Zone Gauges User Manual

A Comprehensive Guide

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1. User documentation

Welcome to the **Zone Gauges Data Field** user documentation which is a data field and has to be integrated into one of the Garmin native apps.

Download PDF

2. English

2.1 Zone Gauges

The **Zone Gauges**, running on all Connect IQ™-compatible Garmin devices with CIQ 2 or higher, is a data field which shows the heart rate in big letters including heart rate zone coloring during your workout session.

> **Note:**
> This data field is optimized for best possible readability.

The main idea behind data fields is to use the native Garmin apps which offers features which cannot be accessed through the Garmin API in 3rd-party apps (e.g. map support, workout support, etc.) and extend its functionality with new features.

> **Note:**
> Due to memory constraints, data fields will only be available on newer Garmin devices with at least 32 kB of memory for data fields!

Link to **Zone Gauges** on Garmin App Store

This website provides further information regarding requirements, installation, getting started, supported data fields and features as well as frequently asked questions.

2.2 Disclaimer

2.2.1 Software disclaimer

Our offered applications, widgets and data fields (further on simply called software), which can be downloaded from the Garmin App Store, are provided ‘as is’ without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of fitness for a purpose, or the warranty of non-infringement. Without limiting the foregoing, Robert Hofer (RH-SPORTS) makes no warranty that:

- the software will meet your requirements.
- the software will be uninterrupted, timely, secure or error-free.
- the results that may be obtained from the use of the software will be effective, accurate or reliable.
- the quality of the software will meet your expectations.

Software and documentation on our web site:

- could include technical or other mistakes, inaccuracies or errors.
- may be out of date where we make no commitment to update the it right away.
- we assume no responsibility for errors or omissions in the software or documentation available from our web sites.
- Robert Hofer (RH-SPORTS) has the right to change the software or documentation anytime.

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The use of the software downloaded is done at your own discretion and risk and with agreement that you will be solely responsible for any damage to your computer system, watch of navigation device or loss of data that results from such activities. No advice or information, whether oral or written, obtained by you from us by mail or from our web sites shall create any warranty for the software.

2.2.2 User data protection according to DSGVO

RH-SPORTS clearly wants to state that we do not collect or save user information of any kind. If you are using our applications or data fields and save the recorded session afterwards then the data will be fully processed by Garmin Ltd. or its subsidiaries. This might include that the recorded data is sent to servers hosted or paid for by Garmin. Please read the user data protection rules from Garmin for further details.

Following applications offer map support:

- Cycling App Professional
- Hiking App Professional
- MTB App Professional
- SkiTour App Professional

These applications do not directly track personal information but makes use of a 3rd party API provided by dynamicWatch which does store personal information on every data request. You can read the detailed privacy policy of dynamicWatch here.

2.2.3 Activity tracking and fitness metric accuracy

Our applications and data fields use the Garmin API´s to retrieve most of the information and cannot be more precise than the data delivered from there. Garmin states following about activity tracking and accuracy:

- "Garmin devices are intended to be tools to provide you with information to encourage an active and healthy lifestyle. Garmin wearables rely on sensors that track your movement and other metrics. The data and information provided by these devices is intended to be a close estimation of your activity and metrics tracked, but may not be precisely accurate. Garmin wearables are not medical devices, and the data provided by them is not intended to be utilized for medical purposes and is not intended to diagnose, treat, cure, or prevent any disease. Garmin recommends you consult your doctor before engaging in any exercise routine."

2.2.4 Accuracy of wrist-based heart rate (Elevate)

Our applications and data fields use the Garmin API´s to retrieve heart rate related data cannot be more precise than the data delivered from there. Regarding wrist-based accuracy, Garmin states following:

- "The optical wrist heart rate (HR) monitor for Garmin wearables is a valuable tool that can provide an accurate estimation of the user's heart rate at any given point in time. The optical HR monitor is designed to attempt to monitor a user's heart rate 24 hours a day, 7 days a week. The frequency at which heart rate is measured varies, and may depend on the level of activity of the user. When you start an activity with your Garmin optical HR device, the optical HR monitor measures more frequently. The intent is to provide the user with a more frequent and accurate heart rate reading during a given activity."
- "While our wrist HR monitor technology is state of the art, there are inherent limitations with the technology that may cause some of the heart rate readings to be inaccurate under certain circumstances. These circumstances include the user's physical characteristics, the fit of the device and the type and intensity of the activity as outlined above. The HR monitor data is not intended to be used for medical purposes, nor is it intended to diagnose, treat, cure or prevent any disease or condition."
- "Wrist heart rate accuracy during swimming is very limited. Garmin does not recommend using wrist heart rate during swimming activities and on some products, wrist heart rate monitoring is disabled while swimming. Garmin recommends using HRM-Swim™ or HRM-Tri™ heart rate monitors with compatible devices to track heart rate while swimming."

2.2.5 White background on AMOLED displays

For devices with AMOLED display (e.g. Venu™ based devices) we strongly recommend to always select the black background to avoid damages due to burn-in effects and to save battery life time!

> **Note:**
> We take over NO responsibility in case of damages due to burn-in effects.

2.3 Requirements

Supported Garmin devices

The **Zone Gauges** data field runs on most Garmin devices but there is a difference in functionality between devices with less than 32 kB of memory and devices with more memory for 3rd party data fields.

List of devices with 32 kB or less memory for data fields:

- Approach® S60
- Captain Marvel
- Darth Vader™
- D2™ Air
- Fēnix® Chronos
- Fēnix® 5 and 5s
- Fēnix® 6 and 6s
- First Avenger
- Forerunner® 55, 245, 645 and 935
- ForeAthlete® 735XTJ
- Rey™
- Venu™ and Venu™ Mercedes-Benz® Collection
- Venu™ SQ and Venu™ SQ Music
- Vivoactive™ HR
- Vivoactive® 3, Vivoactive® 3 Music, Vivoactive® 3m LTE, Vivoactive® 3 Mercedes-Benz® Collection
- Vivoactive® 4 and 4s

List of devices with more than 32 kB of memory:

- Approach® S50
- Approach® S62
- Approach® S70 42mm and 47mm
- D2™ Air X10
- D2™ Charlie
- D2™ Delta, D2™ Delta PX, D2™ Delta S
- D2™ Mach 1
- Descent™ G2
- Descent™ MK1, Descent™ MK2, Descent™ MK2s
- Descent™ Mk3 43mm and 51mm
- Enduro™ and Enduro™ 3
- Epix™ 2, Epix™ Pro (Gen 2) 42mm, 47mm and 51mm
- Fēnix® 5X
- Fēnix® 5 Plus, Fēnix® 5S Plus, Fēnix® 5X Plus
- Fēnix® 6 Pro and 6s Pro
- Fēnix® 6x Pro, 6x Sapphire, 6x Pro Solar and tactix® Delta Sapphire
- Fenix® 7, Fenix® 7s and Fenix® 7x
- Fenix® 7 Pro, Fenix® 7s Pro and Fenix® 7x Pro
- Fēnix® 7 Pro (no Wi-Fi) and Fēnix® 7x Pro (no Wi-Fi)
- Fenix® 8 43mm, 47mm, 51mm and Fenix® 8 Solar 47mm, 51mm
- Fenix® 8 Pro 47mm, 51mm and MicroLED
- Fenix® E
- Forerunner® 165, 165 Music, 245 Music, 255, 255 Music, 255s, 255s Music, 265 and 265s
- Forerunner® 570 42mm and 47mm, 645 Music, 735XT, 945, 945 LTE, 955, 955 Solar, 965 and 970
- Instinct® 3 AMOLED 45mm and 50mm
- Instinct® Crossover AMOLED
- MARQ™ Adventurer, Athlete, Aviator, Captain, Commander, Driver, Expedition and Golfer
- MARQ® (Gen 2) Athlete, Adventurer, Captain, Golfer and Aviator
- Venu™ 2, Venu™ 2 Plus, Venu™ 2s
- Venu™ SQ 2 and Venu™ SQ 2 Music
- Venu® 3 and Venu® 3s
- Venu® 4 41mm and 45mm
- Venu® X1
- Vivoactive® 5 and 6

Garmin device firmware requirements

Please install the latest firmware on your Garmin device. Here the information about the minimum required Connect IQ™ version depending on your device type:

- V2.4.1
    - Approach® S60
    - ForeAthlete® 735J
    - Forerunner® 735XT
    - Vivoactive® HR
- V3.0.0
    - Approach® S62
    - D2® Charlie
    - D2® Delta, D2® Delta PX, D2® Delta S
    - Descent™ MK1
    - Vivoactive® 3 Mercedes-Benz® Collection
- V3.1.0
    - Descent™ MK2
    - Fēnix® Chronos
    - Fēnix® 5, Fēnix® 5S, Fēnix® 5X and Fēnix® 5 Quatix
    - Fēnix® 5 Quatix
    - Fēnix® 5 Plus, Fēnix® 5S Plus, Fēnix® 5X Plus
    - Forerunner® 935
    - Forerunner® 645 and 645 Music
    - Vivoactive® 3
- V3.2.0
    - Captain Marvel
    - Darth Vader™
    - D2™ Air
    - Descent™ MK2s
    - Enduro™
    - Fēnix® 6 and 6 Pro
    - Fēnix® 6s and 6s Pro
    - Fēnix® 6x Pro, 6x Sapphire, 6x Pro Solar and tactix® Delta Sapphire
    - First Avenger
    - Forerunner® 55, 245, 245 Music, 745 and 945
    - MARQ™ Adventurer, Athlete, Aviator, Captain, Commander, Driver, Expedition and Golfer
    - Rey™
    - Venu™ SQ and Venu™ SQ Music
    - Venu™ and Venu™ Mercedes-Benz® Collection
    - Vivoactive® 3 Music, Vivoactive® 3 Music LTE
    - Vivoactive® 4s and 4
- V3.3.0
    - Forerunner® 945 LTE
- V4.0.0
    - D2™ Air X10
    - D2™ Mach 1
    - Venu™ 2, Venu™ 2 Plus, Venu™ 2s

