

# skyVario 1.1

SkyVario is a variometer application that combines some useful information like a moving map and various flight information (airspace, height, speed, track, bearing to landing zone). It also works with an Apple watch. Here you'll find a quick description of the program features.

skyVario is Designed for gliders and para gliders (but can also well be used for hang gliders and general aviation!). It features a simple user interface with a vario meter, compass and moving map utilising the iPhone's barometric sensor and GPS.

The app comes standard with an option to display airspace for positional awareness as well as Apple Watch support.

SkyVario offers tracking of your flight and export various formats like GPX, CSV and secured IGC.

Other features:

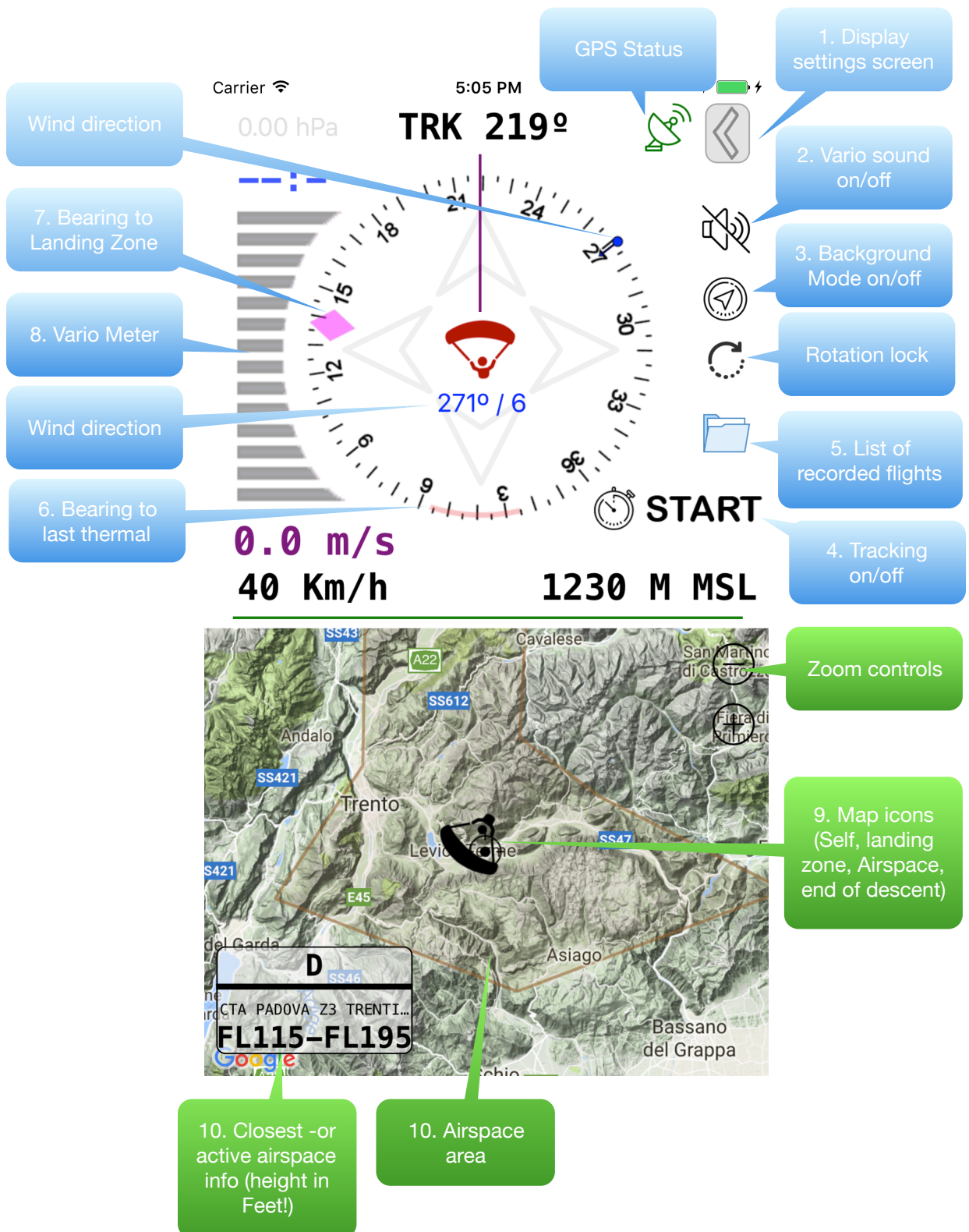
- airspace warnings
- User defined landing zone with guidance
- Configurable vario limits
- Apple Watch support
- Automated flight tracking
- Export formats for sites like:
- Livetrack24, onlinecontest.org etc

Note that SkyVario uses location services when tracking, even when the application is not active. This will consume more battery power then normal. Although every effort has been made to reduce the impact on battery life, please make sure tracking and background location services are afoot when the application is not in use.

