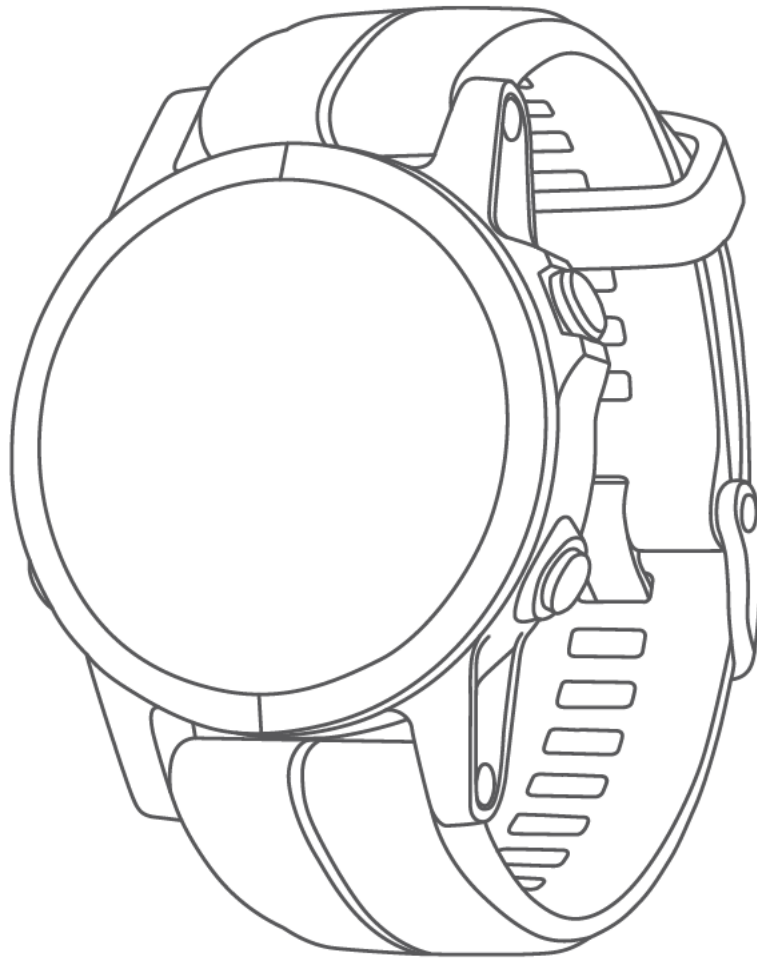


GARMIN.



FĒNIX[®] 5/5S/5X PLUS

Owner's Manual

© 2018 Garmin Ltd. or its subsidiaries

All rights reserved. Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Garmin. Garmin reserves the right to change or improve its products and to make changes in the content of this manual without obligation to notify any person or organization of such changes or improvements. Go to www.garmin.com for current updates and supplemental information concerning the use of this product.

Garmin®, the Garmin logo, ANT+®, Auto Lap®, Auto Pause®, Edge®, fēnix®, TracBack®, VIRB®, and Virtual Partner® are trademarks of Garmin Ltd. or its subsidiaries, registered in the USA and other countries. Connect IQ™, Garmin Connect™, Garmin Explore™, Garmin Express™, Garmin Golf™, Garmin Move IQ™, Garmin Pay™, HRM-Run™, HRM-Swim™, HRM-Tri™, QuickFit™, tempe™, TruSwing™, Varia™, Varia Vision™, Vector™, and Xero™ are trademarks of Garmin Ltd. or its subsidiaries. These trademarks may not be used without the express permission of Garmin.

American Heart Association® is a registered trademark of American Heart Association, Inc. Android™ is a trademark of Google Inc. Apple® and Mac® are trademarks of Apple Inc., registered in the U.S. and other countries. The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Garmin is under license. The Cooper Institute®, as well as any related trademarks, are the property of The Cooper Institute. D12™ is a trademark of Shimano, Inc. Shimano® is a registered trademark of Shimano, Inc. STRAVA and Strava™ are trademarks of Strava, Inc. Advanced heartbeat analytics by Firstbeat. Training Stress Score™ (TSS), Intensity Factor™ (IF), and Normalized Power™ (NP) are trademarks of Peaksware, LLC. Wi-Fi® is a registered mark of Wi-Fi Alliance Corporation. Windows® is a registered trademark of Microsoft Corporation in the United States and other countries. Other trademarks and trade names are those of their respective owners.

This product is ANT+® certified. Visit www.thisisant.com/directory for a list of compatible products and apps.

Table of Contents

Introduction	1
Device Overview.....	1
Viewing the Controls Menu.....	1
Viewing Widgets.....	1
Charging the Device.....	1
Pairing Your Smartphone with Your Device.....	1
Product Updates.....	1
Setting Up Garmin Express.....	2
Activities and Apps	2
Starting an Activity.....	2
Tips for Recording Activities.....	2
Stopping an Activity.....	2
Adding or Removing a Favorite Activity.....	2
Creating a Custom Activity.....	2
Indoor Activities.....	2
Recording a Strength Training Activity.....	2
Outdoor Activities.....	3
Viewing Your Ski Runs.....	3
Using the Metronome.....	3
Playing Audio Prompts During an Activity.....	3
Jumpmaster.....	3
Multisport.....	3
Creating a Multisport Activity.....	3
Tips for Triathlon Training or Using Multisport Activities.....	3
Swimming.....	4
Swim Terminology.....	4
Stroke Types.....	4
Tips for Swimming Activities.....	4
Resting During Pool Swimming.....	4
Training with the Drill Log.....	4
Golfing.....	4
Playing Golf.....	4
Hole Information.....	4
Moving the Flag.....	4
Viewing Hazards.....	5
Measuring a Shot.....	5
Viewing Layup and Dogleg Distances.....	5
Keeping Score.....	5
Updating a Score.....	5
TruSwing™.....	5
Using the Golf Odometer.....	5
Tracking Statistics.....	5
Connected Features	5
Enabling Bluetooth Notifications.....	5
Viewing Notifications.....	6
Receiving an Incoming Phone Call.....	6
Replying to a Text Message.....	6
Managing Notifications.....	6
Turning Off the Bluetooth Smartphone Connection.....	6
Turning On and Off Smartphone Connection Alerts.....	6
Locating a Lost Mobile Device.....	6
Garmin Connect.....	6
Updating the Software Using Garmin Connect Mobile.....	6
Updating the Software Using Garmin Express.....	7
Using Garmin Connect on Your Computer.....	7
Manually Syncing Data with Garmin Connect Mobile.....	7
Garmin Golf™ App.....	7
Starting a GroupTrack Session.....	7
Tips for GroupTrack Sessions.....	7
Garmin Explore™.....	7
Wi-Fi® Connected Features	7
Setting Up Wi-Fi Connectivity.....	7
Connect IQ Features	8

