GARMIN

owner's manual

FORERUNNER® x10XT

MULTISPORT GPS TRAINING DEVICE

Table of Contents

Introduction

⚠ WARNING

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

About the Battery

⚠ WARNING

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

The device is powered by a built-in, lithium-ion battery that you can charge using the charger included in the product box (page 49).

Setting Up the Device

When using your Forerunner® the first time, follow the setup instructions in the *Forerunner 910XT Quick Start Manual*.

Registering Your Device

Help us better support you by completing our online registration today.

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

Getting More Information

- Go to www.garmin.com/intosports.
- Go to www.garmin.com /learningcenter.
- Go to http://buy.garmin.com, or contact your Garmin dealer for information about optional accessories and replacement parts.

Getting Started (QSM)

When using your Forerunner the first time, complete these tasks.

1. Charge the Forerunner ().
2. Turn on the Forerunner ().
3. Put on the optional heart rate monitor ().
4. Go for a run ().
5. Save your run ().

Charging the Forerunner

NOTICE

To prevent corrosion, thoroughly dry the contacts and the surrounding area before charging.

1. Plug the USB connector on the charging clip cable into the AC adapter.
2. Plug the AC adapter into a standard wall outlet.

3. Align the charging clip posts with the contacts on the back of the Forerunner.
4. Clip the charger securely over the face of the Forerunner.

5. Charge the Forerunner completely.

A fully charged battery will last up to 20 hours, depending on usage.

Turning on the Forerunner

The first time you use the Forerunner, you are prompted to choose your system settings and enter user profile information.

1. Press and hold ⏻ to turn on your Forerunner.

2. Follow the on-screen instructions.

3. Go outdoors to an open area.

4. Wait while the Forerunner searches for satellites.

   It may take 30–60 seconds to locate satellite signals. Do not begin your activity until the locating satellites banner disappears.

The time of day and date are set automatically.

Keys

① ⏻	Hold to turn the device on and off. Select to turn on the backlight. Select to search for a compatible weight scale.

②	▲ ▼	Select to scroll through menus and settings. Hold to scroll quickly through the settings. Select to scroll through training pages during a workout.
③	**ENTER**	Press to select options and to acknowledge messages.
④	**START/ STOP**	Select to start and stop the timer.
⑤	**LAP/ RESET**	Select to mark a new lap. Hold to save your run and reset the timer.

⑥	**MODE**	Select to view the timer and the menu. The map and the compass also appear if they are active. Select to exit a menu or a page. Your settings are saved. Hold to switch sport modes.

Icons

① power ⏻

- Press and hold to turn the Forerunner on and off.

- Press to turn on and to adjust the backlight. A status page appears.

- Press to pair with your ANT+™ weight scale (page 34).

-
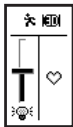
Putting on the Heart Rate Monitor

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

Wear the heart rate monitor directly on your skin, just below your breastplate. It should be snug enough to stay in place during your run.

1. Connect the heart rate monitor module ① to the strap.

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

3. Wrap the strap around your chest, and connect it.

The Garmin logo should be right-side up.

4. Bring the device within range (3 m) of the heart rate monitor.

   TIP: If the heart rate data is erratic or does not appear, you may have to tighten the strap on your chest or warm up for 5–10 minutes.

After you put on the heart rate monitor, it is on standby and ready to send data.

When the heart rate monitor is paired, a message appears, and ♥ appears solid on the screen.

Going for a Run

Before you can record history, you must locate satellite signals () or pair your Forerunner with an optional foot pod.

1. From the timer page, select **START** to start the timer ①.

Your Training

This section describes training features and settings for your device.

- Run basics ()
- Bike basics ()
- Swim basics ()
- Multi sport setup ()
- Alerts ()
- Auto Lap® ()
- Auto Pause® ()
- Auto scroll ()
- Virtual Partner® ()
- Virtual Racer™ ()
- Interval workouts ()
- Custom workouts ()

Sport Mode

Press and hold **mode** to change the sport mode. All settings are specific to the current sport that you have selected.

Training Options

Displaying Pace or Speed

1. Select **MODE** > **Settings** > **Run Settings** > **Pace/Speed** > **Pace/Speed**.

2. Select **Pace** or **Speed**.

   This setting controls the data shown on the following pages: Virtual Partner, history, custom workouts, courses, and Auto Pause.

   For a complete list of the available data fields and descriptions, see .

Alerts

NOTE: Alerts do not function during interval or custom workouts.

You can use alerts to train toward specific time, distance, calorie, heart rate, and cadence goals.

NOTE: To turn on alert tones and vibrations, see .

Setting **Time, Distance, and Calorie Alerts**

1. Select **MODE** > **Training** > **Run Alerts**.
2. Select **Time Alert**, **Distance Alert**, or **Calorie Alert**.
3. Select **On**.
4. Select **Alert At**, and enter a time, distance, or calorie amount.

Each time you reach the alert amount, the device beeps and displays a message.

Setting **Advanced Alerts**

If you have an optional heart rate monitor, foot pod, or GSC™ 10, you can set up advanced alerts for heart rate and cadence.

