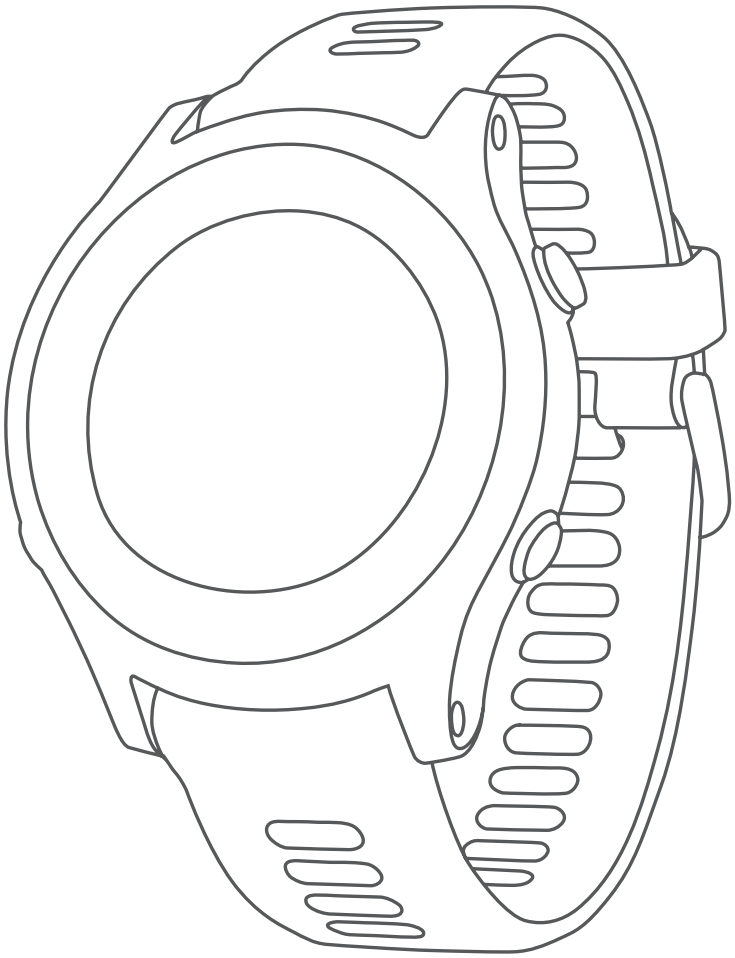
GARMIN



FORERUNNER 945

Owner’s Manual

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M/N: A03525

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Introduction

⚠ WARNING

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

Always consult your physician before you begin or modify any exercise program.

Device Overview



①	LIGHT	Select to turn the device on. Select to turn the backlight on and off. Hold to view the controls menu.
②	START STOP	Select to start and stop the activity timer. Select to choose an option or to acknowledge a message.
③	BACK	Select to return to the previous screen. Select to record a lap, rest, or transition during an activity
④	DOWN	Select to scroll through the widgets, data screens, options, and settings. Hold to open the music controls (*Music, page 28*).
⑤	UP	Select to scroll through the widgets, data screens, options, and settings. Hold to view the menu.

GPS Status and Status Icons

The GPS status ring and icons temporarily overlay each data screen. For outdoor activities, the status ring turns green when GPS is ready. A flashing icon means the device is searching for a signal. A solid icon means the signal was found or the sensor is connected.

GPS	GPS status
	Battery status
	Smartphone connection status
	Wi-Fi® technology status
	Heart rate status
	Foot pod status
	Running Dynamics Pod status
	Speed and cadence sensor status
	Bike lights status
	Bike radar status
	Power meter status
	tempe sensor status
	VIRB camera status

Setting Up Your Watch

To take full advantage of the Forerunner features, complete these tasks.

- Pair your smartphone with the Garmin Connect™ app (*Pairing Your Smartphone with Your Device, page 23*).
- Set up safety features (*Safety and Tracking Features, page 27*).
- Set up music (*Music, page 28*).
- Set up Wi-Fi networks (*Connecting to a Wi-Fi Network, page 27*).
- Set up your Garmin Pay wallet (*Setting Up Your Garmin Pay Wallet, page 29*).

Activities and Apps

Your device can be used for indoor, outdoor, athletic, and fitness activities. When you start an activity, the device displays and records sensor data. You can save activities and share them with the Garmin Connect community.

You can also add Connect IQ activities and apps to your device using the Connect IQ Mobile app (*Connect IQ Features, page 26*).

For more information about activity tracking and fitness metric accuracy, go to *Garmin.com.sg/legal/atdisclaimer*.

Going for a Run

The first fitness activity you record on your device can be a run, ride, or any outdoor activity. You may need to charge the device before starting the activity (*Charging the Device, page 45*).

1. Select **START**, and select an activity.
2. Go outside, and wait while the device locates satellites.
3. Select **START** to start the timer.
4. Go for a run.



5 After you complete your run, select **STOP** to stop the timer.

6 Select an option:
- Select **Resume** to restart the timer.
- Select **Save** to save the run and reset the timer. You can select the run to view a summary.



- Select **Resume Later** to suspend the run and continue recording later.
- Select **Lap** to mark a lap.
- Select **Discard** > **Yes** to delete the run.

Starting an Activity

When you start an activity, GPS turns on automatically (if required). If you have an optional wireless sensor, you can pair it to the Forerunner device (*Pairing Your Wireless Sensors, page 35*).

1 Press **START**.

2 Select an activity.

NOTE: Activities set as favorites appear first in the list (*Customizing Your Activity List, page 37*).

3 Select an option:
- Select an activity from your favorites.
- Select , and select an activity from the extended activity list.

4 If the activity requires GPS signals, go outside to an area with a clear view of the sky.

5 Wait until **GPS** ✓ appears.

The device is ready after it establishes your heart rate, acquires GPS signals (if required), and connects to your wireless sensors (if required).

6 Press **START** to start the activity timer.

The device records activity data only while the activity timer is running.

NOTE: You can hold **DOWN** while in an activity to open the music controls.

Tips for Recording Activities

- Charge the device before starting an activity (*Charging the Device, page 45*).
- Select to record laps.
- Select **UP** or **DOWN** to view additional data pages.

Stopping an Activity

1 Select **STOP**.

2 Select an option:
- To resume your activity, select **Resume**.
- To save the activity and return to watch mode, select **Save** > **Done**.
- To suspend your activity and resume it at a later time, select **Resume Later**.
- To mark a lap, select **Lap**.
- To navigate back to the starting point of your activity along the path you traveled, select **Back to Start** > **TracBack**.
  NOTE: This feature is available only for activities that use GPS.
- To navigate back to the starting point of your activity by the most direct path, select **Back to Start** > **Route**.
  NOTE: This feature is available only for activities that use GPS.
- To discard the activity and return to watch mode, select **Discard** > **Yes**.

NOTE: After stopping the activity, the device saves it automatically after 30 minutes.

Creating a Custom Activity

1 From the watch face, select **START** > **Add**.

2 Select an option:
- Select **Copy Activity** to create your custom activity starting from one of your saved activities.
- Select **Other** to create a new custom activity.

3 If necessary, select an activity type.

4 Select a name or enter a custom name.

Duplicate activity names include a number, for example: Bike(2).

5 Select an option:
- Select an option to customize specific activity settings. For example, you can customize the data screens or auto features.
- Select **Done** to save and use the custom activity.

6 Select **Yes** to add the activity to your list of favorites.

Indoor Activities

The Forerunner device can be used for training indoors, such as running on an indoor track or using a stationary bike. GPS is turned off for indoor activities.

When running or walking with GPS turned off, speed, distance, and cadence are calculated using the

accelerometer in the device. The accelerometer is self-calibrating. The accuracy of the speed, distance, and cadence data improves after a few outdoor runs or walks using GPS.

TIP: Holding the handrails of the treadmill reduces accuracy. You can use an optional foot pod to record pace, distance, and cadence.

When cycling with GPS turned off, speed and distance are not available unless you have an optional sensor that sends speed and distance data to the device (such as a speed or cadence sensor).

Calibrating the Treadmill Distance

To record more accurate distances for your treadmill runs, you can calibrate the treadmill distance after you run at least 1.5 km (1 mi.) on a treadmill. If you use different treadmills, you can manually calibrate the treadmill distance on each treadmill or after each run.

1. Start a treadmill activity (*Starting an Activity, page 2*), and run at least 1.5 km (1 mi.) on the treadmill.
2. After you complete your run, select **STOP**.
3. Select an option:
   - To calibrate the treadmill distance the first time, select **Save**.
     The device prompts you to complete the treadmill calibration.
   - To manually calibrate the treadmill distance after the first- time calibration, select **Calibrate & Save** > **Yes**.
4. Check the treadmill display for the distance traveled, and enter the distance on your device.

Outdoor Activities

The Forerunner device comes preloaded with outdoor activities, such as running and cycling. GPS is turned on for outdoor activities. You can add new activities based on default activities, such as walking or rowing. You can also add custom activities to your device (*Creating a Custom Activity, page 2*).

Multisport

Triathletes, duathletes, and other multisport competitors can take advantage of the multisport activities, such as Triathlon or Swimrun. During a multisport activity, you can transition between activities and continue to view your total time and distance. For example, you can switch from biking to running and view your total time and distance for biking and running throughout the multisport activity.

You can customize a multisport activity, or you can use the default triathlon activity set up for a standard triathlon.

Triathlon Training

When you participate in a triathlon, you can use the triathlon activity to quickly transition to each sport segment, to time each segment, and to save the activity.

1. Select **START** > **Triathlon**.
2. Select **START** to start the timer.
3. Select ↻ at the beginning and end of each transition.
   The transition feature can be turned on or off for the triathlon activity settings.
4. After you complete your activity, select **STOP** > **Save**.

Creating a Multisport Activity

1. From the watch face, select **START** > **Add** > **Multisport**.
2. Select a multisport activity type, or enter a custom name.
   Duplicate activity names include a number. For example, Triathlon(2).
3. Select two or more activities.
4. Select an option:
   - Select an option to customize specific activity settings. For example, you can select whether to include transitions.
   - Select **Done** to save and use the multisport activity.
5. Select **Yes** to add the activity to your list of favorites.

Tips for Triathlon Training or Using Multisport Activities

- Select **START** to start your first activity.
- Select ↻ to transition to the next activity.
  If transitions are turned on, the transition time is recorded separately from the activity times.
- If necessary, select ↻ to start the next activity.
- Select **UP** or **DOWN** to view additional data pages.

Swimming

NOTICE

The device is intended for surface swimming. Scuba diving with the device may damage the product and will void the warranty.

NOTE: The device is compatible with the HRM-Tri accessory and the HRM-Swim accessory (*Heart Rate While Swimming, page 13*).

Swim Terminology

Length: One trip down the pool.

Interval: One or more consecutive lengths. A new interval starts after a rest.

Stroke: A stroke is counted every time your arm wearing the device completes a full cycle.

Swolf: Your swolf score is the sum of the time for one pool length and the number of strokes for that length. For example, 30 seconds plus 15 strokes equals a swolf score of 45. For open water swimming, swolf is calculated over 25 meters.

Swolf is a measurement of swimming efficiency and, like golf, a lower score is better.

Stroke Types

Stroke type identification is available only for pool swimming. Your stroke type is identified at the end of a length. Stroke types appear when you are viewing interval history. You can also select stroke type as a custom data field (*Customizing the Data Screens, page 38*).

Free	Freestyle
Back	Backstroke
Breast	Breaststroke
Fly	Butterfly
Mixed	More than one stroke type in an interval
Drill	Used with drill logging (*Training with the Drill Log, page 4*)

Tips for Swimming Activities

- Before starting a pool swimming activity, follow the on-screen instructions to select your pool size or enter a custom size.

  The next time you start a pool swimming activity, the device uses this pool size. You can hold , select the activity settings, and select Pool Size to change the size.
- Select to record a rest during pool swimming.

  The device automatically records swim intervals and lengths for pool swimming.
- Select to record an interval during open water swimming.

Resting During Pool Swimming

The default rest screen displays two rest timers. It also displays time and distance for the last completed interval.

NOTE: Swim data is not recorded during a rest.

1. During your swim activity, select to start a rest.

   The display reverses to white text on a black background, and the rest screen appears.
2. During a rest, select **UP** or **DOWN** to view other data screens (optional).
3. Select , and continue swimming.
4. Repeat for additional rest intervals.

Training with the Drill Log

The drill log feature is available only for pool swimming. You can use the drill log feature to manually record kick sets, one-arm swimming, or any type of swimming that is not one of the four major strokes.

1. During your pool swim activity, select **UP** or **DOWN** to view the drill log screen.
2. Select o start the drill timer.
3. After you complete a drill interval, select .

   The drill timer stops, but the activity timer continues to record the entire swim session.
4. Select a distance for the completed drill.

   Distance increments are based on the pool size selected for the activity profile.
5. Select an option:
   - To start another drill interval, select .
   - To start a swim interval, select **UP** or **DOWN** to return to the swim training screens.

Viewing Your Ski Runs

Your device records the details of each downhill skiing or snowboarding run using the auto run feature. This feature is turned on by default for downhill skiing and snowboarding. It automatically records new ski runs based on your movement. The timer pauses when you stop moving downhill and when you are on a chairlift. The timer remains paused during the chairlift ride. You can start moving downhill to restart the timer. You can view run details from the paused screen or while the timer is running.

1. Start a skiing or snowboarding activity.
2. Hold .
3. Select **View Runs**.
4. Select **UP** and **DOWN** to view details of your last run, your current run, and your total runs.

   The run screens include time, distance traveled, maximum speed, average speed, and total descent.

Golfing

Playing Golf

Before you play golf, you should charge the device (*Charging the Device, page 45*).

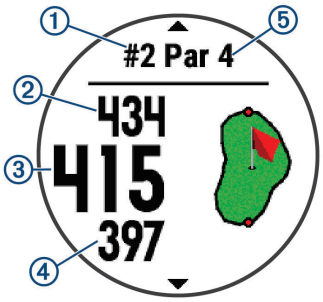
NOTE: If you found a golf course with data that's inaccurate or outdated, please send us a report at *Golf Course Issue Repor*.

1. From the watch face, select **START** > **Golf**.
2. Go outside, and wait while the device locates satellites.
3. Select a course from the list of available courses.
4. If necessary, set your driver distance.
5. Select **Yes** to keep score.
6. Select **UP** or **DOWN** to scroll through the holes.

   The device automatically transitions when you move to the next hole.
7. After you complete your activity, select **START** > **End Round** > **Yes**.

Hole Information

The device calculates the distance to the front and back of the green, and to the selected pin location (*Moving the Flag, page 5*).



①	Current hole number
②	Distance to the back of the green
③	Distance to the selected pin location
④	Distance to the front of the green
⑤	Par for the hole
⑥	Map of the green

Moving the Flag

You can take a closer look at the green and move the pin location.

1. From the hole information screen, select **START** > **Move Flag**.
2. Select **UP** or **DOWN** to move the pin position.
3. Select **START**.

   The distances on the hole information screen are updated to show the new pin location. The pin location is saved for only the current round.

Viewing Measured Shots

Before the device can automatically detect and measure shots, you must enable scoring.

Your device features automatic shot detection and recording. Each time you take a shot along the fairway, the device records your shot distance so you can view it later.

TIP: Automatic shot detection works best when you wear the device on your leading wrist and make good contact with the ball. Putts are not detected.

1. While playing golf, select **START** > **Measure Shot**. Your last shot distance appears.

   NOTE: The distance automatically resets when you hit the ball again, putt on the green, or move to the next hole.
2. Select **DOWN** to view all recorded shot distances.

Viewing Layup and Dogleg Distances

You can view a list of layup and dogleg distances for par 4 and 5 holes.

Select **START** > **Layups**.

Each layup and the distance until you reach each layup appear on the screen.

NOTE: Distances are removed from the list as you pass them.

Keeping Score

1. From the hole information screen, select **START** > **Scorecard**.

   The scorecard appears when you are on the green.
2. Select **UP** or **DOWN** to scroll through the holes.
3. Select **START** to select a hole.
4. Select **UP** or **DOWN** to set the score.

   Your total score is updated.

Updating a Score

1. From the hole information screen, select **START** > **Scorecard**.
2. Select **UP** or **DOWN** to scroll through the holes.
3. Select **START** to select a hole.
4. Select **UP** or **DOWN** to change the score for that hole.

   Your total score is updated.

TruSwing

The TruSwing feature allows you to view swing metrics recorded from your TruSwing device. Go to *Garmin.com.sg/minisite/approach* to purchase a TruSwing device.

Using the Golf Odometer

You can use the odometer to record the time, distance, and steps traveled. The odometer automatically starts and stops when you start or end a round.

1. Select **START** > **Odometer**.
2. If necessary, select **Reset** to reset the odometer to zero.

Tracking Statistics

The Stat Tracking feature enables detailed statistics tracking while playing golf.

1. From the hole information screen, hold ☰.
2. Select the activity settings.
3. Select **Stat Tracking** to enable tracking statistics.

Playing Audio Prompts During Your Activity

You can enable your Forerunner device to play motivational status announcements during a run or other activity. Audio prompts play on your connected headphones using Bluetooth® technology, if available. Otherwise, audio prompts play on your smartphone paired through the Garmin Connect app. During an audio prompt, the device or smartphone mutes the primary audio to play the announcement.

NOTE: This feature is not available for all activities.

1. From the watch face, hold ☰.
2. Select **Settings** > **Audio Prompts**.
3. Select an option:
   - To hear a prompt for each lap, select **Lap Alert**. **NOTE:** The **Lap Alert** audio prompt is enabled by default.
   - To customize prompts with your pace and speed

data, select **Pace/Speed Alert**.
- To customize prompts with your heart rate data, select **Heart Rate Alert**.
- To customize prompts with power data, select **Power Alert**.
- To hear prompts when you start and stop the timer, including the Auto Pause® feature, select **Timer Events**.
- To hear activity alerts play as an audio prompt, select **Activity Alerts**.
- To change the language or the dialect of the voice prompts, select **Dialect**.

Training

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 or select a training plan that has built-in workouts from Garmin Connect, and transfer them to your device.

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

Following a Workout From Garmin Connect

Before you can download a workout from Garmin Connect, you must have a Garmin Connect account (*Garmin Connect, page 31*).

1. Select an option:
   - Open the Garmin Connect app.
   - Go to *connect.Garmin.com*.
2. Create and save a new workout.
3. Select or **Send to Device**
4. Follow the on-screen instructions.

Starting a Workout

Before you can start a workout, you must download a workout from your Garmin Connect account.

1. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select **Training** > **My Workouts**.
5. Select a workout.

   NOTE: Only workouts that are compatible with the selected activity appear in the list.
6. Select **Do Workout**.
7. Select **START** to start the timer.

After you begin a workout, the device displays each step of the workout, step notes (optional), the target (optional), and the current workout data.

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, you must have a Garmin Connect account (*Garmin Connect, page 31*).

You can browse your Garmin Connect account to find a training plan, schedule workouts, and send them to your device.

1. Connect the device to your computer.
2. From your Garmin Connect account, select and schedule a training plan.
3. Review the training plan in your calendar.
4. Select > **Send Workouts to Device**, 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 for track workouts and when you are running a known distance.

Creating an Interval Workout

1. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select **Training** > **Intervals** > **Edit** > **Interval** > **Type**.
5. Select **Distance**, **Time**, or **Open**.

   TIP: You can create an open-ended interval by selecting the Open option.
6. If necessary, select **Duration**, enter a distance or time interval value for the workout, and select ✓.
7. Select **BACK**.
8. Select **Rest** > **Type**.
9. Select **Distance**, **Time**, or **Open**.
10. If necessary, enter a distance or time value for the rest interval, and select ✓.
11. Select **BACK**.
12. Select one or more options:
    - To set the number of repetitions, select **Repeat**.
    - To add an open-ended warm up to your workout, select **Warm Up** > **On**.
    - To add an open-ended cool down to your workout, select **Cool Down** > **On**.

Starting an Interval Workout

1. From the watch face, select **START**.

2. Select an activity.
3. Hold .
4. Select **Training** > **Intervals** > **Do Workout**.
5. Select **START** to start the timer.
6. When your interval workout has a warm up, select to begin the first interval.
7. Follow the on-screen instructions.

After you complete all of the intervals, a message appears.

Stopping an Interval Workout

- At any time, select to stop the current interval or rest period and transition to the next interval or rest period.
- After all intervals and rest periods are complete, select to end the interval workout and transition to a timer that can be used for cool down.
- At any time, select **STOP** to stop the timer. You can resume the timer or end the interval workout.

Using Virtual Partner

The Virtual Partner feature is a training tool designed to help you meet your goals. You can set a pace for the Virtual Partner and race against it.

NOTE: This feature is not available for all activities.

1. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select the activity settings.
5. Select **Data Screens** > **Add New** > **Virtual Partner**.
6. Enter a pace or speed value.
7. Start your activity (*Starting an Activity, page 2*).
8. Select **UP** or **DOWN** to scroll to the Virtual Partner screen and see who is leading.



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, distance and pace, 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. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select **Training** > **Set a Target**.
5. 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 Pace** or **Distance and Speed** to select a distance and pace or speed target.