## **DISCLAIMER:**

The information provided by this application comes from publicly available resources. While the author endeavours to keep the information up to date and correct, he/she makes no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information, products, services, or related graphics contained in this application for any purpose. Any reliance you place on such information is therefore strictly at your own risk. The author of this application makes no representations or warranties of any kind, express or implied nature, content, correctness, currency, accuracy, timeliness, reliability and availability of the said navigation aids and computed information. The use is solely for REFERENCE only. Use of this information for actual in-flight navigation is STRICTLY prohibited. The author takes no responsibility for, and will not be liable for incorrectly displayed or calculated information and unavailability due to technical issues beyond his control. Prolonged use of background locations services and flight tracking will have a negative impact on battery life, and should be turned off when not needed.

# Main Screen



## 1.) Settings Screen

### Only visible in portrait mode!

**Map settings** speak for themselves. Auto zoom will zoom in/out depending on speed or altitude (if elevation data can be found, your altitude is used to zoom in and out).

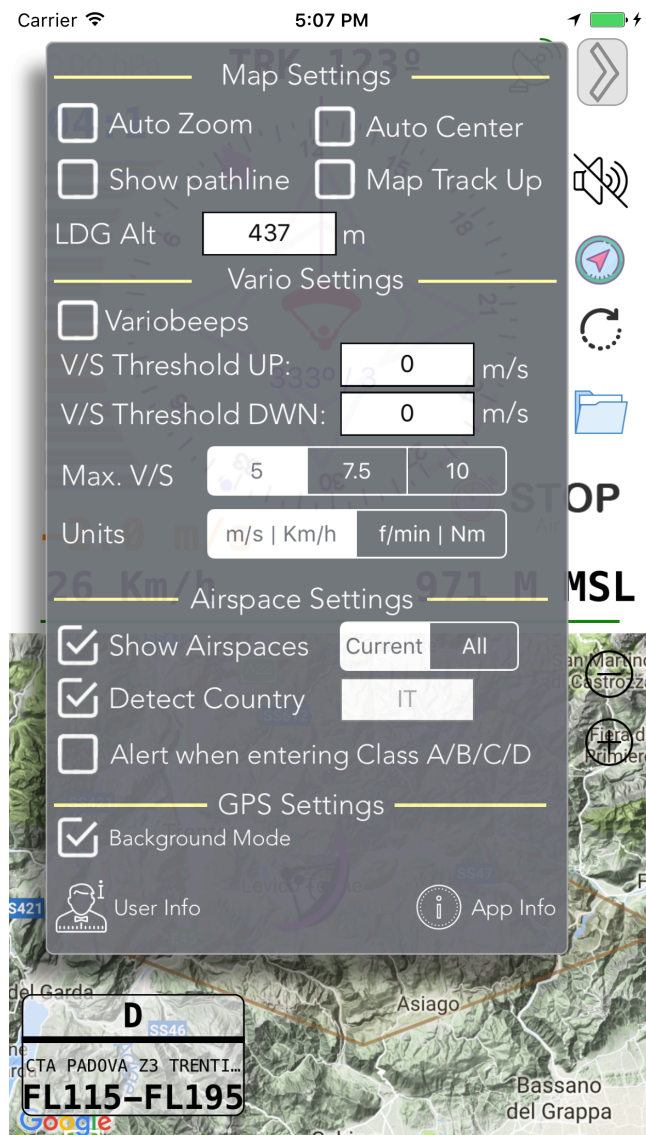
**LDG Alt.** This is the elevation of the landing point. You can long-press on the map to create a landing point marker. If elevation can be found it will be automatically entered. Whenever this altitude is above 0, a descent marker will be shown on the map when the V/S is below 0 (a purple arc).

**Vario beeps** settings allow you to set the threshold for the beeper to activate. You can also set your max V/S. The Vario bar's will be automatically be refactored to your maximum setting.

**Airspace** settings need a country to be filled in. The app can automatically detect this. If this does not work, fill in your own 2 letter country code to show the correct airspaces. The option Current or All will display either all airspaces (rather busy on the map..) or the active/closest one. When approaching another airspace (90 seconds horizontal/vertical) the approaching airspace will light up on the map. Alerts will only be given (in the form of a local notification) if the app is not in foreground. Background mode must then be enabled!

