SkyDrop

user manual



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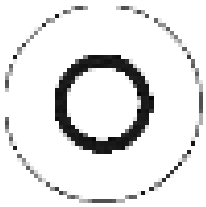
SkyDrop – combined GPS variometer

- **instant analog/digital vario** – no delay response
- **GPS tracklog** – IGC, FAI1 Civil approved or KML
- **Bluetooth & USB connectivity** – Android, iOS, PC
- **full customizable** – multiple screens, layouts and widgets
- **XC navigation functions** – optimized route for competitions
- **thermal assistant, airspace warning, wind speed & direction**
- **ground speed, ground heading, altitude above ground**
- **light weight & compact size** – 88g, 98 x 58 x 23 mm

about this user manual

Despite the fact that we made SkyDrop vario as intuitive as possible, we recommend to read this user manual. We know well this is not your favorite activity, so just briefly go through to understand basic concept. You can leave detailed study of every function for winter time or if you want to learn about 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 our webpage **skybean.eu** or **vps.skybean.eu**

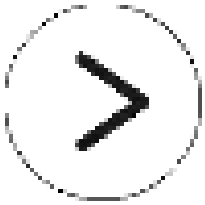
buttons



long press (for 1s) – turn on; pull up menu bar; move to upper level in menu; toggle widget value; start/stop flight stopwatch; **short press** – confirm; list adjustable widgets on home screen; turn off device (if menu bar is pulled up); **press & hold for 5s** to turn device off



short press – scroll between home screens to the left; select widget menu if menu bar is pulled up; scroll up in menu; lower value during setting parameter; **press & hold** to rapid value lowering



short press – scroll between home screens to the right; select settings menu if menu bar is pulled up; scroll down in menu; raise value during setting parameter; **press & hold** to rapid value raising

important note – please read

SkyDrop is in silent mode after start-up, so if you want to hear vario sound, select **FTime** widget and manually start the flight by long press. This feature will help you to be nice to other pilots before launch. By default, the sound will be enabled automatically after launch. To disable this function, please uncheck **Suppress audio** checkbox in Settings>Logger>Auto start/land menu entry.

operation of the SkyDrop vario

During startup animation, firmware version in bottom left and hardware revision in bottom right corner are shown. The device will start on the last used home screen. You can **scroll between home screens by pressing the left or the right arrow buttons**. If adjustable/switchable widgets are on current home screen, you can press middle button to scroll between them. If adjustable widget is highlighted, you can change its value by arrow buttons. If switchable widget is highlighted, you can toggle its state by long press of the middle button. To enter widget or settings menu, you need to **pull up the menu bar** from the bottom while on any home screen by **long press of the middle button**, until menu bar appears. After that, you can enter into **widget menu by pressing the left button**, or enter into **settings menu pressing the right arrow button**, or you can turn the device off by short press of the middle button again.

multi-color light signalization

yellow light – device is being flashed with new firmware

red light – device is charging

green light – device is fully charged

red flash – battery is less than 20%

yellow flash – searching for GPS fix

green flash – GPS 3D fix is acquired

cyan flash – bluetooth is enabled, but not connected

blue flash – bluetooth is enabled & connected

widget menu

SkyDrop uses various widget layouts on home screens. You can adjust all screens, layouts and widgets easily through online drag&drop configurator at **vps.skybean.eu/configurator2** (or **vps.skybean.eu/configurator** for V1) or you can set it directly on device. Before selecting layout of the screen, we recommend to make a list of widgets to be shown and choose the most adequate layout. To change layout, enter widget menu (long press the middle button and then left button), hit **Change layout** entry and select desired option. After that, hit **Change widgets** entry from the same menu. Selected layout will appear and one of the widget position will blink. Use arrow buttons to scroll between layout fields and press middle button to enter complete widget list. Then scroll to desired widget and confirm by the middle button. Several widgets are adjustable (e.g. altimeter widgets **Alt**) or can enable/disable specific function and can be toggled (e.g. **beep** or **weak**).