   The training target screen appears and displays your estimated finish time. The estimated finish time is based on your current performance and the time remaining.
6. Select **START** to start the timer.

Cancelling a Training Target

1. During an activity, hold .
2. Select **Cancel Target** > **Yes**.

Racing a Previous Activity

You can race a previously recorded or downloaded activity. This feature works with the Virtual Partner feature so you can see how far ahead or behind you are during the activity.

NOTE: This feature is not available for all activities.

1. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select **Training** > **Race an Activity**.
5. Select an option:
   - Select **From History** to select a previously recorded activity from your device.
   - Select **Downloaded** to select an activity you downloaded from your Garmin Connect account.
6. Select the activity.

   The Virtual Partner screen appears indicating your estimated finish time.
7. Select **START** to start the timer.
8. After you complete your activity, select **START** > **Save**.

Personal Records

When you complete an activity, the device displays any new personal records you achieved during that activity. Personal records include your fastest time over several typical race distances and longest run, ride, or swim.

NOTE: For cycling, personal records also include most ascent and best power (power meter required).

Viewing Your Personal Records

1. From the watch face, hold .
2. Select **History** > **Records**.
3. Select a sport.
4. Select a record.

5 Select **View Record**.

Restoring a Personal Record

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

1 From the watch face, hold .
2 Select **History** > **Records**.
3 Select a sport.
4 Select a record to restore.
5 Select **Previous** > **Yes**.

NOTE: This does not delete any saved activities.

Clearing a Personal Record

1 From the watch face. hold .
2 Select **History** > **Records**.
3 Select a sport.
4 Select a record to delete.
5 Select **Clear Record** > **Yes**.

NOTE: This does not delete any saved activities.

Clearing All Personal Records

1 From the watch face, hold .
2 Select **History** > **Records**.
3 Select a sport.
4 Select **Clear All Records** > **Yes**.

The records are deleted for that sport only.

NOTE: This does not delete any saved activities.

Segments

You can send running or cycling segments from your Garmin Connect account to your device. After a segment is saved to your device, you can race a segment, trying to match or exceed your personal record or other participants who have raced the segment.

NOTE: When you download a course from your Garmin Connect account, you can download all of the available segments in the course.

Strava™ Segments

You can download Strava segments to your Forerunner 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.

Racing a Segment

Segments are virtual race courses. You can race a segment, and compare your performance to past activities, others' performance, connections in your Garmin Connect account, or other members of the running or cycling communities. 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 **START**.
2 Select an activity.
3 Go for a run or ride.

When you approach a segment, a message appears, and you can race the segment.

4 Start racing the segment.

A message appears when the segment is complete.

Viewing Segment Details

1 Select **START**.
2 Select an activity.
3 Hold .
4 Select **Training** > **Segments**.
5 Select a segment.
6 Select an option:
- Select **Race Time** to view the time and average speed or pace for the segment leader.
- Select **Map** to view the segment on the map.
- Select **Elevation Plot** to view an elevation plot of the segment.

Using the Metronome

The metronome feature plays tones at a steady rhythm to help you improve your performance by training at a faster, slower, or more consistent cadence.

NOTE: This feature is not available for all activities.

1 From the watch face, select **START**.
2 Select an activity.
3 Hold .
4 Select the activity settings.
5 Select **Metronome** > **Status** > **On**.
6 Select an option:
- Select **Beats Per Minute** to enter a value based on the cadence you want to maintain.
- Select **Alert Frequency** to customize the frequency of the beats.
- Select **Sounds** to customize the metronome tone and vibration.

7 If necessary, select **Preview** to listen to the metronome feature before you run.
8 Go for a run (*Going for a Run, page 1*).

The metronome starts automatically.

9 During your run, select **UP** or **DOWN** to view the metronome screen.
10 If necessary, hold to change the metronome

settings.

Extended Display Mode

You can use Extended Display mode to display data screens from your Forerunner device on a compatible Edge device during a ride or triathlon. See your Edge owner's manual for more information.

Setting Up Your User Profile

You can update your gender, birth year, height, weight, heart rate zone, and power zone settings. The device uses this information to calculate accurate training data.

1. Hold ☰.
2. Select **User Profile**.
3. Select an option.

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 9*) 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.

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.

Setting Your Heart Rate Zones

The device uses your user profile information from the initial setup to determine your default heart rate zones. You can set separate heart rate zones for sport profiles, such as running, cycling, and swimming. For the most accurate calorie data during your activity, set your maximum heart rate. You can also set each heart rate zone and enter your resting heart rate manually. You can manually adjust your zones on the device or using your Garmin Connect account.

1. Hold ☰.
2. Select **User Profile** > **Heart Rate**.
3. Select **Max. HR**, and enter your maximum heart rate.

   You can use the Auto Detect feature to automatically record your maximum heart rate during an activity (*Detecting Performance Measurements Automatically, page 17*).
4. Select **LTHR** > **Enter Manually**, and enter your lactate threshold heart rate.

   You can perform a guided test to estimate your lactate threshold (*Lactate Threshold, page 19*). You can use the Auto Detect feature to automatically record your lactate threshold during an activity (*Detecting Performance Measurements Automatically, page 17*).
5. Select **Resting HR**, and enter your resting heart rate.

   You can use the average resting heart rate measured by your device, or you can set a custom resting heart rate.
6. Select **Zones** > **Based On**.
7. Select an option:
   - Select **BPM** to view and edit the zones in beats per minute.
   - Select **%Max. HR** to view and edit the zones as a percentage of your maximum heart rate.
   - Select **%HRR** to view and edit the zones as a percentage of your heart rate reserve (maximum heart rate minus resting heart rate).
   - Select **%LTHR** to view and edit the zones as a percentage of your lactate threshold heart rate.
8. Select a zone, and enter a value for each zone.
9. Select **Add Sport Heart Rate**, and select a sport profile to add separate heart rate zones (optional).
10. Repeat the steps to add sport heart rate zones (optional).

Letting the Device Set Your Heart Rate Zones

The default settings allow the device to detect your maximum heart rate and set your heart rate zones as a percentage of your maximum heart rate.

- Verify that your user profile settings are accurate (*Setting Up Your User Profile, page 9*).
- Run often with the wrist or chest heart rate monitor.
- Try a few heart rate training plans, available from your Garmin Connect account.
- View your heart rate trends and time in zones using your Garmin Connect account.

Heart Rate Zone Calculations

Zone	% of Maximum Heart Rate	Perceived Exertion	Benefits
1	50–60%	Relaxed, easy pace, rhythmic breathing	Beginning-level aerobic training, reduces stress

2	60–70%	Comfortable pace, slightly deeper breathing, conversation possible	Basic cardiovascular training, good recovery pace
3	70–80%	Moderate pace, more difficult to hold conversation	Improved aerobic capacity, optimal cardiovascular training
4	80–90%	Fast pace and a bit uncomfortable, breathing forceful	Improved anaerobic capacity and threshold, improved speed
5	90–100%	Sprinting pace, unsustainable for long period of time, labored breathing	Anaerobic and muscular endurance, increased power

About Lifetime Athletes

A lifetime athlete is an individual who has trained intensely for many years (with the exception of minor injuries) and has a resting heart rate of 60 beats per minute (bpm) or less.

Setting Your Power Zones

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

1. Hold ☰.
2. Select **User Profile** > **Power Zones** > **Based On**.
3. 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.
4. Select **FTP**, and enter your FTP value.
5. Select a zone, and enter a value for each zone.
6. If necessary, select **Minimum**, and enter a minimum power value.

Activity Tracking

The activity tracking feature records your daily step count, distance traveled, intensity minutes, floors climbed, calories burned, and sleep statistics for each recorded day. Your calories burned includes your base metabolism plus activity calories.

The number of steps taken during the day appears on the steps widget. The step count is updated periodically.

For more information about activity tracking and fitness metric accuracy, go to *Garmin.com.sg/legal/atdisclaimer*.

Auto Goal

Your device creates a daily step goal automatically, based on your previous activity levels. As you move during the day, the device shows your progress toward your daily goal ①.



If you choose not to use the auto goal feature, you can set a personalized step goal on your Garmin Connect account.

Using the Move Alert

Sitting for prolonged periods of time can trigger undesirable metabolic state changes. The move alert reminds you to keep moving. After one hour of inactivity, Move! and the red bar appear. Additional segments appear after every 15 minutes of inactivity. The device also beeps or vibrates if audible tones are turned on (*System Settings, page 42*).

Go for a short walk (at least a couple of minutes) to reset the move alert.

Sleep Tracking

While you are sleeping, the device automatically detects your sleep and monitors your movement during your normal sleep hours. You can set your normal sleep hours in the user settings on your Garmin Connect account. Sleep statistics include total hours of sleep, sleep levels, and sleep movement. You can view your sleep statistics on your Garmin Connect account.

NOTE: Naps are not added to your sleep statistics. You can use do not disturb mode to turn off notifications and alerts, with the exception of alarms (*Using Do Not Disturb Mode, page 11*).

Using Automated Sleep Tracking

1. Wear your device while sleeping.
2. Upload your sleep tracking data to the Garmin Connect site (*Manually Syncing Data with Garmin Connect, page 25*).

   You can view your sleep statistics on your Garmin Connect account.

Using Do Not Disturb Mode

You can use do not disturb mode to turn off the backlight, tone alerts, and vibration alerts. For example, you can use this mode while sleeping or watching a movie.

NOTE: You can set your normal sleep hours in the user settings on your Garmin Connect account. You can enable the Sleep Time option in the system settings to automatically enter do not disturb mode during your normal sleep hours (*System Settings, page 42*).

1. Hold **LIGHT**.
2. Select **Do Not Disturb**.

Intensity Minutes

To improve your health, organizations such as the World Health Organization recommend at least 150 minutes per week of moderate intensity activity, such as brisk walking, or 75 minutes per week of vigorous intensity activity, such as running.

The device monitors your activity intensity and tracks your time spent participating in moderate to vigorous intensity activities (heart rate data is required to quantify vigorous intensity). You can work toward achieving your weekly intensity minutes goal by participating in at least 10 consecutive minutes of moderate to vigorous intensity activities. The device adds the amount of moderate activity minutes with the amount of vigorous activity minutes. Your total vigorous intensity minutes are doubled when added.

Earning Intensity Minutes

Your Forerunner device calculates intensity minutes by comparing your heart rate data to your average resting heart rate. If heart rate is turned off, the device calculates moderate intensity minutes by analyzing your steps per minute.

- Start a timed activity for the most accurate calculation of intensity minutes.
- Exercise for at least 10 consecutive minutes at a moderate or vigorous intensity level.
- Wear your device all day and night for the most accurate resting heart rate.

Garmin Move IQ Events

The Move IQ feature automatically detects activity patterns, such as walking, running, biking, swimming, and elliptical training, for at least 10 minutes. You can view the event type and duration on your Garmin Connect timeline, but they do not appear in your activities list, snapshots, or newsfeed. For more detail and accuracy, you can record a timed activity on your device.

Activity Tracking Settings

From the watch face, hold , and select **Settings** > **Activity Tracking**.

Status: Turns off the activity tracking features.

Move Alert: Displays a message and the move bar on the digital watch face and steps screen. The device also beeps or vibrates if audible tones are turned on (*System Settings, page 42*).

Goal Alerts: Allows you to turn on and off goal alerts, or turn them off only during activities. Goal alerts appear for your daily steps goal, daily floors climbed goal, and weekly intensity minutes goal.

Move IQ: Allows your device to automatically start and save a timed walking or running activity when the Move IQ feature detects familiar movement patterns.

Sleep Pulse Ox: Allows your device to record up to four hours of pulse oximeter readings while you sleep.

Turning Off Activity Tracking

When you turn off activity tracking, your steps, floors climbed, intensity minutes, sleep tracking, and Move IQ events are not recorded.

1. From the watch face, hold **UP**.
2. Select **Settings** > **Activity Tracking** > **Status** > **Off**.

Heart Rate Features

The Forerunner device has a wrist-based heart rate monitor and is also compatible with chest heart rate monitors. You can view heart rate data on the heart rate widget. If both wrist-based heart rate and chest heart rate data are available, your device uses the chest heart rate data.

There are several heart rate-related features available in the default widget loop.

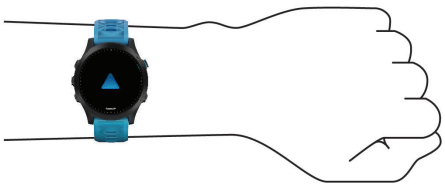
	Your current heart rate in beats per minute (bpm). The widget also displays a graph of your heart rate for the last four hours, highlighting your highest and lowest heart rate.
	Your current stress level. The device measures your heart rate variability while you are inactive to estimate your stress level. A lower number indicates a lower stress level.
	Your current Body Battery energy level. The device calculates your current energy reserves based on sleep, stress, and activity data. A higher number indicates a higher energy reserve.
	The current saturation of oxygen in your blood. Knowing your oxygen saturation can help you determine how your body is adapting to exercise and stress. **NOTE:** The pulse oximeter sensor is located on the back of the device.

Wrist-based Heart Rate

Wearing the Device

- Wear the device above your wrist bone.

  NOTE: The device should be snug but comfortable. For more accurate heart rate readings, the device should not move while running or exercising. For pulse oximeter readings, you should remain motionless.



  NOTE: The optical sensor is located on the back of the device.
- See *Tips for Erratic Heart Rate Data, page 12* for more information about wrist-based heart rate.
- See *Tips for Erratic Pulse Oximeter Data, page 22* for more information about the pulse oximeter sensor.
- For more information about accuracy, go to *Garmin.com.sg/legal/atdisclaimer*.

Tips for Erratic Heart Rate Data

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

- Clean and dry your arm before putting on the device.
- Avoid wearing sunscreen, lotion, and insect repellent under the device.
- Avoid scratching the heart rate sensor on the back of the device.
- Wear the device above your wrist bone. The device should be snug but comfortable.
- Wait until the ♥ icon is solid before starting your activity.
- Warm up for 5 to 10 minutes and get a heart rate reading before starting your activity.

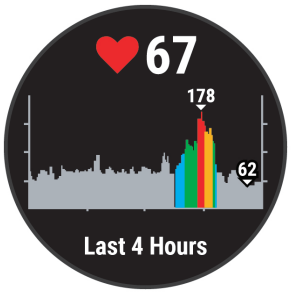
  NOTE: In cold environments, warm up indoors.
- Rinse the device with fresh water after each workout.

Viewing the Heart Rate Widget

The widget displays your current heart rate in beats per minute (bpm) and a graph of your heart rate for the last 4 hours.

1. From the watch face, select **UP** or **DOWN** to view the heart rate widget.

   NOTE: You may need to add the widget to your widget loop (*Customizing the Widget Loop, page 37*).
2. Select **START** to view your average resting heart rate values for the last 7 days.



Broadcasting Heart Rate Data to Garmin® Devices

You can broadcast your heart rate data from your Forerunner device and view it on paired Garmin devices.

NOTE: Broadcasting heart rate data decreases battery life.

1. From the heart rate widget, hold ☰.
2. Select **Options** > **Broadcast Heart Rate**.

   The Forerunner device starts broadcasting your heart rate data, and ((♥ appears.

   NOTE: You can view only the heart rate widget while broadcasting heart rate data from the heart rate widget.
3. Pair your Forerunner device with your Garmin ANT+ compatible device.

   NOTE: The pairing instructions differ for each Garmin compatible device. See your owner's manual.

   TIP: To stop broadcasting your heart rate data, select any key, and select **Yes**.

Setting an Abnormal Heart Rate Alert

You can set the device to alert you when your heart rate exceeds a certain number of beats per minute (bpm) after a period of inactivity.

1. From the heart rate widget, hold ☰.
2. Select **Options** > **Abnormal HR Alert** > **Status** > **On**.
3. Select **Alert Threshold**.
4. Select a heart rate threshold value.

Each time you exceed the threshold value, a message appears and the device vibrates.

Turning Off the Wrist-based Heart Rate Monitor

The default value for the Wrist Heart Rate setting is Auto. The device automatically uses the wrist-based heart rate monitor unless you pair an ANT+ heart rate monitor to the device.

NOTE: Disabling the wrist-based heart rate monitor also disables the wrist-based pulse oximeter sensor. You can perform a manual reading from the pulse oximeter widget.

1. From the heart rate widget, hold ☰.
2. Select **Options** > **Status** > **Off**.

HRM-Swim Accessory

Heart Rate While Swimming

NOTE: If both wrist-based heart rate and chest heart rate data are available, your device uses the chest heart rate data.

To view your heart rate data, you can add heart rate data fields (*Customizing the Data Screens, page 38*). Heart rate data is not visible while the heart rate accessory is underwater.The HRM-Tri accessory and the HRM-Swim accessory record and store your heart rate data while you are swimming. You must start a timed activity on your paired Forerunner device to view your stored heart rate data later. During rest intervals when you are out of the water, the heart rate accessory sends your heart rate data to your Forerunner device. Your Forerunner device automatically downloads stored heart rate data when you save your timed swim activity. Your heart rate accessory must be out of the water, active, and within range of the device (3 m) while the data downloads.

Going for a Pool Swim

1. Select **START** > **Pool Swim**.
2. Select your pool size, or enter a custom size.
3. Select **START**.

   The device records swim data only while the activity timer is running.
4. Start your activity.

   The device automatically records swim intervals and lengths.
5. Select **UP** or **DOWN** to view additional data pages (optional).
6. When resting, select to pause the activity timer.
7. Select to restart the activity timer.
8. After you finish the activity, select **STOP** > **Save**.

Swimming in Open Water

You can use the device for open water swimming. You can record swim data including distance, pace, and stroke rate. You can add data screens to the default open water swimming activity (*Customizing the Data Screens, page 38*).

1. Select **START** > **Open Water**.
2. Go outside and wait while the device locates satellites.
3. Select **START** to start the timer.

   History is recorded only while the timer is running.
4. After you finish the activity, select **STOP** > **Save**.

Sizing the Heart Rate Monitor

Before your first swim, take some time sizing the heart rate monitor. It should be tight enough to stay in place when pushing off the pool wall.

- Select a strap extender, and attach it to the elastic end of the heart rate monitor.

  The heart rate monitor comes with three extender straps to fit different chest sizes.

  TIP: The medium strap extender works for most shirt sizes (from medium to extra-large).
- Put on the heart rate monitor backward to easily adjust the slider on the strap extender.
- Put on the heart rate monitor forward to easily adjust the slider on the heart rate monitor.

Putting On the Heart Rate Monitor

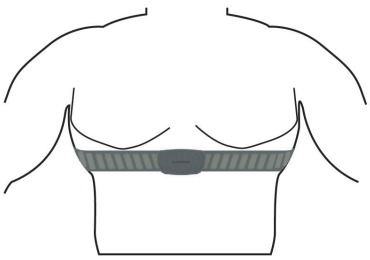
You should wear the heart rate monitor directly on your skin, just below your sternum.

1. Select a strap extender for the best fit.
2. Wear the heart rate monitor with the Garmin logo facing right-side up.

   The hook ① and loop ② connection should be on your right side.



3. Wrap the heart rate monitor around your chest, and connect the strap hook to the loop.



   NOTE: Make sure the care tag does not fold over.
4. Tighten the heart rate monitor so it is snug around your chest, but not restrictive.

   After you put on the heart rate monitor, it is active, storing, and sending data.

Tips for Using the HRM-Swim Accessory

- Adjust the tightness of the heart rate monitor and strap extender if the heart rate monitor slides down your chest when pushing off the pool wall.
- Stand up between intervals so that the heart rate monitor is out of the water to see your heart rate data.

Caring for the Heart Rate Monitor

NOTICE

A buildup of sweat and salt on the strap can decrease the ability of the heart rate monitor to report accurate data.

- Rinse the heart rate monitor after every use.
- Hand wash the heart rate monitor after every seven uses, using a tiny amount of mild detergent, such as dishwashing liquid.

  NOTE: Using too much detergent may damage the heart rate monitor.

- Do not put the heart rate monitor in a washing machine or dryer.
- When drying the heart rate monitor, hang it up or lay it flat.

HRM-Tri Accessory

The HRM-Swim section of this manual explains recording heart rate during your swim (*Heart Rate While Swimming, page 13*).

Pool Swimming

NOTICE

Hand wash the heart rate monitor after exposure to chlorine or other pool chemicals. Prolonged exposure to these substances can damage the heart rate monitor.

The HRM-Tri accessory is designed primarily for open water swimming, but it can be used occasionally for pool swimming. The heart rate monitor should be worn under a swim suit or triathlon top during pool swimming. Otherwise, it may slide down your chest when pushing off the pool wall.

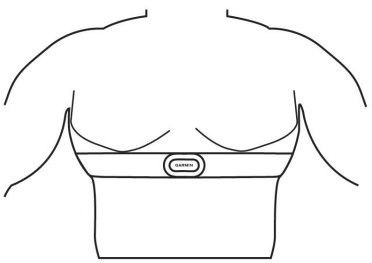
Putting On the Heart Rate Monitor

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. If necessary, attach the strap extender to the heart rate monitor.
2. Wet the electrodes ① on the back of the heart rate monitor to create a strong connection between your chest and the transmitter.