1. Select **MODE** > **Training** > **Options** > **Run Alerts**.
2. Select an option:
   - Select **HR Alert** to set the high and low heart rate values in beats per minute (bpm).

     NOTE: For more information about heart rate zones, see .
   - Select **Cadence Alert** to set the high and low cadence amounts in steps per minute (spm) or revolutions of the crank arm per minute (rpm).
3. Set the parameters for your heart rate or cadence alerts.

Each time you exceed or drop below the specified heart rate or cadence amount, the device beeps and displays a message.

Setting **Walk Break Alerts**

Some running programs use timed walking breaks at regular intervals. For example, during a long training run, the program may instruct you to run for four minutes, then walk for 1 minute, and repeat. Auto Lap functions correctly while you are using the run/walk alerts.

1. Select **MENU** > **Training** > **Run Alerts**.

2. Select **Run/Walk** > **Run/Walk Alert** > **On**.

3. Select **Run Alert**, and enter a time.

4. Select **Walk Alert**, and enter a time.

Each time you reach the alert amount, the device beeps and displays a

message. The run/walk alerts will repeat until you stop the timer.

Auto **Lap**

The default Auto Lap setting is **By Distance**, 1 mile or 1 kilometer.

NOTE: Auto Lap does not function during interval or custom workouts.

Marking **Laps by Distance**

You can use Auto Lap to automatically mark the lap at a specific distance. This feature is helpful for comparing your performance over different parts of a run.

1. Select **MENU** > **Settings** > **Run Settings** > **Auto Lap**.

2. Select **Auto Lap Trigger** > **By Distance**.

3. Select **Lap At**, and enter a distance.

Marking Laps by Position

You can use Auto Lap to automatically mark the lap at a specific position. This feature is helpful for comparing your performance over different parts of a run (for example, a long hill or training sprints).

1. Select **MENU** > **Settings** > **Run Settings** > **Auto Lap**.

2. Select **Auto Lap Trigger** > **By Position** > **Lap At**.

3. Select an option:

   • Select **Lap Press Only** to trigger the lap counter each time you select **LAP** and each time you pass any of those positions again.

   • Select **Start and Lap** to trigger the lap counter at the GPS location where you select **START** and at any location during the run where you select **LAP**.

   • Select **Mark and Lap** to trigger the lap counter at a specific GPS location marked before the run (use **Mark Position**) and at any location during the run where you select **LAP**.

Pausing Your Run Automatically

NOTE: Auto Pause does not function during interval or custom workouts.

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

NOTE: The paused time is not saved with your history data.

1. Select **MENU** > **Settings** > **Run Settings** > **Auto Pause**.

2. Select an option:

   - To pause the timer automatically when you stop moving, select **When Stopped**.

   - To pause the timer automatically when your speed drops below a specified value, select **Custom Speed**.

Using **Auto Scroll**

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

1. Select **MENU** > **Settings** > **Run Settings** > **Auto Scroll**.

2. Select **Slow**, **Medium**, or **Fast**.

Running With a Virtual Partner

Your Virtual Partner is a training tool designed to help you meet your goals.

1. Select MENU > **Training** > **Virtual Partner**.

2. Select **Virtual Partner** > **On**.

3. Select **Format**, and select **Speed** or **Pace**.

4. Enter a value for the Virtual Partner's speed or pace.

5. Select **Alert** > **On** (optional).

6. Go for a run.

7. Scroll to the Virtual Partner page to see who is leading.
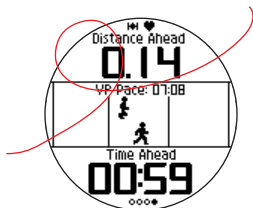
Virtual Racer

Your Virtual Racer is a training tool designed to help you improve your performance. You can race against your own activity or one transferred from your computer (page 15). For example, you can practice running the actual race route and save it to your Forerunner. On race day, you can race against that practice run. The Virtual Racer pushes you to beat your previous pace including hills where you might slow down and the final sprint to the finish line.

Running With a Virtual Racer

Before you can create a race, you must have at least one saved activity.

1. Select MENU > **Training** > **Virtual Racer**.
2. Select **Create New Race**, and select an activity from the list.
3. Enter a name.

4. Select the race.
5. Select **Do Race**.

Virtual Racer Options

Select MENU > **Training** > **Virtual Racer**, and select a race.

- **View Stats**—Displays the time and distance of the previous activity.
- **Race Options**—Allows you to edit the race name, delete the race, and set alert tones.

Racing Against an Activity From the Web

You must have a Garmin Connect account (page 35).

Before you can wirelessly send an activity to your device, you must pair the Forerunner with your computer using the USB ANT Stick™ (page 36).

1. Pair the device to your computer.
2. Go to www.garminconnect.com, and find an activity.

3. Click **Send to Device**.

4. On the device, Select MENU > **Training** > **Virtual Racer**.

5. Select the race.

6. Select **Do Race**.

Interval Workouts

You can create interval workouts based on distance or time. Your custom interval workout is saved until you create another interval workout. Open intervals can be used for track workouts when you are running a known distance but want to keep track of how many intervals you have completed.