Downloading Connect IQ Features.....	8
Downloading Connect IQ Features Using Your Computer.....	8
Garmin Pay	8
Setting Up Your Garmin Pay Wallet.....	8
Paying for a Purchase Using Your Watch.....	8
Adding a Card to Your Garmin Pay Wallet.....	8
Managing Your Garmin Pay Wallet.....	8
Changing Your Garmin Pay Passcode.....	9
Music	9
Connecting to a Third-Party Provider.....	9
Downloading Audio Content from a Third-Party Provider.....	9
Disconnecting from a Third-Party Provider.....	9
Downloading Personal Audio Content.....	9
Listening to Downloaded Music.....	9
Music Playback Controls.....	9
Connecting Headphones using Bluetooth Technology.....	9
Heart Rate Features	10
Wrist-based Heart Rate.....	10
Wearing the Device.....	10
Tips for Erratic Heart Rate Data.....	10
Viewing the Heart Rate Widget.....	10
Broadcasting Heart Rate Data to Garmin Devices.....	10
Broadcasting Heart Rate Data During an Activity.....	10
Turning Off the Wrist-based Heart Rate Monitor.....	10
Putting On the Heart Rate Monitor.....	10
Tips for Erratic Heart Rate Data.....	11
Caring for the Heart Rate Monitor.....	11
Running Dynamics.....	11
Training with Running Dynamics.....	11
Color Gauges and Running Dynamics Data.....	11
Ground Contact Time Balance Data.....	12
Vertical Oscillation and Vertical Ratio Data.....	12
Tips for Missing Running Dynamics Data.....	12
Performance Measurements.....	12
Turning Off Performance Notifications.....	13
Detecting Performance Measurements Automatically.....	13
Training Status.....	13
Tips for Getting Your Training Status.....	13
About VO2 Max. Estimates.....	13
Getting Your VO2 Max. Estimate for Running.....	14
Getting Your VO2 Max. Estimate for Cycling.....	14
Recovery Time.....	14
Viewing Your Recovery Time.....	14
Recovery Heart Rate.....	14
Training Load.....	14
Viewing Your Predicted Race Times.....	14
About Training Effect.....	14
Heart Rate Variability and Stress Level.....	15
Viewing Your Heart Rate Variability and Stress Level.....	15
Performance Condition.....	15
Viewing Your Performance Condition.....	15
Lactate Threshold.....	15
Performing a Guided Test to Determine Your Lactate Threshold.....	15
Getting Your FTP Estimate.....	15
Conducting an FTP Test.....	16
Pulse Oximeter	16
Viewing the Pulse Oximeter Widget.....	16
Turning On All-Day Acclimation Mode.....	16
Turning On Manual Acclimation Mode.....	16
Tips for Erratic Pulse Oximeter Data.....	16
Training	17
Setting Up Your User Profile.....	17
Fitness Goals.....	17

About Heart Rate Zones	17	Compass	23
Setting Your Heart Rate Zones	17	Altimeter and Barometer	23
Letting the Device Set Your Heart Rate Zones	17	History	23
Heart Rate Zone Calculations	17	Using History	23
Setting Your Power Zones	17	Multisport History	24
Activity Tracking	17	Viewing Your Time in Each Heart Rate Zone	24
Auto Goal	18	Viewing Data Totals	24
Using the Move Alert	18	Using the Odometer	24
Sleep Tracking	18	Deleting History	24
Using Automated Sleep Tracking	18	Customizing Your Device	24
Using Do Not Disturb Mode	18	Activities and App Settings	24
Intensity Minutes	18	Customizing the Data Screens	24
Earning Intensity Minutes	18	Adding a Map to an Activity	25
Garmin Move IQ™	18	Alerts	25
Activity Tracking Settings	18	Setting an Alert	25
Turning Off Activity Tracking	18	Activity Map Settings	25
Workouts	18	Routing Settings	25
Following a Workout From the Web	18	Auto Lap	26
Starting a Workout	19	Marking Laps by Distance	26
About the Training Calendar	19	Enabling Auto Pause	26
Using Garmin Connect Training Plans	19	Enabling Auto Climb	26
Interval Workouts	19	3D Speed and Distance	26
Creating an Interval Workout	19	Turning On and Off the Lap Key	26
Starting an Interval Workout	19	Using Auto Scroll	26
Stopping an Interval Workout	19	UltraTrac	26
Segments	19	Power Save Timeout Settings	27
Strava™ Segments	19	Changing the Order of an Activity in the Apps List	27
Viewing Segment Details	19	Widgets	27
Racing a Segment	20	Customizing the Widget Loop	27
Setting a Segment to Adjust Automatically	20	VIRB Remote	27
Using Virtual Partner®	20	Controlling a VIRB Action Camera	27
Setting a Training Target	20	Controlling a VIRB Action Camera During an Activity	27
Cancelling a Training Target	20	Using the Stress Level Widget	28
Racing a Previous Activity	20	Customizing the Controls Menu	28
Personal Records	20	Watch Face Settings	28
Viewing Your Personal Records	20	Customizing the Watch Face	28
Restoring a Personal Record	20	Sensors Settings	28
Clearing a Personal Record	20	Compass Settings	28
Clearing All Personal Records	21	Calibrating the Compass Manually	28
Clock	21	Setting the North Reference	29
Setting an Alarm	21	Altimeter Settings	29
Deleting an Alarm	21	Calibrating the Barometric Altimeter	29
Starting the Countdown Timer	21	Barometer Settings	29
Using the Stopwatch	21	Calibrating the Barometer	29
Adding Alternate Time Zones	21	Map Settings	29
Setting Clock Alerts	21	Marine Map Settings	29
Syncing the Time with GPS	21	Showing and Hiding Map Data	29
Navigation	21	GroupTrack Settings	29
Saving Your Location	21	Navigation Settings	29
Editing Your Saved Locations	21	Customizing Map Features	30
Projecting a Waypoint	21	Setting Up a Heading Bug	30
Navigating to a Destination	22	Setting Navigation Alerts	30
Navigating to a Point of Interest	22	System Settings	30
Points of Interest	22	Time Settings	30
Creating and Following a Course on Your Device	22	Changing the Backlight Settings	30
Creating a Round-Trip Course	22	Customizing the Hot Keys	30
Marking and Starting Navigation to a Man Overboard		Changing the Units of Measure	30
Location	22	Viewing Device Information	30
Navigating with Sight 'N Go	22	Viewing E-label Regulatory and Compliance Information	30
Navigating to Your Starting Point During an Activity	22	Wireless Sensors	31
Navigating to the Starting Point of Your Last Saved Activity	22	Pairing Your Wireless Sensors	31
Stopping Navigation	23	Using an Optional Bike Speed or Cadence Sensor	31
Map	23	Training with Power Meters	31
Viewing the Map	23	Using Electronic Shifters	31
Saving or Navigating to a Location on the Map	23	Situational Awareness	31
Navigating with the Around Me Feature	23		