3. Wear the heart rate monitor with the Garmin logo facing right- side up.



   The loop ② and hook ③ connection should be on your right side.
4. Wrap the heart rate monitor around your chest, and connect the strap hook to the loop.

   NOTE: Make sure the care tag does not fold over.

After you put on the heart rate monitor, it is active and sending data.

Data Storage

The heart rate monitor can store up to 20 hours of data in a single activity. When the heart rate monitor memory is full, your oldest data is overwritten.

You can start a timed activity on your paired Forerunner device, and the heart rate monitor records your heart rate data even if you move away from your device. For example, you can record heart rate data during fitness activities or team sports where watches cannot be worn. Your heart rate monitor automatically sends your stored heart rate data to your Forerunner device when you save your activity. Your heart rate monitor must be active and within range (3 m) of the device while data is uploaded.

Caring for the Heart Rate Monitor

NOTICE

A buildup of sweat and salt on the strap can decrease the ability of the heart rate monitor to report accurate data.

- Rinse the heart rate monitor after every use.
- Hand wash the heart rate monitor after every seven uses or one pool swim, using a tiny amount of mild detergent, such as dishwashing liquid.

  NOTE: Using too much detergent may damage the heart rate monitor.
- Do not put the heart rate monitor in a washing machine or dryer.
- When drying the heart rate monitor, hang it up or lay it flat.

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 13*).
- Wear a cotton shirt or thoroughly wet both sides of the strap.

  Synthetic fabrics that rub or flap against the heart rate monitor can create static electricity that interferes with heart rate signals.
- Move away from sources that can interfere with your heart rate monitor.

  Sources of interference may include strong electromagnetic fields, some 2.4 GHz wireless sensors, high-voltage power lines, electric motors, ovens, microwave ovens, 2.4 GHz cordless phones, and wireless LAN access points.

Running Dynamics

You can use your compatible Forerunner device paired with the HRM-Tri accessory or other running dynamics

accessory to provide real-time feedback about your running form. If your Forerunner device was packaged with the HRM-Tri accessory, the devices are already paired.

The running dynamics accessory has an accelerometer that measures torso movement in order to calculate six running metrics.

Cadence: Cadence is the number of steps per minute. It displays the total steps (right and left combined).

Vertical oscillation: Vertical oscillation is your bounce while running. It displays the vertical motion of your torso, measured in centimeters.

Ground contact time: Ground contact time is the amount of time in each step that you spend on the ground while running. It is measured in milliseconds.

NOTE: Ground contact time and balance are not available while walking.

Ground contact time balance: Ground contact time balance displays the left/right balance of your ground contact time while running. It displays a percentage. For example, 53.2 with an arrow pointing left or right.

Stride length: Stride length is the length of your stride from one footfall to the next. It is measured in meters.

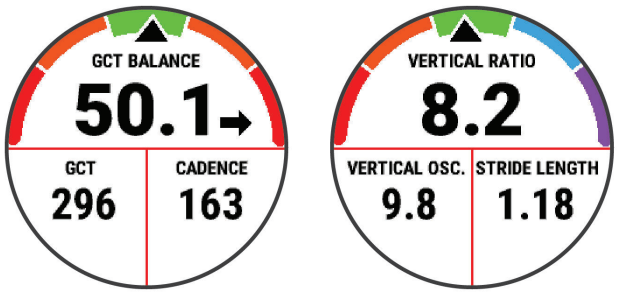
Vertical ratio: Vertical ratio is the ratio of vertical oscillation to stride length. It displays a percentage. A lower number typically indicates better running form.

Training with Running Dynamics

Before you can view running dynamics, you must put on the HRM-Run™ accessory, HRM-Tri accessory, or Running Dynamics Pod, and pair it with your device (*Pairing Your Wireless Sensors, page 35*).

If your Forerunner was packaged with the heart rate monitor, the devices are already paired, and the Forerunner is set to display running dynamics.

1. Select **START**, and select a running activity.
2. Select **START**.
3. Go for a run.
4. Scroll to the running dynamics screens to view your metrics.



5. If necessary, hold **UP** to edit how the running dynamics data appears.

Color Gauges and Running Dynamics Data

The running dynamics screens display a color gauge for the primary metric. You can display cadence, vertical oscillation, ground contact time, ground contact time balance, or vertical ratio as the primary metric. The color gauge shows you how your running dynamics data compare to those of other runners. The color zones are based on percentiles.

Garmin has researched many runners of all different levels. The data values in the red or orange zones are typical for less experienced or slower runners. The data values in the green, blue, or purple zones are typical for more experienced or faster runners. More experienced runners tend to exhibit shorter ground contact times, lower vertical oscillation, lower vertical ratio, and higher cadence than less experienced runners. However, taller runners typically have slightly slower cadences, longer strides, and slightly higher vertical oscillation. Vertical ratio is your vertical oscillation divided by stride length. It is not correlated with height.

Go to *Garmin.com.sg/minisite/runningscience/* for more information on running dynamics. For additional theories and interpretations of running dynamics data, you can search reputable running publications and websites.

Color Zone	Percentile in Zone	Cadence Range	Ground Contact Time Range
Purple	>95	>183 spm	<218 ms
Blue	70–95	174–183 spm	218–248 ms
Green	30–69	164–173 spm	249–277 ms
Orange	5–29	153–163 spm	278–308 ms
Red	<5	<153 spm	>308 ms

Ground Contact Time Balance Data

Ground contact time balance measures your running symmetry and appears as a percentage of your total ground contact time. For example, 51.3% with an arrow pointing left indicates the runner is spending more time on the ground when on the left foot. If your data screen displays both numbers, for example 48–52, 48% is the left foot and 52% is the right foot.

Color Zone	Red	Orange	Green	Orange	Red
Symmetry	Poor	Fair	Good	Fair	Poor
Percent of Other Runners	5%	25%	40%	25%	5%
Ground Contact Time Balance	>52.2% L	50.8–52.2% L	50.7% L–50.7% R	50.8–52.2% R	>52.2% R

While developing and testing running dynamics, the Garmin team found correlations between injuries and greater imbalances with certain runners. For many runners, ground contact time balance tends to deviate further from 50–50 when running up or down hills. Most running coaches agree that a symmetrical running form is good. Elite runners tend to have quick and balanced strides.

You can watch the color gauge or data field during your run or view the summary on your Garmin Connect account after your run. As with the other running dynamics data, ground contact time balance is a quantitative measurement to help you learn about your running form.

Vertical Oscillation and Vertical Ratio Data

The data ranges for vertical oscillation and vertical ratio are slightly different depending on the sensor and whether it is positioned at the chest (HRM-Tri or HRM-Run accessories) or at the waist (Running Dynamics Pod accessory).

Color Zone	Percentile in Zone	Vertical Oscillation Range at Chest	Vertical Oscillation Range at Waist	Vertical Ratio at Chest	Vertical Ratio at Waist
Purple	>95	<6.4 cm	<6.8 cm	<6.1%	<6.5%
Blue	70–95	6.4–8.1 cm	6.8–8.9 cm	6.1–7.4%	6.5–8.3%
Green	30–69	8.2–9.7 cm	9.0–10.9 cm	7.5–8.6%	8.4–10.0%
Orange	5–29	9.8–11.5 cm	11.0–13.0 cm	8.7–10.1%	10.1–11.9%
Red	<5	>11.5 cm	>13.0 cm	>10.1%	>11.9%

Tips for Missing Running Dynamics Data

If running dynamics data does not appear, you can try these tips.

- Make sure you have a running dynamics accessory, such as the HRM-Tri accessory.

  Accessories with running dynamics have on the front of the module.
- Pair the running dynamics accessory with your Forerunner device again, according to the instructions.
- If the running dynamics data display shows only zeros, make sure the accessory is worn right-side up.

  NOTE: Ground contact time and balance appears only while running. It is not calculated while walking.

Performance Measurements

These performance measurements are estimates that can help you track and understand your training activities and race performances. The measurements require a few activities using wrist-based heart rate or a compatible chest heart rate monitor. Cycling performance measurements require a heart rate monitor and a power meter.

These estimates are provided and supported by Firstbeat. For more information, go to *Garmin.com.sg/minisite/runningscience/*.

NOTE: The estimates may seem inaccurate at first. The device requires you to complete a few activities to learn about your performance.

VO2 max.: VO2 max. is the maximum volume of oxygen (in milliliters) you can consume per minute per kilogram of body weight at your maximum performance.

Predicted race times: Your device uses the VO2 max. estimate and your training history to provide a target race time based on your current state of fitness.

HRV stress test: The heart rate variability (HRV) stress test requires a Garmin chest heart rate monitor. The device records your heart rate variability while standing still for 3 minutes. It provides your overall stress level. The scale is 1 to 100, and a lower score indicates a lower stress level.

Performance condition: Your performance condition is a real- time assessment after 6 to 20 minutes of activity. It can be added as a data field so you can view your performance condition during the rest of your activity. It compares your real-time condition to your average fitness level.

Functional threshold power (FTP): The device uses your user profile information from the initial setup to estimate your FTP. For a more accurate rating, you can conduct a guided test.

Lactate threshold: Lactate threshold requires a chest heart rate monitor. Lactate threshold is the point where your muscles start to rapidly fatigue. Your device measures your lactate threshold level using heart rate data and pace.

Turning Off Performance Notifications

Some performance notifications appear upon completion of your activity. Some performance notifications appear during an activity or when you achieve a new performance measurement, such as a new VO2 max. estimate. You can turn off the performance condition feature to avoid some of these notifications.

1. From the watch face, hold ☰.
2. Select **Settings** > **Physiological Metrics** > **Performance Condition**.

Detecting Performance Measurements Automatically

The Auto Detect feature is turned on by default. The device can automatically detect your maximum heart rate and lactate threshold during an activity. When paired with a compatible power meter, the device can automatically detect your functional threshold power (FTP) during an activity.

NOTE: The device detects a maximum heart rate only when your heart rate is higher than the value set in your user profile.

1. Hold ☰.
2. Select **Physiological Metrics** > **Auto Detect**.
3. Select an option.

Syncing Activities and Performance Measurements

You can sync activities, personal records, and performance measurements from other Garmin devices to your Forerunner device using your Garmin Connect account. This allows your device to more accurately reflect your training status and fitness. For example, you can record a ride with an Edge device, and view your activity details and overall training load on your Forerunner device.

1. From the watch face, hold ☰.
2. Select **Settings** > **Physiological Metrics** > **TrueUp**.

When you sync your device with your smartphone, recent activities, personal records, and performance measurements from your other Garmin devices appear on your Forerunner device.

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. The Forerunner device requires wrist- based heart rate or a compatible chest heart rate monitor to display your VO2 max. estimate. The device has separate VO2 max. estimates for running and cycling. You must run either outside with GPS or ride with a compatible power meter at a moderate level of intensity for several minutes to get an accurate VO2 max. estimate.

On the device, your VO2 max. estimate appears as a number, description, and position on the color gauge. On your Garmin Connect account, you can view additional details about your VO2 max. estimate, including your fitness age. Your fitness age gives you an idea of how your fitness compares with a person of the same gender and different age. As you exercise, your fitness age can decrease over time.



Purple	Superior
Blue	Excellent
Green	Good
Orange	Fair
Red	Poor

VO2 max. data is provided by FirstBeat. VO2 max. analysis is provided with permission from The Cooper Institute®. For more information, see the appendix (*VO2 Max. Standard Ratings, page 54*), and go to *www.CooperInstitute.org*.

Getting Your VO2 Max. Estimate for Running

This feature requires wrist-based heart rate or a compatible chest heart rate monitor. If you are using a chest heart rate monitor, you must put it on and pair it with your device (*Pairing Your Wireless Sensors, page 35*). If your Forerunner device was packaged with a heart rate monitor, the devices are already paired.

For the most accurate estimate, complete the user profile setup (*Setting Up Your User Profile, page 9*), and set your maximum heart rate (*Setting Your Heart Rate Zones, page 9*). The estimate may seem inaccurate at first. The device requires a few runs to learn about your running performance.

1. Run for at least 10 minutes outdoors.
2. After your run, select **Save**.
3. Select **START** to scroll through the performance measurements.

Getting Your VO2 Max. Estimate for Cycling

This feature requires a power meter and wrist-based heart rate or a compatible chest heart rate monitor. The power meter must be paired with your Forerunner device (*Pairing Your Wireless Sensors, page 35*). If you are using a chest heart rate monitor, you must put it on and pair it with your device. If your Forerunner device was packaged with a heart rate monitor, the devices

are already paired.

For the most accurate estimate, complete the user profile setup (*Setting Up Your User Profile, page 9*) and set your maximum heart rate (*Setting Your Heart Rate Zones, page 9*). 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.
2. After your ride, select **Save**.
3. Select **START** to scroll through the performance measurements.

Heat and Altitude Performance Acclimation

Environmental factors such as high temperature and altitude impact your training and performance. For example, high altitude training can have a positive impact on your fitness, but you may notice a temporary VO2 max. decline while exposed to high altitudes. Your Forerunner device provides acclimation notifications and corrections to your VO2 max. estimate and training status when the temperature is above 22ºC (72ºF) and when the altitude is above 800 m (2625 ft.). You can keep track of your heat and altitude acclimation in the training status widget.

NOTE: The heat acclimation feature is available only for GPS activities and requires weather data from your connected smartphone. Full acclimation takes a minimum of 4 training days.

Viewing Your Predicted Race Times

For the most accurate estimate, complete the user profile setup (*Setting Up Your User Profile, page 9*), and set your maximum heart rate (*Setting Your Heart Rate Zones, page 9*).

Your device uses the VO2 max. estimate (*About VO2 Max. Estimates, page 17*) and your training history to provide a target race time. The device analyzes several weeks of your training data to refine the race time estimates.

TIP: If you have more than one Garmin device, you can enable the Physio TrueUp™ feature, which allows your device to sync activities, history, and data from other devices (*Syncing Activities and Performance Measurements, page 17*).

1. From the watch face, select **UP** or **DOWN** to view the performance widget.
2. Select **START** to scroll through the performance measurements.

   Your projected race times appear for 5K, 10K, half marathon, and marathon distances.

   NOTE: The projections may seem inaccurate at first. The device requires a few runs to learn about your running performance.

About Training Effect

Training Effect measures the impact of an activity on your aerobic and anaerobic fitness. Training Effect accumulates during the activity. As the activity progresses, the Training Effect value increases. Training Effect is determined by your user profile information and training history, and heart rate, duration, and intensity of your activity. There are seven different Training Effect labels to describe the primary benefit of your activity. Each label is color coded and corresponds to your training load focus (*Training Load Focus, page 21*). Each feedback phrase, for example, “Highly Impacting VO2 Max.” has a corresponding description in your Garmin Connect activity details.

Aerobic Training Effect uses your heart rate to measure how the accumulated intensity of an exercise affects your aerobic fitness and indicates if the workout had a maintaining or improving effect on your fitness level. Your excess post-exercise oxygen consumption (EPOC) accumulated during exercise is mapped to a range of values that account for your fitness level and training habits. Steady workouts at moderate effort or workouts involving longer intervals (> 180 sec) have a positive impact on your aerobic metabolism and result in an improved aerobic Training Effect.

Anaerobic Training Effect uses heart rate and speed (or power) to determine how a workout affects your ability to perform at very high intensity. You receive a value based on the anaerobic contribution to EPOC and the type of activity. Repeated high- intensity intervals of 10 to 120 seconds have a highly beneficial impact on your anaerobic capability and result in an improved anaerobic Training Effect.

You can add Aerobic Training Effect and Anaerobic Training Effect as data fields to one of your training screens to monitor your numbers throughout the activity.

Training Effect	Aerobic Benefit	Anaerobic Benefit
From 0.0 to 0.9	No benefit.	No benefit.
From 1.0 to 1.9	Minor benefit.	Minor benefit.
From 2.0 to 2.9	Maintains your aerobic fitness.	Maintains your anaerobic fitness.
From 3.0 to 3.9	Impacts your aerobic fitness.	Impacts your anaerobic fitness.
From 4.0 to 4.9	Highly impacts your aerobic fitness.	Highly impacts your anaerobic fitness.
5	Overreaching and potentially harmful without enough recovery time.	Overreaching and potentially harmful without enough recovery time.

Training Effect technology is provided and supported by Firstbeat Technologies Ltd. For more information, go to *www.firstbeat.com*.

Performance Condition

As you complete your activity, such as running or cycling, the performance condition feature analyzes your pace, heart rate, and heart rate variability to make a real-time assessment of your ability to perform compared to your average fitness level. It is approximately your real-time percentage deviation from your baseline VO2 max. estimate.

Performance condition values range from -20 to +20. After the first 6 to 20 minutes of your activity, the device displays your performance condition score. For example, a score of +5 means that you are rested, fresh, and capable of a good run or ride. You can add performance condition as a data field to one of your training screens to monitor your ability throughout the activity. Performance condition can also be an indicator of fatigue level, especially at the end of a long training run or ride.

NOTE: The device requires a few runs or rides with a heart rate monitor to get an accurate VO2 max. estimate and learn about your running or riding ability (*About VO2 Max. Estimates, page 17*).

Viewing Your Performance Condition

This feature requires wrist-based heart rate or a compatible chest heart rate monitor.

1. Add **Performance Condition** to a data screen (*Customizing the Data Screens, page 38*).
2. Go for a run or ride.

   After 6 to 20 minutes, your performance condition appears.
3. Scroll to the data screen to view your performance condition throughout the run or ride.

Lactate Threshold

Lactate threshold is the exercise intensity at which lactate (lactic acid) starts to accumulate in the bloodstream. In running, it is the estimated level of effort or pace. When a runner exceeds the threshold, fatigue starts to increase at an accelerating rate. For experienced runners, the threshold occurs at approximately 90% of their maximum heart rate and between 10k and half-marathon race pace. For average runners, the lactate threshold often occurs well below 90% of maximum heart rate. Knowing your lactate threshold can help you determine how hard to train or when to push yourself during a race.

If you already know your lactate threshold heart rate value, you can enter it in your user profile settings (*Setting Your Heart Rate Zones, page 9*).

Performing a Guided Test to Determine Your Lactate Threshold

This feature requires a Garmin chest heart rate monitor. Before you can perform the guided test, you must put on a heart rate monitor and pair it with your device (*Pairing Your Wireless Sensors, page 35*).

The device uses your user profile information from the initial setup and your VO2 max. estimate to estimate your lactate threshold. The device will automatically detect your lactate threshold during runs at a steady, high intensity with heart rate.

TIP: The device requires a few runs with a chest heart rate monitor to get an accurate maximum heart rate value and VO2 max. estimate. If you are having trouble getting a lactate threshold estimate, try manually lowering your maximum heart rate value.

1. From the watch face, select **START**.
2. Select an outdoor running activity.

   GPS is required to complete the test.
3. Hold .
4. Select **Training** > **Lactate Threshold Guided Test**.
5. Start the timer, and follow the on-screen instructions.

   After you begin your run, the device displays each step duration, the target, and current heart rate data. A message appears when the test is complete.
6. After you complete the guided test, stop the timer and save the activity.

   If this is your first lactate threshold estimate, the device prompts you to update your heart rate zones based on your lactate threshold heart rate. For each additional lactate threshold estimate, the device prompts you to accept or decline the estimate.

Getting Your FTP Estimate

Before you can get your functional threshold power (FTP) estimate, you must pair a chest heart rate monitor and power meter with your device (*Pairing Your Wireless Sensors, page 35*), and you must get your VO2 max. estimate (*Getting Your VO2 Max. Estimate for Cycling, page 17*).

The device uses your user profile information from the initial setup and your VO2 max. estimate to estimate your FTP. The device will automatically detect your FTP during rides at a steady, high intensity with heart rate and power.

1. Select **UP** or **DOWN** to view the performance widget.
2. Select **START** to scroll through the performance measurements.

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

Purple	Superior
Blue	Excellent
Green	Good
Orange	Fair
Red	Untrained

For more information, see the appendix (*FTP Ratings, page 55*).

NOTE: When a performance notification alerts you to a new FTP, you can select Accept to save the new FTP, or Decline to keep your current FTP (*Turning Off Performance Notifications, page 17*).

Conducting an FTP Test

Before you can conduct a test to determine your functional threshold power (FTP), you must pair a chest heart rate monitor and a power meter with your device (*Pairing Your Wireless Sensors, page 35*), and you must get your VO2 max. estimate (*Getting Your VO2 Max. Estimate for Cycling, page 17*).

NOTE: The FTP test is a challenging workout that takes about 30 minutes to complete. Choose a practical and mostly flat route that allows you to ride at a steadily increasing effort, similar to a time trial.

1. From the watch face, select **START**.
2. Select a cycling activity.
3. Hold ☰.
4. Select **Training** > **FTP Guided Test**.
5. Follow the on-screen instructions.

   After you begin your ride, the device displays each step duration, the target, and current power data. A message appears when the test is complete.
6. After you complete the guided test, complete the cool down, stop the timer, and save the activity.

