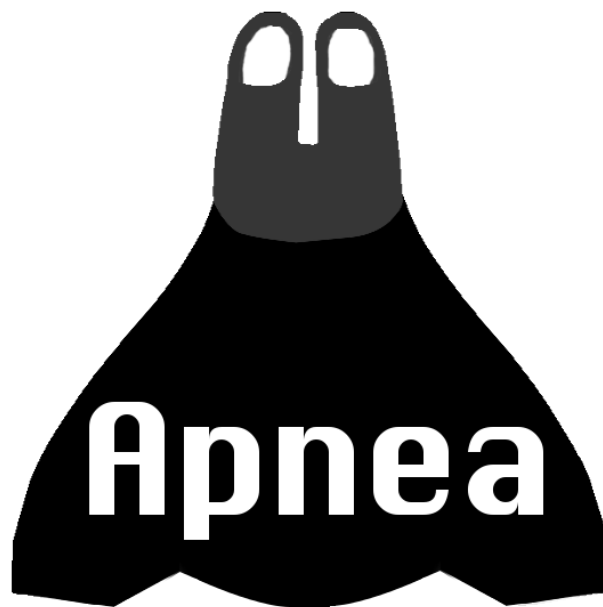# Apnea CWT

The vertical freediving application for Garmin watches.

Charles Rincheval, juin 2018

English traduction: Ralph Maurin

This document was written for Apnea CWT 1.7 version

Document version : 1.2.0

Index

Notes:

- *The texts highlighted in blue correspond to the buttons of your watch (ex:* MENU*).*
- *Test highlighted in green correspond to names of menu appearing on the watch (ex:* Settings*)*
- *It is completely possible that the information displayed by the screenshots is not completely the same as in your watch model.*

Presentation

Apnea CWT is the application for vertical freediving, dedicated to Garmin watches, it differs from Apnea DYN by the fact that it includes settings and displays specific for the practice of vertical freediving in constant weight (CWT: Constant WeighT).

Note that this application is also adapted perfectly for the other disciplines such as free immersion (FIM: Free IMmersion), or constant weight without fins (CNF: Constant weight No Fins), etc…

Current compatibility

The peripherals compatible with Apnea CWT in version 1.7.x are the following:

- D2 Bravo, D2 Charlie
- Descent Mk1
- Forerunner 935
- fēnix 3, fēnix 3 HR
- fēnix 5, fēnix 5S, fēnix 5X
- fēnix Chronos
- vívoactive 3

Notes:

- *Obtain the current list of supported peripherals, on apnea website:*
  http://www.apnea.me/cwt

- *Other peripherals are also supported by Apnea DYN http://www.apnea.me/dyn*

Installation

Apnea CWT is a paid application, once the payment process is carried out, email will be sent to you with the installation process which you must follow (no worry, it is very simple process).

Note: *The process for sending email is manual, thank you thus to be patient.*

The first time that you launch Apnea, a message informed you that your version is not registered, then the following screen will indicates a registration code that you must send as an answer and do not forget to indicate the model of your watch.
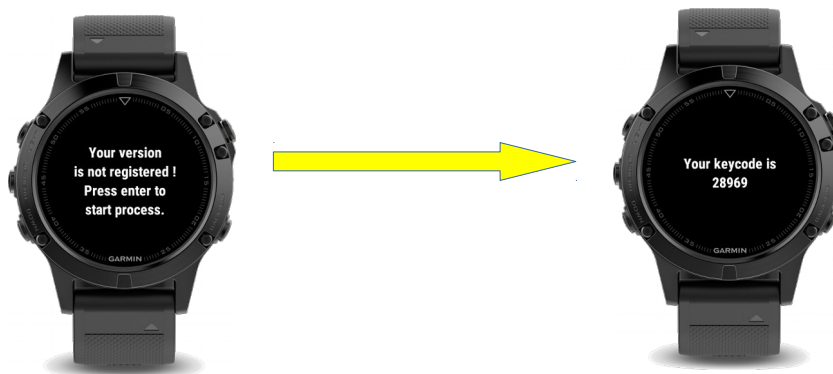
In response to your email, a key code validation will be given to you that you can enter to complete the registration process.

L'enregistrement est alors terminé.
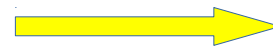
Quick discovering of the application

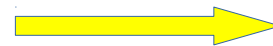At the application opening, you are on the main menu.

You can begin your training immediately by pressing button START or you can change menu while pressing the keys UP /DOWN.

Main screen and information screens

1. Choose CWT and push on START
   You are now on the main screen of the discipline

2. Press on DOWN key
   "Last immersion" screen appears

   It show you temporal information relating to the last immersion
   you realized: The descent time, statics time and ascent time
   Note: We considered time as static when speed passes lower than 5m/min

3. Press again the DOWN key
   Second "Best session" information screen appears

   This screen is displayed your current session records.
   The records are the maximum depth reached and the maximum immersion time

4. Press last once the DOWN key
   Last "Session" information screen appears
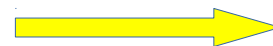
   On this last screen, the total duration of the session is thus indicated
   and also the average and lowest temperature recorded.
   Note: The temperature is not available on all models

5. You can get back to the principal screen by pressing 3 times on the UP key, but notice that only one push on DOWN key will also bring you back to the main screen.