- V4.1.0
    - Fenix® 7, Fenix® 7s and Fenix® 7x
    - Forerunner® 255, 255 Music, 255s and 255s Music
    - Forerunner® 955 and Solar
    - MARQ® (Gen 2) Athlete, Adventurer, Captain, Golfer and Aviator
    - Venu™ SQ 2 and Venu™ SQ 2 Music
- V4.2.0
    - Approach® S70 42mm and 47mm
    - Descent™ Mk3 43 and 51mm
    - Epix™ 2
    - Epix™ Pro (Gen 2) 42mm, 47mm and 51mm
    - Fenix® 7 Pro, Fenix® 7s Pro and Fenix® 7x Pro
    - Fēnix® 7 Pro (no Wi-Fi) and Fēnix® 7x Pro (no Wi-Fi)
    - Forerunner® 165 and 165m
    - Forerunner® 265 and 265s
    - Forerunner® 965
    - Venu® 3 and Venu® 3s
    - Vivoactive® 5
- V5.0.0
    - Approach® S50
    - Descent™ G2
    - Enduro™ 3
    - Fenix® 8 43mm
    - Fenix® 8 47 and 51mm
    - Fenix® 8 Solar 47 and 51mm
    - Fenix® E
    - Instinct® 3 AMOLED 45 and 50mm
    - Vivoactive® 6
- V5.1.0
    - Fenix® 8 Pro 47mm, 51mm and MicroLED
    - Forerunner® 570 42mm and 47mm
    - Forerunner® 970
    - Instinct® Crossover AMOLED
    - Venu® X1
- V5.2.0
    - Venu® 4 41mm and 45mm

> **Note:**
> Please also take a look to the Garmin feature set description for your device.

Garmin software requirements

- Please install the latest Garmin Connect App if you use the mobile phone for installation and configuration.
- Please install the latest Garmin Express Version if you use the PC/MAC for installation and configuration.

2.3.1 Sensor requirements

- Please enable the ANT+ sensor for heart rate or use the wrist-based heart rate.

2.4 Getting started

This section describes everything you need to know to get **Zone Gauges** up and running on your Garmin device.

Topics:

2.4.1 Install data field

Please install the **Zone Gauges** data field by downloading it from the Garmin App Store via the Garmin Express Software on PC/MAC or via the Garmin ConnectIQ mobile app on your mobile phone.

Link to **Zone Gauges** on Garmin App Store

Install instructions:
This is NO application but a data field. In order to use it, you will need to set up a screen with only one field and select **Zone Gauges** from the Connect IQ fields options. The whole screen is needed for displaying all the information which can highly be configured via settings.
Here's how you can set it up:

- Download the data field to your watch.
- Open the activity you want to add the data field to (e.g., Running, Cycling or Walking/Hiking).
- Press and hold the "Up" button until the menu appears.
- Select "Run settings" (usually the first option) and then choose "Data Screens"
- Scroll down and choose "Add New".
- Select "Custom Data" and then choose a layout with just ONE field (Field 1).
- Finally, choose "ConnectIQ Fields" and select the **Zone Gauges** data field.

Once you've completed these steps, you'll have everything you need for a run on just one screen.
If you require further assistance with setting up data fields for your device, please refer to this link for instructions.

2.4.2 Change the user settings

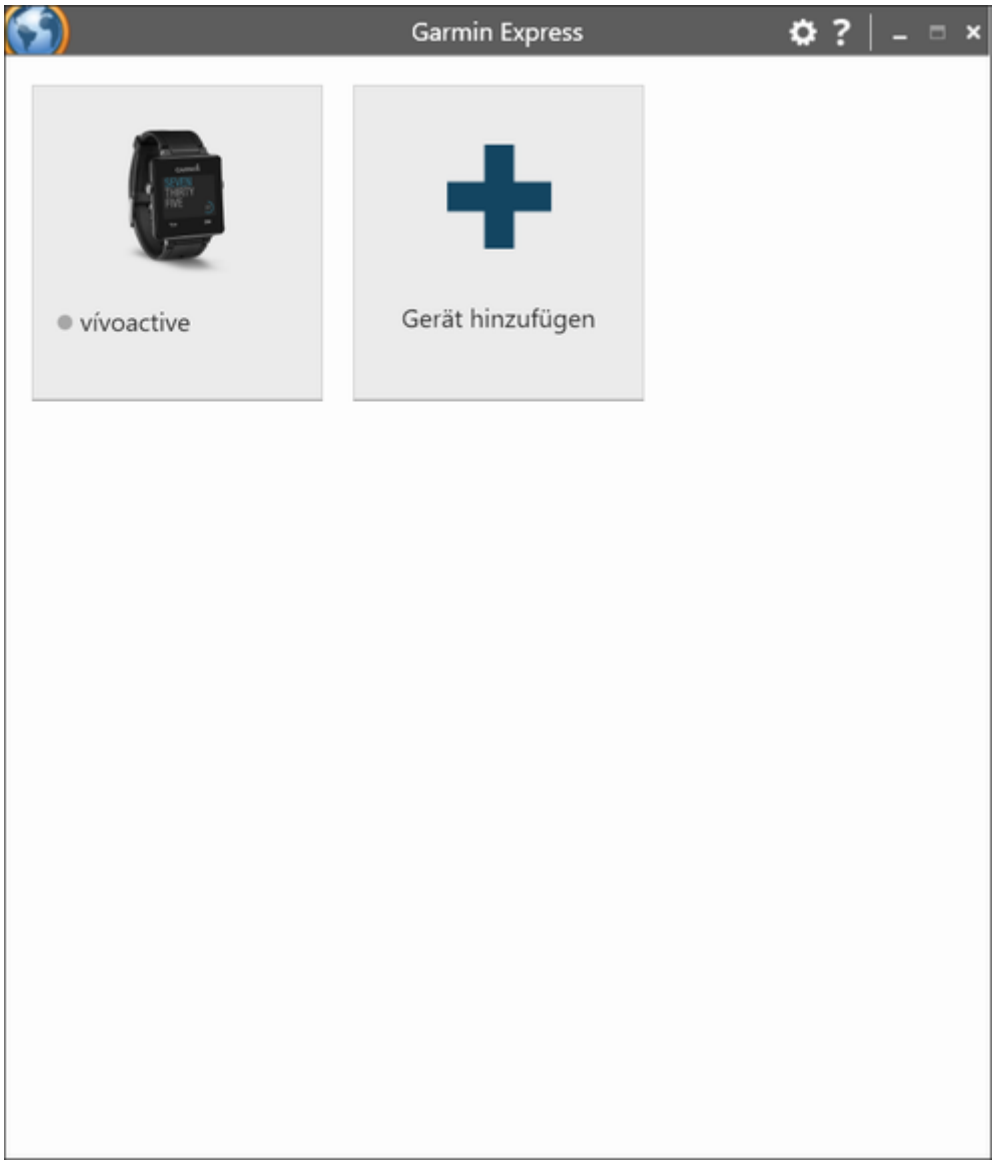
The **Zone Gauges** in the PREMIUM version offers a huge amount of configuration options which can be changed on your PC/MAC your or on your mobile phone:

Change user settings on PC or MAC

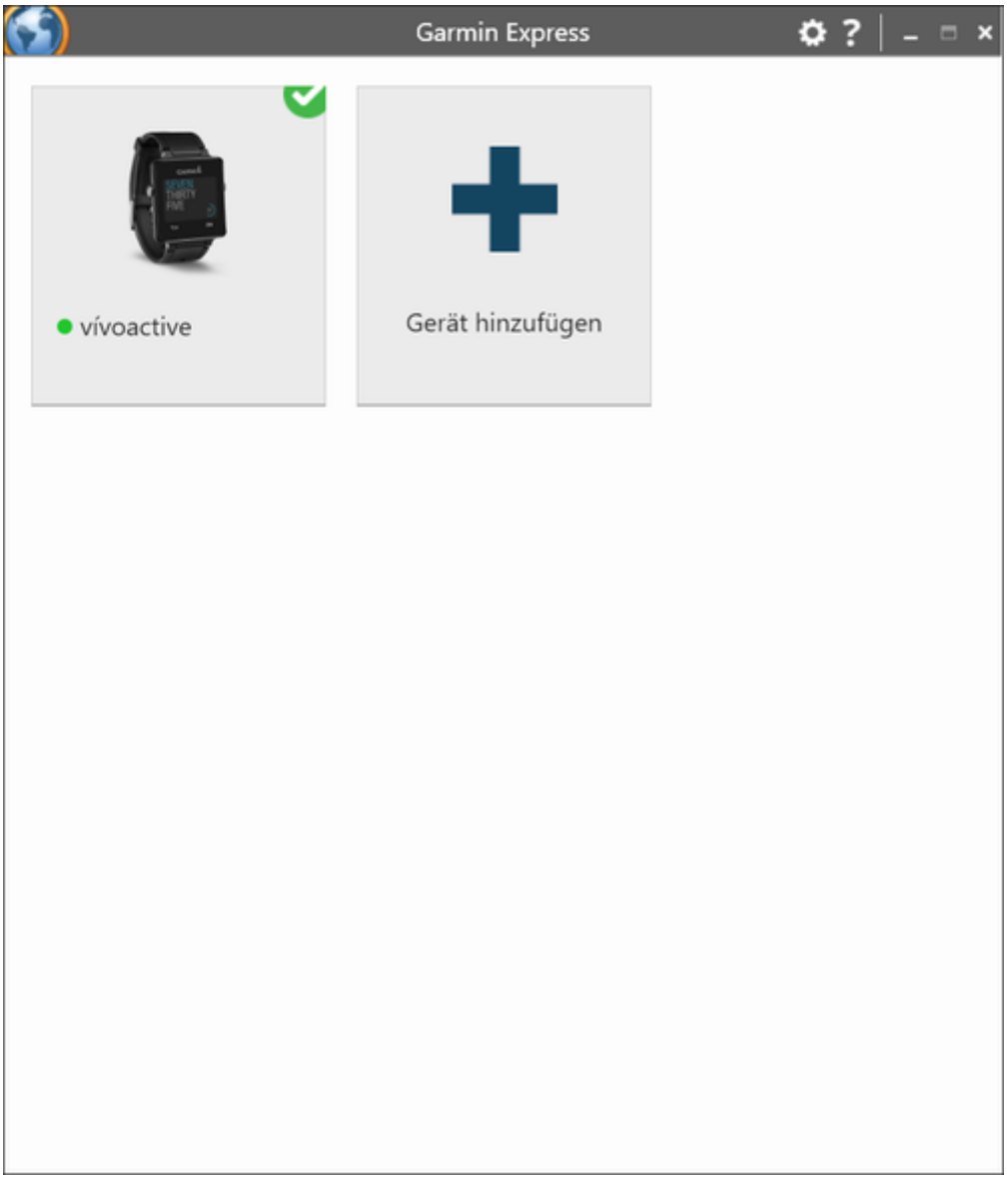
All configurations can be changed on your PC or MAC by using the Garmin Express Software. Before changing configurations, please make sure that you have installed the latest software version. The software can be downloaded from the official Garmin web site.