There are several more options in widget menu to set for each home screen. **Silent page** mutes vario tones while this home screen is shown. **Hide labels** checkbox disables little description labels, shown near widgets, and therefore allows widget data to be larger. **Pages count** entry from the same menu defines number of home screens (1 to 8). **Autoset** submenu entry allows user to use **smart screen switching** function, which is described in separate chapter at the end of this user manual.

We believe, that several widgets are essential to be shown for security reasons – we highlighted them by yellow color.

Some of widgets bring very useful information, what we recommend to see. They can be also shortcuts to enable/disable important functions. These widgets are marked by green color.

Red color means limited availability, due to cost optimization. To keep SkyDrop price as low as possible, we decided to exclude some features, what provides low price-to-value ratio. Temperature, humidity and magnetic (compass) sensors are excluded since September 2022.

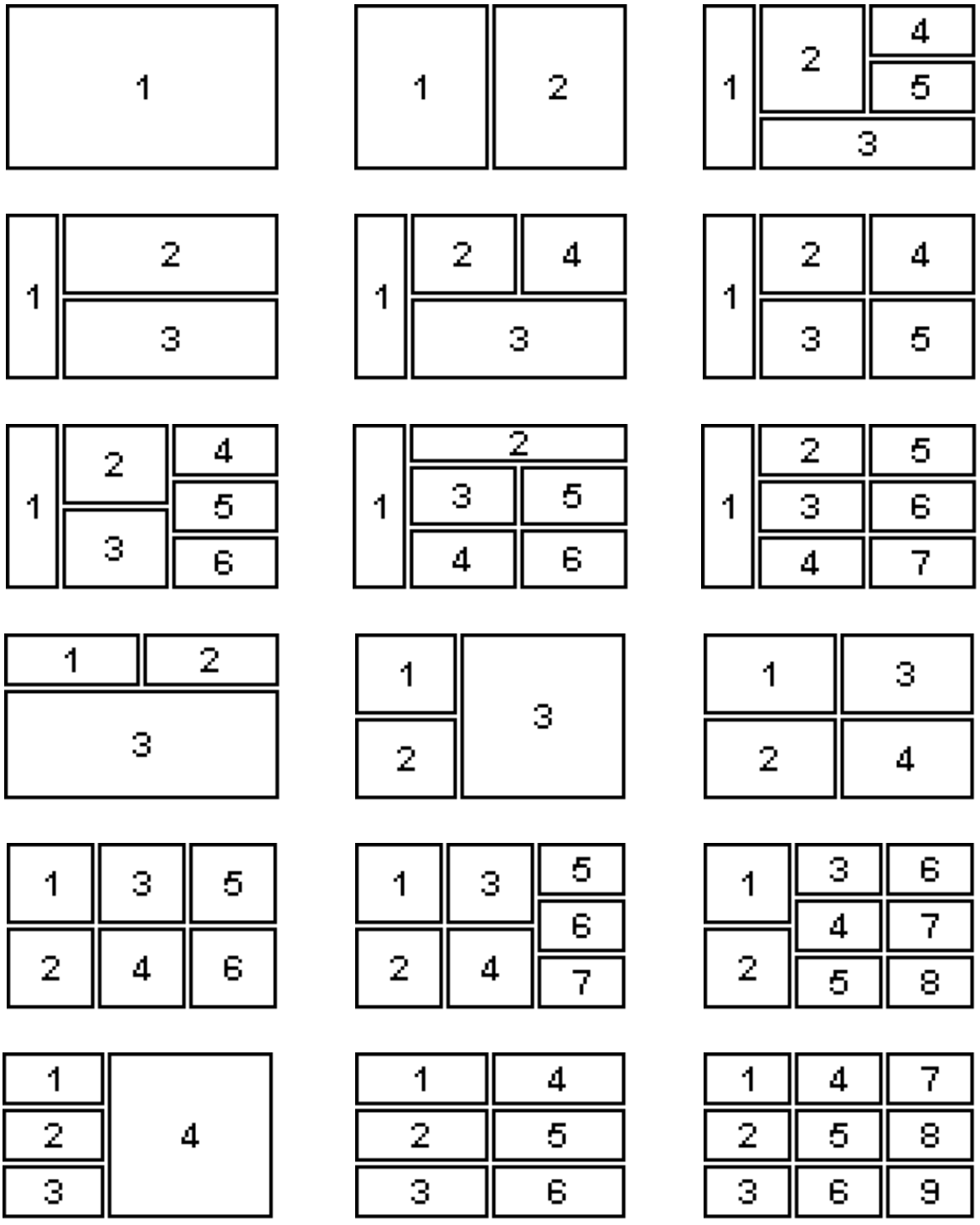
widget list and description (name on LCD)