Foot Pod	31
Improving Foot Pod Calibration	31
Calibrating Your Foot Pod Manually	31
Setting Foot Pod Speed and Distance	31
tempe™	32
Device Information	32
fēnix 5/5S/5X Plus Specifications	32
Battery Information	32
Data Management	32
Disconnecting the USB Cable	32
Deleting Files	32
Device Maintenance	32
Device Care	32
Cleaning the Device	32
Cleaning the Leather Bands	32
Changing the QuickFit™ Bands	32
Metal Watch Band Adjustment	33
Troubleshooting	33
My device is in the wrong language	33
Is my smartphone compatible with my device?	33
My phone will not connect to the device	33
Can I use my Bluetooth sensor with my watch?	33
My headphones will not connect to the device	33
My music cuts out or my headphones do not stay connected ..	33
Resetting Your Device	33
Resetting All Default Settings	33
Acquiring Satellite Signals	33
Improving GPS Satellite Reception	34
The temperature reading is not accurate	34
Maximizing the Battery Life	34
Activity Tracking	34
My daily step count does not appear	34
My step count does not seem accurate	34
The step counts on my device and my Garmin Connect account don't match	34
The floors climbed amount does not seem accurate	34
My intensity minutes are flashing	34
Getting More Information	34
Appendix	34
Data Fields	34
VO2 Max. Standard Ratings	38
FTP Ratings	38
Wheel Size and Circumference	38
Symbol Definitions	39
Index	40

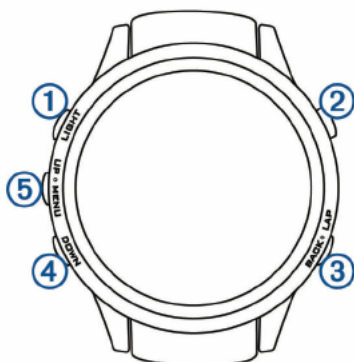
Introduction

⚠ 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 backlight on and off. Hold to view the controls menu. Hold to turn the device on.
② ▲	Select to view the activity list and start or stop an activity. Select to choose an option in a menu.
③ BACK LAP	Select to return to the previous screen. Select to record a lap, rest, or transition during a multisport activity. Hold to view the watch face from any screen.
④ DOWN	Select to scroll through the widget loop and menus. Hold to view the music controls from any screen.
⑤ UP MENU	Select to scroll through the widget loop and menus. Hold to view the menu.

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 (*Customizing the Controls Menu*, page 28).

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



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

Viewing Widgets

Your device comes preloaded with several widgets, and more are available when you pair your device with a smartphone.

- Select **UP** or **DOWN**.
The device scrolls through the widget loop.
- Select ▲ to view additional options and functions for a widget.
- From any screen, hold **BACK** to return to the watch face.

- If you are recording an activity, select **BACK** to return to the activity data pages.

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 port on your computer.
- 3 Charge the device completely.

Pairing Your Smartphone with Your Device

To use the connected features of the fēnix device, it must be paired directly through the Garmin Connect™ Mobile app, instead of from the Bluetooth® settings on your smartphone.

- 1 From the app store on your smartphone, install and open the Garmin Connect Mobile 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 Mobile app, follow the on-screen instructions.
- If you already paired another device with the Garmin Connect Mobile app, from the ☰ or ⋮ menu, select **Garmin Devices > Add Device**, and follow the on-screen instructions.

Product Updates

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

This provides easy access to these services for Garmin® devices:

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

Setting Up Garmin Express

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

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 8*).

For more information about activity tracking and fitness metric accuracy, go to garmin.com/ataccuracy.

Starting an Activity

When you start an activity, GPS turns on automatically (if required). When you stop the activity, the device returns to watch mode.


- 1 From the watch face, select .
- 2 Select an activity.
- 3 If necessary, follow the on-screen instructions to enter additional information.
- 4 If necessary, wait while the device connects to your ANT+® sensors.
- 5 If the activity requires GPS, go outside, and wait while the device locates satellites.
- 6 Select  to start the timer.

NOTE: The device does not record your activity data until you start the timer.

Tips for Recording Activities



- Charge the device before starting an activity (*Charging the Device, page 1*).
- Select **LAP** to record laps.
- Select **UP** or **DOWN** to view additional data pages.

Stopping an Activity

- 1 Select .
 - 2 Select an option:
 - To resume your activity, select **Resume**.
 - To save the activity and return to watch mode, select **Save**.
 - 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.