Step 1: Start Garmin Express Software Look for the symbol as shown below and double-click it to start the Garmin Express software.

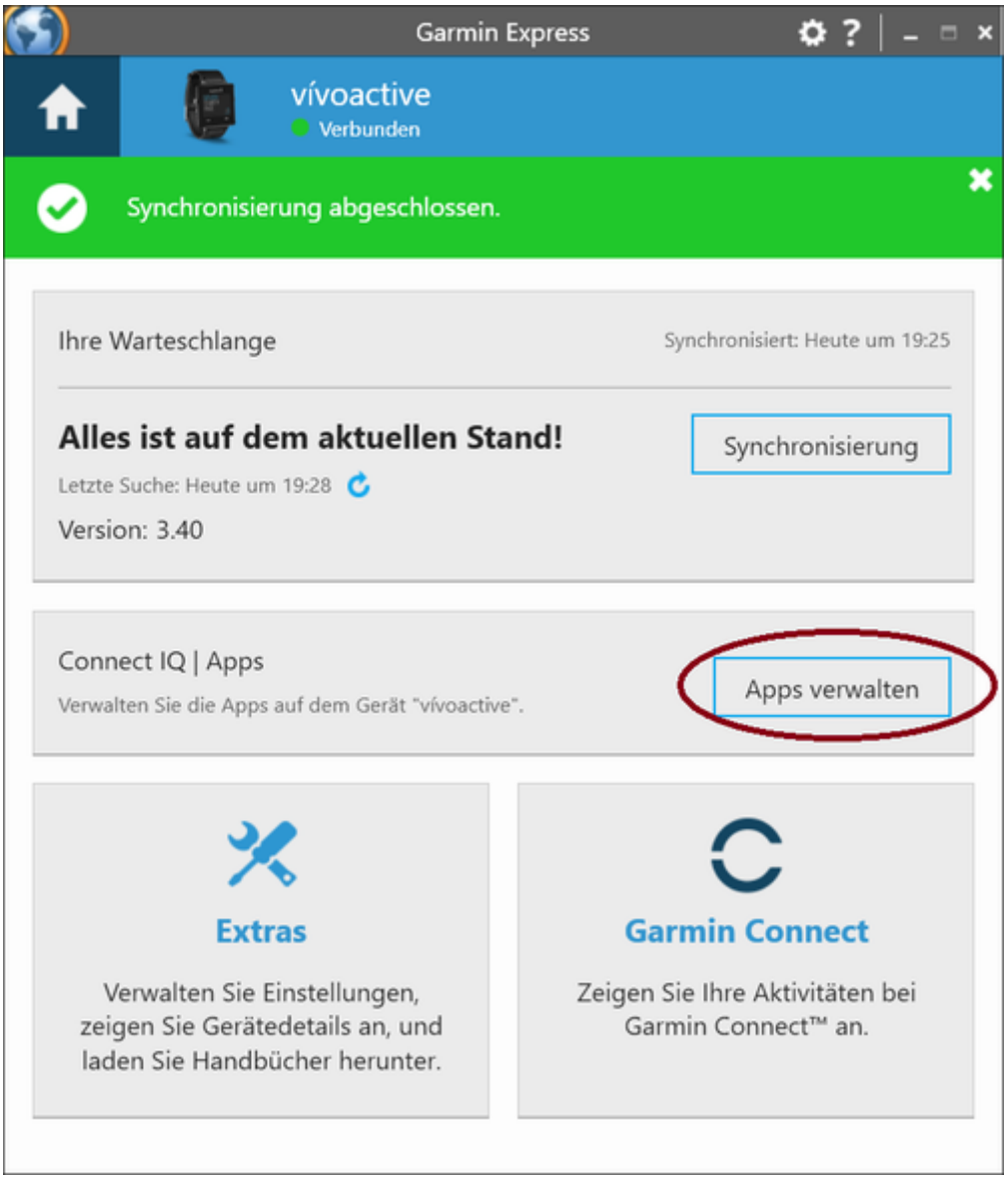
After that you should be able to see your Garmin device as shown in the picture below. If not, please add your device first. For details refer to the documentation provided by Garmin.



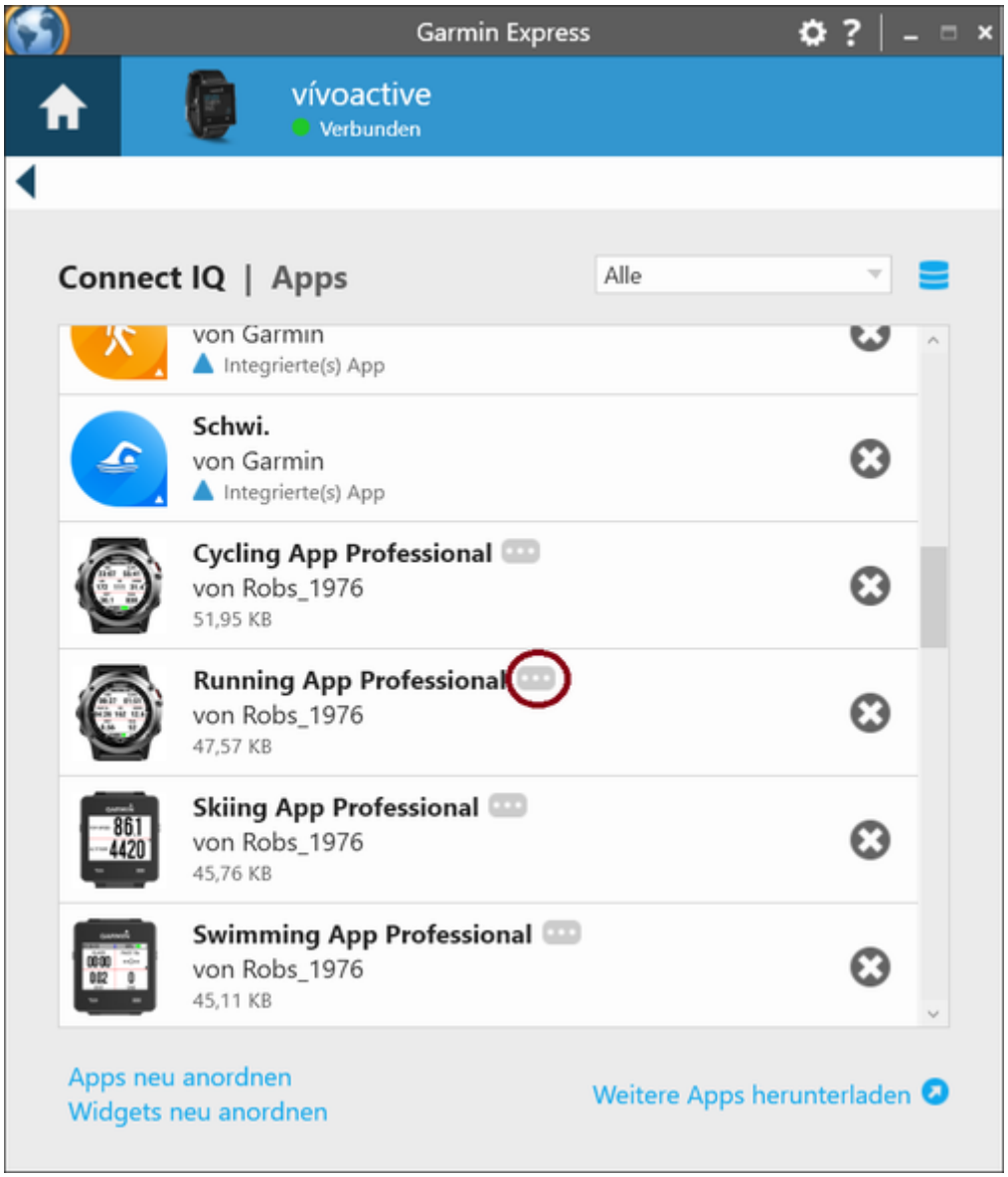
Step 2: Establish Connection between PC/MAC and the Garmin Device Connect your device via USB to your PC/MAC. Your device should be automatically detected and the Garmin Express software starts a synchronization process. When everything is ok, it is signalized via green lights as shown in the figure below. In case problems occur, please refer to the documentation provided by Garmin.