Creating an Interval Workout

1. Select MENU > **Training** > **Workouts** > **Intervals**.

2. Select **Edit Workout**.

3. Select **Type**, and select **Time**, **Distance**, or **Open**.

   TIP: To create an open-ended interval, set the type to **Open**.

4. Enter a distance or time interval value.

5. Select **Rest Type**, and select **Distance**, **Time**, or **Open**.

6. If necessary, enter a distance or time value for the rest interval.

7. Select the number of repetitions.

8. If necessary, select **Warmup** > **Yes** to add an open-ended warmup to your workout.

9. If necessary, select **Cooldown** > **Yes** to add an open-ended cooldown to your workout.

Starting an Interval Workout

1. Select MENU > **Training** > **Workouts** > **Intervals** > **Do Workout**.

2. Select **START**.

 If your interval workout has a warm up, you must select **LAP** to begin the first interval.

3. Follow the on-screen instructions.

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

Stopping an Interval Workout

• At any time, select **LAP** to end an interval.

• At any time, select **STOP** to stop the timer.

• If your interval workout has a cool down, you must select **LAP** to end the interval workout.

Custom Workouts

Custom workouts can include goals for each workout step and varied distances, times, and calories. You can create custom workouts using Garmin Connect® (page 35) and transfer them to the Forerunner. However, you can also create and save a custom workout directly on your Forerunner.

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

Creating a Custom Workout

1. Select MENU > **Training** > **Workouts** > **Custom** > **Create New**.

2. Select **Run 000** to edit the name of the workout.

3. Select **Add New Step**.

4. Select **Duration** to specify how the step will be measured.

   For example, select **Distance** to end the step after a specific distance.

   If you select **Open**, you can select **LAP** to end the step during your workout.

5. If necessary, select **Duration Value**, and enter a value.

6. Select **Target** to choose your goal during the step.

   For example, select **Heart Rate** to maintain a consistent heart rate during the step.

7. If necessary, select a target zone or enter a custom range.

   For example, you can select a heart rate zone. Each time you exceed or drop below the specified heart rate, the device beeps and displays a message.

8. If necessary, select **Rest Step** > **Yes**.

   During a rest step, the timer continues to run and data is recorded.

9. If necessary, add another step to the workout.

Repeating a Custom Workout Step
Before you can repeat a workout step, you must create a workout with at least one step.

1. Select **Add New Step** > **Duration**.

2. Select an option:

   • Select **Repeat** to repeat a step one or more times.

For example, you can repeat a 1-mile step 4 times.

• Select **Repeat Until** to repeat a step for a specific duration.

 For example, you can repeat a 5-minute step for thirty minutes or until you reach heart rate zone 5.

3. Select **Back to Step**, and select a step to repeat.

Starting a Custom Workout

1. Select MENU > **Training** > **Workouts** > **Custom**.

2. Select a workout, and select **Do Workout**.

3. Select **START**.

4. Follow the on-screen instructions.

When you complete all of the steps, a message appears.

Stopping a Custom Workout

• At any time, select **LAP** to end a step.

• At any time, select **STOP** to stop the timer.

Deleting a Custom Workout

1. Select MENU > **Training** > **Workouts** > **Custom**.

2. Select the workout.

3. Select **Delete Workout** > **Yes**.

Sending Workouts to Your Device

Before you can wirelessly send workouts to your device, you must pair the Forerunner with your computer using the USB ANT Stick (page 36).

1. Connect the USB ANT Stick to your computer.

2. Open Garmin Connect (page 35).

3. Follow the on-screen instructions.

Bike Training Options

Many of the training features of the Forerunner can be applied to cycling. For the best results, you should customize the cycling settings.

Changing Your Sport to Cycling

Your Forerunner can display data and history for your bike training.

1. Hold **MODE**.

2. Select **Bike**.

After changing your sport, you can set up alerts, Auto Lap, Auto Pause, and Auto Scroll settings for your bike training (pages 11–14).

Training With a Bike Sensor

For information about the GSC™ 10, see page 28.

Other Training Features

Not sure what will be funneled into this section.

Swimming with Your Forerunner

The Forerunner is waterproof to 50 m for surface swimming. Use the timer to record your swim time.

NOTE: The Forerunner records GPS data only when you are swimming outside using the freestyle stroke.

TIP: Because GPS signals may be interrupted, swimmers and triathletes should put the device in a swimming cap, for the most-accurate speed and distance data.

1. Press and hold **mode** > select **Other**.

2. Press **mode** > select **Settings** > **Other Settings** > **Swim**.

3. Select **Enabled** > **Yes**.

   NOTE: The swim setting must be turned on to get accurate distance data.

4. Press **start** to start the timer.

5. When you have finished swimming, press **lap** or **stop** to view your distance and average speed in the data fields.

   You must press **stop** to stop the timer.

   NOTICE: Scuba diving with the Forerunner may damage the product and will void the warranty.

Using the Countdown Timer

You can use the countdown timer to automatically start the Forerunner timer after a specified countdown. For

example, you can use a 30-second countdown before you start a timed sprint. You can also set a 5-minute countdown before starting a boat race.