The main screen

This screen is divided into 2 section, the first upper part (in gray) indicates information relative to surface, the lower part (in blue) indicates information relative to the last immersion.

Surface

- **Surface Time**: Starts automatically when you launch the application or when you exit an immersion.

- **GPS indicator** : When activated, shows you by color the quality of GPS reception (**Ok**, **Bad**, **None** or **In progress**)

- **Recording activity** : Allows you to make sure the activity is actually recording

Last immersion

- **Last immersion time** : Show you total time of the last immersion

- **Depth of the last immersion** : Show you maximum depth reached during last immersion

- **Immersion LAP** : Immersion counter

- **Heart Rate**: Gives you your current heartbeat when available (number of beats per minute)

Immersion

This screen appears automatically when an immersion is detected.

It displays information about the current dive.

Current depth

Vertical speed

Immersion time

- **Current depth** : The current depth
  Notes: According to models, the depth reading is refreshed from 1 to 3 seconds (ex: The depth on Fenix 3 is refreshed all 2 to 3 seconds, on Fenix 5/935, the depth is refreshed almost instantaneously)

- **Vertical speed** : Indicates the vertical speed

- **Immersion time**: The total duration of the current immersion

Warning statement: Do not press buttons during an immersion, or you will increase the risk of getting water into the watch

Settings

1. From the main screen of the discipline, a push on `RETURN` key takes you along the main menu

2. While pressing the `UP`/`DOWN` keys, you will see the scrolling menus, select the `Settings` menu and press `START`, navigate to the settings submenu in order to familiarize yourself with these settings

Note: All the settings are automatically saved (except the Simulation settings)

Example with "Activity" setting

- **Setting name**: The name of the current settings
- **Description**: Briefly described the goal of the current setting
- **Current value**: The setting current value, in order to change this value, use `UP`/`DOWN` keys of your watch, once chosen, push `START` to validate or `RETURN` to cancel the change.

Here are each setting menu:

Announcements…

Group of menus gathering all the settings likely to announce an event that it is temporal or environmental (ex: depth)

Announcements > **Alarm…**

A set of alert menus that let you know when a depth is reached.

Announcements > Alarm… > **Depth**

The instruction from which one or more alerts will be issued.

During your descent, you will be notified when the set depth is reached.

Announcements > Alarm… > **Quantity**

The number of alerts to be issued once the depth has been reached.

If the setting is "Infinite", then the watch will alert you as long as you do not go above the alert depth.

Announcements > **Notification**

Allows you to know the depth without looking at the watch, if set at 10m, when you exceed 10m depth, the watch will vibrate 1 time, then 2 times at 20m, etc ... If the setting is 5m, the watch will vibrate a times at 5m, 2 times at 10m, etc.

Announcements > Cadence… > **Surface**

Schedule an alert every xx seconds while you are on the surface.

Announcements > Cadence… > **Immersion**

Schedule an alert every xx seconds while you are in immersion.

Announcements > **Event**

Allows you to sound an audible warning when submerging, surfacing or both.

Activity

Set whether you want to record the activity or not.

3 possibles choices:

1. **Yes**: The activities will be recorded with a confirmation when exiting the application

2. **Yes, with GPS**: Same than "Yes" with the GPS activation in order to position your activity on a map, very useful outside, think about passing by again on "Yes" if you practice in swimming pool.

3. **Not**: No activity recorded

Depth

Depth at which immersion begins, it may be useful to put a greater depth to avoid erroneous detections when you put your hand in the water for example.

Backlight

Specify whether the display illumination should always be lit during an immersion.