Vario bar () shows graphical value of analog vario, each step represents 1 m/s, the total range of analog vario bar is -6 to 6 m/s.
Vario (Vario) shows value of digital variometer, actual lift/sink value in m/s or ft/m.
AVG vario (Avg) shows averaged digital variometer during time period set in **Average vario integration int.**
Vario history () shows graphically relative vario value during time. Range of time interval is set in **Average vario integration int.**
Altitude 1 to 5 (Alt) shows altimeter's 1 to 5 value. This widget can be adjusted.
Height AGL (HAGL) is altitude above ground (shown if terrain data is stored in AGL folder on SD card). Long middle button press on the widget sets Altitude 1 to ground level, so HAGL will be zero, what can be used to calibrate Altimeter 1 on ground by GPS altitude.
Ground Level (Glevel) is terrain elevation (if data is on SD card).
Ground speed (GSpd) shows speed relative to ground.
Glide ratio (Glide) shows ground speed to sink angle ratio (e.g. 9).
GPS heading (GHdg) is value in degrees obtained from GPS receiver. This option is the best if very precise course is needed.
GPS HDG arrow (GHdg) graphically shows GPS heading, the North is up. This option is fine if you want compass look like view.
GPS HDG points (GHdg) shows GPS heading in one of 8 main directions (N, NE, E, SE, S, SW, W and NW). This is recommended option for heading representation.
GPS position (GPos) shows GPS coordinates in selected format.
Thermal time (TTime) measures circling time in current thermal.
Thermal gain (TGain) shows altitude change while circling in current thermal (can be positive, but also negative).
Thermal assistant () graphically represents your actual vario value during last circle in 8 main heading positions. Lift is shown as circles, sink as crosses. Larger symbol means higher value of lift/sink rate. Use larger widget slot for better readability (e.g. layout #16).
Flight time (FTime) shows duration of current flight. You can manually start/stop this timer by long press the middle button when highlighted.

Hike Mode (Hike) turn GPS logger on in any circumstances.
Time (Time) and
Date (Date) show actual clock and date (both can be set by GPS).
Odometer (Odo) – don't use this function, it doesn't work properly.
Home Arrow (Home) is pointing to position set as Home (if set). Default home is take-off position.
Home Distance (Home) shows distance to Home from your actual position.
Home Time (Home) is estimated time to reach the Home position based on Home Distance and actual ground speed.
Home Info (Home) shows name of the selected home position.
Waypoint Arrow (WP) is pointing to actual waypoint position.
Waypoint Distance (WP) shows distance to actual waypoint.
Waypoint Time (WP) is estimated time to reach actual waypoint.
Waypoint Info (WP info) shows name and position in waypoint list.
Airspace Info () shows name, class, floor and ceiling of the closest or violated airspace. Also arrow and distance of best exit course are shown. See the **section 6** how to load airspace data into SkyDrop.
Wind direction (WDir) shows absolute value in degrees (0-359).
Wind arrow (WDir) shows direction of wind relative to compass.
Wind dir points (WDir) shows direction of wind in 8 main directions.
Wind speed (WSpd) shows calculated wind speed in selected units.
Accelerometer (Acc) shows actual G force, where 1 is calm state.
Compass heading (Comp) shows actual value in degrees.
Compass arrow (Comp) graphically points to north (as standard compass).
Compass points (Comp) shows orientation of vario in 8 main directions.
Battery (Bat) shows remaining battery power in %. Low temperature in high altitude can cause battery voltage drop, what seems like battery power lost, but it only looks like.
Temperature (Temp) shows air temperature and humidity.
Weeklift ON/OFF (weak) between light thermal (<1m/s) signalization modes. Can be traditional continuous, beeping or off.
Audio ON/OFF (beep) can mute/unmute by long press vario sound.
Empty leaves current widget slot empty.