NOTE: During the countdown, history is not recorded.

The swim setting must be turned off to access the countdown timer.

1. Press and hold **mode** > select **Other**.
2. Press **mode** > select **Settings** > **Other Settings** > **Countdown Timer**.
3. Select **Countdown Timer** > **On**.
4. Enter the countdown time.
5. Press **start** to begin the countdown timer.

   You will hear 5 beeps before the timer starts automatically.

DRAFT

ANT+ Sensors

The Forerunner is compatible with these ANT+ accessories.

- Heart rate monitor (page 25)
- Foot pod (page 27)
- GSC 10 (page 28)
- Power meters?
- Weight Scale (page 30)
- Fitness Equipment (page 30)

For information about purchasing additional accessories, go to http://buy.garmin.com.

Pairing Your ANT+ Sensors

Before you can pair, you must put on the heart rate monitor or install the sensor. See the quick start manual or the accessory instructions.

If your Forerunner does not show data from the accessory, you may need to pair the accessory to your Forerunner. Pairing is the connecting of ANT+™ wireless sensors, for example, connecting your foot pod with a Forerunner. After you pair the first time, your Forerunner automatically recognizes your foot pod each time it is activated.

- Make sure that the ANT+ sensor is compatible with your Garmin device.

  Bring the Forerunner within range (3 m) of the ANT+ sensor.

  Stay 10 m away from other ANT+ sensors while pairing.

- If ♥ is off, select **MODE** > **Settings** > Run Settings > **Heart Rate** > **HR Monitor** > **On** > **Search for New**.

- If 🔲 is off, select **MODE** > **Settings** > Run Settings > **Foot Pod** > **Foot Pod** > **On** > **Search**

for New.

- If is off, Select MENU > **Setti**ngs > **Bike Sensor** > **Bike Sensor** > **On** > **Search for New**.

- If you still cannot pair the accessory, replace the accessory battery (heart rate monitor, page 49).

When the accessory is paired, a message appears, and the accessory icon (page 8) appears solid on the screen.

Heart Rate Monitor

Setting Your Heart Rate Zones

Before you can customize your heart rate zones, you must enable the heart rate monitor.

The Forerunner uses your user profile information from the initial setup to determine your heart rate zones. For the most accurate calorie data during your activity, set your maximum heart rate, resting heart rate, and heart rate zones.

1. Select **MODE** > **Settings** > Run Settings > **Heart Rate** > **HR Zones**.

2. Enter you maximum heart rate.

   If you do not know it, use 220 - your age.

3. Enter your resting heart rate.

   If you do not know it, select **Continue**.

4. Select **Zone Calc**.

5. Select an option:

   - Select **Max.** to view and edit the zones as a percentage of your maximum heart rate.

   - Select **Reserve** to ...

- Select **Custom** to edit each zone value manually.

The zone values update automatically; however, you can still edit each value manually.

About **Heart Rate Zones**

Many athletes are using heart rate zones to measure and increase their cardiovascular strength and improve their level of fitness. A heart rate zone is a set range of heartbeats per minute.

The five commonly accepted heart rate zones are numbered from 1 to 5 according to increasing intensity. Generally, heart rate zones are calculated based on percentages of your maximum heart rate.

Fitness **Goals**

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

- Your heart rate is a good measure of exercise intensity.

- Training in certain heart rate zones can help you improve cardiovascular capacity and strength.

- Knowing your heart rate zones can prevent you from overtraining and can decrease your risk of injury.

If you know your maximum heart rate, you can use the table (page 32) 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.

More **Heart Rate Options**

- Heart rate alerts (page 11)

- Heart rate zone calculations (page 32)

• Heart rate data fields (page 42)

• Heart rate troubleshooting (page 33)

Foot Pod

Your Forerunner is compatible with the foot pod. You can use the foot pod to send data to your Forerunner when training indoors, when your GPS signal is weak, or when you lose satellite signals. The foot pod is on standby and ready to send data. You must pair the foot pod with your Forerunner (page 24).

After 30 minutes of inactivity, the foot pod powers off to conserve the battery. When the battery is low, a message appears on your Forerunner.

Approximately five hours of battery life remain.

Choosing Your Speed Source

If you plan to train outdoors, you can set the Forerunner to use foot pod data to calculate pace rather than using GPS.

> Select **MODE** > **Settings** > **Run Settings** > **Foot Pod** > **Speed Source** > **Foot Pod**.

About Foot Pod Calibration

Calibrating your foot pod is optional and can improve accuracy. There are three ways to adjust the calibration: distance, GPS, and manual.

Calibrating Your Foot Pod by Distance

For best results, the foot pod should be calibrated using the inside lane of a regulation track. A regulation track (2 laps = 800 m) is more accurate than a treadmill.

1. Select **MODE** > **Settings** > **Run Settings** > **Foot Pod** > **Calibrate** > **Distance**.

2. Select a distance.

3. Select **START** to begin recording.

4. Run or walk the distance.

5. Select **STOP**.

Calibrating Your Foot Pod by GPS

You must have GPS signals to calibrate the foot pod using GPS.

