

Project Hiking Way V1.x

for Hiking and Trail

VIVOACTIVE HR & 3 & 3 Music

FORERUNNER 645/645M/735XT/935

FENIX 5/5S/5X/Plus/tactix Charlie/Chronos/6/6s



HikingWay V1.x App for **Vivoactive HR & 3 & 3 Music**, **Forerunner 645/645m/735xt/935** and **Fenix 5/5S/5X/Plus/Chronos/6/6s** is dedicated for **Trail or Hiking** in mountain, forest, everywhere there is a GPS signal.

In real time, it's reported on the screen: the **distance** (km or mile), the **average/current speed or pace** (km or mile by hour, or min:sec by km or mile), the **time elapsed** (h:min:sec), **Heart Rate** value (bpm) and some other information about the hiking as: **compass**, **arrow indicator for the initial position direction**, **current time**, **height difference** (positive and negative cumulated) and **altitude** (min, current, max) shortest distance to the initial position and duration with your average speed to come back to initial position. It is also possible to save and load a position (for example your home position). During the trail/hiking, it is possible to consult **the Map** with the possibility of zoom on your watch. A battery indicator is also available to inform and to warn about battery level when GPS is on and then to avoid a crash during the hiking.¹

When the Heart Rate monitor is turned on, the **heart rate** value is reported on the screen in real time. A **HR threshold** can be adjusted; a periodical vibration warning (and a heart warning on screen) is activated as long as the heart rate is higher than the threshold. For Night Runner, it's possible to keep screen light activated during the run. Your hiking session (map, speed, ...) can be stored with FIT format compatible for Garmin Connect IQ (need to create a Garmin Connect account); then, it's possible to have look on map and session information on your Garmin Connect IQ page.

Language available: French, Chinese (Simplified), English, Italian, Japanese, Germany, Nederland, Spanish, Swedish, Norwegian, Danish, Polish, Portuguese, Slovak.

¹ **Nota :** Compare to a running or trail, a hiking takes much more longer time. Don't forget that GPS decrease the battery level quickly and that Garmin overestimate its battery capacity. Please check before starting your trail/hiking the battery capacity of your watch when GPS is on, particular for a long hiking more than 4 hours.

Summarizing of the main functionalities:

Functionalities	Free	Need a registration code
Real time: distance, average/current pace or speed, time, height difference, clock, Back To Home data's (distance, duration to come back to initial position)	X	
Play, Pause, Stop	X	
Back to Home functionalities: green arrows indicator showing the direction for the initial position, shortest distance and duration to come back	X	
Back to Home functionalities : Save/Load positions		X
Compass displaying	X	
Final report before App exit: distance, average pace, time, height difference	X	
Session saving (FIT format compatible for Garmin Connect)	X	
Language: French, Chinese(Simplified), English, Italian, Japanese, Germany, Nederland, Spanish, Swedish, Norwegian, Danish, Polish, Portuguese, Slovak.	X	
Km or Mile: parameter to switch in app parameters	X	
Night runner: Setting to maintain screen light activated during running		X
Previous Trail/Hiking report displaying	X	
Heart Rate monitor management: activation or not, real time on screen, threshold adjustment (periodical vibration warning and on screen as long as the HR is higher than the threshold) and HR zone adjustment	X	
Heart Rate monitor management: visual warning (heart picture) on screen when HR is higher than the threshold		X
Map displaying	X	
Map displaying: zoom functionality		X
Map displaying: for tactile watches, possibility to tag a position on the map (with a blue circle mark)		X

About Heart Rate monitor scale:

When HR is enabled and for registered users, a HR scale is displayed at the left part of the screen with 5 zones for all watches type:

- **Zone 1 from 127 to 138 bpm (blue color)**
- **Zone 2 from 139 to 148 bpm (dark green color)**
- **Zone 3 from 149 to 159 bpm (green color)**
- **Zone 4 from 160 to 169 bpm (orange color)**
- **Zone 5 from 170 (red color)**

Each HR zone is fully adjustable in the setting menu of the app.

About Back to Home functionality (BTH) and Map displaying:



The BTH functionality provides to the runner an indicator of the direction to come back to initial position (or loaded position): a double green arrow. When this double arrow is at the top of the screen (0°), the runner is walking in the right direction to come back to initial position (shortest distance).

Nota: for a better BTH operating, it's important to be in movement.

When the map is displayed, following information are available:



- The course in real time with the initial position (●);
- The current position with a red arrow oriented in the movement direction (Δ);
- A specific position with a blue circle (●) for the specific position (tagged by user during the course for tactile watches only; this functionality need a registration)
- The Back To Home green arrows indicator (Δ) at left sides (this functionality need a registration)
- The Compass pink arrow indicator (Δ) at right side (this functionality need a registration)
- Zoom level at the top of the screen: x1.0 and scale (km or miles) for zoom level different than x1.0
- At the bottom of the screen, the distance of the course and the shortest distance to initial position P0.