screen layout options

Each slot can show one widget, its size is adaptable, so the larger slots show larger numbers or letters. Of course, there are physical limits, so don’t put large widget into small slot e.g. Airspace info or Thermal assistant.



settings menu

Long press the middle button and then press the right button to enter settings menu on SkyDrop vario. There are 9 main entries with their submenus.

1. **Vario**
   - 1.1. **Lift threshold** defines the positive vertical speed level, when vario sound is activated (in 0.1m/s steps).
   - 1.2. **Sink threshold** defines the negative vertical speed level, when vario sound is activated (in 0.1m/s steps).
   - 1.3. **Units** can be metric or imperial (meters per second or hundreds feet per minute).
   - 1.4. **Use accel** checkbox allows motion sensors (9D IMU) fusion with barometer to accelerate vario response. Vario response is then without any delay!
   - 1.5. **Advanced**
     - 1.5.1. **Fluid audio** checkbox allows sound tone change during actual beep, what is very useful while long tones in profile.
     - 1.5.2. **Sink Mode** can be classic continuous, beeping, or can be disabled. Use vario demo before flight to hear sound.
     - 1.5.3. **Weak lift mode** entry toggles between beeping or continual mode. Weak lift detection reports situation, when glider is in light thermal, but still slightly sinks.
     - 1.5.4. **Weak lift threshold** defines lower value of working range. Upper value is defined by **Lift threshold**.
     - 1.5.5. **Beep offset** is pre-tone frequency difference if **sink mode** or **weak lift mode** are set to beep. Sink pre-tone is higher, while weak lift beep is lower than following tone.
     - 1.5.6. **Beep duration** sets pre-tone duration.
     - 1.5.7. **Weak low frequency** and
     - 1.5.8. **Weak high frequency** set frequency range in **weak lift cont. mode** linearly applied within weak detection range.

1.5.9. **Digital vario int.** defines time of displayed digital vario value averaging (don't applies to sound output).

1.5.10. **Average vario int.** defines time used to compute average vario value and defines **Vario history** time range.

1.5.11. **Vario Demo** simulates vario sound. This function is very useful, if you changed some advanced vario settings, so you won't be surprised in the air ☺

2. Altimeters

2.1. Altimeter 1-5

2.1.1. **Mode** can be absolute, **related to QNH1 or QNH2**, **relative** to other altimeter (with offset adjustable through home screen widget) or following **GPS altitude**.

2.1.2. **Relative to** selection defines related altimeter if relative mode is selected. Altimeter 1 must stay at absolute mode.

2.1.3. **Zero at takeoff** set altitude in relative mode to zero right after launch (automatically detected or manual).

2.1.4. **Units** can be set to metric (meters) or imperial (feet).

2.1.5. **Auto from GPS** checkbox (shown if QNH1/2 mode is selected) enables periodical correction of barometric altitude by GPS altitude. Algorithm is based on actual GPS accuracy and accumulated barometric drift during time.

2.2. Alarms

2.2.1. **Enabled** checkbox turn this function on.

2.2.2. **Auto confirm** sets warning duration when activated.

2.2.3. **Alarm 1 (Low)** and

2.2.4. **Alarm 2 (Lowest)** warn pilot when sinking through preset altitude. **Low** value has to be higher than **Lowest** one. These alarms are very useful during SIV or acro training.

2.2.5. **Alarm 3 (High)** warns pilot when lifting through preset altitude. Set this alarm little lower (300m) than allowed ceiling in current area to prevent airspace violation.