1. Select MENU > **Settings** > **Foot Pod** > **Calibrate** > **GPS**.

2. Select **START** to begin recording.

3. Run or walk approximately 1000 m.

   The Forerunner informs you that you have traveled far enough.

Calibrating Your Foot Pod Manually

If your foot pod distance seems slightly high or low each time you run, you can manually adjust the calibration factor. The calibration formula is actual distance (use a regulation track) / recorded distance × current calibration factor = new calibration factor. For example, 1600 m / 1580 m × 95 = 96.2.

1. Select **MODE** > **Settings** > **Run Settings** > **Foot Pod** > **Calibration Factor**.

2. Adjust the calibration factor.

GSC 10

Cadence data from the GSC 10 is always recorded. If there is no GSC 10 paired, GPS data is used to calculate the speed and distance. Cadence is your rate of pedaling or "spinning" measured by the number of revolutions of the crank arm per minute (rpm). There are two sensors on the GSC 10: one for cadence and one for speed.

Selecting Your Cadence Sensor Type?

Since Garmin only has one accessory in this category, I assume it will be selected as the default. Maybe this topic is not necessary.

Calibrating the Bike Sensor

Before you customize the bike sensor options, you must change your sport to cycling (page 20).

Before you can calibrate the bike sensor, it must be properly installed and actively recording data.

Calibrating your bike sensor is optional and can improve accuracy. For calibration instructions specific to your bike sensor, refer to the manufacturer's instructions.

1. Select **MODE** > **Settings** > **Bike Settings** > [**Bike 1**] > **ANT+ Spd/ Cad** > **Calibration**.

2. Select an option:

- To use GPS to determine your wheel size, select **Auto**.
- To enter your wheel size, select **Manual**.

Power Meters

For a list of third-party ANT+ sensors that are compatible with the Edge, go to www.garmin.com/intosports.

Pairing Your Power Meter

Refer to the manufacturer's instructions.

When the power meter is paired, a message appears, and appears solid on the status page.

Calibrating Your Power Meter

For calibration instructions specific to your power meter, refer to the manufacturer's instructions.

Before you can calibrate your power meter, it must be properly installed and

actively recording data.

More **Bike Options**
• Cadence alerts (page 11)
• Bike training (page 20)
• Cadence data fields (page 42)

Using **the Weight Scale**

If you have an ANT+ compatible weight scale, the Forerunner can read the data from the weight scale.

1. Select **LIGHT**.

   A message appears when the weight scale is found.

2. Stand on the scale.

   NOTE: If using a body composition scale, remove shoes and socks to ensure that all body composition parameters are read and recorded.

3. Step off the scale.

TIP: If an error occurs, step off the scale, and try again.

About **Lifetime Athletes**

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

Fitness **Equipment**

ANT+ technology automatically links your Forerunner and heart rate monitor to fitness equipment so you can view your data on the equipment console. Look for the ANT+ Link Here logo on compatible fitness equipment.

Go to www.garmin.com/antplus for

more linking instructions.

DRAFT

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

ANT+ Sensor Troubleshooting

Problem	Solution
I have a third-party ANT+ sensor.	Make sure that it is compatible with the Forerunner (www.garmin.com/intosports).

Problem	Solution
I changed the battery in my accessory.	You must pair the sensor to your Forerunner again (page 24).
The heart rate data is inaccurate or erratic.	• Make sure that the heart rate monitor is snug against your body. • Warm up for 5–10 minutes. • Reapply moisture to the electrodes. Use water, saliva, or electrode gel. • Clean the electrodes. Dirt and sweat residue on the electrodes can interfere with heart rate signals. • Wear a cotton shirt or wet your shirt if suitable for your activity. 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 of strong electromagnetic fields and some 2.4 GHz wireless sensors, which can interfere with your heart rate monitor. Sources of interference may include high-voltage power lines, electric motors, microwave ovens, 2.4 GHz cordless phones, and wireless LAN access points.

History

Your Forerunner stores data based on the type of activity, the accessories used, and your training settings. The Forerunner can save approximately 180 hours of history with typical use. When the Forerunner memory is full, your oldest data is overwritten.

Your history

Viewing History

The history displays the date, time of day, distance, activity time, calories, and average and maximum pace or speed. The history can also display the average and maximum heart rate and cadence data if you are using the heart rate monitor, foot pod, or cadence sensor (optional accessories).

1. Select MENU > **History** > **Activities**.

2. Swipe up or down to view your saved activities.

3. Select an activity.

4. Scroll to the bottom of the page, and select **View Laps**.

5. Swipe up or down to scroll through laps.

Viewing Pace or Speed in History

1. Select MENU > **History** > **Options**.

2. Select **Running** or **Cycling**, depending on what sport you are using.

3. Select **Show Pace** or **Show Speed**.

Viewing Totals

1. Select MENU > **History** > **Totals**.

   Your total time and distance appear.

2. Select **Weekly** or **Monthly**.

Resetting Your Totals

You can reset the distance and time totals that appear on the device.

NOTE: This does not delete any history.