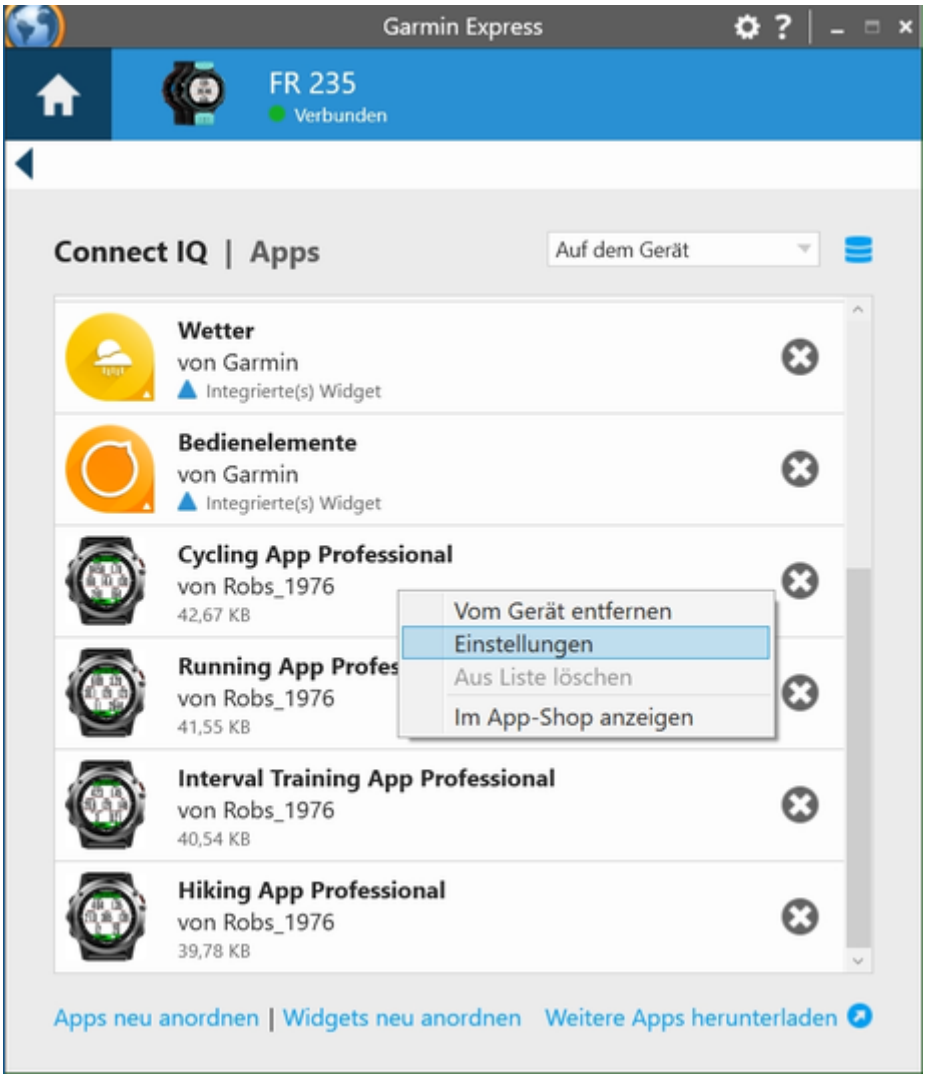


Step 3: Select Device Please click on the icon which shows your device. Following picture should appear:



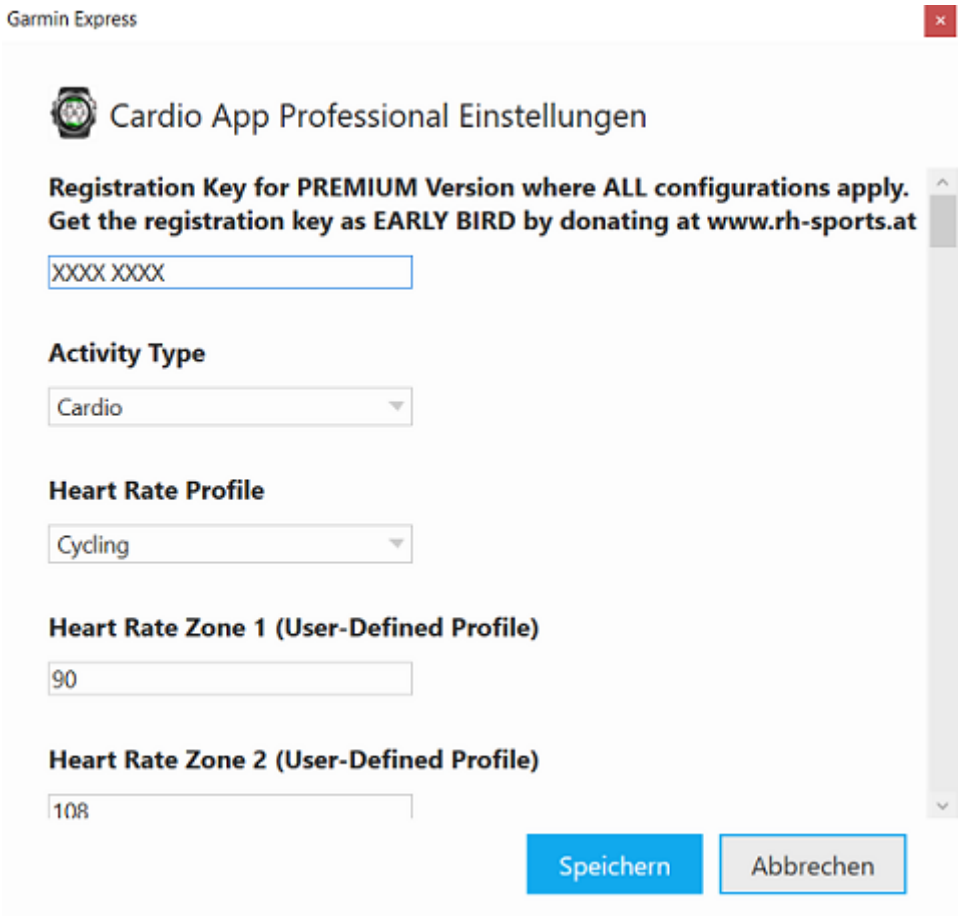
Step 4: Find our Apps Please click the marked button in the picture above. A list of all installed applications on your device should appear. Please scroll up/down until you find the application you would like to configure as shown in the figure below:



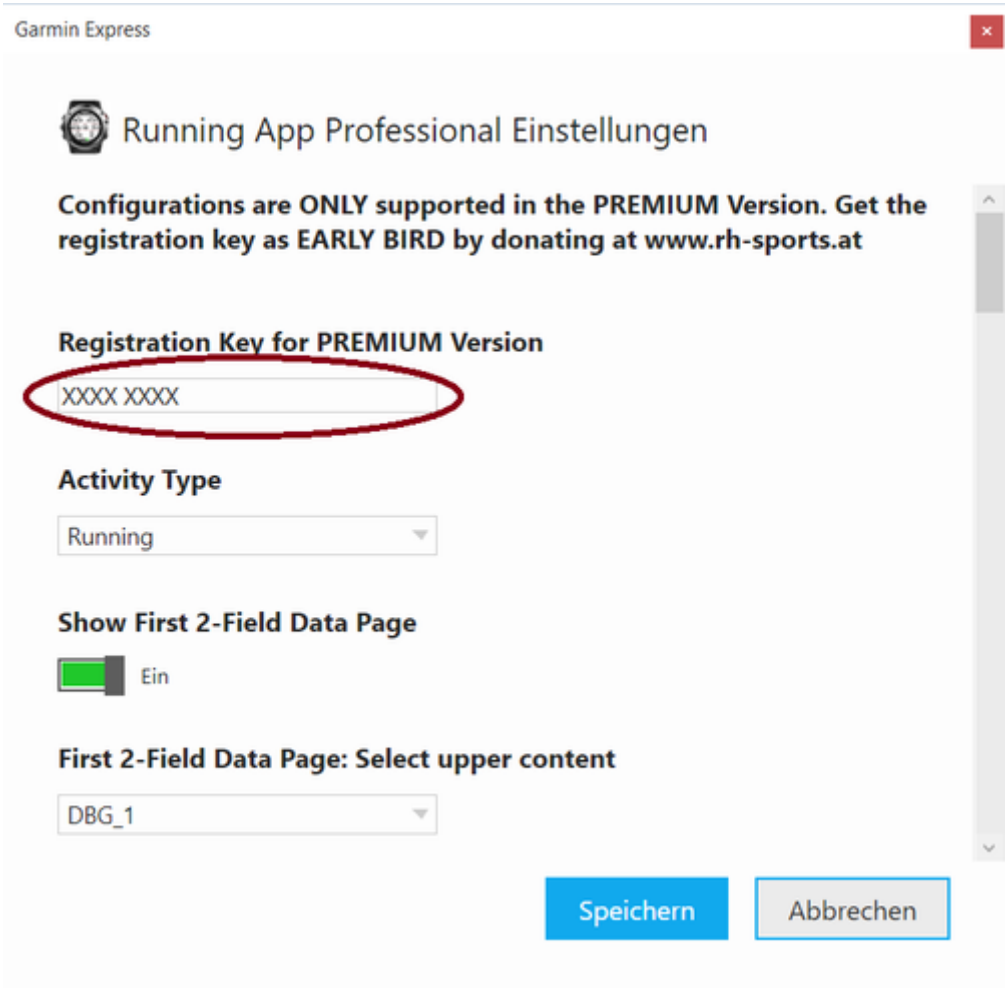


Step 5: Select App for Configuration Please select the application you would like to configure by clicking with the left mouse button to the three dots as marked in the left picture above to the app of your choice as shown in the right picture above. A context menu will be shown where you have to select "Settings"

Following screen should appear:



Step 6: Change Configuration Please note that configuration changes ONLY apply on your Garmin device if you have entered the proper PREMIUM key in the field marked in the picture below. The key consists of two times four characters separated by a space in between. If the proper key is entered, please make the configurations according to your needs and press the "Save" button at the end. The Garmin Express Software will update the configurations on your device. In case of errors, please refer to the documentation provided by Garmin.