   Your FTP appears as a value measured in watts per kilogram, your power output in watts, and a position on the color gauge.
7. Select an option:
   - Select **Accept** to save the new FTP.
   - Select **Decline** to keep your current FTP.

Training Status

These measurements are estimates that can help you track and understand your training activities. The measurements require a few activities using wrist-based heart rate or a compatible chest heart rate monitor. Cycling performance measurements require a heart rate monitor and a power meter.

These estimates are provided and supported by Firstbeat. For more information, go to *Garmin.com.sg/minisite/runningscience/*.



NOTE: The estimates may seem inaccurate at first. The device requires you to complete a few activities to learn about your performance.

Training status: Training status shows you how your training affects your fitness and performance. Your training status is based on changes to your training load and VO2 max. over an extended time period.

VO2 max.: VO2 max. is the maximum volume of oxygen (in milliliters) you can consume per minute per kilogram of body weight at your maximum performance. Your device displays heat and altitude corrected VO2 max. values when you are acclimating to high heat environemnts or high altitude.

Training load: Training load is the sum of your excess post- exercise oxygen consumption (EPOC) over the last 7 days. EPOC is an estimate of how much energy it takes for your body to recover after exercise.

Training load focus: Your device analyzes and distributes your training load into different categories based on the intensity and structure of each activity recorded. Training load focus includes the total load accumulated per category, and the focus of the training. Your device displays your load distribution over the last 4 weeks.

Recovery time: The recovery time displays how much time remains before you are fully recovered and ready for the next hard workout.

Training Status Levels

Training status shows you how your training affects your fitness level and performance. Your training status is based on changes to your training load and VO2 max. over an extended time period. You can use your training status to help plan future training and continue improving your fitness level.

Peaking: Peaking means that you are in ideal race condition. Your recently reduced training load is allowing your body to recover and fully compensate for earlier training. You should plan ahead, since this peak state can only be maintained for a short time.

Productive: Your current training load is moving your fitness level and performance in the right direction. You should plan recovery periods into your training to maintain your fitness level.

Maintaining: Your current training load is enough to maintain your fitness level. To see improvement, try adding more variety to your workouts or increasing your training volume.

Recovery: Your lighter training load is allowing your body to recover, which is essential during extended periods of hard training. You can return to a higher training load when you feel ready.

Unproductive: Your training load is at a good level, but your fitness is decreasing. Your body may be

struggling to recover, so you should pay attention to your overall health including stress, nutrition, and rest.

Detraining: Detraining occurs when you are training much less than usual for a week or more, and it is affecting your fitness level. You can try increasing your training load to see improvement.

Overreaching: Your training load is very high and counterproductive. Your body needs a rest. You should give yourself time to recover by adding lighter training to your schedule.

No Status: The device needs one or two weeks of training history, including activities with VO2 max. results from running or cycling, to determine your training status.

Tips for Getting Your Training Status

The training status feature depends on updated assessments of your fitness level, including at least two VO2 max. measurements per week. Your VO2 max. estimate is updated after outdoor runs or rides during which your heart rate reached at least 70% of your maximum heart rate for several minutes. The trail run and indoor run activities do not generate a VO2 max. estimate in order to preserve the accuracy of your fitness level trend.

To get the most out of the training status feature, you can try these tips.

- At least two times per week, run or ride outdoors with a power meter, and reach a heart rate higher than 70% of your maximum heart rate for at least 10 minutes.

  After using the device for one week, your training status should be available.
- Record all of your fitness activities on this device, or enable the Physio TrueUp feature, allowing your device to learn about your performance (*Syncing Activities and Performance Measurements, page 17*).

Training Load

Training load is a measurement of your training volume over the last seven days. It is the sum of your excess post-exercise oxygen consumption (EPOC) measurements for the last seven days. The gauge indicates whether your current load is low, high, or within the optimal range to maintain or improve your fitness level. The optimal range is determined based on your individual fitness level and training history. The range adjusts as your training time and intensity increase or decrease.

Training Load Focus

In order to maximize performance and fitness gains, training should be distributed across three categories: low aerobic, high aerobic, and anaerobic. Training load focus shows you how much of your training is currently in each category and provides training targets. Training load focus requires at least 7 days of training to determine if your training load is low, optimal, or high. After 4 weeks of training history, your training load estimate will have more detailed target information to help you balance your training activities.

Below targets: Your training load is lower than optimal in all intensity categories. Try increasing the duration or frequency of your workouts.

Low aerobic shortage: Try adding more low aerobic activities to provide recovery and balance for your higher intensity activities.

High aerobic shortage: Try adding more high aerobic activities to help improve your lactate threshold and VO2 max. over time.

Anaerobic shortage: Try adding a few more intense, anaerobic activities to improve your speed and anaerobic capacity over time.

Balanced: Your training load is balanced and provides all- around fitness benefits as you continue training.

Low aerobic focus: Your training load is mostly low aerobic activity. This provides a solid foundation and prepares you for adding more intense workouts.

High aerobic focus: Your training load is mostly high aerobic activity. These activities help to improve lactate threshold, VO2 max., and endurance.

Anaerobic focus: Your training load is mostly intense activity. This leads to rapid fitness gains, but should be balanced with low aerobic activities.

Above targets: Your training load is higher than optimal, and you should consider scaling back the duration and frequency of your workouts.

Recovery Time

You can use your Garmin device with wrist-based heart rate or a compatible chest heart rate monitor to display how much time remains before you are fully recovered and ready for the next hard workout.

NOTE: The recovery time recommendation uses your VO2 max. estimate and may seem inaccurate at first. The device requires you to complete a few activities to learn about your performance.

The recovery time appears immediately following an activity. The time counts down until it is optimal for you to attempt another hard workout.

Viewing Your Recovery Time

For the most accurate estimate, complete the user profile setup (*Setting Up Your User Profile, page 9*), and set your maximum heart rate (*Setting Your Heart Rate Zones, page 9*).

1. Go for a run.
2. After your run, select **Save**.

   The recovery time appears. The maximum time is 4 days.

NOTE: From the watch face, you can select **UP** or **DOWN** to view the training status widget, and select **START** to scroll through the metrics to view your recovery time.

Recovery Heart Rate

If you are training with wrist-based heart rate or a compatible chest heart rate monitor, you can check your recovery heart rate value after each activity. Recovery heart rate is the difference between your exercising heart rate and your heart rate two minutes after the exercise has stopped. For example, after a typical training run, you stop the timer. Your heart rate is 140 bpm. After two minutes of no activity or cool down, your heart rate is 90 bpm. Your recovery heart rate is 50 bpm (140 minus 90). Some studies have linked recovery heart rate to cardiac health. Higher numbers generally indicate healthier hearts.

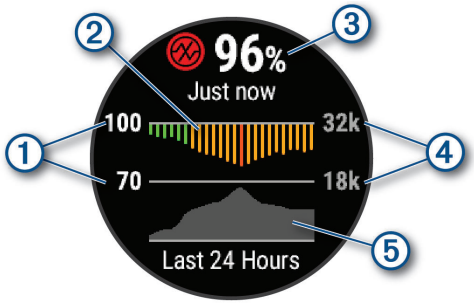
TIP: For best results, you should stop moving for two minutes while the device calculates your recovery heart rate value. You can save or discard the activity after this value appears.

Pulse Oximeter

The Forerunner device has a wrist-based pulse oximeter to gauge the saturation of oxygen in your blood. Knowing your oxygen saturation can help you determine how your body is acclimating to high altitudes for alpine sport and expedition. When you view the pulse oximeter widget while you are not moving, your device analyzes your oxygen saturation and your elevation. The elevation profile helps indicate how your pulse oximeter readings are changing, relative to your to elevation.

On the device, your pulse oximeter reading appears as an oxygen saturation percentage and color on the graph. On your Garmin Connect account, you can view additional details about your pulse oximeter readings, including trends over multiple days.

For more information about pulse oximeter accuracy, go to *Garmin.com.sg/legal/atdisclaimer*.



①	The oxygen saturation percentage scale.
②	A graph of your average oxygen saturation readings for the last 24 hours.
③	Your most recent oxygen saturation reading.
④	The elevation scale.
⑤	A graph of your elevation readings for the last 24 hours.

Viewing the Pulse Oximeter Widget

The widget displays your most recent blood oxygen saturation percentage, a graph of your hourly average readings for the last 24 hours, and a graph of your elevation for the last 24 hours.

NOTE: The first time you view the pulse oximeter widget, the device must acquire satellite signals to determine your elevation. You should go outside, and wait while the device locates satellites.

1. While you are sitting or inactive, select **UP** or **DOWN** to view the pulse oximeter widget.
2. Remain stationary for up to 30 seconds.

   NOTE: If you are too active for the watch to determine your oxygen saturation, a message appears instead of a percentage. You can check your oxygen saturation again after several minutes of inactivity.
3. Select **START** to view a graph of your pulse oximeter readings for the last seven days.

Turning On Pulse Oximeter Sleep Tracking

You can set your device to continuously measure your blood oxygen saturation while you sleep.

NOTE: Unusual sleep positions can cause abnormally low sleep-time SpO2 readings.

1. From the pulse oximeter widget, hold ☰.
2. Select **Options** > **Sleep Pulse Ox** > **On**.

Turning On All-Day Acclimation Mode

1. From the pulse oximeter widget, hold ☰.
2. Select **Options** > **All Day Mode** > **On**.

   The device automatically analyzes your oxygen saturation throughout the day, when you are not moving.

   NOTE: Turning on all-day acclimation mode decreases battery life.

Tips for Erratic Pulse Oximeter Data

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

- Remain motionless while the device reads your blood oxygen saturation.
- Wear the device above your wrist bone. The device should be snug but comfortable.
- Hold the arm wearing the device at heart level while the device reads your blood oxygen saturation.
- Use a silicone band.
- Clean and dry your arm before putting on the device.
- Avoid wearing sunscreen, lotion, and insect repellent under the device.

- Avoid scratching the optical sensor on the back of the device.
- Rinse the device with fresh water after each workout.

Viewing Your Heart Rate Variability Stress Score

Before you can perform the heart rate variability (HRV) stress test, you must put on a Garmin chest heart rate monitor and pair it with your device (*Pairing Your Wireless Sensors, page 35*).

Your HRV stress score is the result of a three-minute test performed while standing still, where the Forerunner device analyzes heart rate variability to determine your overall stress. Training, sleep, nutrition, and general life stress all impact how you perform. 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 training run or yoga.

TIP: Garmin recommends that you measure your stress score before you exercise, at approximately the same time, and under the same conditions every day. You can view previous results on your Garmin Connect account.

1. Select **START** > **DOWN** > **HRV Stress** > **START**.
2. Follow the onscreen instructions.

Body Battery

Your device analyzes your heart rate variability, stress level, sleep quality, and activity data to determine your overall Body Battery level. Like a gas gauge on a car, it indicates your amount of available reserve energy. The Body Battery level range is from 0 to 100, where 0 to 25 is low reserve energy, 26 to 50 is medium reserve energy, 51 to 75 is high reserve energy, and 76 to 100 is very high reserve energy.

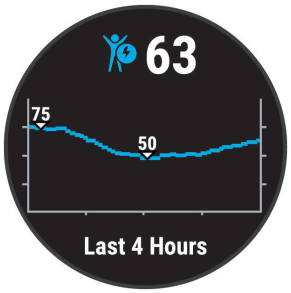
You can sync your device with your Garmin Connect account to view your most up-to-date Body Battery level, long-term trends, and additional details (*Tips for Improved Body Battery Data, page 23*).

Viewing the Body Battery Widget

The Body Battery widget displays your current Body Battery level and a graph of your Body Battery level for the last several hours.

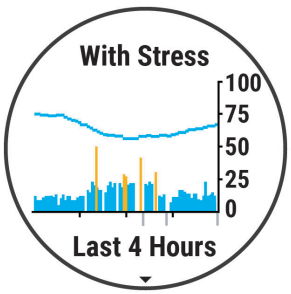
1. Select **UP** or **DOWN** to view the Body Battery widget.

   NOTE: You may need to add the widget to your widget loop (*Customizing the Widget Loop, page 37*).

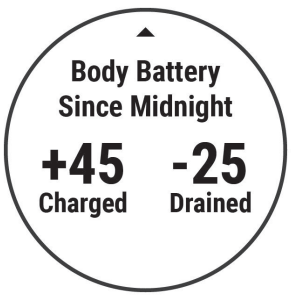


2. Select **START** to view a combined graph of your Body Battery and stress level.

   Blue bars indicate periods of rest. Orange bars indicate periods of stress. Gray bars indicate times that you were too active to determine your stress level.



3. Select **DOWN** to see your Body Battery data since midnight.



Tips for Improved Body Battery Data

- Your Body Battery level updates when you sync your device with your Garmin Connect account.
- For more accurate results, wear the device while sleeping.
- Rest and good sleep charge your Body Battery.
- Strenuous activity, high stress, and poor sleep can cause your Body Battery to drain.
- Food intake, as well as stimulants like caffeine, has no impact on your Body Battery.

Smart Features

Pairing Your Smartphone with Your Device

To use the connected features of the Forerunner 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. Bring your smartphone within 10 m (33 ft.) of your device.
3. Select **LIGHT** to turn on the device.

   The first time you turn on the device, it is in pairing mode.

   TIP: You can hold **LIGHT**, and select to manually enter pairing mode.
4. Select an option to add your device to your Garmin Connect account:
   - If this is the first time you are pairing a device with the Garmin Connect app, follow the on-screen instructions.
   - If you already paired another device with the Garmin Connect app, from the or ••• menu, select Garmin **Devices** > **Add Device**, and follow the on-screen instructions.

Tips for Existing Garmin Connect Users

1. From the Garmin Connect app, select or •••.
2. Select **Garmin Devices** > **Add Device**.

Enabling Bluetooth Notifications

Before you can enable notifications, you must pair the Forerunner device with a compatible mobile device (*Pairing Your Smartphone with Your Device, page 23*).

1. Hold .
2. Select **Settings** > **Phone** > **Smart Notifications** > **Status** > **On**.
3. Select **During Activity**.
4. Select a notification preference.
5. Select a sound preference.
6. Select **Not During Activity**.
7. Select a notification preference.
8. Select a sound preference.
9. Select **Privacy**.
10. Select a privacy preference.
11. Select **Timeout**.
12. Select the amount of time the alert for a new notification appears on the screen.
13. Select **Signature** to add a signature to your text message replies.

Viewing Notifications

1. From the watch face, select **UP** or **DOWN** to view the notifications widget.
2. Select **START.**
3. Select a notification.
4. Select **DOWN** for more options.
5. Select **BACK** to return to the previous screen.

Playing Audio Prompts on Your Smartphone During Your Activity

Before you can set up audio prompts, you must have a smartphone with the Garmin Connect app paired to your Forerunner device.

You can set the Garmin Connect app to play motivational status announcements on your smartphone during a run or other activity. Audio prompts include the lap number and lap time, pace or speed, and heart rate data. During an audio prompt, the Garmin Connect app mutes the primary audio of the smartphone to play the announcement. You can customize the volume levels on the Garmin Connect app.

NOTE: If you have a Forerunner device, you can enable audio prompts on the device through your connected headphones, without using a connected smartphone (*Playing Audio Prompts During Your Activity, page 5*).

NOTE: The Lap Alert audio prompt is enabled by default.

1. From the Garmin Connect app, select or •••.
2. Select **Garmin Devices**.
3. Select your device.
4. Select **Activity Options** > **Audio Prompts**.

Managing Notifications

You can use your compatible smartphone to manage notifications that appear on your Forerunner device.

Select an option:

- If you are using an iPhone® device, go to the notifications settings to select the items to show on the device.
- If you are using an Android™ smartphone, from the Garmin Connect app, select **Settings** > **Smart Notifications**.

Turning Off the Bluetooth Smartphone Connection

1. Hold **LIGHT** to view the controls menu.
2. Select to turn off the Bluetooth smartphone connection on your Forerunner device.

   Refer to the owner's manual for your mobile device to turn off Bluetooth wireless technology on your mobile device.

Turning On and Off Smartphone Connection Alerts

You can set the Forerunner device to alert you when your paired smartphone connects and disconnects using Bluetooth wireless technology.

NOTE: Smartphone connection alerts are turned off by default.

1. Hold .
2. Select **Phone** > **Alerts**.

Bluetooth Connected Features

The Forerunner device has several Bluetooth connected features for your compatible smartphone

using the Garmin Connect app.

- Activity uploads
- Assistance
- Connect IQ
- Find my phone
- Find my watch
- Incident detection
- GroupTrack
- LiveTrack
- Live Event Sharing
- Music controls
- Phone notifications
- Social media interactions
- Software updates
- Weather updates
- Workout and course downloads

Manually Syncing Data with Garmin Connect

1. Hold **LIGHT** to view the controls menu.
2. Select .

Locating a Lost Mobile Device

You can use this feature to help locate a lost mobile device that is paired using Bluetooth wireless technology and currently within range.

1. Hold **LIGHT** to view the controls menu.
2. Select **Find My Phone**.

   The Forerunner device begins searching for your paired mobile device. An audible alert sounds on your mobile device, and the Bluetooth signal strength displays on the Forerunner device screen. The Bluetooth signal strength increases as you move closer to your mobile device.
3. Select **BACK** to stop searching.

Widgets

Your device comes preloaded with widgets that provide at-a-glance information. Some widgets require a Bluetooth connection to a compatible smartphone.

Some widgets are not visible by default. You can add them to the widget loop manually (*Customizing the Widget Loop, page 37*).

ABC: Displays combined altimeter, barometer, and compass information.

Body Battery: Displays your current Body Battery level and a graph of your Body Battery levels for the last several hours.

Calendar: Displays upcoming meetings from your smartphone calendar.

Calories: Displays your calorie information for the current day.

Compass: Displays an electronic compass.

Dog tracking: Displays your dog's location information when you have a compatible dog tracking device paired with your Forerunner device.

Floors climbed: Tracks your floors climbed and progress toward your goal.

Garmin coach: Displays scheduled workouts when you select a Garmin coach training plan in your Garmin Connect account.

Health stats: Displays a dynamic summary of your current health statistics. The measurements includes heart rate, Body Battery level, stress, and more.

Heart rate: Displays your current heart rate in beats per minute (bpm) and a graph of your heart rate.

History: Displays your activity history and a graph of your recorded activities.

Intensity minutes: Tracks your time spent participating in moderate to vigorous activities, your weekly intensity minutes goal, and progress toward your goal.

inReach controls: Allows you to send messages on your paired inReach device.

Last activity: Displays a brief summary of your last recorded activity, such as your last run, last ride, or last swim.

Music controls: Provides music player controls for your smartphone or on-device music.

My day: Displays a dynamic summary of your activity today. The metrics include timed activities, intensity minutes, floors climbed, steps, calories burned, and more.

Notifications: Alerts you to incoming calls, texts, social network updates, and more, based on your smartphone notification settings.

Performance: Displays performance measurements that help you track and understand your training activities and race performances.

Pulse oximeter: Displays your most recent blood oxygen saturation percentage and a graph of your readings.

Steps: Tracks your daily step count, step goal, and data for previous days.

Stress: Displays your current stress level and a graph of your stress level. You can do a breathing activity to help you relax.

Sunrise and sunset: Displays sunrise, sunset, and civil twilight times.

Training status: Displays your current training status and training load, which shows you how your training affects your fitness level and performance.

VIRB controls: Provides camera controls when you have a VIRB device paired with your Forerunner device.

Weather: Displays the current temperature and weather forecast.

Xero device: Displays laser location information when you have a compatible Xero device paired with your Forerunner device.

Viewing the Widgets

Your device comes preloaded with widgets that provide at-a- glance information. Some widgets require a Bluetooth connection to a compatible smartphone.

- From the watch face, select **UP** or **DOWN** to view the widgets.

  Available widgets include heart rate and activity tracking. The performance widget requires several activities with heart rate and outdoor runs with GPS.
- Select **START** to view additional options and functions for a widget.

About My Day

The My Day widget is a daily snapshot of your activity. This is a dynamic summary that updates throughout the day. As soon as you climb a flight of stairs or record an activity, it appears in the widget. The metrics include recorded activities, intensity minutes for the week, floors climbed, steps, calories burned, and more. You can select START to view additional metrics.

Viewing the Controls Menu

The controls menu contains options, such as turning on do not disturb mode, locking the keys, and turning the device off. You can also open the Garmin Pay wallet.

NOTE: You can add, reorder, and remove the options in the controls menu.

1. From any screen, hold **LIGHT**.



2. Select **UP** or **DOWN** to scroll through the options.

Customizing the Controls Menu

You can add, remove, and change the order of the shortcut menu options in the controls menu (*Viewing the Controls Menu, page 26*).

1. Hold .
2. Select **Controls**.
3. Select a shortcut to customize.
4. Select an option:
   - Select **Reorder** to change the location of the shortcut in the controls menu.
   - Select **Remove** to remove the shortcut from the controls menu.
5. If necessary, select **Add New** to add an additional shortcut to the controls menu.

Viewing the Weather Widget

Weather requires a Bluetooth connection to a compatible smartphone.