Nota: Only **100 positions are displayed** on the map. There are 2 map parameters in the HikingWay parameters setting:

- **Map sampling:** a position is saved every *Map Sampling* seconds
- **Map full/incomplete:** when *Full Map* is selected and 200 positions saved, every two positions is deleted, then map precision is reduced. When *Incomplete Map* is selected and 200 positions saved, first position is deleted, the start of your hiking is then gradually deleted.

Some pictures:

			
<p>Vivoactive3</p>	<p>Forerunner 935</p>	<p>Vivoactive HR</p>	<p>Fenix 5 series</p>
			
<p>Map (green position: initial position (●); flash red position (▲): current position, blue (●) for the specific position tagged by user for tactile watches only)</p>	<p>Vivoactive 3 with Back To Home indicator (double green arrows)</p>	<p>Parameters menu</p>	<p>Altitude (Min. / Current / Max.)</p>
			
<p>Height difference (cumulated positive and negative height)</p>	<p>Current Time</p>	<p>Distance between initial position and current position</p>	<p>Report: distance, Average speed/pace, duration, cumulated positive and negative height, altitude (Min./Max.)</p>

User manual - How to use Hiking Way:

Sheet summarizing all commands according watches types:

<u>Specific command</u>	Vivoactive HR	Vivoactive 3	Non-tactile watches
Parameter menu access	Swipe down on screen	Hold on screen	Press down pushbutton
Leave menu item	Press back/esc pushbutton	Swipe right on screen	Press back/esc pushbutton
Map displaying/hiding	Swipe up on screen	Swipe up on screen	Press up pushbutton
Zoom when map is displayed during hiking/running or when report od end hiking/running is displayed	Swipe left(+)/right(-) on screen	Swipe left(+)/right(-) on screen	Press down pushbutton (after x3.0, zoom set to x0.2)
Switch current/average pace/altitude... on screen	Swipe left/right or tape on screen	Swipe left/right or tape on screen	Press up or down pushbutton (only during running)
Leave app (condition: pause mode or running not stated)	Press back/esc pushbutton	Swipe right on screen	Press back/esc pushbutton
Start/Pause/Restart	Press Start pushbutton	Press Start pushbutton	Press Start pushbutton
Tag a position on map (with blue circle mark)	Tap on screen	Tap on screen	

Parameter adjustment:

Main parameters are adjustable through Parameter Menu. Two specific paramters have to be explained more:

- **Map menu:** this menu allows to adjust the number of sampling to draw the map; when the number of sampling is low, the memory used by app could be high.
- **Vibration menu:** this parameter allows to adjust the level of vibration for Heart Rate management

About compass operating:

It's recommended to calibrate your watch compass. For that refer to the user's manual of your watch in sensor parameter section.

About altitude and height difference determination:

The Altitude is provided by watch Garmin sensor (GPS and/or barometer depending on your watch). The precision of altitude measurement is better by using barometer than with GPS. For watches using the two sensor type, Garmin Operating system tries to provide always the best estimation of the altitude. For cumulative height difference positive and negative, the measurement is made each 100 m, a cutoff threshold of 4 meter is used to detect if there is really an elevation or not.

Hiking Way registration, how to obtain the registration code:

Hiking Way development takes many time, thanks you to support me if you enjoy my app. Some functions can be unblocked with a specific code (registration in parameters menu). To obtain the code (to set in the parameters of HikingWay) which unblock functions, please, **make a free donation** (EURO only, don't forget to check PayPal tax in your country) to my PayPal account:

<https://www.paypal.me/SylvainPelletier169>

Then, send me the prove of donation to my email: pelletier.sylvain@yahoo.fr (with **your watch type** and **the app name**). I will send you the code.

If you like my jobs, don't forget to write a comment on Garmin Connect IQ Apps Store. Thanks to send me by email any feedback, mistranslation or bugs which could improve this application.

How to set the registration code in App: in HikingWay parameter, go to the "registration code" section and set the correct number for each code 1, 2, 3 and 4.

Requirement: THE LAST WATCH FIRMWARE (to check with Garmin Express, compatible with SDK Connect IQ 3.0.x), UNINSTALL THE PREVIOUS VERSION BEFORE INSTALLING THIS NEW VERSION. Update for next release is made automatically by connecting your watch to Garmin Express after synchronizing.

Trouble shouting: If problem appears (IQ warning), try to uninstall and to reinstall the app, and reboot your watch.

Release historic:

Version 1.82 (March 2020):

- **Battery indicator (with warning when the battery level is low)**
- **Map: only 200 positions displayed(to avoid bug(watchdog counter error))**

Version 1.80 (January 2020):

- **New Map Design**

Version 1.60 (September 2019):

- **Map functionality**

Version 1.50 (May 2019):

- **Pace/Speed switch parameter**

Version 1.10 (Dec 2018):

- **Fix bug**

Version 1.00 (Nov 2018):

- **Initial version**