Step 7: Disconnect Device After the configuration changes were saved, disconnect your device from the PC/MAC.

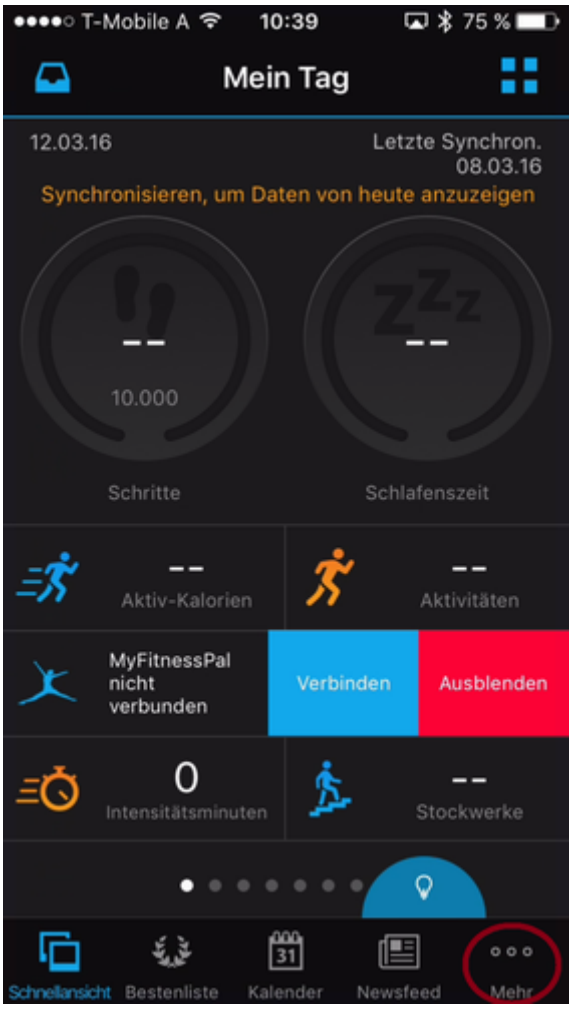
Step 8: Start Application on Device Please start your application on your Garmin device. If you have the PREMIUM Version (key was correct), then your configuration changes should have been applied. If not, please refer to our Frequently Asked Questions.

Change user settings on mobile phone

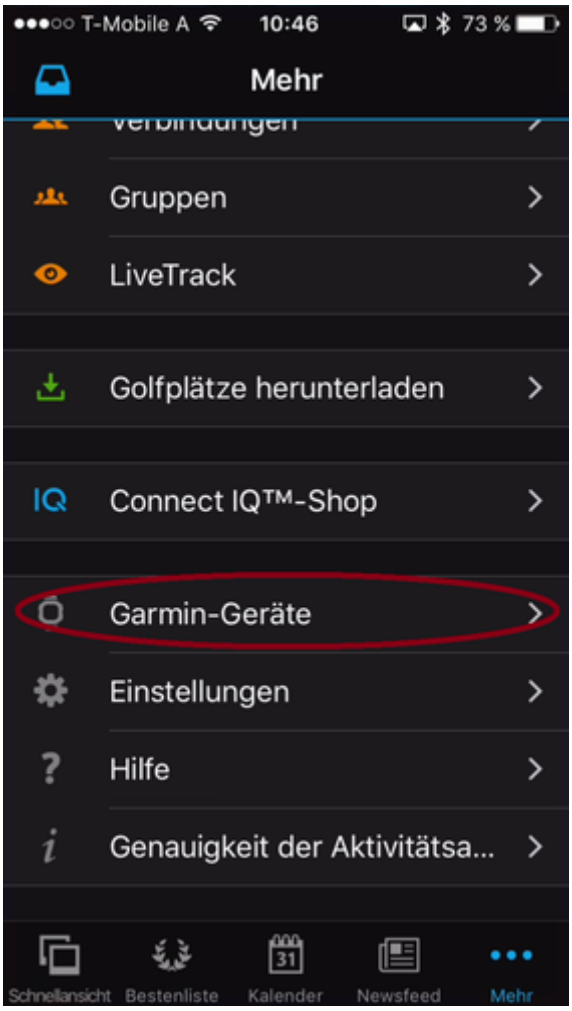
All configurations can be changed on your mobile phone by using the Garmin Connect(TM) Mobile app which is available for Android-, iOS- and Windows-compatible devices. Before changing configurations, please make sure that you have installed the latest app version. The app can be downloaded from the appropriate App Store (e.g. Google Play, Apple Store, etc.)

Step 1: Start Garmin Connect Mobile App Look on your mobile phone for the app with the symbol shown on the left side and click it to start the Garmin Connect™ Mobile app.

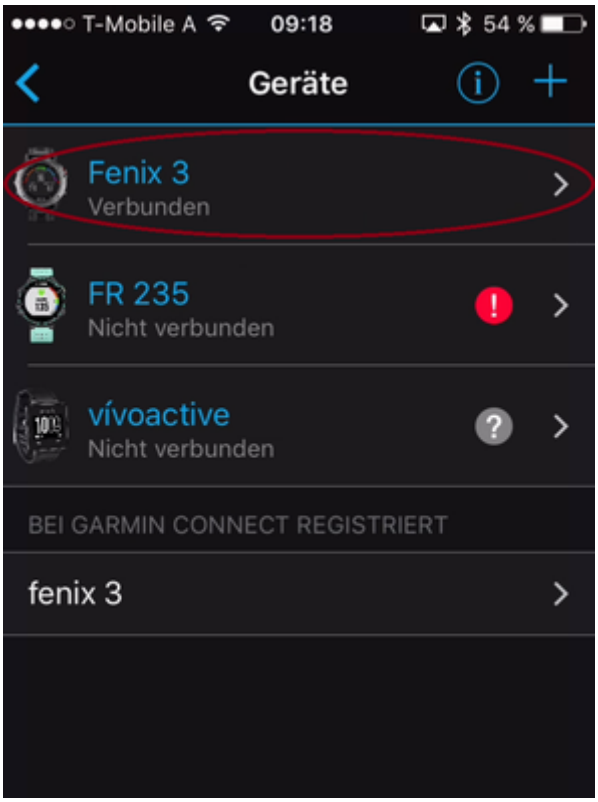
A similar window as shown below should appear.



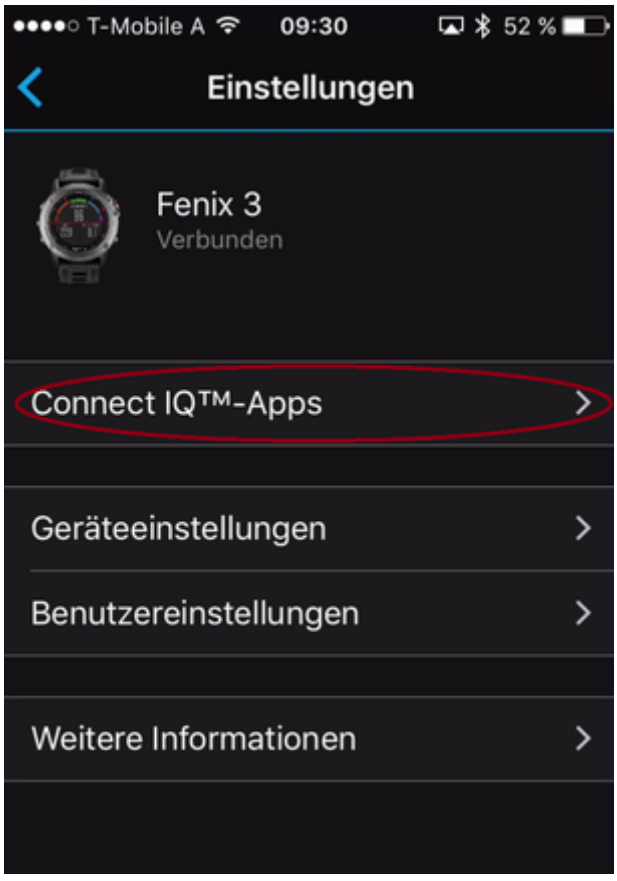
Step 2: Look for Garmin Devices List After pressing the button with the dots on the lower right side (as marked above) a new windows appears. Please scroll down until you find the entry "Garmin Devices".