Adding or Removing a Favorite Activity

The list of your favorite activities appears when you press  from the watch face, and it provides quick access to the activities you use most. The first time you press  to start an activity, the device prompts you to select your favorite activities. You can add or remove favorite activities at any time.

- 1 Hold **MENU**.
- 2 Select **Settings > Activities & Apps**.
Your favorite activities appear at the top of the list with a white background. Other activities appear with a black background.
- 3 Select an option:
 - To add a favorite activity, select the activity, and select **Set as Favorite**.
 - To remove a favorite activity, select the activity, and select **Remove from Favorites**.

Creating a Custom Activity

- 1 From the watch face, select  > **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 select an accent color or customize the data screens.
 - Select **Done** to save and use the custom activity.
- 6 Select **Yes** to add the activity to your list of favorites.

Indoor Activities

The fēnix 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).

Recording a Strength Training Activity

You can record sets during a strength training activity. A set is multiple repetitions (reps) of a single move.

- 1 From the watch face, select  > **Strength**.
The first time you record a strength training activity, you will select which wrist your watch is on.
- 2 Select  to start the set timer.
- 3 Start your first set.
The device counts your reps. Your rep count appears when you complete at least six reps.

TIP: The device can only count reps of a single move for each set. When you want to change moves, you should finish the set and start a new one.

4 Select **LAP** to finish the set.


The watch displays the total reps for the set. After several seconds, the rest timer appears.

5 If necessary, hold **MENU**, select **Edit Last Set**, and edit the number of reps.

TIP: You can also add the weight used for the set.

6 When you are done resting, select **LAP** to start your next set.

7 Repeat for each strength training set until your activity is complete.

8 After your last set, select  to stop the set timer.

9 Select **Save**.

Outdoor Activities

The fēnix 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).

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 **MENU**.

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.

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 .

2 Select an activity.

3 Hold **MENU**.

4 Select the activity settings.

5 Select **Metronome > Status > On**.

6 Select an option:

- Select **Beats / 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 (*Starting an Activity*, page 2).

The metronome starts automatically.

9 During your run, select **UP** or **DOWN** to view the metronome screen.

10 If necessary, hold **MENU** to change the metronome settings.

Playing Audio Prompts During an Activity

You can enable your fēnix 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 Mobile 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 Hold **MENU**.

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 information, select **Pace/Speed Alert**.
- To customize prompts with your heart rate information, select **Heart Rate Alert**.
- To hear prompts when you start and stop the timer, including the Auto Pause[®] feature, select **Timer Events**.
- To change the language or the dialect of the voice prompts, select **Dialect**.

Jumpmaster

WARNING

The jumpmaster feature is for use by experienced skydivers only. The jumpmaster feature should not be used as a primary skydiving altimeter. Failure to input the appropriate jump related information can lead to serious personal injury or death.

The jumpmaster feature follows military guidelines for calculating the high altitude release point (HARP). The device detects automatically when you have jumped to begin navigating toward the desired impact point (DIP) using the barometer and electronic compass.

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.

Creating a Multisport Activity

1 From the watch face, select  > **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  to start your first activity.
- Select **LAP** to transition to the next activity.

If transitions are turned on, the transition time is recorded separately from the activity times.

- If necessary, select **LAP** 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 cannot record wrist heart rate data while swimming.

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 24*).

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

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 MENU, select the activity settings, and select Pool Size to change the size.
- Select **LAP** to record a rest during pool swimming. The device automatically records swim intervals and lengths for pool swimming.
- Select **LAP** 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 **LAP** 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 **LAP**, 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 **LAP** to start the drill timer.
- 3 After you complete a drill interval, select **LAP**. 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 **LAP**.
 - To start a swim interval, select **UP** or **DOWN** to return to the swim training screens.

Golfing

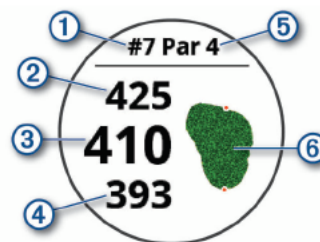
Playing Golf

Before you play golf, you should charge the device (*Charging the Device, page 1*).

- 1 From the watch face, select **Golf**.
- 2 Go outside, and wait while the device locates satellites.
- 3 Select a course from the list of available courses.
- 4 Select **Yes** to keep score.
- 5 Select **UP** or **DOWN** to scroll through the holes. The device automatically transitions when you move to the next hole.
- 6 After you complete your activity, select **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 4*).



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

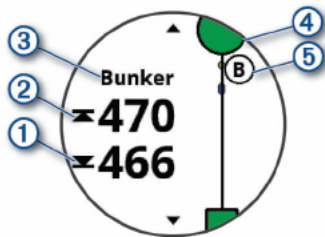
You can take a closer look at the green and move the pin location.

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

You can view distances to hazards along the fairway for par 4 and 5 holes. Hazards that affect shot selection are displayed individually or in groups to help you determine the distance to layup or carry.

- 1 From the hole information screen, select **▲** > **Hazards**.



- The distances to the front ① and back ② of the nearest hazard appear on the screen.
- The hazard type ③ is listed at the top of the screen.
- The green is represented as a half circle ④ at the top of the screen. The line below the green represents the center of the fairway.
- Hazards ⑤ are shown below the green in approximate locations relative to the fairway.

- 2 Select **UP** or **DOWN** to view other hazards for the current hole.

Measuring a Shot

- 1 Take a shot, and watch where your ball lands.
- 2 Select **▲** > **Measure Shot**.
- 3 Walk or drive to your ball.
The distance automatically resets when you move to the next hole.
- 4 If necessary, select **Reset** to reset the distance at any time.

Viewing Layup and Dogleg Distances

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

Select **▲** > **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 **▲** > **Scorecard**.
The scorecard appears when you are on the green.
- 2 Select **UP** or **DOWN** to scroll through the holes.
- 3 Select **▲** 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 **▲** > **Scorecard**.
- 2 Select **UP** or **DOWN** to scroll through the holes.
- 3 Select **▲** 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 www.garmin.com/golf 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 **▲** > **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 **MENU**.
- 2 Select the activity settings.
- 3 Select **Stat Tracking** to enable tracking statistics.