1. From the watch face, select **UP** or **DOWN** to view the weather widget.
2. Select **START** to view hourly weather data.
3. Select **DOWN** to view daily weather data.

Opening the Music Controls

Music controls require a Bluetooth connection to a compatible smartphone.

1. From the watch face, hold **LIGHT**.
2. Select .
3. Select **UP** or **DOWN** to use the music controls.

Connect IQ Features

You can add Connect IQ features to your watch from Garmin and other providers using the Connect IQ website. You can customize your device with watch faces, data fields, widgets, and apps.

Watch Faces: Allow you to customize the appearance of the clock.

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 watch, 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.

Wi-Fi Connected Features

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

Audio content: Allows you to sync audio content from third- party providers.

Software updates: Your device downloads and installs the latest software update automatically when a Wi-Fi connection is available.

Workouts and training plans: You can browse for and select workouts and training plans on the Garmin Connect site. The next time your device has a Wi-Fi

connection, the files are wirelessly sent to your device.

Connecting to a Wi-Fi Network

You must connect your device to the Garmin Connect app on your smartphone or to the Garmin Express application on your computer before you can connect to a Wi-Fi network.

1. Hold ☰.
2. Select **Settings** > **Wi-Fi** > **My Networks** > **Add Network**.

   The device displays a list of nearby Wi-Fi networks.
3. Select a network.
4. If necessary, enter the password for the network.

The device connects to the network, and the network is added to the list of saved networks. The device reconnects to this network automatically when it is within range.

Safety and Tracking Features

⚠ CAUTION

Incident detection and assistance are supplemental features and should not be relied on as a primary method to obtain emergency assistance. The Garmin Connect app does not contact emergency services on your behalf.

The Forerunner device has safety and tracking features that must be set up with the Garmin Connect app.

NOTICE

To use these features, you must be connected to the Garmin Connect app using Bluetooth technology. You can enter emergency contacts in your Garmin Connect account.

Assistance: Allows you to send a text message with your name and GPS location to your emergency contacts.

Incident detection: Allows the Garmin Connect app to send a message to your emergency contacts when the Forerunner 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.

Live Event Sharing: Allows you to send messages to friends and family during an event, providing real-time updates.

NOTE: This feature is available only if your device is connected to an Android smartphone.

Adding Emergency Contacts

Emergency contact phone numbers are used for the incident detection and assistance features.

1. From the Garmin Connect app, select ☰ or •••.
2. Select **Safety & Tracking** > **Incident Detection & Assistance** > **Add Emergency Contact**.
3. Follow the on-screen instructions.

Requesting Assistance

Before you can request assistance, you must set up emergency contacts (*Adding Emergency Contacts, page 27*).

1. Hold the ⏻ key.
2. When you feel three vibrations, release the key to activate the assistance feature.

   The countdown screen appears.

   TIP: You can select **Cancel** before the countdown is complete to cancel the message.

Turning Incident Detection On and Off

1. From the watch face, hold ☰.
2. Select **Settings** > **Safety & Tracking** > **Incident Detection**.
3. Select an activity.

   NOTE: Incident detection is available only for outdoor walk, run, and bike activities.

When an incident is detected by your Forerunner device with GPS enabled, the Garmin Connect app can send an automated text message and email with your name and GPS location to your emergency contacts. A message appears indicating your contacts will be informed after 30 seconds have elapsed. You can select **Cancel** before the countdown is complete to cancel the message.

Starting a GroupTrack Session

Before you can start a GroupTrack session, you must have a Garmin Connect account, a compatible smartphone, and the Garmin Connect app.

These instructions are for starting a GroupTrack session with Forerunner devices. If your connections have other compatible devices, you can see them on the map. The other devices may not be able to display GroupTrack riders on the map.

1. Go outside, and turn on the Forerunner device.
2. Pair your smartphone with the Forerunner device (*Pairing Your Smartphone with Your Device, page 23*).
3. On the Forerunner device, hold ☰, and select **Safety & Tracking** > **GroupTrack** > **Show on Map** to enable viewing connections on the map screen.
4. In the Garmin Connect app, from the settings menu, select **Safety & Tracking** > **LiveTrack** > **GroupTrack**.
5. If you have more than one compatible device, select a device for the GroupTrack session.
6. Select **Visible to** > **All Connections**.
7. Select **Start LiveTrack**.

8. On the Forerunner device, start an activity.
9. Scroll to the map to view your connections.

   TIP: From the map, you can hold ☰ and select **Nearby Connections** to view distance, direction, and pace or speed information for other connections in the GroupTrack session.

Tips for GroupTrack Sessions

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

- Start your activity outside using GPS.
- Pair your Forerunner device with your smartphone using Bluetooth technology.
- In the Garmin Connect app, from the settings menu, select **Connections** to update the list of connections for your GroupTrack session.
- Make sure all of your connections pair to their smartphones and start a LiveTrack session in the Garmin Connect 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 (*Adding a Map to an Activity, page 38*).

Music

You can download audio content to your device from your computer or from a third-party provider, so you can listen when your smartphone is not nearby. To listen to audio content stored on your device, you must connect headphones with Bluetooth technology.

You can use the music controls to control music playback on your smartphone or to play music stored on your device.

Connecting to a Third-Party Provider

NOTICE

The copyright of music provided by third-party music services are owned by the record companies. The record companies license the music tracks or albums to third-party music services with a time limit, and the music license must be periodically updated and renewed. If you often listen to downloaded music offline, you will need to reconnect your watch to the internet every 7 days (via Wi-Fi or Garmin Connect) so that you can continue to make use of third-party offline music services.

Before you can download music or other audio files to your compatible watch from a supported third-party provider, you must connect to the provider using the Garmin Connect app.

1. From the Garmin Connect app, select ☰ or •••.
2. Select **Garmin Devices**, and select your device.
3. Select **Music**.
4. Select an option:
   - To connect to an installed provider, select a provider, and follow the on-screen instructions.
   - To connect to a new provider, select **Get Music Apps**, locate a provider, and follow the on-screen instructions.

Spotify®

Spotify is a digital music service that gives you access to millions of songs.

TIP: Spotify integration requires the Spotify application be installed on your mobile phone. A compatible mobile digital device and premium subscription is required, where available. Go to *Garmin.com.sg*.

This product incorporates Spotify software which is subject to third party licenses found here: *https://developer.spotify.com/legal/third-party-licenses*. Soundtrack every journey with Spotify. Play songs and artists you love, or let Spotify entertain you.

Downloading Audio Content from Spotify

Before you can download audio content from Spotify, you must connect to a Wi-Fi network (*Connecting to a Wi-Fi Network, page 27*).

1. Hold **DOWN** from any screen to open the music controls.
2. Hold **UP**.
3. Select **Music Providers** > **Spotify**.
4. Select **Add music & podcasts**.
5. Select a playlist or other item to download to the device.

   NOTE: Downloading audio content can drain the battery. You may need to connect the device to an external power source if the remaining battery life is insufficient.

   The selected playlists and other items are downloaded to the device.

Downloading Personal Audio Content

Before you can send your personal music to your device, you must install the Garmin Express application on your computer (*Garmin.com.sg/express*).

You can load your personal audio files, such as .mp3 and .aac files, to a Forerunner device from your computer.

1. Connect the device to your computer using the included USB cable.
2. On your computer, open the Garmin Express application, select your device, and select **Music**.

   TIP: For Windows® computers, you can select 📁+ and browse to the folder with your audio files. For Apple® computers, the Garmin Express application uses your iTunes® library.

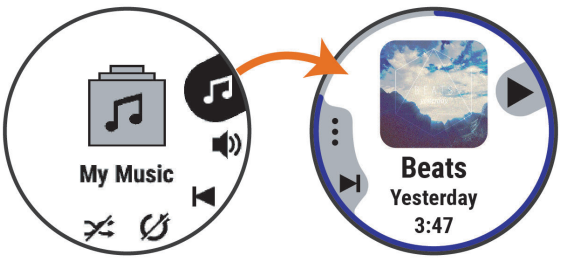
3 In the **My Music** or **iTunes Library** list, select an audio file category, such as songs or playlists.
4 Select the checkboxes for the audio files, and select **Send to Device**.
5 If necessary, in the Forerunner list, select a category, select the checkboxes, and select **Remove From Device** to remove audio files.

Listening to Music

1 Hold **DOWN** from any screen to open the music controls.
2 Connect your headphones with Bluetooth technology (*Connecting Headphones using Bluetooth Technology, page 29*).
3 Hold ☰.
4 Select **Music Providers**, and select an option:
- To listen to music downloaded to the watch from your computer, select **My Music** (*Downloading Personal Audio Content, page 28*).
- To listen to music from your smartphone, select **Control Phone**.
- To listen to music from a third-party provider, select the name of the provider.

5 Select ⋮ to open the music playback controls.

Music Playback Controls



Manage	Select to manage content from some third-party providers.
⋮	Select to browse the audio files and playlists for the selected source.
🔊	Select to adjust the volume.
▶	Select to play and pause the current audio file.
⏭	Select to skip to the next audio file in the playlist. Hold to fast forward through the current audio file.
⏮	Select to restart the current audio file. Select twice to skip to the previous audio file in the playlist. Hold to rewind through the current audio file.
↻	Select to change the repeat mode.
⤮	Select to change the shuffle mode.

Controlling Music Playback on a Connected Smartphone

1 On your smartphone, start playing a song or playlist.
2 On your Forerunner device, hold **DOWN** from any screen to open the music controls.
3 Select **Music Providers** > **Control Phone**.

Connecting Headphones using Bluetooth Technology

To listen to music loaded onto your Forerunner device, you must connect headphones using Bluetooth technology.

1 Bring the headphones within 2 m (6.6 ft.) of your device.
2 Enable pairing mode on the headphones.
3 Hold ☰.
4 Select **Settings** > **Music** > **Headphones** > **Add New**.
5 Select your headphones to complete the pairing process.

Garmin Pay

The Garmin Pay feature allows you to use your watch to pay for purchases in participating stores using credit or debit cards from a participating financial institution.

Setting Up Your Garmin Pay Wallet

You can add one or more participating credit or debit cards to your Garmin Pay wallet. Go to *garmin.com/garminpay/banks* to find participating financial institutions.

1 From the Garmin Connect app, select ☰ or •••.
2 Select **Garmin Pay** > **Get Started**.
3 Follow the on-screen instructions.

Paying for a Purchase Using Your Watch

Before you can use your watch to pay for purchases, you must set up at least one payment card.

You can use your watch to pay for purchases in a participating store.

1 Hold **LIGHT**.
2 Select **Wallet**.
3 Enter your four-digit passcode.

NOTE: If you enter your passcode incorrectly three times, your wallet locks, and you must reset your passcode in the Garmin Connect app.

Your most recently used payment card appears.



4. If you have added multiple cards to your Garmin Pay wallet, select **DOWN** to change to another card (optional).
5. Within 60 seconds, hold your watch near the payment reader, with the watch facing the reader.

   The watch vibrates and displays a check mark when it is finished communicating with the reader.
6. If necessary, follow the instructions on the card reader to complete the transaction.

TIP: After you successfully enter your passcode, you can make payments without a passcode for 24 hours while you continue to wear your watch. If you remove the watch from your wrist or disable heart rate monitoring, you must enter the passcode again before making a payment.

Adding a Card to Your Garmin Pay Wallet

You can add up to ten credit or debit cards to your Garmin Pay wallet.

1. From the Garmin Connect app, select ☰ or •••.
2. Select **Garmin Pay** > ⋮ > **Add Card**.
3. Follow the on-screen instructions.

After the card is added, you can select the card on your watch when you make a payment.

Managing Your Garmin Pay Cards

You can temporarily suspend or delete a card.

NOTE: In some countries, participating financial institutions may restrict the Garmin Pay features.

1. From the Garmin Connect app, select ☰ or •••.
2. Select **Garmin Pay**.
3. Select a card.
4. Select an option:
   - To temporarily suspend or unsuspend the card, select **Suspend Card**.
     The card must be active to make purchases using your Forerunner 945 device.
   - To delete the card, select 🗑.

Changing Your Garmin Pay Passcode

You must know your current passcode to change it. If you forget your passcode, you must reset the Garmin Pay feature for your device, create a new passcode, and reenter your card information.

1. From the Forerunner 945 device page in the Garmin Connect app, select **Garmin Pay** > **Change Passcode**.
2. Follow the on-screen instructions.

The next time you pay using your Forerunner 945 device, you must enter the new passcode.

History

History includes time, distance, calories, average pace or speed, lap data, and optional sensor information.

NOTE: When the device memory is full, your oldest data is overwritten.

Using History

History contains previous activities you have saved on your device.

1. From the watch face, hold ☰.
2. Select **History** > **Activities**.
3. Select an activity.
4. Select an option:
   - To view additional information about the activity, select **All Stats**.
   - To view the impact of the activity on your aerobic and anaerobic fitness, select **Training Effect** (*About Training Effect, page 18*).
   - To view your time in each heart rate zone, select **Heart Rate** (*Viewing Your Time in Each Heart Rate Zone, page 30*).
   - To select a lap and view additional information about each lap, select **Laps**.
   - To select an exercise set and view additional information about each set, select **Sets**.
   - To view the activity on a map, select **Map**.
   - To view an elevation plot for the activity, select **Elevation Plot**.
   - To delete the selected activity, select **Delete**.

Multisport History

Your device stores the overall multisport summary of the activity, including overall distance, time, calories, and optional accessory data. Your device also separates the activity data for each sport segment and transition so you can compare similar training activities and track how quickly you move through the transitions. Transition history includes distance, time, average speed, and calories.

Viewing Your Time in Each Heart Rate Zone

Viewing your time in each heart rate zone can help you adjust your training intensity.

1. From the watch face, hold ☰.
2. Select **History** > **Activities**.
3. Select an activity.
4. Select **Heart Rate**.

Viewing Data Totals

You can view the accumulated distance and time data saved to your device.

1. From the watch face, hold ☰.
2. Select **History** > **Totals**.
3. If necessary, select an activity.
4. Select an option to view weekly or monthly totals.

Using the Odometer

The odometer automatically records the total distance traveled, elevation gained, and time in activities.

1. Hold ☰.
2. Select **History** > **Totals** > **Odometer**.
3. Select **UP** or **DOWN** to view odometer totals.

Deleting History

1. Hold ☰.
2. Select **History** > **Options**.
3. Select an option:
   - Select **Delete All Activities** to delete all activities from the history.
   - Select **Reset Totals** to reset all distance and time totals.
     NOTE: This does not delete any saved activities.

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. To sign up for a free account, go to *connect.Garmin.com*.

Store your activities: After you complete and save an activity with your device, you can upload that activity to your Garmin Connect account 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, running dynamics, an overhead map view, pace and speed charts, and customizable reports.

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



Plan your training: You can choose a fitness goal and load one of the day-by-day training plans.

Track your progress: You can track your daily steps, join a friendly competition with your connections, and meet your goals.

Share your activities: You can connect with friends to follow each other's activities or post links to your activities on your favorite social networking sites.

Manage your settings: You can customize your device and user settings on your Garmin Connect account.

Access the Connect IQ store: You can download apps, watch faces, data fields, and widgets.

Using Garmin Connect on Your Computer

The Garmin Express application connects your device to your Garmin Connect account using a computer. You can use the Garmin Express application to upload your activity data to your Garmin Connect account and to send data, such as workouts or training plans, from the Garmin Connect website to your device. You can also install device software updates and manage your Connect IQ apps.

1. Connect the device to your computer using the USB cable.
2. Go to *Garmin.com.sg/express*.
3. Download and install the Garmin Express application.
4. Open the Garmin Express application, and select **Add Device**.
5. Follow the on-screen instructions.

Data Management

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

Deleting Files

NOTICE

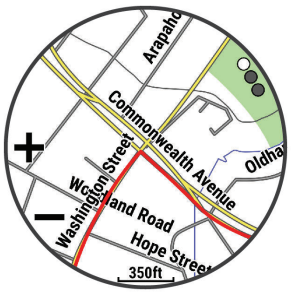
If you do not know the purpose of a file, do not delete it. Your device memory contains important system files that should not be deleted.

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

   NOTE: Mac operating systems provide limited support for MTP file transfer mode. You must open the Garmin drive on a Windows operating system. You should use the Garmin Express application to remove music files from your device.

Navigation

You can use the GPS navigation features on your device to view your path on a map, save locations, and find your way home.



Courses

You can send a course from your Garmin Connect account to your device. After it is saved to your device, you can navigate the course on your device.

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.

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.

Creating and Following a Course on Your Device

1. From the watch face, select **START**.
2. Select an activity.
3. Hold .
4. Select **Navigate** > **Courses** > **Create New**.
5. Enter a name for the course, and select ✓.
6. Select **Add Location**.
7. Select an option.
8. If necessary, repeat steps 4 and 5.
9. Select **Done** > **Do Course**.

   Navigation information appears.
10. Select **START** to begin navigation.

Creating a Round-Trip Course

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

1. From the watch face, select **START**.
2. Select **Run** or **Bike**.
3. Hold .
4. Select **Navigation** > **Round-Trip Course**.
5. Enter the total distance for the course.
6. Select a direction heading.

   The device creates up to three courses. You can select **DOWN** to view the courses.
7. Select **START** to select a course.
8. Select an option:
   - To begin navigation, select **Go**.
   - To view the course on the map and pan or zoom the map, select **Map**.
   - To view a list of turns in the course, select **Turn By Turn**.
   - To view an elevation plot of the course, select **Elevation Plot**.
   - To save the course, select **Save**.
   - To view a list of ascents in the course, select **View Climbs**.

Saving Your Location

You can save your current location to navigate back to it later.

NOTE: You can add options to the controls menu.

1. Hold **LIGHT**.
2. Select **Save Location**.
3. Follow the on-screen instructions.

Editing Your Saved Locations

You can delete a saved location or edit its name, elevation, and position information.

1. From the watch face, select **START** > **Navigate** > **Saved Locations**.
2. Select a saved location.
3. Select an option to edit the location.

Projecting a Waypoint

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

1. If necessary, select **START** > **Add** > **Project Wpt**. to add the project waypoint app to the apps list.
2. Select **Yes** to add the app to your list of favorites.
3. From the watch face, select **START** > **Project Wpt.**.
4. Select **UP** or **DOWN** to set the heading.
5. Select **START**.
6. Select **DOWN** to select a unit of measure.
7. Select **UP** to enter the distance.
8. Select **START** to save.

The projected waypoint is saved with a default name.

Navigating to a Destination

You can use your device to navigate to a destination or follow a course.

1. From the watch face, select **START** > **Navigate**.
2. Select a category.
3. Respond to the on-screen prompts to choose a destination.
4. Select **Go To**.

   Navigation information appears.
5. Select **START** to begin navigation.

Navigating to a Point of Interest

If the map data installed on your device includes points of interest, you can navigate to them.

1. From the watch face, select **START**.
2. Select an activity.
3. Hold ☰.
4. Select **Navigation** > **Points of Interest**, and select a category.

   A list of points of interest near your current location appears.
5. If necessary, select an option:
   - To search near a different location, select **Search Near**, and select a location.
   - To search for a point of interest by name, select **Spell Search**, enter a name, select **Search Near**, and select a location.
6. Select a point of interest from the search results.
7. Select **Go**.

   Navigation information appears.
8. Select **START** to begin navigation.

Points of Interest

A point of interest is a place that you may find useful or interesting. Points of interest are organized by category and can include popular travel destinations such as gas stations, restaurants, hotels, and entertainment venues.

Navigating with Sight 'N Go

You can point the device at an object in the distance, such as a water tower, lock in the direction, and then navigate to the object.

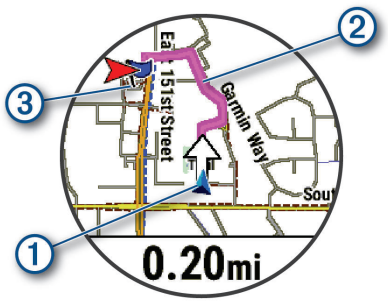
1. From the watch face, select **START** > **Navigate** > **Sight 'N Go**.
2. Point the top of the watch at an object, and select **START**.

   Navigation information appears.
3. Select **START** to begin navigation.

Navigating to Your Starting Point During an Activity

You can navigate back to the starting point of your current activity in a straight line or along the path you traveled. This feature is available only for activities that use GPS.

1. During an activity, select **STOP** > **Back to Start**.
2. Select an option:
   - To navigate back to the starting point of your activity along the path you traveled, select **TracBack**.
   - If you do not have a supported map or are using direct routing, select **Route** to navigate back to the starting point of your activity in a straight line.
   - If you are not using direct routing, select **Route** to navigate back to the starting point of your activity using turn-by-turn directions.



Your current location ①, the track to follow ②, and your destination ③ appear on the map.

Navigating to the Starting Point of Your Last Saved Activity

You can navigate back to the starting point of your last saved activity in a straight line or along the path you traveled. This feature is available only for activities that use GPS.

1. Select **START** > **Navigate** > **Activities**.
2. Select your last saved activity.
3. Select **Back to Start**.
4. Select an option:
   - To navigate back to the starting point of your activity along the path you traveled, select **TracBack**.
   - To navigate back to the starting point of your activity in a straight line, select **Route**.
5. Select **DOWN** to view the compass (optional). The arrow points toward your starting point.

