.8</td>
</tr>
<tr>
<td>Excellent</td>
<td>80</td>
<td>43.9</td>
<td>42.4</td>
<td>39.7</td>
<td>36.7</td>
<td>33</td>
</tr>
<tr>
<td>Good</td>
<td>60</td>
<td>39.5</td>
<td>37.8</td>
<td>36.3</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td>Fair</td>
<td>40</td>
<td>36.1</td>
<td>34.4</td>
<td>33</td>
<td>30.1</td>
<td>27.5</td>
</tr>
<tr>
<td>Poor</td>
<td>0–40</td>
<td>&lt;36.1</td>
<td>&lt;34.4</td>
<td>&lt;33</td>
<td>&lt;30.1</td>
<td>&lt;27.5</td>
</tr>
</tbody>
</table>

Data reprinted with permission from The Cooper Institute. For more information, go to www.CooperInstitute.org.

Wheel Size and Circumference

Your speed sensor automatically detects your wheel size. If necessary, you can manually enter your wheel circumference in the speed sensor settings.

The tire size is marked on both sides of the tire. This is not a comprehensive list. You can also measure the circumference of your wheel or use one of the calculators available on the internet.

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Wheel Circumference (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 x 1.75</td>
<td>1515</td>
</tr>
<tr>
<td>20 x 1.3/8</td>
<td>1615</td>
</tr>
<tr>
<td>22 x 1.3/8</td>
<td>1770</td>
</tr>
<tr>
<td>22 x 1-1/2</td>
<td>1785</td>
</tr>
<tr>
<td>24 x 1</td>
<td>1753</td>
</tr>
<tr>
<td>24 x 3/4 Tubular</td>
<td>1785</td>
</tr>
<tr>
<td>24 x 1-1/8</td>
<td>1795</td>
</tr>
<tr>
<td>24 x 1.75</td>
<td>1890</td>
</tr>
<tr>
<td>24 x 1-1/4</td>
<td>1905</td>
</tr>
<tr>
<td>24 x 2.00</td>
<td>1925</td>
</tr>
<tr>
<td>24 x 2.125</td>
<td>1965</td>
</tr>
<tr>
<td>26 x 7/8</td>
<td>1920</td>
</tr>
<tr>
<td>26 x 1-1.0</td>
<td>1913</td>
</tr>
<tr>
<td>26 x 1</td>
<td>1952</td>
</tr>
<tr>
<td>26 x 1.25</td>
<td>1953</td>
</tr>
<tr>
<td>26 x 1-1/8</td>
<td>1970</td>
</tr>
<tr>
<td>26 x 1.40</td>
<td>2005</td>
</tr>
<tr>
<td>26 x 1.50</td>
<td>2010</td>
</tr>
<tr>
<td>26 x 1.75</td>
<td>2023</td>
</tr>
<tr>
<td>26 x 1.95</td>
<td>2050</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Wheel Circumference (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 x 2.00</td>
<td>2055</td>
</tr>
<tr>
<td>26 x 1-3/8</td>
<td>2068</td>
</tr>
<tr>
<td>26 x 2.10</td>
<td>2068</td>
</tr>
<tr>
<td>26 x 2.125</td>
<td>2070</td>
</tr>
<tr>
<td>26 x 2.35</td>
<td>2083</td>
</tr>
<tr>
<td>26 x 1-1/2</td>
<td>2100</td>
</tr>
<tr>
<td>26 x 3.00</td>
<td>2170</td>
</tr>
<tr>
<td>27 x 1</td>
<td>2145</td>
</tr>
<tr>
<td>27 x 1-1/8</td>
<td>2155</td>
</tr>
<tr>
<td>27 x 1-1/4</td>
<td>2161</td>
</tr>
<tr>
<td>27 x 1-3/8</td>
<td>2169</td>
</tr>
<tr>
<td>29 x 2.1</td>
<td>2288</td>
</tr>
<tr>
<td>29 x 2.2</td>
<td>2298</td>
</tr>
<tr>
<td>29 x 2.3</td>
<td>2326</td>
</tr>
<tr>
<td>650 x 20C</td>
<td>1938</td>
</tr>
<tr>
<td>650 x 23C</td>
<td>1944</td>
</tr>
<tr>
<td>650 x 35A</td>
<td>2090</td>
</tr>
<tr>
<td>650 x 38B</td>
<td>2105</td>
</tr>
<tr>
<td>650 x 38A</td>
<td>2125</td>
</tr>
<tr>
<td>700 x 18C</td>
<td>2070</td>
</tr>
<tr>
<td>700 x 19C</td>
<td>2080</td>
</tr>
<tr>
<td>700 x 20C</td>
<td>2086</td>
</tr>
<tr>
<td>700 x 23C</td>
<td>2096</td>
</tr>
<tr>
<td>700 x 25C</td>
<td>2105</td>
</tr>
<tr>
<td>700C Tubular</td>
<td>2130</td>
</tr>
<tr>
<td>700 x 28C</td>
<td>2136</td>
</tr>
<tr>
<td>700 x 30C</td>
<td>2146</td>
</tr>
<tr>
<td>700 x 32C</td>
<td>2155</td>
</tr>
<tr>
<td>Tire Size</td>
<td>Wheel Circumference (mm)</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>700 × 35C</td>
<td>2168</td>
</tr>
<tr>
<td>700 × 38C</td>
<td>2180</td>
</tr>
<tr>
<td>700 × 40C</td>
<td>2200</td>
</tr>
<tr>
<td>700 × 44C</td>
<td>2235</td>
</tr>
<tr>
<td>700 × 45C</td>
<td>2242</td>
</tr>
<tr>
<td>700 × 47C</td>
<td>2268</td>
</tr>
</tbody>
</table>