Connected Features

Connected features are available for your fēnix device when you connect the device to a compatible smartphone using Bluetooth wireless technology. Some features require you to install the Garmin Connect Mobile app on the connected smartphone. Go to www.garmin.com/apps for more information. Some features are also available when you connect your device to a wireless network.

Phone notifications: Displays phone notifications and messages on your fēnix device.

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.

GroupTrack: Allows you to keep track of your connections using LiveTrack directly on screen and in real time.

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

Connect IQ: Allows you to extend your device features with new watch faces, widgets, apps, and data fields.

Software Updates: Allows you to update your device software.

Weather: Allows you to view current weather conditions and weather forecasts.

Bluetooth sensors: Allows you to connect Bluetooth compatible sensors, such as a heart rate monitor.

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

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


Enabling Bluetooth Notifications

Before you can enable notifications, you must pair the fēnix device with a compatible mobile device (*Pairing Your Smartphone with Your Device*, page 1).

- 1 Hold **MENU**.
- 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.

Viewing Notifications

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

Receiving an Incoming Phone Call

When you receive a phone call on your connected smartphone, the fēnix device displays the name or phone number of the caller. You can accept or decline the call. If your device is connected to a smartphone with Android™, you can also decline with a text message by selecting from a list of messages on your fēnix device.


- To accept the call, select **Accept**.
- To decline the call, select **Decline**.
- To decline the call and immediately send a text message reply, select **Reply**, and select a message from the list.

Replying to a Text Message

NOTE: This feature is available only for smartphones with Android.

When you receive a text message notification on your fēnix device, you can send a quick reply by selecting from a list of messages. You can customize messages in the Garmin Connect Mobile app.

NOTE: This feature sends text messages using your phone. Regular text message limits and charges from your carrier and phone plan may apply. Contact your mobile carrier for more information about text message charges or limits.

- 1 From the watch face, select **UP** to view the notifications widget.
- 2 Select , and select a text message notification.
- 3 Select **DOWN** > **Reply**.
- 4 Select a message from the list.
Your phone sends the selected message as an SMS text message.


Managing Notifications

You can use your compatible smartphone to manage notifications that appear on your fēnix 5/5S/5X Plus device.

Select an option:

- If you are using an Apple® smartphone, use the notifications settings on your smartphone to select the items to show on the device.
- If you are using a smartphone with Android, from the Garmin Connect Mobile 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 fēnix 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 fēnix 5/5S/5X Plus 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 **MENU**.
- 2 Select **Settings** > **Phone** > **Alerts**.

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 .

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

- 3 Select **BACK** to stop searching.

Garmin Connect

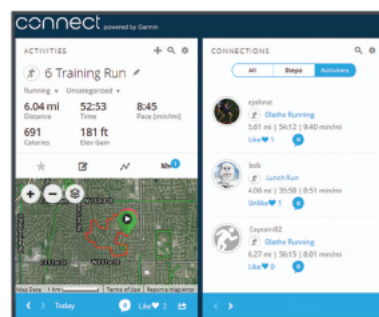
Your Garmin Connect account allows you to track your performance and connect with your friends. It gives you the tools to track, analyze, share, and encourage each other. You can record the events of your active lifestyle, including runs, walks, rides, swims, hikes, golf games, and more. It is also your online statistics tracker, where you can analyze and share all your rounds of golf.

You can create your free Garmin Connect account when you pair your device with your phone using the Garmin Connect Mobile app, or you can go to garminconnect.com.

Store your activities: After you complete and save a timed 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 fitness and outdoor activities, including time, distance, heart rate, calories burned, cadence, an overhead map view, and pace and speed charts. You can view more detailed information about your golf games, including scorecards, statistics, and course information. You can also view customizable reports.

NOTE: To view some data, you must pair an optional wireless sensor with your device (*Pairing Your Wireless Sensors*, page 31).



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.

Updating the Software Using Garmin Connect Mobile
Before you can update your device software using the Garmin Connect Mobile 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 1).

Synchronize your device with the Garmin Connect Mobile app (*Manually Syncing Data with Garmin Connect Mobile*, page 7).

When new software is available, the Garmin Connect Mobile app automatically sends the update to your device.

Updating the Software Using Garmin Express

Before you can update your device software, you must download and install the Garmin Express application and add your device (*Using Garmin Connect on Your Computer*, page 7).


- 1 Connect the device to your computer using the USB cable.
When new software is available, the Garmin Express application sends it to your device.
- 2 After the Garmin Express application finishes sending the update, disconnect the device from your computer.
Your device installs the update.

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 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 www.garmin.com/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.

Manually Syncing Data with Garmin Connect Mobile

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

Garmin Golf™ App

The Garmin Golf app allows golfers to compete with each other at different courses. More than 41,000 courses have a weekly leaderboard that anyone can join. You can set up a tournament event and invite players to compete. You can upload scorecards from your compatible Garmin device to view detailed statistics and shot analyses.

The Garmin Golf app syncs your data with your Garmin Connect account. You can download the Garmin Golf app from the app store on your smartphone.

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 Mobile app.

These instructions are for starting a GroupTrack session with fēnix 5/5S/5X Plus 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 fēnix 5/5S/5X Plus device.
- 2 Pair your smartphone with the fēnix 5/5S/5X Plus device (*Pairing Your Smartphone with Your Device*, page 1).
- 3 On the fēnix 5/5S/5X Plus device, hold **MENU**, and select **Settings > GroupTrack > Show on Map** to enable viewing connections on the map screen.
- 4 In the Garmin Connect Mobile app, from the settings menu, select **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 fēnix 5/5S/5X Plus device, start an activity.

9 Scroll to the map to view your connections.

TIP: From the map, you can hold **MENU** 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.

- Ride outside using GPS.
- Pair your fēnix 5/5S/5X Plus device with your smartphone using Bluetooth technology.
- In the Garmin Connect Mobile 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 Mobile app.
- Make sure all your connections are in range (40 km or 25 mi.).
- During a GroupTrack session, scroll to the map to view your connections (*Adding a Map to an Activity*, page 25).