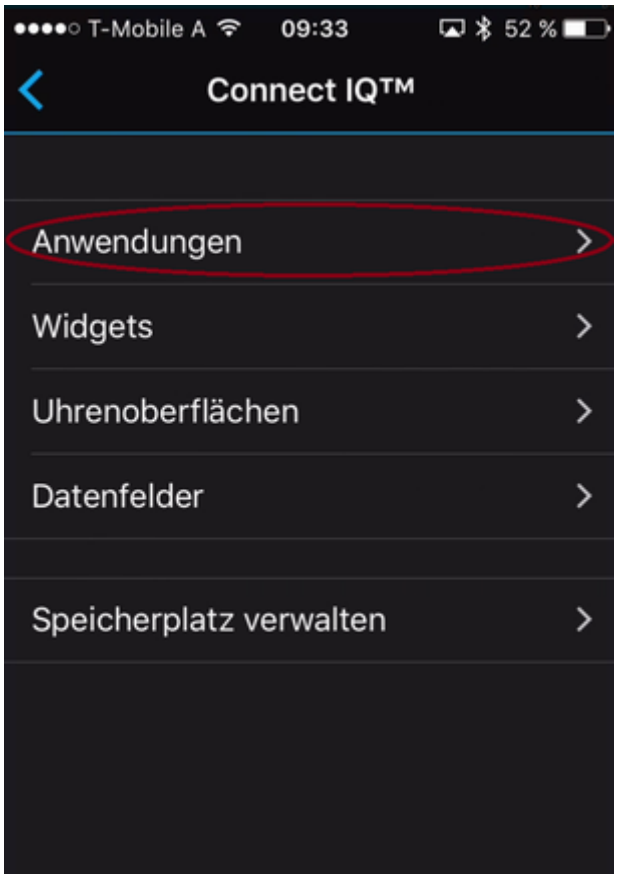


Step 3: Select your Garmin Devices After pressing the button marked above, a window with all your registered Garmin devices appears (see picture below). If you cannot find your device, please add it before by clicking on the upper right "+" sign. For further details, please refer to the documentation offered by Garmin. Then select one of your connected device.

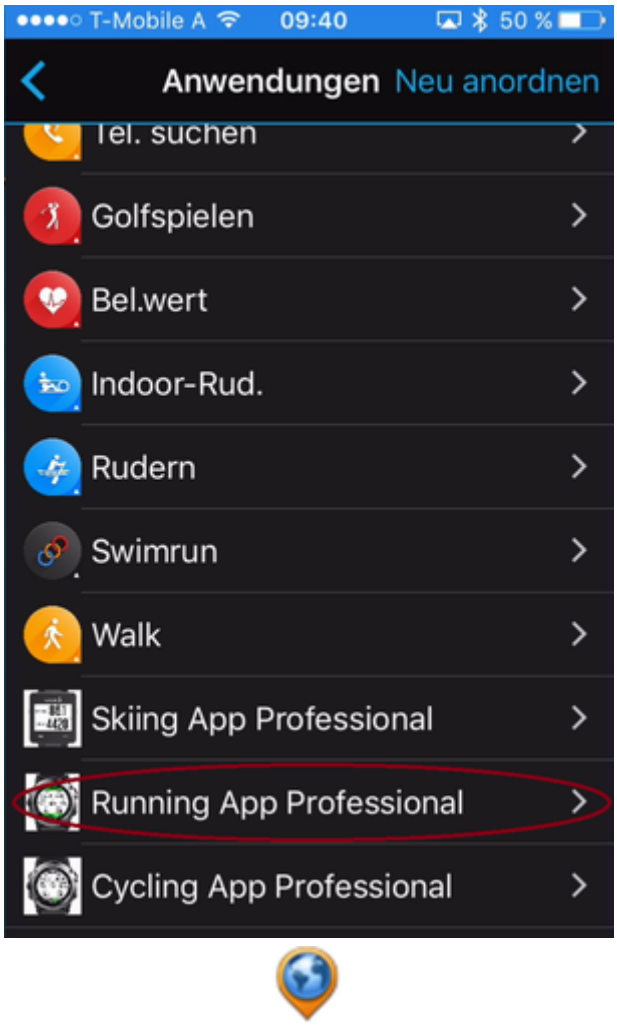


Step 4: Select Activities and Apps Please click the marked button in the picture below following by clicking to applications.

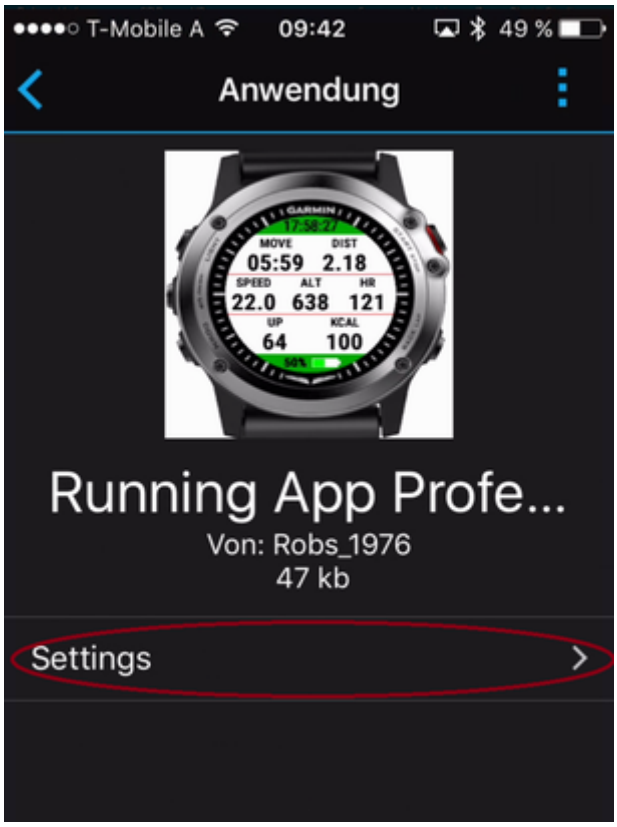




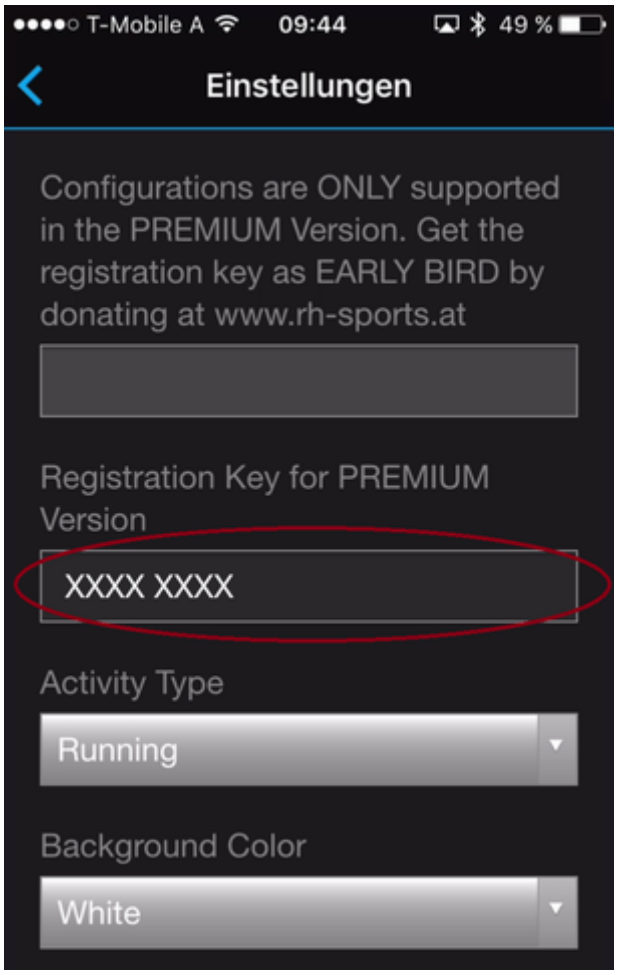
Step 5: Select an Application for Configuration A list of all applications appear. Please scroll up/down until you find the application you would like to configure as shown in the figure below:



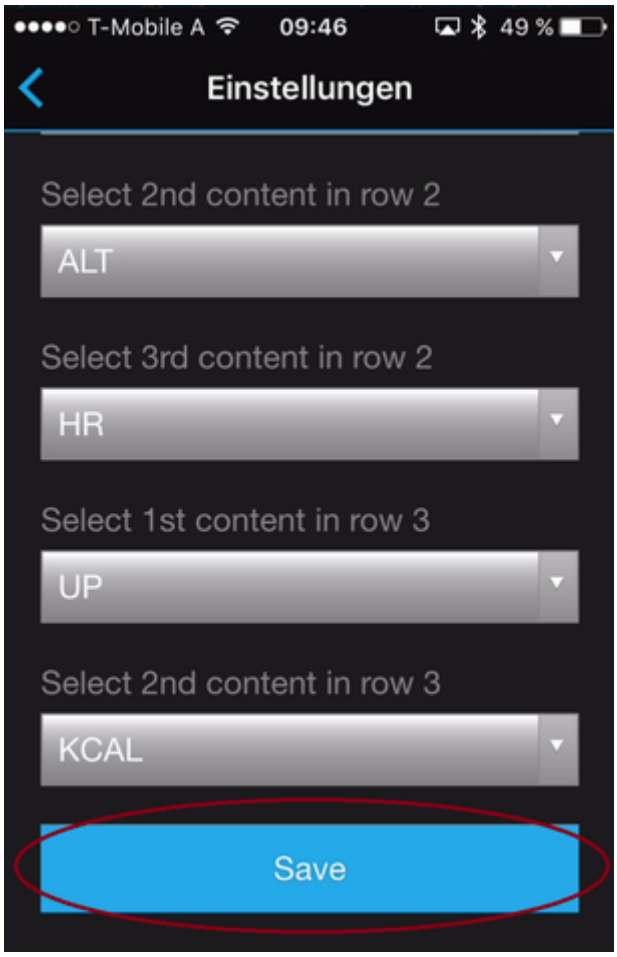
Step 6: Select Settings Please click on Settings as marked below.



Step 7: Change Configuration Please note that configuration changes ONLY apply on your device if you have entered the proper PREMIUM key in the field marked in the picture below. The key consists of two times four characters separated by a space in between. If the proper key is entered, please make the configurations according to your needs.



Step 8: Save Configurations Finally scroll down and press the "Save" button. The Garmin Mobile App will update your configurations on your device. In case of communication errors, please refer to the documentation provided by Garmin.