Marking and Starting Navigation to a Man Overboard Location

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

TIP: You can customize the hold function of the keys to access the MOB function (*Customizing the Hot Keys, page 43*).

From the watch face, select **START** > **Navigate** > **Last MOB**. Navigation information appears.

Stopping Navigation

1. During an activity, hold .
2. Select **Stop Navigation**.

Map

represents your location on the map. Location names and symbols appear on the map. When you are navigating to a destination, your route is marked with a line on the map.

- Map navigation (*Panning and Zooming the Map, page 34*)
- Map settings (*Map Settings, page 34*)

Viewing the Map

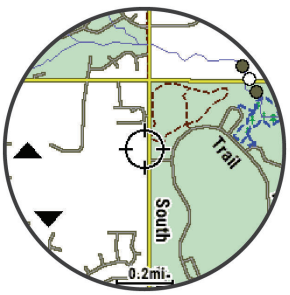
1. Start an outdoor activity.
2. Select **UP** or **DOWN** to scroll to the map screen.
3. Hold , and select an option:
   - To pan or zoom the map, select **Pan/Zoom**.
     TIP: You can select **START** to toggle between panning up and down, panning left and right, or zooming. You can hold **START** to select the point indicated by the crosshairs.
   - To see nearby points of interest and waypoints, select **Around Me**.

Saving or Navigating to a Location on the Map

You can select any location on the map. You can save the location or start navigating to it.

1. From the map, hold .
2. Select **Pan/Zoom**.

   Controls and crosshairs appear on the map.



3. Pan and zoom the map to center the location in the crosshairs.
4. Hold **START** to select the point indicated by the crosshairs.
5. If necessary, select a nearby point of interest.
6. Select an option:
   - To start navigating to the location, select **Go**.
   - To save the location, select **Save Location**.
   - To view information about the location, select **Review**.

Navigating with the Around Me Feature

You can use the around me feature to navigate to nearby points of interest and waypoints.

NOTE: The map data installed on your device must include points of interest to navigate to them.

1. From the map, hold .
2. Select **Around Me**.

   Icons indicating points of interest and waypoints appear on the map.
3. Select **UP** or **DOWN** to highlight a section of the map.
4. Select **STOP**.

   A list of points of interest and waypoints in the highlighted map section appear.
5. Select **STOP** to select a location.
6. Select an option:
   - To start navigating to the location, select **Go**.
   - To view the location on the map, select **Map**.
   - To save the location, select **Save Location**.
   - To view information about the location, select **Review**.

Panning and Zooming the Map

1. While navigating, select **UP** or **DOWN** to view the map.
2. Hold .
3. Select **Pan/Zoom**.
4. Select an option:
   - To toggle between panning up and down, panning left and right, or zooming, select **START**.
   - To pan or zoom the map, select **UP** and **DOWN**.
   - To quit, select **BACK**.

Map Settings

You can customize how the map appears in the map app and data screens.

From the watch face, hold , and select **Settings** > **Map**.

Orientation: Sets the orientation of the map. The North Up option shows north at the top of the screen. The Track Up option shows your current direction of travel at the top of the screen.

User Locations: Shows or hides saved locations on the map.

Auto Zoom: Automatically selects the zoom level for optimal use of your map. When disabled, you must zoom in or out manually.

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

Track Log: Shows or hides the track log, or the path you have traveled, as a colored line on the map.

Track Color: Changes the track log color.

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

Marine: Sets the map to display data in marine mode.

Draw Segments: Shows or hides segments, as a

colored line on the map.

Draw Contours: Shows or hides contour lines on the map.

Altimeter and Barometer

The device contains an internal altimeter and barometer. The device collects elevation and pressure data continuously, even in low-power mode. The altimeter displays your approximate elevation based on pressure changes. The barometer displays environmental pressure data based on the fixed elevation where the altimeter was most recently calibrated (*Altimeter Settings, page 42*). To open the altimeter or barometer settings quickly, select START from the altimeter or barometer widgets.

Compass

The device has a 3-axis compass with automatic calibration. The compass features and appearance change depending on your activity, whether GPS is enabled, and whether you are navigating to a destination. You can change the compass settings manually (*Compass Settings, page 41*). To open the compass settings quickly, you can select START from the compass widget.

Navigation Settings

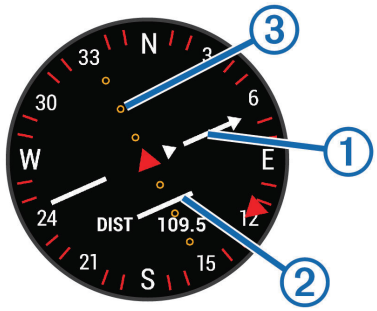
You can customize the map features and appearance when navigating to a destination.

Customizing Map Features

1. Hold .
2. Select **Settings** > **Navigation** > **Data Screens**.
3. Select an option:
   - Select **Map** to turn on or off the map.
   - Select **Guide** to turn on or off the guide screen that displays the compass bearing or course to follow while navigating.
   - Select **Elevation Plot** to turn on or off the elevation plot.
   - Select a screen to add, remove, or customize.

Course Pointer

The course pointer is most useful when you are navigating to your destination in a straight line, such as when you are navigating on water. It can help you navigate back to the course line when you go off-course to avoid obstacles or hazards.



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

Setting Up a Heading Bug

You can set up a heading indicator to display on your data pages while navigating. The indicator points to your target heading.

1. Hold .
2. Select **Settings** > **Navigation** > **Heading Bug**.

Setting Navigation Alerts

You can set alerts to help you navigate to your destination.

1. Hold .
2. Select **Settings** > **Navigation** > **Alerts**.
3. Select an option:
   - To set an alert for a specified distance from your final destination, select **Final Distance**.
   - To set an alert for the estimated time remaining until you reach your final destination, select **Final ETE**.
   - To set an alert when you stray from the course, select **Off Course**.
   - To enable turn-by-turn navigation prompts, select **Turn Prompts**.
4. If necessary, select **Status** to turn on the alert.
5. If necessary, enter a distance or time value, and select ✓.

Wireless Sensors

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

Pairing Your Wireless Sensors

The first time you connect a wireless sensor to your device using ANT+ or Bluetooth technology, you must pair the device and sensor. After they are paired, the device connects to the sensor automatically when you start an activity and the sensor is active and within range.

NOTE: If a heart rate monitor was bundled with your device, the included heart rate monitor is already paired with your device.

1. If you are pairing a heart rate monitor, put on the heart rate monitor (*Putting On the Heart Rate Monitor, page 13*).

   The heart rate monitor does not send or receive data until you put it on.
2. Bring the device within 3 m (10 ft.) of the sensor.

   NOTE: Stay 10 m (33 ft.) away from other wireless sensors while pairing.
3. Hold .
4. Select **Settings** > **Sensors and Accessories** > **Add New**.
5. Select an option:
   - Select **Search All**.
   - Select your sensor type.

   After the sensor is paired with your device, the sensor status changes from Searching to Connected. Sensor data appears in the data screen loop or a custom data field.

Foot Pod

Your device is compatible with the foot pod. You can use the foot pod to record pace and distance instead of using GPS when you are training indoors or when your GPS signal is weak. The foot pod is on standby and ready to send data (like the heart rate monitor).

After 30 minutes of inactivity, the foot pod powers off to conserve the battery. When the battery is low, a message appears on your device. Approximately five hours of battery life remain.

Going for a Run Using a Foot Pod

Before you go for a run, you must pair the foot pod with your Forerunner device (*Pairing Your Wireless Sensors, page 35*).

You can run indoors using a foot pod to record pace, distance, and cadence. You can also run outdoors using a foot pod to record cadence data with your GPS pace and distance.

1. Install your foot pod according to the accessory instructions.
2. Select a running activity.
3. Go for a run.

Foot Pod Calibration

The foot pod is self-calibrating. The accuracy of the speed and distance data improves after a few outdoor runs using GPS.

Improving Foot Pod Calibration

Before you can calibrate your device, you must acquire GPS signals and pair your device with the foot pod (*Pairing Your Wireless Sensors, page 35*).

The foot pod is self-calibrating, but you can improve the accuracy of the speed and distance data with a few outdoor runs using GPS.

1. Stand outside for 5 minutes with a clear view of the sky.
2. Start a running activity.
3. Run on a track without stopping for 10 minutes.
4. Stop your activity, and save it.

   Based on the recorded data, the foot pod calibration value changes, if necessary. You should not need to calibrate the foot pod again unless your running style changes.

Calibrating Your Foot Pod Manually

Before you can calibrate your device, you must pair your device with the foot pod sensor (*Pairing Your Wireless Sensors, page 35*).

Manual calibration is recommended if you know your calibration factor. If you have calibrated a foot pod with another Garmin product, you may know your calibration factor.

1. From the watch face, hold .
2. Select **Settings** > **Sensors and Accessories**.
3. Select your foot pod.
4. Select **Cal. Factor** > **Set Value**.
5. Adjust the calibration factor.
   - Increase the calibration factor if your distance is too low.
   - Decrease the calibration factor if your distance is too high.

Setting Foot Pod Speed and Distance

Before you can customize the foot pod speed and distance, you must pair your device with the foot pod sensor (*Pairing Your Wireless Sensors, page 35*).

You can set your device to calculate speed and distance using your foot pod data instead of GPS data.

1. Hold .
2. Select **Sensors and Accessories**.
3. Select your foot pod.
4. Select **Speed** or **Distance**.
5. Select an option:
   - Select **Indoor** when you are training with GPS turned off, usually indoors.
   - Select **Always** to use your foot pod data regardless of the GPS setting.

Using an Optional Bike Speed or Cadence Sensor

You can use a compatible bike speed or cadence sensor to send data to your device.

- Pair the sensor with your device (*Pairing Your Wireless Sensors, page 35*).
- Set your wheel size (*Wheel Size and Circumference, page 55*).

- Go for a ride (*Starting an Activity, page 2*).

Training with Power Meters

- Go to *Garmin.com.sg/buy* 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 10*).
- Use range alerts to be notified when you reach a specified power zone (*Setting an Alert, page 39*).
- Customize the power data fields (*Customizing the Data Screens, page 38*).

Using Electronic Shifters

Before you can use compatible electronic shifters, such as Shimano® Di2™ shifters, you must pair them with your device (*Pairing Your Wireless Sensors, page 35*). You can customize the optional data fields (*Customizing the Data Screens, page 38*). The Forerunner device displays current adjustment values when the sensor is in adjustment mode.

Situational Awareness

Your Forerunner 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 Forerunner software before pairing Varia devices (*Updating the Software Using the Garmin Connect App, page 48*).

tempe

The tempe is an ANT+ wireless temperature sensor. You can attach the sensor to a secure strap or loop where it is exposed to ambient air, and therefore, provides a consistent source of accurate temperature data. You must pair the tempe with your device to display temperature data from the tempe.

Customizing Your Device

Customizing Your Activity List

1. From the watch face, hold .
2. Select **Settings** > **Activities & Apps**.
3. Select an option:
   - Select an activity to customize the settings, set the activity as a favorite, change the order of appearance, and more.
   - Select **Add Apps** to add more activities or create custom activities.

Customizing the Widget Loop

You can change the order of widgets in the widget loop, remove widgets, and add new widgets.

1. From the watch face, hold .
2. Select **Settings** > **Widgets**.
3. Select a widget.
4. Select an option:
   - Select **Reorder** to change the location of the widget in the widget loop.
   - Select **Remove** to remove the widget from the widget loop.
5. Select **Add Widgets**.
6. Select a widget.

   The widget is added to the widget loop.

Activities and App Settings

These settings allow you to customize each preloaded activity app based on your needs. For example, you can customize data pages and enable alerts and training features. Not all settings are available for all activity types.

Hold , select **Settings** > **Activities & Apps**, select an activity, and select the activity settings.

3D Distance: Calculates your distance traveled using your elevation change and your horizontal movement over ground.

3D Speed: Calculates your speed using your elevation change and your horizontal movement over ground (*3D Speed and Distance, page 40*).

Accent Color: Sets the accent color of each activity to help identify which activity is active.

Alerts: Sets the training or navigation alerts for the activity.

Auto Climb: Enables the device to detect elevation changes automatically using the built-in altimeter.

Auto Lap: Sets the options for the Auto Lap® feature (*Auto Lap, page 39*).

Auto Pause: Sets the device to stop recording data when you stop moving or when you drop below a specified speed (*Enabling Auto Pause, page 40*).

Auto Run: Enables the device to detect ski runs automatically using the built-in accelerometer.

Auto Scroll: Enables you to move through all of the activity data screens automatically while the timer is running (*Using Auto Scroll, page 40*).

Auto Set: Enables the device to start and stop exercise sets automatically during a strength training activity.

Background Color: Sets the background color of each activity to black or white.

ClimbPro: Displays ascent planning and monitoring screens while navigating.

Countdown Start: Enables a countdown timer for pool

swimming intervals.

Data Screens: Enables you to customize data screens and add new data screens for the activity (*Customizing the Data Screens, page 38*).

GPS: Sets the mode for the GPS antenna. Using the GPS + GLONASS or GPS + GALILEO options provides increased performance in challenging environments and faster position acquisition. Using the GPS and another satellite together can reduce battery life more than using the GPS option only.

Using the UltraTrac option records track points and sensor data less frequently (*UltraTrac, page 41*).

Lock Keys: Locks the keys during multisport activities to prevent accidental key presses.

Map: Sets the display preferences for the map data screen for the activity (*Activity Map Settings, page 39*).

Metronome: Plays tones at a steady rhythm to help you improve your performance by training at a faster, slower, or more consistent cadence (*Using the Metronome, page 8*).

Pool Size: Sets the pool length for pool swimming.

Power Save Timeout: Sets the power-save timeout options for the activity (*Power Save Timeout Settings, page 41*).

Rename: Sets the activity name.

Repeat: Enables the Repeat option for multisport activities. For example, you can use this option for activities that include multiple transitions, such as a swimrun.

Restore Defaults: Allows you to reset the activity settings.

Routing: Sets the preferences for calculating routes for the activity (*Routing Settings, page 39*).

Scoring: Enables or disables scorekeeping automatically when you start a round of golf. The Always Ask option prompts you when you begin a round.

Segment Alerts: Enables prompts that alert you to approaching segments.

Stat Tracking: Enables statistics tracking while playing golf.

Stroke Detect.: Enables stroke detection for pool swimming.

Transitions: Enables transitions for multisport activities.

Customizing the Data Screens

You can show, hide, and change the layout and content of data screens for each activity.

1. Hold ☰.
2. Select **Settings** > **Activities & Apps**.
3. Select the activity to customize.
4. Select the activity settings.
5. Select **Data Screens**.
6. Select a data screen to customize.
7. Select an option:
   - Select **Layout** to adjust the number of data fields on the data screen.
   - Select a field to change the data that appears in the field.
   - Select **Reorder** to change the location of the data screen in the loop.
   - Select **Remove** to remove the data screen from the loop.
8. If necessary, select **Add New** to add a data screen to the loop.

   You can add a custom data screen, or select one of the predefined data screens.

Adding a Map to an Activity

You can add the map to the data screens loop for an activity.

1. From the watch face, hold ☰.
2. Select **Settings** > **Activities & Apps**.
3. Select the activity to customize.
4. Select the activity settings.
5. Select **Data Screens** > **Add New** > **Map**.

Alerts

You can set alerts for each activity, which can help you to train toward specific goals, to increase your awareness of your environment, and to navigate to your destination. Some alerts are available only for specific activities. There are three types of alerts: event alerts, range alerts, and recurring alerts.

Event alert: An event alert notifies you once. The event is a specific value. For example, you can set the device to alert you when you reach a specified elevation.

Range alert: A range alert notifies you each time the device is above or below a specified range of values. For example, you can set the device to alert you when your heart rate is below 60 beats per minute (bpm) and over 210 bpm.

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.

Alert Name	Alert Type	Description
Cadence	Range	You can set minimum and maximum cadence values.
Calories	Event, recurring	You can set the number of calories.
Custom	Event, recurring	You can select an existing message or create a custom message and select an alert type.

Distance	Recurring	You can set a distance interval.
Elevation	Range	You can set minimum and maximum elevation values.
Heart Rate	Range	You can set minimum and maximum heart rate values or select zone changes. See *About Heart Rate Zones, page 9* and *Heart Rate Zone Calculations, page 9*.
Pace	Range	You can set minimum and maximum pace values.
Power	Range	You can set the high or low power level.
Proximity	Event	You can set a radius from a saved location.
Run/Walk	Recurring	You can set timed walking breaks at regular intervals.
Speed	Range	You can set minimum and maximum speed values.
Stroke Rate	Range	You can set high or low strokes per minute.
Time	Event, recurring	You can set a time interval.

Setting an Alert

1. Hold .
2. Select **Settings** > **Activities & Apps**.
3. Select an activity.

   NOTE: This feature is not available for all activities.
4. Select the activity settings.
5. Select **Alerts**.
6. Select an option:
   - Select **Add New** to add a new alert for the activity.
   - Select the alert name to edit an existing alert.
7. If necessary, select the type of alert.
8. Select a zone, enter the minimum and maximum values, or enter a custom value for the alert.
9. If necessary, turn on the alert.

For event and recurring alerts, a message appears each time you reach the alert value. For range alerts, a message appears each time you exceed or drop below the specified range (minimum and maximum values).

Activity Map Settings

You can customize the appearance of the map data screen for each activity.

Hold , select **Settings** > **Activities & Apps**, select an activity, select the activity settings, and select **Map**.

Configure Maps: Shows or hides data from installed map products.

Use Sys. Settings: Enables the device to use the preferences from the system map settings.

Orientation: Sets the orientation of the map. The North Up option shows north at the top of the screen. The Track Up option shows your current direction of travel at the top of the screen.

User Locations: Shows or hides saved locations on the map.

Auto Zoom: Automatically selects the zoom level for optimal use of your map. When disabled, you must zoom in or out manually.

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

Track Log: Shows or hides the track log, or the path you have traveled, as a colored line on the map.

Track Color: Changes the track log color.

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

Marine: Sets the map to display data in marine mode.

Draw Segments: Shows or hides segments, as a colored line on the map.

Draw Contours: Shows or hides contour lines on the map.

Routing Settings

You can change the routing settings to customize the way the device calculates routes for each activity.

Hold , select **Settings** > **Activities & Apps**, select an activity, select the activity settings, and select **Routing**.

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

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

Courses: Sets how you navigate courses using the device. Use the Follow Course option to navigate a course exactly as it appears, without recalculating. Use the Use Map option to navigate a course using routable maps, and recalculate the route if you stray from the course.

Calculation Method: Sets the calculation method to minimize the time, distance, or ascent in routes.

Avoidances: Sets the road or transportation types to avoid in routes.

Type: Sets the behavior of the pointer that appears during direct routing.

Auto Lap

Marking Laps by Distance

You can use Auto Lap to mark a lap at a specific distance automatically. This feature is helpful for comparing your performance over different parts of an activity (for example, every 1 mile or 5 kilometers).

1. Hold .
2. Select **Settings** > **Activities & Apps**.

3 Select an activity.

NOTE: This feature is not available for all activities.

4 Select the activity settings.

5 Select **Auto Lap**.

6 Select an option:

- Select **Auto Lap** to turn Auto Lap on or off.
- Select **Auto Distance** to adjust the distance between laps.

Each time you complete a lap, a message appears that displays the time for that lap. The device also beeps or vibrates if audible tones are turned on (*System Settings, page 42*).

If necessary, you can customize the data pages to display additional lap data (*Customizing the Data Screens, page 38*).

Customizing the Lap Alert Message

You can customize one or two data fields that appear in the lap alert message.

1 Hold ☰.

2 Select **Activities & Apps**.

3 Select an activity.

NOTE: This feature is not available for all activities.

4 Select the activity settings.

5 Select **Auto Lap** > **Lap Alert**.

6 Select a data field to change it.

7 Select **Preview** (optional).

Enabling Auto Pause

You can use the Auto Pause feature to pause the timer automatically when you stop moving. This feature is helpful if your activity includes stop lights or other places where you must stop.

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

1 Hold ☰.

2 Select **Settings** > **Activities & Apps**.

3 Select an activity.

NOTE: This feature is not available for all activities.

4 Select the activity settings.

5 Select **Auto Pause**.

6 Select an option:

- To pause the timer automatically when you stop moving, select **When Stopped**.
- To pause the timer automatically when your pace or speed drops below a specified level, select **Custom**.

Enabling Auto Climb

You can use the auto climb feature to detect elevation changes automatically. You can use it during activities such as climbing, hiking, running, or biking.

1 Hold ☰.

2 Select **Settings** > **Activities & Apps**.

3 Select an activity.

NOTE: This feature is not available for all activities.