Garmin Explore™

The Garmin Explore website and mobile app allow you to plan trips and use cloud storage for your waypoints, routes, and tracks. They offer advanced planning both online and offline, allowing you to share and sync data with your compatible Garmin device. You can use the mobile app to download maps and navigate anywhere, without using your cellular service.

You can download the Garmin Explore app from the app store on your smartphone, or you can go to explore.garmin.com.

Wi-Fi® Connected Features

The fēnix 5/5S/5X Plus device has Wi-Fi connected features. The Garmin Connect Mobile app is not required for you to use Wi-Fi connectivity.

Activity uploads to your Garmin Connect account:

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

Workouts and training plans: Allows you to 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.

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

Setting Up Wi-Fi Connectivity

- 1 Select an option:
 - Download the Garmin Connect Mobile app, and pair your smartphone (*Pairing Your Smartphone with Your Device*, page 1).
 - Go to www.garmin.com/express, and download the Garmin Express application.
- 2 Follow the on-screen instructions to set up Wi-Fi connectivity.

Connect IQ Features

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

Before you can download features from the Connect IQ Mobile app, you must pair your fēnix 5/5S/5X Plus device with your smartphone.

- 1 From the app store on your smartphone, install and open the Connect IQ Mobile app.
- 2 If necessary, select your device.
- 3 Select a Connect IQ feature.
- 4 Follow the on-screen instructions.

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.

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 Mobile app, select  or .
- 2 Select **Garmin Devices**, and select your device.
- 3 Select **Garmin Pay > Create Your Wallet**.
- 4 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 .
- 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 Mobile 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 fēnix 5/5S/5X Plus device page in the Garmin Connect Mobile app, select **Garmin Pay** > .
- 2 Follow the on-screen instructions to enter the card information and add the card to your wallet.

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

Managing Your Garmin Pay Wallet

You can view detailed information about each of your payment cards, and you can suspend, activate, or delete a card. You can also suspend or delete your whole Garmin Pay wallet.

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

- 1 From the fēnix 5/5S/5X Plus device page in the Garmin Connect Mobile app, select **Garmin Pay > Manage Your Wallet**.

- 2 Select an option:

- To suspend a specific card, select the card, and select **Suspend**.

The card must be active to make purchases using your fēnix 5/5S/5X Plus device.

- To temporarily suspend all cards in your wallet, select **Suspend Wallet**.

You cannot pay using your fēnix 5/5S/5X Plus device until you unsuspend at least one card using the app.

- To unsuspend your suspended wallet, select **Unsuspend Wallet**.

- To delete a specific card, select the card, and select **Delete**.

The card is completely deleted from your wallet. If you want to add this card to your wallet in the future, you must enter the card information again.

- To delete all cards in your wallet, select **Delete Wallet**.

Your Garmin Pay wallet and all the card information associated with it are deleted. You cannot pay using your fēnix 5/5S/5X Plus device until you create a new wallet and add a card.

Changing Your Garmin Pay Passcode

You must know your current passcode to change it. Your passcode cannot be recovered. If you forget your passcode, you must delete your wallet, create a new one, and reenter your card information.

You can change the passcode required to access your Garmin Pay wallet on your fēnix 5/5S/5X Plus device.

- 1 From the fēnix 5/5S/5X Plus device page in the Garmin Connect Mobile app, select **Garmin Pay > Reset Passcode**.
- 2 Follow the on-screen instructions.

The next time you pay using your fēnix 5/5S/5X Plus device, you must enter the new passcode.

Music

NOTE: This section is about three different music playback options.


You can control music playback on your paired smartphone using your fēnix 5/5S/5X Plus device.

On a fēnix, 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

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


- 1 From the Garmin Connect Mobile app, select  or **...**.
- 2 Select **Garmin Devices**, and select your device.
- 3 Select **Music**.
- 4 Select an option:
 - Select a third-party provider, and follow the on-screen instructions.
 - Select **Get Music Apps**, locate a provider, and follow the on-screen instructions.

Downloading Audio Content from a Third-Party Provider

Before you can download audio content from a third-party provider, you must connect to a Wi-Fi network (*Setting Up Wi-Fi Connectivity*, page 7).

- 1 Hold **DOWN** from any screen to open the music controls.
- 2 Select  > **Music Providers**.
- 3 Select a connected provider.
- 4 Select a playlist or other item to download to the device.
- 5 Select **BACK** until you are prompted to sync with the service, and select **Yes**.
The selected playlists and other items are downloaded to the device.
- 6 Connect the device to an external power source.
Downloading audio content can drain the battery.

Disconnecting from a Third-Party Provider

- 1 From the Garmin Connect Mobile app, select  or **...**.
- 2 Select **Garmin Devices**, and select your device.
- 3 Select **Music**.
- 4 Select an installed third-party provider, and follow the on-screen instructions to disconnect the third-party provider from your 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 (www.garmin.com/express).

You can load your personal .mp3 and .aac files to a fēnix 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**.
- 3 Select the checkboxes for songs, playlists, and other audio files, and select **Send to Device**.









Listening to Downloaded 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 9).
- 3 Select , and select an option:
 - To listen to music downloaded to the watch from your computer, select **My Music**.
 - To listen to music from your smartphone, select **Control Music on Phone**.
 - To listen to music from a third-party provider, select the name of the provider.
- 4 Select the music you want to play.

TIP: Select Play All Songs to start playing all the songs downloaded to the device in shuffle mode.

Music Playback Controls



	Select to manage content from third-party providers.
	Select to switch between playing audio from the device and controlling music on a connected smartphone. When playing audio from the device, select to browse the available audio files and playlists in your library.
	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.

Connecting Headphones using Bluetooth Technology

To listen to music loaded onto your fēnix 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 **MENU**.

- 4 Select **Settings > Sensors & Accessories > Add New > Headphones**.
- 5 Select your headphones to complete the pairing process.