Step 9: Start Application on Device Please start your application on your device. If you have the PREMIUM Version (key was correct), then your configuration changes should have been applied. If not, please refer to our *Frequently Asked Questions*.

2.4.3 Start the data field

Pre-Condition:

- Please add the data field to your Garmin native application as described here

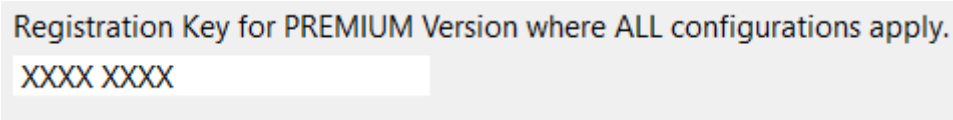
Perform following steps to use the data field:

- Go into the activity where you want to change the data fields (Run, Run Indoor, etc...)
- Go into Menu->Activity Settings->Data Screens
- Go to screen 1 or 2, etc.
- Select layout (it will take you to the data screen and you use <> to add/remove number of data fields); then back once
- Select data field 1 (as an example - could be 1,2,3,4)
- Select Connect IQ
- Select the custom data field you wish to use.
- Repeat for any other fields you wish to replace.

2.4.4 Change user settings

Registration key for PREMIUM version

After successful donation you receive a mail with the PREMIUM activation key(s). Please copy the registration key exactly in the given format (XXXX XXXX) into this text field. The registration key evaluation is case sensitive and no spaces are allowed at the beginning or end. One space is mandatory after the fourth character.



Here some important registration hints:

Hint 1: Please copy the registration key with 9 characters length exactly in the given format (XXXX XXXX) into this text field. The registration key is a hexadecimal number (numbers from 0 to 9 and big letters from A to F) and the evaluation is case sensitive. No spaces are allowed at the beginning or end. One space is mandatory after the fourth character.

Hint 2: Users reported that on some devices (e.g. Android-based mobile phones) more than one space is added when copying the key to the app settings field. Please make sure that there is exactly one space after the fourth character.

Hint 3: Please synchronize the settings with your watch afterwards. If you use Garmin Express software on PC or MAC, please disable the bluetooth connection between your mobile phone and watch during configuration as otherwise the settings might be overwritten again.

Hint 4: Sometimes it is necessary to reboot the watch once (for whatever reason).

Hint 5: Please use the right key for the selected application or data field.

Hint 6: Please make sure that there are no floating point values in the app settings anymore (except for Swimming App where they are allowed).

2.5 Features

This section describes the most important features of the **Zone Gauges** in more detail. Here a short summary:

- Heart rate information

2.5.1 Heart rate information

This data field shows the heart rate value in very big letters and colors the background according to the current heart rate zone with following color coding:

HR zone	Color	Percentage of maximum heart rate
Zone 0	BLACK	M_HR % < 50
Zone 1	GREY	50 <= M_HR % < 59
Zone 2	BLUE	60 <= M_HR % < 69
Zone 3	GREEN	70 <= M_HR % < 79
Zone 4	ORANGE	80 <= M_HR % < 89
Zone 5	RED	90 <= M_HR % < 99
Zone 6	DARK RED	M_HR % >= 100

> **Note:**
> The Garmin heart rate profile for running is used as input to calculate the proper heart rate zone!

2.6 Frequently asked questions

2.6.1 What is the difference between data field 1 and 2

For cycling, hiking and running we offer two data fields which are currently either the same or very similar. E.g. for cycling these are:

- CyclingDF4 1 and 2
- CyclingDF7 1 and 2

There are following main reasons for that:

- The resources for data fields on some devices (with 32kB) are very limited. Therefore features will be balanced upon the two data fields.
- The user can already now add both data fields and select different metrics for each of them.

For further details, please click here.

2.6.2 What to do if the app or data field does not work?

We do our best to test the applications and data fields as good as possible. As we do not have all physical available Garmin devices and all ANT+ sensors with all combinations of Garmin firmware versions, we have to do most of the tests on the simulator provided by Garmin. If you detect problems with our application or data field on your Garmin device, please provide us detailed feedback via the official bug report form in order we are able to understand and reproduce your problem. This gives us a fair chance to provide a fix as soon as possible.

Please press here to get the bug report dialog

THANK YOU VERY MUCH for YOUR SUPPORT!!!!

2.6.3 Why is an update of the firmware required?

Some users reported that an update of the firmware is requested even though the latest firmware is already installed. In such a case, please try out following options:

- Update your Garmin Express or Garmin Mobile software (if you don´t have the latest versions installed).
- Reboot your device once.

2.6.4 What is the purpose of the FREE version?

The **FREE Version** is fully functional and offers you a basic feature set which allows you to test the application or data field intensively without any risk on your Garmin device.

> **Note:**
> In our standalone applications some more advanced features (e.g. alerts) cannot be activated in the FREE verison and a periodic **FREE Version** notification is shown.
>
> **Note:**
> In our data fields all features are available even in the FREE verison but still a periodic **FREE Version** notification is shown.

If you like our application or data field we would be very happy if you donate to upgrade to the **PREMIUM Version**.

2.6.5 How to upgrade to the PREMIUM version?

If you like our application or data field and would you like to benefit of following further advantages:

- support our further development or
- unlock all (more advanced) features or
- get ride of the periodic **FREE Version** notification

we would be very happy if you donate to upgrade to the **PREMIUM Version**.

> **Note:**
> The PREMIUM version is a **lifetime license** which is valid for ALL future updates and can be used on as many devices you personally own, even at the same time!

Here two links for further details how to donate for the **PREMIUM Version**:

- RH-SPORTS website
- Online shop with additional payment options like:
  - stripe credit card
  - PayPal (including credit card, debit card and bank transfer)
  - Payment in advance (useful for countries where stripe or PayPal do not work)

2.6.6 I did not received the unlock keys for the PREMIUM Version after donation?

After successful donation you immediately will get a mail to the mail address used in PAYPAL. It contains the unlock keys and the activation information for the selected **PREMIUM version(s)**. The information is provided as attached PDF. If this is not the case, please do following:

- Check whether you used the right mail address. It is the one you are using in PAYPAL.
- Check whether the mail went to your JUNK or SPAM folder.
- Write a mail to rh-sports@gmx.at to request the keys.

2.6.7 What to do if after entering the key, still the FREE version is active?

You can detect whether the **FREE version** is still active or not in following way:

- In standalone applications (e.g. Running App Professional) the **FREE version** is active, if you see a "Please donate as EARLY BIRD" message upon application start.
- In data fields (e.g. RunningDF4 1), which have to be integrated into one of the Garmin native apps, the **FREE version** is active if you get a "FREE Version" notification upon session start and regularily after some minutes.

Some users reported that the **FREE version** is still active after entering the registration key and after synchronization. In all known cases, the wrong key has been entered. Please make sure that you enter the proper key and following the instructions below:

Here some important registration hints:

Hint 1: Please copy the registration key with 9 characters length exactly in the given format (XXXX XXXX) into this text field. The registration key is a hexadecimal number (numbers from 0 to 9 and big letters from A to F) and the evaluation is case sensitive. No spaces are allowed at the beginning or end. One space is mandatory after the fourth character.

Hint 2: Users reported that on some devices (e.g. Android-based mobile phones) more than one space is added when copying the key to the app settings field. Please make sure that there is exactly one space after the fourth character.

Hint 3: Please synchronize the settings with your watch afterwards. If you use Garmin Express software on PC or MAC, please disable the bluetooth connection between your mobile phone and watch during configuration as otherwise the settings might be overwritten again.

Hint 4: Sometimes it is necessary to reboot the watch once (for whatever reason).

Hint 5: Please use the right key for the selected application or data field.

Hint 6: Please make sure that there are no floating point values in the app settings anymore (except for Swimming App where they are allowed).

2.6.8 What to do if GPS is not found upon start?

Sometimes it happens that GPS is not found during app startup and the app polls infinitely for a proper GPS signal. According to customer feedback this happens when the Garmin (sensor) firmware was updated. This is out of our control. Following workaround seems to do the trick:

- Once start a Garmin native app like running, cycling, etc.
- Wait until GPS is found.
- Stop the Garmin native app and start one of our apps.
- GPS should be found soon.

> **Note:**
> Indoor it is sometimes very difficult for a device to find a proper GPS signal. So please make sure you do it outdoor.

2.6.9 How to enable GPS, GLONASS or GALILEO?

On Garmin devices with CIQ below 3.3.6, Garmin does not allow Connect IQ applications to controll which satellites are used. Following steps seem to help here as workaround:

- Once start a Garmin native app like running, cycling, etc.
- Select the required positioning sources in the settings of the native app.
- Stop the Garmin native app and start one of our apps.
- According to our information the selected sources of the native app are then used for our apps as well.

2.6.10 What to do in case of a app or data field crash upon start?

If you see following icon on your Garmin device upon application start or when you add a data field into a Garmin native app:

please completely uninstall and reinstall the application or data field. The setting file changed and the automated Garmin install is not replacing the setting file.

2.6.11 What to do if settings cannot be changed?

Setting changes always work in the Garmin eco-system and a valid connection to Garmin serves are necessary. Sometimes these servers are down and settings cannot be changed.

> **Note:**
> Unfortunately this is out of our control and we have to wait until Garmin fixed that problem.

In case the settings are corrupted, then following seqeunce may help:

- Delete app
- Synchronize
- Once reboot your device (e.g. watch)
- Install the app again
- Change settings

2.6.12 User settings lost after update?

Unfortunately Garmin may reset the user settings when updating the Garmin firmware version of the application or data field. This leads to the problem that all configurations are lost and the **FREE Version** is active again. I´m testing some work-arounds but so far I was not successful. As soon as I have updates, I will publish them here.