4 Select the activity settings.

5 Select **Auto Climb** > **Status**.

6 Select **Always** or **When Not Navigating**.

7 Select an option:

- Select **Run Screen** to identify which data screen appears while running.
- Select **Climb Screen** to identify which data screen appears while climbing.
- Select **Invert Colors** to reverse the display colors when changing modes.
- Select **Vertical Speed** to set the rate of ascent over time.
- Select **Mode Switch** to set how quickly the device changes modes.

NOTE: The Current Screen option allows you to automatically switch to the last screen you were viewing before the auto climb transition occurred.

3D Speed and Distance

You can set 3D speed and distance to calculate your speed or distance using both your elevation change and your horizontal movement over ground. You can use it during activities such as skiing, climbing, navigating, hiking, running, or biking.

Using Auto Scroll

You can use the auto scroll feature to cycle through all of the activity data screens automatically while the timer is running.

1 Hold ☰.

2 Select **Settings** > **Activities & Apps**.

3 Select an activity.

NOTE: This feature is not available for all activities.

4 Select the activity settings.

5 Select **Auto Scroll**.

6 Select a display speed.

Changing the GPS Setting

By default, the device uses GPS to locate satellites. For more information about GPS, go to *Garmin.com.sg/about-gps*.

1 Hold ☰.

2 Select **Settings** > **Activities & Apps**.

3 Select the activity to customize.

4 Select the activity settings.

5 Select **GPS**.

6 Select an option:

- Select **Normal (GPS Only)** to enable the default GPS satellite system.
- Select **GPS + GLONASS** (Russian satellite system) for more accurate position information in situations with poor sky visibility.
- Select **GPS + GALILEO** (European Union satellite

system) for more accurate position information in situations with poor sky visibility.
- Select UltraTrac to record track points and sensor data less frequently (*UltraTrac, page 41*)

NOTE: Using GPS and another satellite together can reduce battery life more quickly than using GPS only (*GPS and Other Satellite Systems, page 41*).

GPS and Other Satellite Systems

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

UltraTrac

The UltraTrac feature is a GPS setting that records track points and sensor data less frequently. Enabling the UltraTrac feature increases battery life but decreases the quality of recorded activities. You should use the UltraTrac feature for activities that demand longer battery life and for which frequent sensor data updates are less important.

Power Save Timeout Settings

The timeout settings affect how long your device stays in training mode, for example, when you are waiting for a race to start. Hold ☰, select **Settings** > **Activities & Apps**, select an activity, and select the activity settings. Select **Power Save Timeout** to adjust the timeout settings for the activity.

Normal: Sets the device to enter low-power watch mode after 5 minutes of inactivity.

Extended: Sets the device to enter low-power watch mode after 25 minutes of inactivity. The extended mode can result in shorter battery life between charges.

Removing an Activity or App

1. From the watch face, hold ☰.
2. Select **Settings** > **Activities & Apps**.
3. Select an activity.
4. Select an option:
   - To remove an activity from your list of favorites, select **Remove from Favorites**.
   - To delete the activity from the apps list, select **Remove**.

GroupTrack Settings

Hold ☰, and select **Settings** > **GroupTrack**.

Show on Map: Enables you to view connections on the map screen during a GroupTrack session.

Activity Types: Allows you to select which activity types appear on the map screen during a GroupTrack session.

Watch Face Settings

You can customize the appearance of the watch face by selecting the layout, colors, and additional data. You can also download custom watch faces from the Connect IQ store.

Customizing the Watch Face

Before you can activate a Connect IQ watch face, you must install a watch face from the Connect IQ store (*Connect IQ Features, page 26*).

You can customize the watch face information and appearance, or activate an installed Connect IQ watch face.

1. From the watch face, hold ☰.
2. Select **Watch Face**.
3. Select **UP** or **DOWN** to preview the watch face options.
4. Select **Add New** to scroll through additional pre-loaded watch faces.
5. Select **START** > **Apply** to activate a pre-loaded watch face or an installed Connect IQ watch face.
6. If using a pre-loaded watch face, select **START** > **Customize**.
7. Select an option:
   - To change the style of the numbers for the analog watch face, select **Dial**.
   - To change the style of the hands for the analog watch face, select **Hands**.
   - To change the style of the numbers for the digital watch face, select **Layout**.
   - To change the style of the seconds for the digital watch face, select **Seconds**.
   - To change the data that appears on the watch face, select **Additional Data**.
   - To add or change an accent color for the watch face, select **Accent Color**.
   - To change the background color, select **Bkgd. Color**.
   - To save the changes, select **Done**.

Sensors Settings

Compass Settings

Hold ☰, and select **Settings** > **Sensors and Accessories** > **Compass**.

Calibrate: Allows you to manually calibrate the compass sensor (*Calibrating the Compass Manually, page 42*).

Display: Sets the directional heading on the compass to degrees or milliradians.

North Ref.: Sets the north reference of the compass (*Setting the North Reference, page 42*).

Mode: Sets the compass to use electronic-sensor data only (On), a combination of GPS and electronic-sensor data when moving (Auto), or GPS data only (Off).

Calibrating the Compass Manually

NOTICE

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

Your device was already calibrated at the factory, and the device uses automatic calibration by default. If you experience irregular compass behavior, for example, after moving long distances or after extreme temperature changes, you can manually calibrate the compass.

1. Hold .
2. Select **Sensors and Accessories** > **Compass** > **Calibrate** > **Start**.
3. Follow the on-screen instructions.

   TIP: Move your wrist in a small figure eight motion until a message appears.

Setting the North Reference

You can set the directional reference used in calculating heading information.

1. Hold .
2. Select **Settings** > **Sensors and Accessories** > **Compass** > **North Ref.**.
3. Select an option:
   - To set geographic north as the heading reference, select True.
   - To set the magnetic declination for your location automatically, select **Magnetic**.
   - To set grid north (000º) as the heading reference, select **Grid**.
   - To set the magnetic variation value manually, select **User**, enter the magnetic variance, and select **Done**.

Altimeter Settings

Hold , and select **Settings** > **Sensors and Accessories** > **Altimeter**.

Calibrate: Allows you to manually calibrate the altimeter sensor.

Elevation: Sets the units of measure for elevation.

Calibrating the Barometric Altimeter

Your device was already calibrated at the factory, and the device uses automatic calibration at your GPS starting point by default. You can manually calibrate the barometric altimeter if you know the correct elevation.

1. Hold .
2. Select **Sensors and Accessories** > **Altimeter**.
3. Select an option:
   - To calibrate automatically from your GPS starting point, select **Auto Cal.**, and select an option.
   - To enter the current elevation, select **Calibrate**.

Barometer Settings

Hold , and select **Settings** > **Sensors and Accessories** > **Barometer**.

Calibrate: Allows you to manually calibrate the barometer sensor.

Plot: Sets the time scale for the chart in the barometer widget.

Watch Mode: Sets the sensor used in watch mode. The Auto option uses both the altimeter and barometer according to your movement. You can use the Altimeter option when your activity involves changes in altitude, or the Barometer option when your activity does not involve changes in altitude.

Calibrating the Barometer

Your device was already calibrated at the factory, and the device uses automatic calibration at your GPS starting point by default. You can manually calibrate the barometer if you know the correct elevation or the correct sea level pressure.

1. Hold .
2. Select **Sensors and Accessories** > **Barometer** > **Calibrate.**
3. Select an option:
   - To enter the current elevation or sea level pressure, select **Yes**.
   - To calibrate automatically from the digital elevation model, select **Use DEM**.
   - To calibrate automatically from your GPS starting point, select **Use GPS**.

Xero Location Settings

Hold , and select **Settings** > **Sensors and Accessories** > **XERO Locations**.

Status: Enables the display of laser location information from a compatible, paired Xero device.

Share Mode: Allows you to share laser location information publicly or broadcast it privately.

System Settings

Hold , and select **Settings** > **System**.

Language: Sets the language displayed on the device.

Time: Adjusts the time settings (*Time Settings, page 43*).

Backlight: Adjusts the backlight settings (*Changing the Backlight Settings, page 43*).

Sounds: Sets the device sounds, such as key tones, alerts, and vibrations.

Do Not Disturb: Turns on or off do not disturb mode. Use the Sleep Time option to turn on do not disturb mode automatically during your normal sleep hours. You can set your normal sleep hours on your Garmin Connect account.

Hot Keys: Allows you to assign shortcuts to device keys (*Customizing the Hot Keys, page 43*).

Auto Lock: Allows you to lock the keys automatically

to prevent accidental key presses. Use the During Activity option to lock the keys during a timed activity. Use the Not During Activity option to lock the keys when you are not recording a timed activity.

Units: Sets the units of measure used on the device (*Changing the Units of Measure, page 43*).

Format: Sets general format preferences, such as the pace and speed shown during activities, the start of the week, and geographical position format and datum options.

Data Recording: Sets how the device records activity data. The Smart recording option (default) allows for longer activity recordings. The Every Second recording option provides more detailed activity recordings, but may not record entire activities that last for longer periods of time.

USB Mode: Sets the device to use MTP (media transfer protocol) or Garmin mode when connected to a computer.

Reset: Allows you to reset user data and settings (*Resetting All Default Settings, page 48*).

Software Update: Allows you to install software updates downloaded using Garmin Express.

Time Settings

Hold , and select **Settings** > **System** > **Time**.

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

Set Time: Sets the time zone for the device. The Auto option sets the time zone automatically based on your GPS position.

Time: Allows you to adjust the time if it is set to the Manual option.

Alerts: Allows you to set hourly alerts, as well as sunrise and sunset alerts that sound a specific number of minutes or hours before the actual sunrise or sunset occurs.

Sync With GPS: Allows you to manually sync the time with GPS when you change time zones, and to update for daylight saving time.

Changing the Backlight Settings

1. From the watch face, hold .
2. Select **Settings** > **System** > **Backlight**.
3. Select **During Activity** or **Not During Activity**.
4. Select an option:
   - Select **Keys and Alerts** to turn on the backlight for key presses and alerts.
   - Select **Gesture** to turn on the backlight by raising and turning your arm to look at your wrist.
   - Select **Timeout** to set the length of time before the backlight turns off.
   - Select **Brightness** to set the brightness level of the backlight.

Customizing the Hot Keys

You can customize the hold function of individual keys and combinations of keys.

1. Hold .
2. Select **Settings** > **System** > **Hot Keys**.
3. Select a key or combination of keys to customize.
4. Select a function.

Changing the Units of Measure

You can customize units of measure for distance, pace and speed, elevation, weight, height, and temperature.

1. From the watch face. hold .
2. Select **Settings** > **System** > **Units**.
3. Select a measurement type.
4. Select a unit of measure.

Clocks

Setting an Alarm

You can set up to ten separate alarms. You can set each alarm to sound once or to repeat regularly.

1. From the watch face, hold .
2. Select **Alarm Clock** > **Add Alarm**.
3. Select **Time**, and enter the alarm time.
4. Select **Repeat**, and select when the alarm should repeat (optional).
5. Select **Sounds**, and select a type of notification (optional).
6. Select **Backlight** > **On** to turn on the backlight with the alarm.
7. Select **Label**, and select a description for the alarm (optional).

Deleting an Alarm

1. From the watch face, hold .
2. Select **Alarm Clock**.
3. Select an alarm.
4. Select **Delete**.

Starting the Countdown Timer

1. From any screen, hold **LIGHT**.
2. Select **Timer**.

   NOTE: You may need to add this item to the controls menu.
3. Enter the time.
4. If necessary, select **Restart** > **On** to automatically restart the timer after it expires.
5. If necessary, select **Sounds**, and select a type of notification.
6. Select **Start Timer**.

Using the Stopwatch

1. From any screen, hold **LIGHT**.
2. Select **Stopwatch**.

NOTE: You may need to add this item to the controls menu.

3 Select **START** to start the timer.

4 Select **LAP** to restart the lap timer ①.



The total stopwatch time ② continues running.

5 Select **START** to stop both timers.

6 Select **OPTIONS**.

7 Save the recorded time as an activity in your history (optional).

Syncing the Time with GPS

Each time you turn on the device and acquire satellites, the device automatically detects your time zones and the current time of day. You can also manually sync the time with GPS when you change time zones, and to update for daylight saving time.

1 From the watch face, hold ☰.

2 Select **Settings** > **System** > **Time** > **Sync With GPS**.

3 Wait while the device locates satellites (*Acquiring Satellite Signals, page 47*).

Setting the Time Manually

1 From the watch face, hold ☰.

2 Select **Settings** > **System** > **Time** > **Set Time** > **Manual**.

3 Select **Time**, and enter the time of day.

VIRB Remote

The VIRB remote function allows you to control your VIRB action camera using your device. Go to *Garmin.com.sg/minisite/virb* to purchase a VIRB action camera.

Controlling a VIRB Action Camera

Before you can use the VIRB remote function, you must enable the remote setting on your VIRB camera. See the VIRB Series Owner's Manual for more information. You must also set the VIRB widget to be shown in the widget loop (*Customizing the Widget Loop, page 37*).

1 Turn on your VIRB camera.

2 On your Forerunner watch, select **UP** or **DOWN** to view the VIRB widget.

3 If necessary, select **START** to pair your Forerunner watch with your VIRB camera.

4 Wait while your watch connects to your camera.

5 Select an option:

- To record video, select **Start Recording**.
  The video counter appears on the Forerunner screen.
- To take a photo while recording video, select **DOWN**.
- To stop recording video, select **STOP**.
- To take a photo, select **Take Photo**.
- To take multiple photos in burst mode, select **Take Burst**.
- To send the camera to sleep mode, select **Sleep Camera**.
- To wake the camera from sleep mode, select **Wake Camera**.
- To change video and photo settings, select **Settings**.

Controlling a VIRB Action Camera During an Activity

Before you can use the VIRB remote function, you must enable the remote setting on your VIRB camera. See the VIRB Series Owner's Manual for more information. You must also set the VIRB widget to be shown in the widget loop (*Customizing the Widget Loop, page 37*).

1 Turn on your VIRB camera.

2 On your Forerunner watch, select **UP** or **DOWN** to view the VIRB widget.

3 If necessary, select **START** to pair your Forerunner watch with your VIRB camera.

4 Wait while your watch connects to your camera.

When the camera is connected, a VIRB data screen is automatically added to the activity apps.

5 During an activity, select **UP** or **DOWN** to view the VIRB data screen.

6 Hold ☰.

7 Select **VIRB Remote**.

8 Select an option:

To control the camera using the activity timer, select Settings > Recording Mode > Timer Start/Stop.
NOTE: Video recording automatically starts and stops when you start and stop an activity.

- To control the camera using the menu options, select **Settings** > **Recording Mode** > **Manual**.
- To manually record video, select **Start Recording**.
  The video counter appears on the Forerunner screen.
- To take a photo while recording video, select **DOWN**.
- To manually stop recording video, select **STOP**.
- To take multiple photos in burst mode, select **Take Burst**.
- To send the camera to sleep mode, select **Sleep Camera**.
- To wake the camera from sleep mode, select

Wake Camera.

Device Information

Viewing Device Information

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

1. From the watch face, hold ☰.
2. Select **Settings** > **System** > **About**.

Viewing E-label Regulatory and Compliance Information

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

1. From the watch face, hold ☰.
2. Select **Settings** > **System** > **About**.

Charging the Device

⚠ 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.

NOTICE

To prevent corrosion, thoroughly clean and dry the contacts and the surrounding area before charging or connecting to a computer. Refer to the cleaning instructions in the appendix.

1. Plug the small end of the USB cable into the charging port on your device.



2. Plug the large end of the USB cable into a USB charging port.
3. Charge the device completely.

Tips for Charging the Device

1. Connect the charger securely to the device to charge it using the USB cable (*Charging the Device, page 45*).

   You can charge the device by plugging the USB cable into a Garmin approved AC adapter with a standard wall outlet or a USB port on your computer. Charging a fully depleted battery takes up to two hours.
2. Remove the charger from the device after the battery charge level reaches 100%.

Specifications

NOTICE

Typical value tested under Garmin's laboratory conditions. The actual battery life depends on the features enabled on your device and environmental factors, such as activity tracking, wrist-based heart rate, smartphone notifications frequency, GPS status, internal sensors, and connected sensors.

Forerunner Specifications

Battery type		Rechargeable, built-in lithium-ion battery
Battery life	Smartwatch mode	Up to 14 days
	GPS mode	Up to 32 times
	Smartwatch mode with music	Up to 14 times
	GPS mode with music	Up to 10 times
Operating temperature range		From -20º to 45ºC (from -4º to 113ºF)
Charging temperature range		From 0º to 45ºC (from 32º to 113ºF)
Forerunner 945 Music media storage		Approximately 1000 songs
Water rating		Swim, 5 ATM*

*The device withstands pressure equivalent to a depth of 50 m. For more information, go to *Garmin.com.sg/legal/waterrating*.

HRM-Swim Specifications and HRM-Tri Specifications

Battery type	User-replaceable CR2032 (3 V)
HRM-Swim battery life	Up to 18 mo. (approximately 3 hr./wk.)
HRM-Tri battery life	Up to 10 mo. for triathlon training (approximately 1 hr./day)
Operating temperature range	From -10° to 50°C (from 14° to 122°F)
Water rating	Swim, 5 ATM*

*The device withstands pressure equivalent to a depth of 50 m. For more information, go to *Garmin.com.sg/legal/waterrating*.

Device Care

NOTICE

Avoid extreme shock and harsh treatment, because it can degrade the life of the product.

Avoid pressing the keys under water.

Do not use a sharp object to clean the device.

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

Thoroughly rinse the device with fresh water after exposure to chlorine, salt water, sunscreen, cosmetics, alcohol, or other harsh chemicals. Prolonged exposure to these substances can damage the case.

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

Cleaning the Device

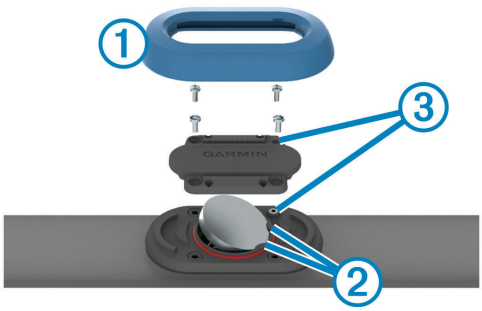
1. Wipe the device using a cloth dampened with a mild detergent solution.
2. Wipe it dry

After cleaning, allow the device to dry completely.

TIP: For more information, go to *Garmin.com.sg/legal/fit-and-care*.

Replacing the HRM-Swim Battery and the HRM-Tri Battery

1. Remove the sleeve ① from the heart rate monitor module.



2. Use a small Phillips (00) screwdriver to remove the four screws on the front of the module.
3. Remove the cover and battery.
4. Wait 30 seconds.
5. Insert the new battery under the two plastic tabs ② with the positive side facing up.

   NOTE: Do not damage or lose the O-ring gasket.

   The O-ring gasket should remain around the outside of the raised plastic ring.
6. Replace the front cover and the four screws.

   Observe the orientation of the front cover. The raised screw ③ should fit in the matching raised screw hole on the front cover.

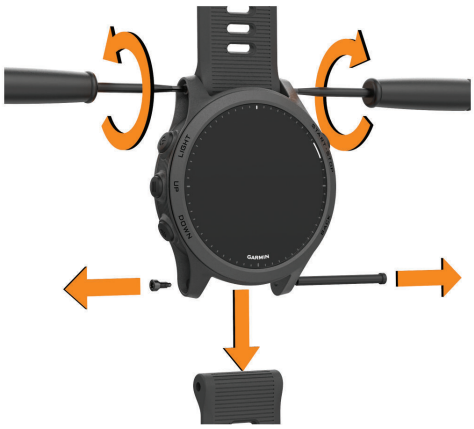
   NOTE: Do not overtighten.
7. Replace the sleeve.

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

Changing the Bands

You can replace the bands with new Forerunner bands or compatible QuickFit® bands.

1. Use the two screwdrivers to loosen the pins.



2. Remove the pins.
3. Select an option:
   - To install Forerunner bands, align the new bands, and replace the pins using the two screwdrivers.
   - To install QuickFit bands, replace the pins, and press the new bands into place.







NOTE: Make sure the band is secure. The latch should close over the watch pin.

Troubleshooting

Product Updates

On your computer, install Garmin Express (*Garmin.com.sg/express*). On your smartphone, install the Garmin Connect app. This provides easy access to these services for Garmin devices:

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

Setting Up Garmin Express

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

Getting More Information

- Go to *Garmin.com.sg/buy* for additional manuals, articles, and software updates.
- Go to *buy.garmin.com*, or contact your Garmin dealer for information about optional accessories and replacement parts.
- Go to *Garmin.com.sg/legal/atdisclaimer*.

  This is not a medical device. The pulse oximeter feature is not available in all countries.

Activity Tracking

For more information about activity tracking accuracy, go to *Garmin.com.sg/legal/atdisclaimer*.

My daily step count does not appear

The daily step count is reset every night at midnight.

If dashes appear instead of your step count, allow the device to acquire satellite signals and set the time automatically.

My step count does not seem accurate

If your step count does not seem accurate, you can try these tips.

- Wear the device on your non-dominant wrist.
- Carry the device in your pocket when pushing a stroller or lawn mower.
- Carry the device in your pocket when actively using your hands or arms only.