2.2.6. **Reset** value defines hysteresis of alarms for re-activation.

2.3. **QNH1** and

2.4. **QNH2** values in hPa are pressures adjusted to mean sea level for actual date and location according to local info service. SkyDrop can store two different QNH values for flying in wide altitude range. Standard QFE pressure 1013.25 hPa is default value of QNH2.

3. Logger

3.1. **Enabled** checkbox enables or disables GPS tracking.

3.2. **Total time** summarize air time of all flights. You can adjust it, or even reset (lowering to zero).

3.3. **Format** of output file can be chosen IGC or KML.

3.4. **Auto start/land** submenu offers

3.4.1. **Start threshold** defines altitude change within **Timeout** time period, used for automatic launch detection.

3.4.2. **Land threshold** in meters defines maximum altitude change within **Timeout** period to detect landing.

3.4.3. **GPS Speed** threshold also works for launch detection.

3.4.4. **Timeout** in seconds is used for landing detection. It is not counted into fly time (**FTime**).

3.4.5. **Suppress audio** checkbox mutes vario while waiting on takeoff place. We recommend to leave this function on.

3.4.6. **Record always** checkbox disables automatic start/stop of logging. Logger records while device is turned on, until it is turned off.

3.5. **Pilot name**,

3.6. **Glider type** and

3.7. **Glider ID** fields are used to be written in recorded track logs.

4. **Flight logs** contains all recorded track logs arranged by their date, showing basic flight statistics.

5. **Navigation**

You can use waypoint navigation for competitions or for normal XC flying. Route can go through centers of waypoints for XC flying or can be optimized for the shortest distance for competitions, so you won't be navigated to center of waypoints, but along tangent lines of their circles defined by its radius. As this is advanced feature for experienced pilots, this manual not provides deep detailed explanation of principles of waypoint task navigation. You can create desired route from waypoints stored is list files. SkyDrop supports CUP format of waypoint list files placed in WPT folder. You will get this file from competition organizers. If you want to create your own waypoints for XC flying, we recommend **flyxc.app** web based tool, what generates CUP file.

5.1. **Create Task** generates new blank competition task named TASKnnn (starting at 001) and enter its edition.

5.2. **Load/Close task** choice serves to load task from memory or to close currently opened task and disable navigation.

5.3. **Edit Task** allows to change loaded task parameters. If no task is loaded, it works as **Load task** entry.

5.3.1. **Task name** be used to change generated name.

5.3.2. **Settings** of the task

5.3.2.1. **SSS Crossing** can be **Enter** or **Exit**.

5.3.2.2. **Goal** can be **Cylinder** or **Line**.

5.3.2.3. **Start** and

5.3.2.4. **Deadline** define competition task time range.

5.3.2.5. **Earth model** can be set **WGS-84** or **FAI Sphere**.

5.3.2.6. **Optimise** checkbox enables the shortest route calculation (keep it checked for competition).

5.3.3. **Waypoint** settings

5.3.3.1. **Waypoint #N** allows you to switch current waypoint for another one stored in memory.

5.3.3.2. **Radius** defines approach circle around waypoint.

5.3.3.3. **Move up** or

5.3.3.4. **Move down** shifts the waypoint in the task list.

5.3.3.5. **Remove** is used to delete the waypoint from task.

5.3.4. **Center** shows overall distance of task trough waypoints.

5.3.5. **Short** shows the shortest possible distance of task route using radius distance approach to waypoints.

5.3.6. **Add waypoint** serves to add waypoint from memory to edited task. The first waypoint is take-off followed by SSS. The last two waypoints are ESS and GOAL. All others between are standard turnpoints.

5.3.7. **Delete task** permanently deletes currently edited task.

5.4. **Home position** is set to waypoint from memory.

5.5. **Use takeoff** checkbox sets **Home position** to takeoff place.

6. Airspaces

Download and unzip Airspace data of desired location from our web **vps.skybean.eu/air**. Then copy data to AIR folder in your SkyDrop. If you can't see such folder, you might need to create it. The countries in airspace list overlap, so the same file can be in multiple zip files. Therefore it is OK to skip or override this file.

