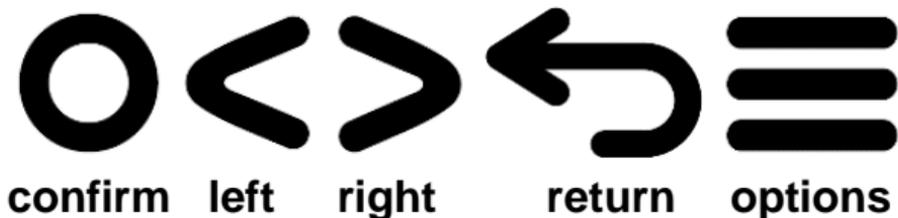# strato

user manual

strato – combined GPS vario

- **instant analog/digital vario** – no delay response
- **3" color display –** sunlight readable – transflective technology
- **GPS tracklog** – IGC, FAI1 Civil approved and/or KML
- **Bluetooth & USB connectivity** – Android, iOS, PC, A2DP audio
- **full customizable** – multiple screens, layouts and widgets
- **thermal assistant, airspace in map, wind speed & direction**
- **ground speed, altitude and heading vs. ground**
- **light weight & compact size** – 190g, 138 x 58 x 24 mm

about this user manual

We recommend reading this **strato** quick guide to learn basic principles of vario operation. We know well this is not your favorite activity, so just briefly go through to understand the basic concept. This manual is very short anyway, as there are explanatory notes inside vario, which will teach you about every specific function. You don't have to keep the printed copy, PDF copy is stored inside vario (SD card), or you can find it on **strato** webpage **strato.skybean.eu**.

buttons

confirm **left** **right** **return** **options**

Buttons mentioned in text are shown **inverted** to recognize it

basic operation

Turn ON
Press and hold **confirm** for at least 1s or until the "Release button" note will appear, then release **confirm** and click it again. This sequence avoids accidental power ON in a backpack.

Turn OFF
Press and hold **confirm** for at least 1s or until the menu bar is pulled up, then release **confirm** and click it again.

Home pages
By default, a couple of home pages are predefined, which you can list by **left** or **right** arrow keys.

Settings menu
All vario adjustments and profiles are set in the settings menu, where to enter press and hold **confirm** for 1 second until the menu bar is pulled up, then release **confirm** and click **right**.

Layout menu
Every home page can be edited (or moved, saved or deleted) in the layout menu, where enter, press and hold **confirm** for 1 second until the menu bar is pulled up, then release **confirm** and click **left**.

Setting and layout menu navigation
Once in the menu, click **right** to move down or **left** to move up. Click **confirm** to enter to the next menu level or click **return** to go to upper menu level. Click **confirm** to highlight adjustable parameter (what will go blue), then use **left** or **right** to set desired value. Finally press **confirm** to store it.

Home page layout edit
Every home page can be edited, you can add, remove or change predefined widgets, change their size or position. In the layout menu click **confirm** to *Edit page* entry. Then you can list between widgets by **left** or **right** (blue frame). To edit widget size or its position, click

confirm to highlight it to red frame. Then clicking **left** or **right** will move the widget left or right. The next **confirm** click will switch to up/down movement. The next **confirm** click (widget frame will go green) switches to horizontal scale adjustment, followed by vertical scale change. One more **confirm** click will return the widget frame to blue, so now it is again in list mode. In any step of widget position/size adjustment, you can add another one or change/remove highlighted widget by clicking **options**, where there are also some other widget settings.

Home page widgets adjustment
When on any of the home pages, **confirm** clicks will list adjustable widgets. If the value widget is highlighted (e.g. barometric altimeter), click **left** or **right** or to change its value, then click **confirm** or just do nothing, timeout will return automatically. To toggle the status widget (e.g. flight stopwatch), press and hold to change its status. You can use this method also to change zoom on map, FANET radar or thermal trace widgets.

Shortcuts
You can add two specific actions to **return** and **options** buttons on every home page. To assign, press and hold **return** or **options** until a shortcut menu will appear, then assign function from list. Then click **return** or **options** will activate the assigned action.
There are also two global shortcuts available. To set/activate them, press and hold **confirm** until the menu bar is pulled up. Then click **return** or **options** to activate shortcut, or press and hold to edit assigned action.

Help notes
We understand that reading a long manual is not just boring, but also useless if it is not followed by real user experience. Therefore this user manual describes just principles of operation and deeper description of each function is inside vario. If you navigate in the settings or layout menu and there is little question mark in the right bottom corner, then press and hold **options** to show description. Click **confirm** or **return** to exit.

bluetooth pairing

Telemetry (baro and other data) - Please pair **strato** in app not in system menu. On **strato**, go to the Bluetooth menu and check its serial number with listed devices on the phone (Strato_nnnnnnn). Then confirm pairing on both **strato** and phone.

Speaker (A2DP) - **strato** is equipped with a high quality speaker, so it would be a shame to not use it for playing music. This needs pairing in phone system settings. Please select Strato_nnnnnnn with headphone icon.