### Background mode

The app will use the GPS in background, even when the app is not visible. **Please note this will consume battery if left on!** The application will turn it off automatically when there is no reasonable movement after about 30/40 minutes, but better turn it off yourself when not needed to conserve battery power!



## User Settings & App info

User settings will open a window where you can set/change your name/glider/registration/type. This is used for the IGC files.

Carrier 3:31 PM

Done User Details (Used for IGC Files)

Name  
Enter your name

Glider  
Enter your gliders brand

Glider Registration  
Enter glider registration

Mode Para Glider Glider Hang Glider

APP ID: V276XT99N631  
GPS Sensor: x86\_64  
BARO Sensor: x86\_64

View Live tracking

Share live track link with:

Loctome Setup loctome.com

Live track refresh rate: 60 Sec.

Carrier 3:32 PM

Done User Details for loctome.com

Username  
Enter your loctome user name

Password  
Enter your loctome password

☐ Enabled

View Live tracking

Share loctome live track link with:

Loctome

Last server response: -

Use the 'View Live Tracking' button to open a browser session with live tracking. Live tracking can be disabled in general by turning it off in the Settings screen, or individually (in this case only for loctome) on the appropriate setting page.

**App info** will show the current version and give you the option to email/send debug data if so requested and show this guide.

## **GPS Status**

This icon will be green if GPS reception is OK, yellow if the signal is weak and red when it is not available.

## **2.) Vario sounds on/off**

This quick toggle selection lets you turn on/off the sounds without opening the settings window. Sounds will also be inhibited if the device is in mute mode, even though sounds are enabled in the application.

## **3.) Background mode on/off**

This quick toggle selection lets you turn on/off the GPS background mode without opening the settings window. Please note that when you press the flight tracking button, Background mode will be automatically enabled. Icon will change colour when selected.

## **4.) Tracking on/off**

This quick toggle selection lets you turn on/off the the flight tracking.

1st press will arm the flight tracking system, the icon will change colour, and 'ground' will be displayed below it. once the ground speed exceeds 3.5 km/h the system will assume you have started your flight. 'Air' will be displayed below the button and the button will flash indication it is tracking your flight. When the flight is complete, you need to manually stop the flight tracking by tapping the button again. Note: Start and Stop for tracking is also available on the apple Watch. If no movement is detected, a small dot (●) will be show in front of 'Air' to indicate no movement. If no movement is detected for more then 5 minutes, tracking will automatically stop.

## **5.) List of recorded flights**

This will open a window with all recorded flights. For the moment, there is no interaction available for the saved flights, and you can export them in a .zip file (opens with Dropbox, iCloud drive or other file management tool installed on your iPhone). Three files are saved:

- <unique number>-Flight.csv (flight info)
- <unique number>-Tracklog.csv & <unique number>-Tracklog.gpx (actual track log of the recorded flight)
- <unique number>-Tracklog.igc

These files can be exported separately or combined in a .zip file.

IGC files are protected with a security record, and can be verified on the website:

<https://www.skyvario.com>

## **6.) Bearing to last thermal**

This small red band will display whenever you have a positive V/S. It will remember the location, and this small band is an approximate bearing where to find it again. When there is a negative V/S, the bar will be dimmed and stays visible for around 2 minutes until a positive V/S is detected, otherwise it will disappear.

## **7.) Bearing to landing zone**

This diamond will indicate where you have put the marker for the landing zone on the map. It is a relative bearing to this point. To create a landing zone, long-press anywhere on the map you want your landing zone to be. In combination with the elevation information in the settings window (which is retrieved automatically if there is an internet connection), a purple bar will be shown on the map where the program calculates your end of descent point.

## **8.) Variometer**

This indication will show the difference in vertical speed. Either based on the iPhone its barometric system, or GPS if a barometer is not available. The bars are adjusted according to the Max. VS setting in the settings panel.

The icon in the compass will also change colour for Positive (green) and negative (red) VS.

## **Rotation lock**

When tapped, this will prevent the main screen from rotation regardless of any iPhone setting.

## **Wind direction**

This will be visible whenever the pilot has made more than two 90° turns in the same direction (either left, or right). Note that this way of wind calculation is not that accurate, and should only be used as a rough value. It will be updated whenever a two-times 90° turn is detected in the same direction. A little blue pointer on the compass will visualise the direction and an arrow will show the strength of the wind vector.