Heart Rate Features

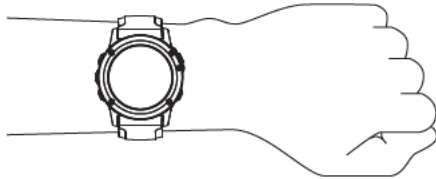
The fēnix 5/5S/5X Plus device has a wrist-based heart rate monitor and is also compatible with chest heart rate monitors (sold separately). You can view heart rate data on the heart rate widget. If both wrist-based heart rate and chest heart rate data are available, your device uses the chest heart rate data.

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 on the fēnix 5/5S/5X Plus device, it should not move while running or exercising. For more accurate pulse oximeter readings on the fēnix 5X Plus device, you should remain motionless.



NOTE: The optical sensor is located on the back of the device.

- See *Tips for Erratic Heart Rate Data*, page 10 for more information about wrist-based heart rate.
- See *Tips for Erratic Pulse Oximeter Data*, page 16 for more information about the pulse oximeter sensor.
- For more information about accuracy, go to garmin.com/ataccuracy.

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.

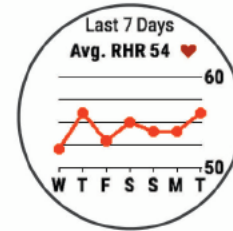
NOTE: In cold environments, warm up indoors.

- Rinse the device with fresh water after each workout.
- While exercising, use a silicone band.

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 **DOWN**.
- 2 Select  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 fēnix 5/5S/5X Plus device and view it on paired Garmin devices.

NOTE: Broadcasting heart rate data decreases battery life.

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

The fēnix 5/5S/5X Plus 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 fēnix 5/5S/5X Plus 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.

Broadcasting Heart Rate Data During an Activity

You can set up your fēnix 5/5S/5X Plus device to broadcast your heart rate data automatically when you begin an activity. For example, you can broadcast your heart rate data to an Edge® device while cycling, or to a VIRB® action camera during an activity.

NOTE: Broadcasting heart rate data decreases battery life.

- 1 From the heart rate widget, hold **MENU**.
- 2 Select **Options > Broadcast During Activity**.
- 3 Begin an activity (*Starting an Activity*, page 2).

The fēnix 5/5S/5X Plus device starts broadcasting your heart rate data in the background.

NOTE: There is no indication that the device is broadcasting your heart rate data during an activity.

- 4 If necessary, pair your fēnix 5/5S/5X Plus 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, stop the activity (*Stopping an Activity*, page 2).

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 on-wrist detection feature for Garmin Pay payments, and you must enter a passcode before making each payment (*Garmin Pay*, page 8).

NOTE: Disabling the wrist-based heart rate monitor also disables the wrist-based pulse oximeter sensor.

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

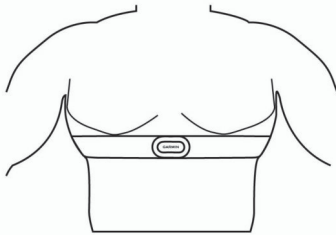
Putting On the Heart Rate Monitor

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.

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 11).
- 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.

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.

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.

- 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.

Running Dynamics

You can use your compatible fēnix device paired with the HRM-Run™ accessory or other running dynamics accessory to provide real-time feedback about your running form. If your fēnix device was packaged with the HRM-Run 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 a running dynamics accessory, such as the HRM-Run accessory, and pair it with your device ([Pairing Your Wireless Sensors](#), page 31). If your fēnix 5/5S/5X Plus was packaged with the accessory, the devices are already paired, and the fēnix 5/5S/5X Plus is set to display running dynamics data screens.

- 1 Select an option:
 - If your running dynamics accessory and fēnix 5/5S/5X Plus device are already paired, skip to step 7.
 - If your running dynamics accessory and fēnix 5/5S/5X Plus device are not already paired, complete all the steps in this procedure.
- 2 Hold **MENU**.
- 3 Select **Settings > Activities & Apps**.
- 4 Select an activity.
- 5 Select the activity settings.
- 6 Select **Data Screens > Add New**.
- 7 Select a running dynamics data screen.

NOTE: The running dynamics screens are not available for all activities.
- 8 Go for a run ([Starting an Activity](#), page 2).
- 9 Select **UP** or **DOWN** to open a running dynamics screen to view your metrics.

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 www.garmin.com/runningdynamics 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-Run accessory.
Accessories with running dynamics have  on the front of the module.
- Pair the running dynamics accessory with your fēnix 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 www.garmin.com/physio.



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.

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

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.

Predicted race times: Your device uses the VO2 max. estimate and published data sources to provide a target race time based on your current state of fitness. This projection also presumes you have completed the proper training for the race.

HRV stress test: The HRV (heart rate variability) 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

Performance notifications are turned on by default. Some performance notifications are alerts that 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.

- 1 Hold **MENU**.
- 2 Select **Settings > Physiological Metrics > Performance Notifications**.
- 3 Select an option.

Detecting Performance Measurements Automatically

The Auto Detection 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 **MENU**.
- 2 Select **Settings > Physiological Metrics > Auto Detection**.
- 3 Select an option.

Training Status

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

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

- Run outdoors with heart rate at least two times per week, or ride with heart rate and power at least two times per week. After using the device for one week, your training status should be available.
- Record all of your fitness activities on this device, allowing it to learn about your performance.

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 fēnix 5/5S/5X Plus 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 38), 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 31](#)). If your fēnix 5/5S/5X Plus 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 17](#)), and set your maximum heart rate ([Setting Your Heart Rate Zones, page 17](#)). 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 **UP** or **DOWN** to view the performance widget.
- 4 Select  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 fēnix 5/5S/5X Plus device ([Pairing Your Wireless Sensors, page 31](#)). If you are using a chest heart rate monitor, you must put it on and pair it with your device. If your fēnix 5/5S/5X Plus 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 17](#)) and set your maximum heart rate ([Setting Your Heart Rate Zones, page 17](#)). 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 **UP** or **DOWN** to view the performance widget.
- 4 Select  to scroll through the performance measurements.