Don't forget to disable vario sound on XCtrack, because then **strato** will play XCtrack vario sound via audio profile, so there will be playing two vario sounds at the same time.

WiFi connection

strato vario can be connected to WiFi network for **IGC** track logs download, or updates. Enter *Wi-Fi* in the settings menu and click *WiFi network*. Select your home WiFi or your phone's hotspot. If **strato** haven't connected to this network before, you will need to enter its password. Navigate through the virtual keyboard with **left** or **right**, select symbol by **confirm** and finally confirm the entered password by **options**. Hit **return** to cancel.

tracklog download

strato vario generates **IGC** track log files approved by **FAI Civil class 1** certification, sufficient for the highest level competitions and/or KML logs used by Google. **Vario can generate both types at the same time**. All track logs are stored on SD card inside vario. For wireless access to them, **strato** needs to be connected to a local WiFi network, or to a hotspot from your phone – we recommend this option. Then go to the WiFi menu, and put the **strato** *Network info* number (local IP address) to the web browser address line in your PC or phone. Now you can see a simple web server in **strato**. Besides other cool stuff, there is also a file manager, where you can find your tracklog and upload it to the XC server. Other two tools

(Audio profile editor and GNSS simulator) are designed for PC size display. When you want to try the **Audio profile editor** tool, first uncheck *Disable in flight* checkbox in WiFi menu, as once you force **strato** to virtually fly, it disables WiFi by default to save battery power.

To access IGC or other files via cable, use the **right USB port**, while vario is OFF, to connect it to the PC. It will connect as a mass storage flash disk, and copy your actual flight log from the LOGS folder into the PC.

power management

strato is a portable device, which needs from time to time to be filled up with some juice. If possible, connect the charger to the **left USB port for fast charging**, the other port works also, but slower. We recommend to charge vario before each flight, you never know how far you will fly ☺

system language

strato offers couple a different system languages. Go to System from the settings menu, then Display and finally select your preferred language.

device update

strato has implemented an OTA (over the air) update method via WiFi. Go to *System* from settings menu, then *Firmware* and select **devel** in *Firmware channel* selection box. Now you can hit *Check for updates* to verify your firmware version. **strato** automatically checks this on startup if it is connected to the network. If there is a newer firmware version, **strato** will ask you to download and install it. If there is any reason you want to go back to any of previously installed firmware versions, go to the *Manual firmware install*, where all previously downloaded firmware files are.

Another way to upload an update file is via wireless file manager described in the **tracklog download** section or via USB cable from PC. All **strato** update files are at our web

strato.skybean.eu/fw/devel. We recommend using the newest file, which is at the bottom in the folder named by the largest number and also its column date modified is the most recent.

data sources

strato has preloaded by default map and terrain data of all Alpine countries (Germany, Austria, Slovenia, Italy, Switzerland and France), so you will need to put there other locations manually if needed. We also always preload data for the destination country, to which **strato** flies from our lab. You can use the automatic download function of map & terrain data via WiFi. Enter Map from settings menu, then Map management and finally select the country to download. There are many small files for large countries (e.g. Australia), so we recommend USB data transfer via cable. It is also not very fast, but more reliable than WiFi connection.

Airspace data download can be either done via WiFi or cable. As airspace data is quite small, we recommend automatic WiFi transfer from the XContest server. You can find all data and useful information about **strato** at its web page **strato.skybean.eu**.

torch light

strato has implemented torch light in case you need to hike at night to catch sunrise up there, or just need to find your tent after a long debriefing discussion with friends. Press and hold **left** until the torch symbol appears on display, then release and click it again (the same principle as power ON sequence). To turn OFF just press and hold **left** until the torch goes down.

reset

In case that **strato** has a lot of hard work (e.g. map rendering), but you decide to switch it off, it may freeze during turning OFF. In that situation (or any other) you can perform hardware reset of the device – press and hold a couple seconds **left** and **right** at the same time until vario will reset itself and power OFF.

technical specification

memory – 64 GB
battery – 5000 mAh, depends on activated functions 8 to 12 hours
operation temperature range – -20 to 45 ºC (0 to 160 ºF)
package includes

strato vario with stripe, hook&loop adhesives, worldwide super-fast wall charger, 2 USB-C cables, LCD protector, user manual, hard shell protective pocket and sticker.

important information

By purchasing this device the user agrees with terms and conditions of device operation. **strato** variometer is not designed for flying under instrument flight rules (IFR) in any case. Manufacturer is not responsible for any accidents or injuries caused by reliance on information provided by the **strato** variometer. We highly recommend to use both hook&loop mount and safety strap when flying with **strato**, **hooks go to vario**. However we did our best to protect the device against destruction by water, it is not guaranteed and warranty will be void. If vario was in contact with water, immediately turn it off and write us an email. If the device is broken for any reason, do not hesitate to contact us to solve it.

contact information

email:

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website:

skybean.eu

instagram.com/skybean_vario

youtube.com/c/SkyBeanVarios

facebook.com/skybeanvario