Select MENU > **History** > **Options** > **Reset Totals** > **Yes**.

Deleting History

Deleting a Run

1. Select MENU > **History** > **Activities**.

2. Select a run.

3. Scroll to the bottom of the page, and select **Delete** > **Yes**.

Deleting All Activities

Select MENU > **History** > **Options** > **Delete All Activities** > **Yes**.

Using Free Software

Garmin provides two software options for storing and analyzing your run history.

- Garmin Connect is Web-based software (www.garminconnect.com). You can use Garmin Connect on any computer with Internet access.

- Garmin Training Center is computer software that does not require the Internet after installation. It operates directly on your computer, not on the Internet.

1. Go to www.garmin.com/intosports.

2. Select **Train with Garmin**.

3. Select **Online Software** or **Desktop Software**.

4. Follow the on-screen instructions.

Sending History to Your Computer

Before you can wirelessly send an activity to your device, you must pair the Forerunner with your computer using the USB ANT Stick (page 35).

1. Plug the USB ANT Stick ① into a USB port on your computer.

2. Bring your device within range (3 m) of your computer.

   When the ANT Agent finds your device, the ANT Agent displays the unit ID and asks you if you want to pair.

3. Select **Yes**.

4. Follow the on-screen instructions.

Preventing Data Transfer

You can prevent transferring data to or from any computer, even a paired computer.

Select MENU > **Settings** > **System** > **Data Transfer** > **Data Transfer** > **Off**.

Navigation

Locations

Viewing and Saving Your Current Location

Before you can view and save your location, you must locate satellite signals (page 9).

You can save your current location, such as your home or parking spot.

1. Select MENU > **Where To?** > **Where Am I?**.

   Your current coordinates appear.

2. Select **Save**.
3. If necessary, select **Edit** to edit the properties.

Editing Locations

1. Select MENU > **Where To?** > **Locations**.
2. Select a location.

3. Select **View Location** > **Edit**.
4. Select an attribute.

   For example, select **Edit Elevation** to enter a known altitude for the location.

5. Enter the new information.

Deleting Locations

1. Select MENU > **Where To?** > **Locations**.
2. Select a location.
3. Select **Delete Location** > **Yes**.

Navigating to a Saved Location

Before you can navigate to a saved location, you must locate satellite signals.

1. Select MENU > **Where To?** > **Locations**.
2. Select a location.

3. Select **Go to Location**.

   The compass page appears.

To record the activity, you must start the timer.

Navigating Back to Start

You can only navigate to your starting location if you are training with GPS.

At any point during your run, you can return to your starting point. You must start the timer in order to use this feature.

1. During your run, select **STOP**, but do not reset the timer.

2. Select MENU > **Where To?** > **Back to Start**.

   The compass page appears. The Forerunner navigates you back to the starting point of your run.

Stopping the Navigation

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

GPS Settings

Turning Off GPS

Select MENU > **Settings** > **System** > **GPS** > **GPS** > **Off**.

When GPS is off, speed and distance data are not available unless you have an optional sensor that sends speed and distance data to the device (such as the foot pod or GSC 10). The next time you turn on the device, it will search for satellite signals again.

Satellite Page

The satellite page shows your current GPS satellite information. For more information, go to www.garmin.com /aboutGPS.

Select MENU > **Settings** > **System** > **GPS** > **Satellites**.

Settings

System Settings

Select MENU > **Settings** > **System**.

- **Language**—sets the device language.
- **Key Tones**—sets the device to use audible tones for key presses.
- **Alert Tones**—sets the device to use audible tones for messages.
- **Alert Vibration**—sets the device to use vibration for messages.
- **Data Recording**—controls how the device records activity data.
  - **Smart**—records key points where you change direction, speed, or heart rate.
  - **Every Second**—records points every second. It creates a very detailed record of your activity; however, it greatly increases the size of the activity.
- **GPS**—page 38.
- **Backlight**—page 49.

Customizing the Unit Settings

You can customize units of measure for distance, pace and speed, elevation, position format, and weight.

1. Select MENU > **Settings** > **System** > **Units**.
2. Select a setting.
3. Select a unit for the setting.

Time Settings

Setting the Time Manually

By default, the watch time is set automatically when the Forerunner locates satellites.

1. Select MENU > **Settings** > **System** > **Time** > **Set Time** > **Manual**.
2. Enter the time.
3. If necessary, select **Time Format** to choose between 12 hour or 24 hour.

Setting the Alarm

1. Select MENU > **Settings** > **Alarm**.
2. Select **Alarm** > **On**.
3. Select **Time**, and enter a time.

Time Zones

Each time you locate satellites, the device automatically detects your time zone and the current time of day.

Setting Your User Profile

The Forerunner uses information that you enter about yourself to calculate accurate run data. You can modify the following user profile information: gender, age, weight, and height.

1. Select MENU > **Settings** > **User Profile**.
2. Modify the settings.

About Calories

Calorie expenditure and heart rate analysis technology is provided and supported by Firstbeat Technologies Ltd. For more information, go to www.firstbeattechnologies.com.