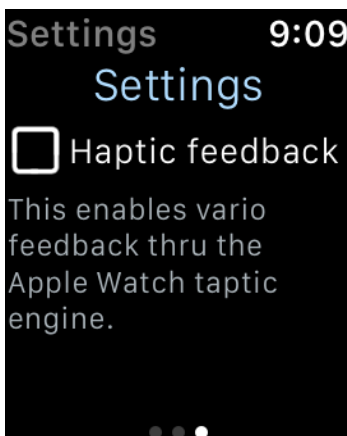
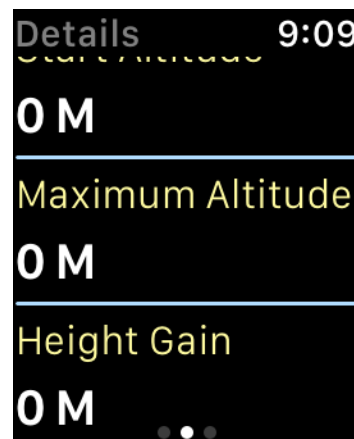
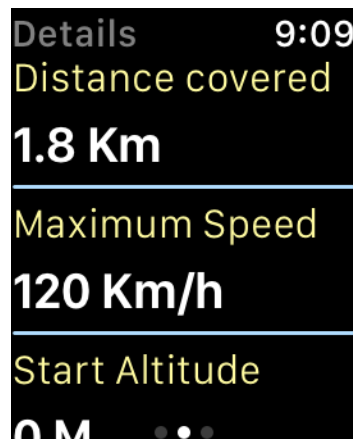
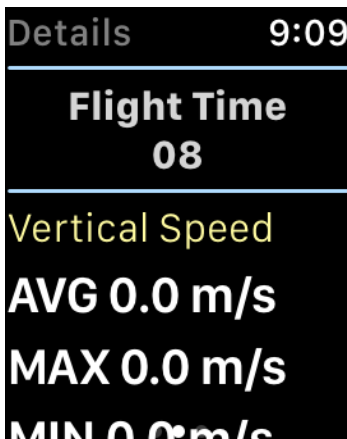
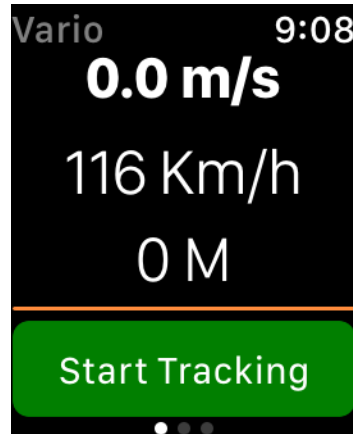
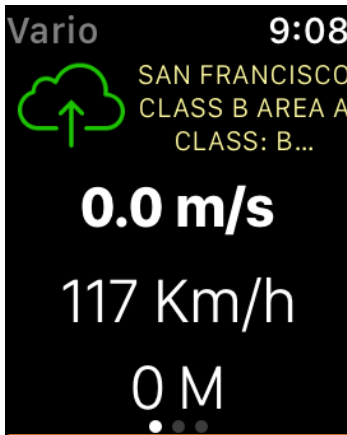
## **Good to know!**

Various functions of the application will work to its best when an internet connection is available.

If your iPhone has a barometric sensor, this will be used over the GPS altimeter for altitude registration and calculations. IGC files however have both values in the file when exported (GPS altitude related to MSL, and barometric altitude based on standard atmosphere as described in the IGC standard).

# Apple watch

Apple watch app will only work with the iPhone app running (or in background mode). It will so basic data, and when so desired, can provide haptic feedback upon V/S changes. The Detail page will only update data when a flight is being recorded. Recording can be started and stopped from the watch as well.





### **Privacy disclaimer - Live Tracking**

skyVario application offers the option to live track your flight. This implies that your location information is sent to a server and stored so it is publicly available. This option is controlled by the user setting 'Enable Live track'. When the option is set to **off, no** location data (and other data) will be sent to the internet for sharing. The sharing option will also be disabled on the website and therefore disabling live view.

Location data saved locally on the device will only be accessible by the skyVario application. Local storage of location data is also controlled by the user option Start/Stop tracking.

When tracking is not enabled, no data is stored nor sent. When Live Tracking is enabled, the information stored is the current position data only, updated on a +/- 1 minute interval. For security reasons, the data is also encrypted during storage.

Information stored locally (and on the internet when live track is enabled) will **never** be shared with 3rd party's and will solely be used for the functions of skyVario.

By enabling Live Track for the first time, the user will accept this disclaimer.