Simulation

When enabled, simulates an immersion in the activity view. To go down, use the DOWN arrow, to go back to the surface, press the UP key, to stop the immersion, return to the settings and set Simulation to "No". (note: during a simulation, the activity is no longer recorded)
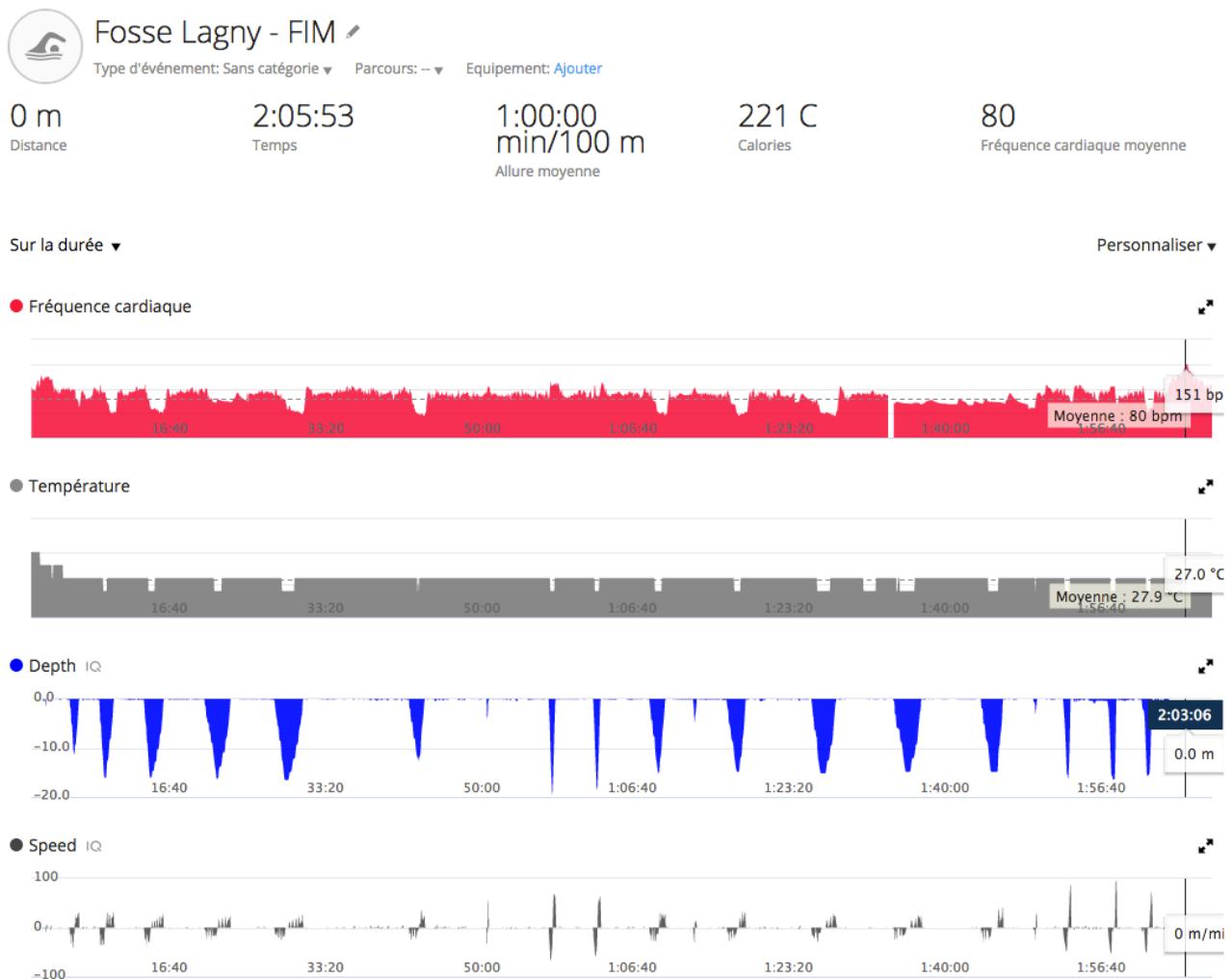
About

1. Get back to the main menu, choose About, enter the menu

2. This screen enables you to know which version is currently installed on your watch.

Viewing an activity

Here is the view of a free immersion session in deep pool once the activity pushed on the Garmin servers.

In the bottom left you will also find data fields preceded by the title "Connect IQ" which correspond to settings related to the activity.

- **Max depth**: Maximum depth reached

- **Max immersion duration** : Maximum duration of immersion

- **Max fall down duration** : Maximum duration in descent

- **Max neutral duration** : Maximum duration in statics

- **Max ascent duration** : Maximum duration in ascent

Note: Apnea considers a speed lower than 5m/minute as a statics.

Connect IQ™

19.6 m
Max depth IQ

181 sec
Max immersion duration IQ

61 sec
Max fall down duration IQ

74 sec
Max neutral duration IQ

60 sec
Max ascent duration IQ

Frequently Asked Questions

- **The display of the depth is in feet, I would like to have it in meter?**
  Apnea uses the unit chosen by the user, so to change it, you have to go to the settings of your watch (not those of Apnea CWT).

- **Why the Fenix 3 (and not the Fenix 3 HR) can not indicate a depth of more than 15m?**
  It is because of the sensor used for this model which saturates at 2.5 bars of pressure, that is to say 15m.

- **Which is the depth limit?**
  Some models of watches are indicated resistant to 100m, it is about 100m static, that is to say that the test is realized in a box and the watch does not undergo other constraints during the test (no movement, of current, etc.), these models (Fenix 3 HR, Fenix 5, etc ...) have been tested at 40m successfully and even beyond (remember that you take your watch under your own responsibility).

- **How to access the time when the application is launched?**
  Use one of the shortcuts configured on the watch, by default, if you have not changed, you just have to stay press the DOWN button, the time will be displayed then.

- **I have reinstalled my watch, do I have to buy a new license?**
  The purchase of Apnea gives you the right to 3 generations of license allowing you to reinstall your watch when needed.

In case of problem?

Check that your watch is up to date by connecting it to your computer and launching Garmin Express.

Recommandations

- Never press the buttons during an immersion, you risk getting water into the watch.

- Use a screen protection in order to avoid striping your watch inadvertently.

- On models with a Connect IQ version below 2.4 (Fenix 3 and Fenix 3 HR), it is recommended to disable automatic altimeter calibration (Settings> Sensors & Accessories> Altimeter> Auto Calibration: Off)