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 17](#)), and set your maximum heart rate ([Setting Your Heart Rate Zones, page 17](#)).

- 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 performance widget, and select  to scroll through the performance measurements 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.

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.

Viewing Your Predicted Race Times

For the most accurate estimate, complete the user profile setup ([Setting Up Your User Profile, page 17](#)), and set your maximum heart rate ([Setting Your Heart Rate Zones, page 17](#)).

Your device uses the VO2 max. estimate ([About VO2 Max. Estimates, page 13](#)) and published data sources to provide a target race time based on your current state of fitness. This projection also presumes you have completed the proper training for the race.

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

- 1 Select **UP** or **DOWN** to view the performance widget.
- 2 Select  to scroll through the performance measurements.
Your projected race times appear for 5K, 10K, half marathon, and marathon distances.

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, telling you how the activity has improved your fitness. Training Effect is determined by your user profile information, heart rate, duration, and intensity of your activity.





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 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.

It is important to know that your Training Effect numbers (from 0.0 to 5.0) may seem abnormally high during your first few activities. It takes several activities for the device to learn your aerobic and anaerobic fitness.

You can add Training Effect as a data field to one of your training screens to monitor your numbers throughout the activity.

Color Zone	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.

Color Zone	Training Effect	Aerobic Benefit	Anaerobic Benefit
	From 2.0 to 2.9	Maintains your aerobic fitness.	Maintains your anaerobic fitness.
	From 3.0 to 3.9	Improves your aerobic fitness.	Improves your anaerobic fitness.
	From 4.0 to 4.9	Highly improves your aerobic fitness.	Highly improves your anaerobic fitness.
	5.0	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.




Heart Rate Variability and Stress Level

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

Viewing Your Heart Rate Variability and Stress Level

This feature requires a Garmin chest heart rate monitor. Before you can view your heart rate variability (HRV) stress level, you must put on a heart rate monitor and pair it with your device ([Pairing Your Wireless Sensors, page 31](#)). If your fenix 5/5S/5X Plus device was packaged with a heart rate monitor, the devices are already paired.

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

- 1 If necessary, select  > **Add** > **HRV Stress** to add the stress app to the apps list.
- 2 Select **Yes** to add the app to your list of favorites.
- 3 From the watch face, select  > **HRV Stress** > .
- 4 Stand still, and rest for 3 minutes.

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 13](#)).

Viewing Your Performance Condition

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

- 1 Add **Perform. Cond.** to a data screen ([Customizing the Data Screens, page 24](#)).
- 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 17](#)).

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 31](#)).

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 .
- 2 Select an outdoor running activity.
GPS is required to complete the test.
- 3 Hold **MENU**.
- 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 31](#)), and you must get your VO2 max. estimate ([Getting Your VO2 Max. Estimate for Cycling, page 14](#)).

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  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 38).

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 13).

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 31), and you must get your VO₂ max. estimate (*Getting Your VO₂ Max. Estimate for Cycling*, page 14).

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 .
- 2 Select a cycling activity.
- 3 Hold **MENU**.
- 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.

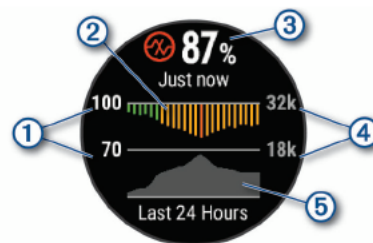
Your FTP appears as a value measured in watts per kilogram, your power output in watts, and a position on the color gauge.

- 7 Select an option:
 - Select **Accept** to save the new FTP.
 - Select **Decline** to keep your current FTP.

Pulse Oximeter

The fēnix 5X Plus 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.




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.

- 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  to view a graph of your pulse oximeter readings for the last seven days.

Turning On All-Day Acclimation Mode

From the pulse oximeter widget, select  > **DOWN** > **OK**.

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.

Turning On Manual Acclimation Mode

- 1 From the pulse oximeter widget, hold **MENU**.
- 2 Select **Options > Acclimation > Manual**.

The device analyzes your oxygen saturation when you view the pulse oximeter widget.

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.
- 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.

Training

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 **MENU**.
- 2 Select **Settings > 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 17](#)) 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 **MENU**.
- 2 Select **Settings > User Profile > Heart Rate**.
- 3 Select **Max. HR**, and enter your maximum heart rate.
You can use the Auto Detection feature to automatically record your maximum heart rate during an activity ([Detecting Performance Measurements Automatically, page 13](#)).
- 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 15](#)). You can use the Auto Detection feature to automatically record your lactate threshold during an activity ([Detecting Performance Measurements Automatically, page 13](#)).
- 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 steps 3 through 8 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 17](#)).
- 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

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 **MENU**.
- 2 Select **Settings > 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

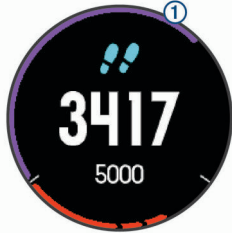
burned, and sleep statistics for each recorded day. Your calories burned includes your base metabolism plus activity calories.

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/ataccuracy.

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 30](#)).

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 18](#)).

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 Mobile, page 7](#)).

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 30](#)).

- 1 Hold **LIGHT**.
- 2 Select .

Intensity Minutes

To improve your health, organizations such as the U.S. Centers for Disease Control and Prevention, the American Heart Association®, and 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 fēnix 5/5S/5X Plus 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™

When your movements match familiar exercise patterns, the Move IQ feature automatically detects the event and displays it in your timeline. The Move IQ events show activity type and duration, but they do not appear in your activities list or newsfeed.

The Move IQ feature can automatically start a timed activity for walking and running using time thresholds you set in the Garmin Connect Mobile app. These activities are added to your activities list.

Activity Tracking Settings

Hold **MENU**, 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 30](#)).

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 you to turn on and off Move IQ events.

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 Hold **MENU**.
- 2 Select **Settings > Activity Tracking > Status > Off**.

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 the Web

Before you can download a workout from Garmin Connect, you must have a Garmin Connect account ([Garmin Connect, page 6](#)).

- 1 Connect the device to your computer.