2.6.13 Activity not visible on Garmin Connect?

There could be several reasons why an activity is not visible on Garmin Connect:

- Activity recording was never started.
- Activity recording was not saved upon leaving the Garmin native app.
- No synchronization between device and Garmin Connect happened.
- Especially in indoor sessions it can happen that the device stays in Auto-Stop Mode. Please deactivate this feature in the user settings.
- Especially in indoor sessions no movements might be detected by the device. Thus distance stays 0. In such a case no activity results are stored on Garmin Connect.

2.6.14 Activity tracking and fitness metric accuracy

The app uses the Garmin API´s to retrieve most of the information and cannot be more precise than the data delivered from there. Garmin states following about activity tracking and accuracy:

- "Garmin devices are intended to be tools to provide you with information to encourage an active and healthy lifestyle. Garmin wearables rely on sensors that track your movement and other metrics. The data and information provided by these devices is intended to be a close estimation of your activity and metrics tracked, but may not be precisely accurate. Garmin wearables are not medical devices, and the data provided by them is not intended to be utilized for medical purposes and is not intended to diagnose, treat, cure, or prevent any disease. Garmin recommends you consult your doctor before engaging in any exercise routine."

2.6.15 Accuracy of wrist-based heart rate (Elevate)

The app uses the Garmin API to retrieve heart rate related data cannot be more precise than the data delivered from there. Regarding wrist-based accuracy, Garmin states following:

- "The optical wrist heart rate (HR) monitor for Garmin wearables is a valuable tool that can provide an accurate estimation of the user's heart rate at any given point in time. The optical HR monitor is designed to attempt to monitor a user's heart rate 24 hours a day, 7 days a week. The frequency at which heart rate is measured varies, and may depend on the level of activity of the user. When you start an activity with your Garmin optical HR device, the optical HR monitor measures more frequently. The intent is to provide the user with a more frequent and accurate heart rate reading during a given activity."
- "While our wrist HR monitor technology is state of the art, there are inherent limitations with the technology that may cause some of the heart rate readings to be inaccurate under certain circumstances. These circumstances include the user's physical characteristics, the fit of the device and the type and intensity of the activity as outlined above. The HR monitor data is not intended to be used for medical purposes, nor is it intended to diagnose, treat, cure or prevent any disease or condition."
- "Wrist heart rate accuracy during swimming is very limited. Garmin does not recommend using wrist heart rate during swimming activities and on some products, wrist heart rate monitoring is disabled while swimming. Garmin recommends using HRM-Swim™ or HRM-Tri™ heart rate monitors with compatible devices to track heart rate while swimming."

2.6.16 Is there a way to enable/disable GLONASS?

The GPS/GLONASS setting is based on what was last used in the Garmin native apps (like cycling, running). Garmin does not allow Connect-IQ apps or data fields to change this setting.

2.6.17 Why is info derived from altitude (e.g, UP, DOWN, PWR, GRADE in %) not accurate?

People with Garmin devices (e.g. watches) are frequently concerned about the accuracy (or lack of it) of the altitude data (or from altitude derive data) if the info is derived from GPS and not from a barometric altimeter. Many suspect their equipment or the app may even be defective or buggy

when they see the altitude data. Unfortunately this is NORMAL as GPS is not accurate enough regarding altitude information. Following Garmin devices have no barometric altimeter and are thus affected (list might not be complete):

- ForeAthlete® 230J, ForeAthlete® 235J, ForeAthlete® 630J.
- Forerunner® 735XTJ, ForeAthlete® 920XTJ, Forerunner® 230, Forerunner® 235, Forerunner® 630, Forerunner® 735XT.
- Vivoactive™ series.
- Others: Please take a look to the Garmin feature set description for your device.

With the integrated GPS receivers, the horizontal error is specified to be within about +/- 15 meters (50 feet) 95% of the time. Most users find this is a conservative specification and that their modern GPS receivers routinely perform better than this worst case specification. But users should expect that SOMETIMES they may see the error approach the specification limits. AND 5% of the time, the error may be "any value" from zero to whatever. Note: Unless you have a CLEAR AND UNOBSTRUCTED view of the sky you can count on your error excursions to be much greater than the above numbers. Your GPS depends on this clear and unobstructed view or it cannot make accurate range measurements to the satellites. Generally, altitude error is specified to be 1.5 times horizontal error specification. This means that the user of standard consumer GPS receivers should consider +/-23meters (75ft) with a DOP of 1 for 95% confidence. Altitude error is always considerably worse than the horizontal (position error). Much of this is a matter of geometry. If we (simplistically) consider just four satellites, the "optimum" configuration for best overall accuracy is having the four SVs at 40 to 55 degrees above the horizon and one (for instance) in each general direction N, E, W, and S.

> **Note:**
> You will get a very BAD DOP if the SVs are at the exact same elevation. Luckily, this is a rare occurrence. The similar "best" arrangement for vertical position is with one SV overhead and the others at the horizon and 120 degrees in azimuth apart. Obviously, this arrangement is very poor from a signal standpoint. As a result, of this geometry the calculated solution for altitude is not as accurate as it is for horizontal position. Almost any calibrated altimeter will be more stable at reading altitude than a GPS. GPS altitude measures the user´s distance from the center of the SVs orbits. These measurements are referenced to geodetic altitude or ellipsoidal altitude in some GPS equipment. Garmin and most equipment manufacturers utilize a mathematical model in the GPS software which roughly approximates the geodetic model of the earth and reference altitude to this model. As with any model, there will be errors as the earth is not a simple mathematical shape to represent. What this means is that if you are walking on the seashore, and see your altitude as -15 meters, you should not be concerned. First, the geodetic model of the earth can have much more than this amount of error at any specific point and Second, you have the GPS error itself to add in. As a result of this combined error, I am not surprised to be at the seashore and see -40 meter errors in some spots.

Following data fields are affected if you have no watch with barometric altimeter:

- UP
- DOWN
- GRADE in %
- PWR, A PWR, M PWR (if not derived from a compatible ANT+ power sensor)
- VSPD xs, A VSPD, M VSPD

2.7 Backlog

This section shows the backlog with potential features planned for upcoming releases:

- Support of power sensor
- Power zone gauge
- Cadence zone gauge
- Zone low/high alert

> **Note:**
> Please note that there is no guarantee if and when the feature will be implemented!

2.8 Version history

The following table lists the version history of the latest released **Zone Gauges** versions:

Version	Date	Change description
1.6.0	30.09.2025	Support for Instinct® Crossover AMOLED added Support for Venu® X1 added
1.5.5	27.09.2025	Several GUI improvements Support for Fenix® 8 Pro 47mm, 51mm and MicroLED added Support for Venu® 4 41mm and 45mm added
1.5.0	22.05.2025	Support for Forerunner® 570 42mm and 47mm added Support for Forerunner® 970 added
1.4.5	26.04.2025	Support for Vivoactive® 6 added
1.4.0	22.03.2025	Support for Approach® S50 added Support for Descent™ G2 added
1.3.5	02.02.2025	Several GUI improvements Support for Instinct® 3 AMOLED 45mm added Support for Instinct® 3 AMOLED 50mm added
1.3.0	30.09.2024	Support for Fenix® 8 43mm added Support for Fenix® 8 47 / 51mm added Support for Fenix® 8 Solar 47mm added Support for Fenix® 8 Solar 51mm added Support for Fenix® E added Support for Enduro™ 3 added
1.2.9	21.04.2024	Hotfix for app setting problems on newer devices Hotfix for language problems Build with latest SDK 7.1.1
1.2.6	09.03.2024	Bugfix to only alert for FREE version if session is running
1.2.5	09.03.2024	Support for Forerunner® 165 and 165 Music added
1.2.0	11.12.2023	Support for Descent™ Mk3 43mm added Add support for configuration options in german language Improve configuration description in english language
1.1.5	23.11.2023	Support for Descent™ Mk3 51mm added Support for Fēnix® 7 Pro (no Wi-Fi) added Support for Fēnix® 7x Pro (no Wi-Fi) added
1.1.0	05.10.2023	Support for Venu® 3 added Support for Venu® 3s added Support for Vivoactive® 5 added
1.0.5	21.07.2023	Support for Approach® S70 47mm added Support for Epix™ Pro (Gen 2) 51mm added
1.0.0	15.07.2023	Support for Approach® S70 42mm added Support for Epix™ Pro (Gen 2) 42mm and 47mm added Support for Fenix® 7 Pro, Fenix® 7s Pro and Fenix® 7x Pro added
0.9.5	25.06.2023	Support for Forerunner® 265 added Support for Forerunner® 265s added Support for Forerunner® 965 added
0.9.1	21.06.2023	Support for MARQ® (Gen 2) Athlete / Adventurer / Captain / Golfer / Aviator added
0.9.0	06.03.2023	Several adaptions to work with new Garmin SDK 4.2.1 Workaround implemented for FR645 and FR645m to avoid app crashes upon start due to font problems

0.8.1	09.09.2022	GUI and stability improvements
0.8.0	01.09.2022	Support for Venu™ SQ 2 and Venu™ SQ 2 Music added GUI improvements
0.7.0	15.06.2022	Support for Forerunner® 255, 255 Music, 255s and 255s Music added Support for Forerunner® 955 / Solar added
0.6.0	30.05.2022	User setting added to select between normal and big font size
0.5.0	23.05.2022	First version with heart rate gauge

3. Deutsch

3.1 Deutsche Dokumentation

Diese Seite beinhaltet die deutschen Dokumente für alle Garmin Connect-IQ-kompatiblen Applikationen und Datenfelder von RH-SPORTS.

Wir arbeiten gerade daran ...

None