About Training Effect

Training effect measures the impact of an activity on your aerobic fitness. Training effect accumulates during the activity. As the activity progresses successfully, 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.

It is important to know that your training effect numbers (1.0–5.0) may seem abnormally high during your first few runs. It takes several activities for the device to learn your aerobic fitness.

Train- ing Effect	Description
1.0–1.9	Helps recovery (short activities). Improves endurance with longer activities (more than 40 minutes).
2.0–2.9	Maintains your aerobic fitness.
3.0–3.9	Improves your aerobic fitness if repeated as part of your weekly training program.

4.0–4.9	Highly improves your aerobic fitness if repeated 1–2 times per week with adequate recovery time.
5.0	Causes temporary overload with high improvement. Train up to this number with extreme care. Requires additional recovery days.

Training effect technology is provided and supported by Firstbeat Technologies Ltd. For more information, go to www.firstbeattechnologies.com.

Customizing the Training Pages

You can customize the data fields on four training pages.

1. Select MENU > **Setti**ngs > **Training Pages**.

2. Select a training page.

3. Select MENU.

4. Change the number of data fields you want to see on the page.

5. Select **Enabled**.

6. Select ◄.

7. Select a data field to change it.

8. Select a category and a data field.

   For example, select **Heart Rate** > **HR - Lap**.

Data Fields

Data fields with the * symbol display statute or metric units. Data fields with the ** symbol require an ANT+ sensor.

Data Field	Description
Cadence **	For running, cadence is measured in steps per minute (spm). For cycling, cadence is measured in revolutions of the crank arm per minute (rpm).
Cadence – Average **	Average cadence for the duration of your current activity.
Cadence – Lap **	Average cadence for the current lap.
Calories	Amount of total calories burned.
Calories - Fat	Amount of fat calories burned. Requires a New Leaf® assessment.

Data Field	Description
Calories to Go	During a workout, the remaining calories when the step duration is a calorie amount.
Distance *	Distance traveled for the current activity.
Distance – Lap *	Distance traveled in the current lap.
Distance – Last Lap *	Distance of the last completed lap.
Distance to Go *	During a workout, the remaining distance when the step duration is a distance amount.
Elevation *	Distance above or below sea level.

Data Field	Description
GPS Accuracy *	The margin of error for your exact location. For example, your GPS location is accurate to within +/- 12 feet.
Grade	Calculation of rise over run. For example, if for every 10 feet you climb (elevation) you travel 200 feet (distance), your grade is 5%.
Heading	The direction you are moving.
Heart Rate **	Heart rate in beats per minute (bpm).
Heart Rate to Go **	During a workout, the amount you are above or below the heart rate target.

Data Field	Description
HR – %HRR **	Percentage of heart rate reserve (maximum heart rate minus resting heart rate).
HR – %Max. **	Percentage of maximum heart rate.
HR – Average **	Average heart rate for the duration of your current activity.
HR – Avg. %HRR **	Average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the activity.
HR – Avg. %Max. **	Average percentage of maximum heart rate for the activity.
HR – Lap **	Average heart rate in the current lap.

Data Field	Description
HR – Lap %HRR **	Average percentage of heart rate reserve (maximum heart rate minus resting heart rate) for the lap.
HR – Lap %Max. **	Average percentage of maximum heart rate for the lap.
HR Zone **	Current range of heart rate (1 to 5). The default zones are based on your user profile, maximum heart rate, and resting heart rate.
Lap Pace Zone	Range of pace (ten zones available) for the current lap.
Lap Speed Zone *	Range of speed (ten zones available) for the current lap.

Data Field	Description
Laps	Number of laps completed.
Pace	Current pace.
Pace – Average	Average pace for the duration of your current activity.
Pace – Lap	Average pace in the current lap.
Pace – Last Lap	Average pace during the last completed lap.
Pace Zone	Current range of pace. Zones can be set in Garmin Connect.
Reps to Go	During a workout, the remaining repetitions.
Speed *	Current speed.
Speed – Average *	Average speed for the activity.

Data Field	Description
Speed – Lap *	Average speed in the current lap.
Speed – Last Lap *	Average speed during the last completed lap.
Speed Zone *	Current range of speed. Zones can be set in Garmin Connect.
Sunrise	The time of sunrise based on your GPS position.
Sunset	The time of sunset based on your GPS position.
Time	Stopwatch time.
Time – Avg. Lap	Average time to complete the laps so far.

Data Field	Description
Time - Elapsed	Total time recorded. For example, if you run 10 minutes, then stop the timer for 5 minutes, then start the timer again and run for 20 minutes, your elapsed time is 35 minutes.
Time – Lap	Amount of time in the current lap.
Time – Last Lap	Amount of time during the last completed lap.
Time of Day	Current time of day based on your time settings (format, time zone, and daylight saving time).
Time to Go	During a workout, the remaining time in the interval or step.

Data Field	Description
Training Effect (TE) **	Current impact (1.0-5.0) on your aerobic fitness (page 40).

Customizing the Favorites Category

1. Select MENU > **Settings** > **Training Pages**.
2. Select a training page.
3. Select a data field to change it.
4. Select **Favorites** > **Edit Favorites**.
5. Select one or more data fields.