  NOTE: The device may interpret some repetitive motions, such as washing dishes, folding laundry, or clapping your hands, as steps.

The step counts on my device and my Garmin Connect account don't match

The step count on your Garmin Connect account updates when you sync your device.

1. Select an option:
   - Sync your step count with the Garmin Connect application (*Using Garmin Connect on Your Computer, page 31*).
   - Sync your step count with the Garmin Connect app (*Manually Syncing Data with Garmin Connect, page 25*).
2. Wait while the device syncs your data.

   Syncing can take several minutes.

   NOTE: Refreshing the Garmin Connect app or the Garmin Connect application does not sync your data or update your step count.

The floors climbed amount does not seem accurate

Your device uses an internal barometer to measure elevation changes as you climb floors. A floor climbed is equal to 3 m (10 ft.).

- Locate the small barometer holes on the back of the device, near the charging contacts, and clean the area around the charging contacts.

  The barometer performance may be affected if the barometer holes are obstructed. You can rinse the device with water to clean the area.

  After cleaning, allow the device to dry completely.
- Avoid holding handrails or skipping steps while climbing stairs.
- In windy environments, cover the device with your sleeve or jacket as strong gusts can cause erratic readings.

My intensity minutes are flashing

When you exercise at an intensity level that qualifies toward your intensity minutes goal, the intensity minutes flash.

Exercise for at least 10 consecutive minutes at a moderate or vigorous intensity level.

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.

TIP: For more information about GPS, go to *Garmin.com.sg/about-gps*.

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.

Improving GPS Satellite Reception

- Frequently 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 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.

Restarting the Device

If the device stops responding, you may need to restart it.

NOTE: Restarting the device may erase your data or settings.

1. Hold ⏻ for 15 seconds.

   The device turns off.
2. Hold ⏻ for one second to turn on the device.

Resetting All Default Settings

NOTE: This deletes all user-entered information and activity history. If you have set up a Garmin Pay wallet, restoring default settings also deletes the wallet from your device.

You can reset all of the device settings to the factory default values.

1. From the watch face, hold ☰.
2. Select **Settings** > **System** > **Reset**.
3. Select an option:
   - To reset all of the device settings to the factory default values and save all activity information and stored music, select **Reset Default Settings**.
   - To delete all activities from your history, select **Delete All Activities**.
   - To reset all distance and time totals, select **Reset Totals**.
   - To reset the all of the device settings to the factory default values and delete all activity information and stored music, select **Delete Data and Reset Settings**.

Updating the Software Using the Garmin Connect App

Before you can update your device software using the Garmin Connect app, you must have a Garmin Connect account, and you must pair the device with a compatible smartphone (*Pairing Your Smartphone with Your Device, page 23*).

Sync your device with the Garmin Connect app (*Manually Syncing Data with Garmin Connect, page 25*).

When new software is available, the Garmin Connect app automatically sends the update to your device.

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.

My device is in the wrong language

You can change the device language selection if you have accidently selected the wrong language on the device.

1. Hold ☰.
2. Scroll down to the last item in the list, and select **START**.
3. Select the first item in the list.
4. Use **UP** and **DOWN** to select your language.

Is my smartphone compatible with my device?

The Forerunner device is compatible with smartphones using Bluetooth wireless technology.

Go to *Garmin.com.sg/ble* for compatibility information.

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.

  If you are using an Apple device, you should also remove your device from the Bluetooth settings on your smartphone.
- If you bought a new smartphone, remove your device from the Garmin Connect app on the

smartphone you intend to stop using.

- Bring your smartphone within 10 m (33 ft.) of the device.
- On your smartphone, open the Garmin Connect app, select ☰ or •••, and select **Garmin Devices** > **Add Device** to enter pairing mode.
- Select **Menu** > **Settings** > **Phone** > **Pair Phone**.

Maximizing Battery Life

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

- Reduce the backlight timeout (*Changing the Backlight Settings, page 43*).
- Reduce the backlight brightness.
- Turn off Bluetooth wireless technology when you are not using connected features (*Bluetooth Connected Features, page 24*).
- When pausing your activity for a longer period of time, use the **Resume Later** option (*Stopping an Activity, page 2*).
- Turn off activity tracking (*Turning Off Activity Tracking, page 11*).
- Use a watch face that is not updated every second.

  For example, use a watch face without a second hand (*Customizing the Watch Face, page 41*).
- Limit the smartphone notifications the device displays (*Managing Notifications, page 24*).
- Stop broadcasting heart rate data to paired Garmin devices (*Broadcasting Heart Rate Data to Garmin® Devices, page 12*).
- Turn off wrist-based heart rate monitoring (*Turning Off the Wrist-based Heart Rate Monitor, page 12*).

  NOTE: Wrist-based heart rate monitoring is used to calculate vigorous intensity minutes and calories burned.
- Turn off the pulse oximeter feature (*Turning Off the Wrist-based Heart Rate Monitor, page 12*).
- Use UltraTrac GPS mode for your activity (*UltraTrac, page 41*).
- Select the **Smart** recording interval (*System Settings, page 42*).

The temperature reading is not accurate

Your body temperature affects the temperature reading for the internal temperature sensor. To get the most accurate temperature reading, you should remove the watch from your wrist and wait 20 to 30 minutes.

You can also use an optional tempe external temperature sensor to view accurate ambient temperature readings while wearing the watch.

How can I manually pair ANT+ sensors?

You can use the device settings to manually pair ANT+ sensors. The first time you connect a sensor to your device using ANT+ wireless technology, you must pair the device and sensor. After they are paired, the device connects to the sensor automatically when you start an activity and the sensor is active and within range.

1. Stay 10 m (33 ft.) away from other ANT+ sensors while pairing.
2. If you are pairing a heart rate monitor, put on the heart rate monitor.

   The heart rate monitor does not send or receive data until you put it on.
3. Hold ☰.
4. Select **Settings** > **Sensors and Accessories** > **Add New**.
5. Select an option:
   - Select **Search All**.
   - Select your sensor type.

   After the sensor is paired with your device, a message appears. Sensor data appears in the data page loop or a custom data field.

Can I use my Bluetooth sensor with my watch?

The device is compatible with some Bluetooth sensors. The first time you connect a sensor to your Garmin device, you must pair the device and sensor. After they are paired, the device connects to the sensor automatically when you start an activity and the sensor is active and within range.

1. Hold ☰.
2. Select **Settings** > **Sensors and Accessories** > **Add New**.
3. Select an option:
   - Select **Search All**.
   - Select your sensor type.

   You can customize the optional data fields (*Customizing the Data Screens, page 38*).

My music cuts out or my headphones do not stay connected

When using a Forerunner device connected to headphones using Bluetooth technology, the signal is strongest when there is a direct line of sight between the device and the antenna on the headphones.

- If the signal passes through your body, you may experience signal loss or your headphones may become disconnected.
- It is recommended to wear your headphones with the antenna on the same side of your body as your Forerunner device.

Appendix

Data Fields

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

% Heart Rate Reserve: The percentage of heart rate reserve (maximum heart rate minus resting heart rate).

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

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

24-Hour Maximum: The maximum temperature recorded in the last 24 hours from a compatible temperature sensor.

24-Hour Minimum: The minimum temperature recorded in the last 24 hours from a compatible temperature sensor.

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

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

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

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

500m Pace: The current rowing pace per 500 meters.

Aerobic Training Effect: The impact of the current activity on your aerobic fitness level.

Ambient Pressure: The uncalibrated ambient pressure.

Anaerobic Training Effect: The impact of the current activity on your anaerobic fitness level.

Average % Heart Rate Reserve: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the current activity.

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

Average Cadence: Cycling. The average cadence for the current activity.

Average Cadence: Running. The average cadence for the current activity.

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

Average Distance Per Stroke: Swimming. The average distance traveled per stroke during the current activity.

Average Distance Per Stroke: Paddle sports. The average distance traveled per stroke during the current activity.

Average GCT Balance: The average ground contact time balance for the current session.

Average Ground Contact Time: The average amount of ground contact time for the current activity.

Average Heart Rate: The average heart rate for the current activity.

Average Heart Rate %Max.: The average percentage of maximum heart rate for the current activity.

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

Average Left Power Phase: The average power phase angle for the left leg for the current activity.

Average Nautical Speed: The average speed in knots for the current activity.

Average Overall Speed: The average speed for the current activity, including both moving and stopped speeds.

Average Pace: The average pace for the current activity.

Average Power: The average power output for the current activity.

Average Stride Length: The average stride length for the current session.

Average Stroke Rate: Paddle sports. The average number of strokes per minute (spm) during the current activity.

Average Strokes Per Length: The average number of strokes per pool length during the current activity.

Average Swolf: The average swolf score for the current activity. Your swolf score is the sum of the time for one length plus the number of strokes for that length (*Swim Terminology, page 3*). In open water swimming, 25 meters is used to calculate your swolf score.

Average Vertical Oscillation: The average amount of vertical oscillation for the current activity.

Average Vertical Ratio: The average ratio of vertical oscillation to stride length for the current session.

Avg. Left Peak Power Phase: The average power phase peak angle for the left leg for the current activity.

Avg. Moving Speed: The average speed when moving for the current activity.

Avg. Platform Center Offset: The average platform center offset for the current activity.

Avg. Right Peak Power Phase: The average power phase peak angle for the right leg for the current activity.

Avgerage Speed: The average speed for the current activity.

Balance: The current left/right power balance.

Barometric Pressure: The current calibrated environmental pressure.

Battery Level: The remaining battery power.

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

Cadence: Cycling. The number of revolutions of the

crank arm. Your device must be connected to a cadence accessory for this data to appear.

Cadence: Running. The steps per minute (right and left).

Calories: The amount of total calories burned.

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

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

Destination Location: The position of your final destination.

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

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

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

Distance Per Stroke: Paddle sports. The distance traveled per stroke.

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

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

Elapsed Time: 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.

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

Estimated Total Distance: The estimated distance from the start to the final destination. You must be navigating for this data to appear.

ETA: 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.

ETE: The estimated time remaining until you reach the final destination. You must be navigating for this data to appear.

Floors Climbed: The total number of floors climbed up for the day.

Floors Descended: The total number of floors climbed down for the day.

Floors per Minute: The number of floors climbed up per minute.

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

GCT Balance: The left/right balance of ground contact time while running.

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.

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

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

GPS: The strength of the GPS satellite signal.

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

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

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%.

Ground Contact Time: The amount of time in each step that you spend on the ground while running, measured in milliseconds. Ground contact time is not calculated while walking.

Heading: The direction you are moving.

Heart Rate: Your heart rate in beats per minute (bpm).

Heart Rate %Max.: The percentage of maximum heart rate.

Heart Rate 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).

Intensity Factor: The Intensity Factor™ for the current activity.

Interval Average %HRR: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the current swim interval.

Interval Average %Max.: The average percentage of maximum heart rate for the current swim interval.

Interval Average Heart Rate: The average heart rate for the current swim interval.

Interval Distance: The distance traveled for the current interval.

Interval Lengths: The number of pool lengths completed during the current interval.

Interval Maximum %HRR: The maximum percentage of heart rate reserve (maximum heart rate minus

resting heart rate) for the current swim interval.

Interval Maximum %Max.: The maximum percentage of maximum heart rate for the current swim interval.

Interval Maximum Heart Rate: The maximum heart rate for the current swim interval.

Interval Pace: The average pace for the current interval.

Interval Stroke Rate: The average number of strokes per minute (spm) during the current interval.

Interval Strokes Per Length: The average number of strokes per pool length during the current interval.

Interval Stroke Type: The current stroke type for the interval.

Interval Swolf: The average swolf score for the current interval.

Interval Time: The stopwatch time for the current interval.

Lap % Heart Rate Reserve: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the current lap.

Lap 500m Pace: The average rowing pace per 500 meters for the current lap.

Lap Ascent: The vertical distance of ascent for the current lap.

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

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

Lap Cadence: Running. The average cadence for the current lap.

Lap Descent: The vertical distance of descent for the current lap.

Lap Distance: The distance traveled for the current lap.

Lap Distance Per Stroke: Swimming. The average distance traveled per stroke during the current lap.

Lap GCT Balance: The average ground contact time balance for the current lap.

Lap Ground Contact Time: The average amount of ground contact time for the current lap.

Lap Heart Rate: The average heart rate for the current lap.

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

Lap Left Peak Power Phase: The average power phase peak angle for the left leg for the current lap.

Lap Left Power Phase: The average power phase angle for the left leg for the current lap.

Lap Normalized Power: The average Normalized Power for the current lap.

Lap Pace: The average pace for the current lap.

Lap Platform Center Offset: The average platform center offset for the current lap.

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

Lap Right Peak Power Phase: The average power phase peak angle for the right leg for the current lap.

Lap Right Power Phase: The average power phase angle for the right leg for the current lap.

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

Lap Speed: The average speed for the current lap.

Lap Stride Length: The average stride length for the current lap.

Lap Stroke Rate: Swimming. The average number of strokes per minute (spm) during the current lap.

Lap Stroke Rate: Paddle sports. The average number of strokes per minute (spm) during the current lap.

Lap Strokes: Swimming. The total number of strokes for the current lap.

Lap Strokes: Paddle sports. The total number of strokes for the current lap.

Lap Swolf: The swolf score for the current lap.

Lap Time: The stopwatch time for the current lap.

Lap Vertical Oscillation: The average amount of vertical oscillation for the current lap.

Lap Vertical Ratio: The average ratio of vertical oscillation to stride length for the current lap.

Last Lap %HRR: The average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the last completed lap.

Last Lap 500m Pace: The average rowing pace per 500 meters for the last lap.

Last Lap Ascent: The vertical distance of ascent for the last completed lap.

Last Lap Cadence: Cycling. The average cadence for the last completed lap.

Last Lap Cadence: Running. The average cadence for the last completed lap.

Last Lap Descent: The vertical distance of descent for the last completed lap.

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

Last Lap Distance Per Stroke: Swimming. The average distance traveled per stroke during the last completed lap.

Last Lap Distance Per Stroke: Paddle sports. The average distance traveled per stroke during the last completed lap.

Last Lap Heart Rate: The average heart rate for the last completed lap.

Last Lap Heart Rate %Max.: The average percentage of maximum heart rate for the last completed lap.

Last Lap Normalized Power: The average Normalized Power for the last completed lap.

Last Lap Pace: The average pace for the last completed lap.

Last Lap Power: The average power output for the last completed lap.

Last Lap Speed: The average speed for the last completed lap.

Last Lap Stroke Rate: Swimming. The average number of strokes per minute (spm) during the last completed lap.

Last Lap Stroke Rate: Paddle sports. The average number of strokes per minute (spm) during the last completed lap.

Last Lap Strokes: Swimming. The total number of strokes for the last completed lap.

Last Lap Strokes: Paddle sports. The total number of strokes for the last completed lap.

Last Lap Swolf: The swolf score for the last completed lap.

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

Last Length Pace: The average pace for your last completed pool length.

Last Length Stroke Rate: The average number strokes per minute (spm) during the last completed pool length.

Last Length Strokes: The total number of strokes for the last completed pool length.

Last Length Stroke Type: The stroke type used during the last completed pool length.

Last Length Swolf: The swolf score for the last completed pool length.

Lat/Lon: The current position in latitude and longitude regardless of the selected position format setting.

Left Peak Power Phase: 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.

Left Power Phase: The current power phase angle for the left leg. Power phase is the pedal stroke region where positive power is produced.

Lengths: The number of pool lengths completed during the current activity.

Load: The training load for the current activity. Training load is the amount of excess post-exercise oxygen consumption (EPOC), which indicates the strenuousness of your workout.

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

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

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

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

Maximum Lap Power: The top power output for the current lap.

Maximum Nautical Speed: The maximum speed in knots for the current activity.

Maximum Power: The top power output for the current activity.

Maximum Speed: The top speed for the current activity.

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

Moving Time: The total time moving for the current activity.

Multisport Time: The total time for all sports in a multisport activity, including transitions.

Muscle O2 Saturation %: The estimated muscle oxygen saturation percentage for the current activity.

Nautical Distance: The distance traveled in nautical meters or nautical feet.

Nautical Speed: The current speed in knots.

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

Normalized Power: The Normalized Power™ for the current activity.

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

Pace: The current pace.

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.

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

Power: The current power output in watts.

Power to Weight: The current power measured in watts per kilogram.

Power Zone: The current range of power output (1 to 7) based on your FTP or custom settings.

Rear: The rear bike gear from a gear position sensor.

Repeat On: The timer for the last interval plus the current rest (pool swimming).

Reps: During a strength training activity, the number of repetitions in a workout set.

Respiration Rate: Your respiration rate in breaths per minute (brpm).

Rest Timer: The timer for the current rest (pool swimming).

Right Peak Power Phase: 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.

Right Power Phase: The current power phase angle for the right leg. Power phase is the pedal stroke region where positive power is produced.

Set Timer: During a strength training activity, the amount of time spent in the current workout set.

Speed: The current rate of travel.

Stopped Time: The total time stopped for the current activity.

Stride Length: The length of your stride from one footfall to the next, measured in meters.

Stroke Rate: Swimming. The number of strokes per minute (spm).

Stroke Rate: Paddle sports. The number of strokes per minute (spm).

Strokes: Swimming. The total number of strokes for the current activity.

Strokes: Paddle sports. The total number of strokes for the current activity.

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

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

Temperature: The temperature of the air. Your body temperature affects the temperature sensor. You can pair a tempe sensor with your device to provide a consistent source of accurate temperature data.

Time in Zone: The time elapsed in each heart rate or power zone.

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

Timer: The current time of the countdown timer.

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

Torque Efficiency: 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.

Total Hemoglobin: The estimated total hemoglobin concentration in the muscle.

Training Stress Score: The Training Stress Score™ for the current activity.

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

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

Vertical Oscillation: The amount of bounce while you are running. The vertical motion of your torso, measured in centimeters for each step.

Vertical Ratio: The ratio of vertical oscillation to stride length.

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

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

Work: The accumulated work performed (power output) in kilojoules.

VO2 Max. Standard Ratings

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

Males	Percentile	20–29	30–39	40–49	50–59	60–69	70–79
Superior	95	55.4	54	52.5	48.9	45.7	42.1
Excellent	80	51.1	48.3	46.4	43.4	39.5	36.7
Good	60	45.4	44	42.4	39.2	35.5	32.3
Fair	40	41.7	40.5	38.5	35.6	32.3	29.4
Poor	0–40	<41.7	<40.5	<38.5	<35.6	<32.3	<29.4

Females	Percentile	20–29	30–39	40–49	50–59	60–69	70–79
Superior	95	49.6	47.4	45.3	41.1	37.8	36.7
Excellent	80	43.9	42.4	39.7	36.7	33	30.9
Good	60	39.5	37.8	36.3	33	30	28.1
Fair	40	36.1	34.4	33	30.1	27.5	25.9
Poor	0–40	<36.1	<34.4	<33	<30.1	<27.5	<25.9

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FTP Ratings

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

Males	Watts per Kilogram (W/kg)
Superior	5.05 and greater
Excellent	From 3.93 to 5.04
Good	From 2.79 to 3.92
Fair	From 2.23 to 2.78
Untrained	Less than 2.23

Females	Watts per Kilogram (W/kg)
Superior	4.30 and greater
Excellent	From 3.33 to 4.29
Good	From 2.36 to 3.32
Fair	From 1.90 to 2.35
Untrained	Less than 1.90

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

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.

Tire Size	Wheel Circumference (mm)
20 × 1.75	1515
20 × 1-3/8	1615
22 × 1-3/8	1770
22 × 1-1/2	1785
24 × 1	1753
24 × 3/4 Tubular	1785
24 × 1-1/8	1795
24 × 1.75	1890
24 × 1-1/4	1905
24 × 2.00	1925
24 × 2.125	1965
26 × 7/8	1920
26 × 1-1.0	1913
26 × 1	1952
26 × 1.25	1953
26 × 1-1/8	1970
26 × 1.40	2005
26 × 1.50	2010
26 × 1.75	2023
26 × 1.95	2050
26 × 2.00	2055
26 × 1-3/8	2068
26 × 2.10	2068
26 × 2.125	2070
26 × 2.35	2083
26 × 1-1/2	2100
26 × 3.00	2170
27 × 1	2145
27 × 1-1/8	2155
27 × 1-1/4	2161
27 × 1-3/8	2169
29 x 2.1	2288
29 x 2.2	2298
29 x 2.3	2326
650 x 20C	1938
650 x 23C	1944
650 × 35A	2090
650 × 38B	2105
650 × 38A	2125
700 × 18C	2070
700 × 19C	2080
700 × 20C	2086
700 × 23C	2096
700 × 25C	2105
700C Tubular	2130
700 × 28C	2136
700 × 30C	2146
700 × 32C	2155
700 × 35C	2168
700 × 38C	2235
700 × 40C	2200
700 × 44C	2235
700 × 45C	2242
700 × 47C	2268

Symbol Definitions

These symbols may appear on the device or accessory labels.

	WEEE disposal and recycling symbol. The WEEE symbol is attached to the product in compliance with the EU directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE). It is intended to deter the improper disposal of this product and to promote reuse and recycling.

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