Device Information

Specifications

NOTICE

The Forerunner is

NOTE: swimming note or notice.

Forerunner Specifications	
Battery	200 mAh rechargeable, lithium-ion battery
Battery life	20 hours, typical use (xref)
Operating temperature range	From -4°F to 140°F (from -20°C to 60°C)
Water resistance	164 ft. (50 m)
Radio frequency/ protocol	2.4 GHz ANT+ wireless communications protocol
Compatible accessories	ANT+ wireless technology works with compatible heart rate monitor, foot pod, GSC 10, power? weight scale, and fitness equipment.

Heart Rate Monitor Specifications	
Water resistance	98.4 ft. (30 m) This product does not transmit heart rate data to your GPS device while swimming.
Battery	User-replaceable CR2032, 3 volts (page 49)
Battery life	Approximately 4.5 years (1 hour per day)
Operating temperature	From 23°F to 122°F (from -5°C to 50°C) **NOTE**: In cold conditions, wear appropriate clothing to keep the heart rate monitor near your body temperature.
Radio frequency/ protocol	2.4 GHz ANT+ wireless communications protocol

About the Battery

⚠ WARNING

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

The actual battery life of a fully charged battery depends on how much time you use GPS, the backlight, and power save mode. Exposure to extremely cold temperatures will also reduce battery life.

Power Save

After a period of inactivity, the Forerunner goes into power save mode and 🔒 appears. The Forerunner displays the time and date, but does not connect with your ANT+ accessories or use GPS. Swipe left to exit power save mode.

Maximizing Battery Life

Extensive use of screen backlighting can significantly reduce battery life.

Setting the Backlight

1. Select MENU > **Settings** > **System** > **Backlight** > **Mode**.

2. Select an option:

   • To activate the backlight only using the **LIGHT** key, select **Manual**.

   • To activate the backlight for all key presses and messages, select **Keys/Alerts**.

Adjusting the Backlight Timeout

1. Select MENU > **Settings** > **System** > **Backlight** > **Timeout**.

2. Select a short backlight timeout.

Heart Rate Monitor Battery

⚠ WARNING

Do not use a sharp object to remove user-replaceable batteries. Contact your local waste disposal department to properly recycle the batteries. Perchlorate Material – special handling may apply. See www.dtsc.ca.gov /hazardouswaste/perchlorate.

Replacing the Heart Rate Monitor Battery

1. Use a small Phillips screwdriver to remove the four screws on the back of the module.

2. Remove the cover and battery.

3. Wait 30 seconds.

4. Insert the new battery with the positive side facing up.

   NOTE: Do not damage or lose the O-ring gasket.

5. Replace the back cover and the four screws.

After you replace the heart rate monitor battery, you must pair it with the device again.

Changing the Wrist Band

You can purchase a fabric wrist band accessory for the Forerunner (http://buy.garmin.com).

1. Use the pin tool ① to remove the pins ②.

   NOTE: Do not discard the pins.

2. Align the top of the Forerunner ③ with the connector ④.

3. Insert the tapered end ⑤ of the pin to secure the connector to the Forerunner.

   TIP: You must firmly press the pin into the connector. Use a sturdy, blunt object, if necessary.

4. Align the connector with the loop ⑥ of the fabric wrist strap.

5. Insert the tapered end of the pin ⑦ to secure the connector to the loop.

6. Repeat steps 2–5 for the bottom connector.

Caring for Your Device

NOTICE

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

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

Do not use a sharp object to clean the area between the screen and bezel.

Avoid chemical cleaners and solvents that can damage plastic components.

Cleaning the Device

1. Use a cloth dampened with a mild detergent solution.

2. Wipe it dry.

Cleaning the Screen

1. Use a soft, clean, lint-free cloth.
2. If necessary, use water, isopropyl alcohol, or eyeglass lens cleaner.
3. Apply the liquid to the cloth, and gently wipe the screen with the cloth.

Caring for the Heart Rate Monitor

You must unsnap the module before cleaning the strap.

- Rinse the strap after every use.
- Hand wash the strap in cold water with a mild detergent after every five uses.
- Do not put the strap in a washing machine or a dryer.
- To prolong the life of your heart rate monitor, unsnap the module when not in use.

Updating the Software Using Garmin Connect

Before you can update the device software, you must pair the USB ANT Stick with your computer (page 36).

1. Connect the USB ANT Stick to your computer.
2. Go to www.garminconnect.com.

   If there is new software available, Garmin Connect alerts you to update the software.
3. Follow the on-screen instructions.
4. Keep your device in range (3 m) of the computer during the update process.

DRAFT

Appendix

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www.garmin.com

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www.garmin.com/support

Garmin International, Inc.
1200 East 151st Street,
Olathe, Kansas 66062, USA

Garmin (Europe) Ltd.
Liberty House, Hounsdown Business Park
Southampton, Hampshire, SO40 9LR UK

Garmin Corporation
No. 68, Zhangshu 2nd Road, Xizhi Dist.
New Taipei City, 221, Taiwan (R.O.C.)

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