6.1. **Enabled classes** contains list of checkboxes to enable/disable individual airspace classes.

6.2. **Alert near** defined alert activation distance from airspace.

6.3. **Alert inside** checkbox enables alert if inside of airspace.

6.4. **Auto confirm** is time period while alert pop-up stays on.

6.5. **Reset ignore list** deletes airspaces added to ignore list.

7. GPS

7.1. **Enable GPS** checkbox enables/disables GPS receiver.

7.2. **Status** shows available satellites and signal strength.

7.3. **GPS time** and

7.4. **GPS date** show actual time and date from GPS receiver.

7.5. **Speed units**, used for ground speed widget **GSpd,** can be chosen from m/s, km/h, mph or knots.

7.6. **Format** of coordinates can be chosen from – DD.dddddd, DDº MM.mmm' or DDº MM' SS".

7.7. **Distance units** can be set to metric or imperial.

7.8. **Earth model** allows you to switch between WGS-84 and FAI Sphere models.

8. Bluetooth

8.1. **Bluetooth module** shows used module type onboard.

8.2. **Enabled** checkbox enables/disables Bluetooth function.

8.3. **Protocol** selection changes device communication protocols (apps) – LK8EX1 (XCtrack), DigiFly (XCSoar) or BlueFly (FlyMe).

8.4. **Forward GPS** checkbox enables forwarding GPS coordinates to connected device, so there is possibility to turn off its internal GPS to save power.

9. Settings

9.1. **Date&Time**

9.1.1. **Time** and

9.1.2. **Date** items allow adjust on-board clock and date.

9.1.3. **Time zone** entry is used if time is obtained from GPS receiver to set the correct local time.

9.1.4. **DST** checkbox means daylight saving time option.

9.1.5. **Sync with GPS** checkbox allows to get accurate time from GPS.

9.2. Display

9.2.1. **Contrast** adjusts LCD screen contrast.

9.2.2. **Backlight** adjustment controls LCD backlight level.

9.2.3. **Backlight timeout** defines how long backlight remains on after the last button press.

9.2.4. **Invert display** checkbox inverts pixels on LCD.

9.2.5. **Flip orientation** checkbox turns over LCD screen.

9.2.6. **Animation** checkbox enables smooth switching between home screens.

9.2.7. **Cycle** checkbox sets the display into mode which will periodically (10s) switch your screens in carousel mode.

9.2.8. **Temperature** shown in Celsius or Fahrenheit units.

9.3. Audio

9.3.1. **Vario volume** adjust vario sound level.

9.3.2. **Vario mute** checkbox turns off vario beeping. This can be also done by **beep** widget.

9.3.3. **Alert volume** adjust sound level of pop-up info messages.

9.3.4. **Menu volume** adjust sound level of menu sounds.

9.3.5. **Menu Sounds** contains several checkboxes, what enables/disables system beeps and sounds.

9.3.5.1. **On/Off sound** checkbox play sound at startup or power off.

9.3.5.2. **Page sound** checkbox informs, which home screen is currently selected by two beeps of different tone.

9.3.5.3. **Button sound** checkbox enables beep, when any button is pressed.

9.3.5.4. **GPS ready** checkbox enables notification, when GPS 3D fix is achieved.

9.4. **Auto power-off** entry defines timeout while device stays turned on, if no operation occurred. **Auto power-off will not occur during flight**. Put zero value to disable.

9.5. **Advanced** settings

9.5.1. **Device id** shows device serial number.

9.5.2. **Mass storage** checkbox enables automatic switching to USB mode after plugging USB cable. **Don't use if you want charge vario during flight!**

9.5.3. **Uart function** can be used for data streaming by UART interface at several baud rates. UART is using same protocol as Bluetooth. Debug msg. option runs at 921600 baud rate and is used for development.

9.5.4. **Calibration** submenu contains motion sensors calibration routines. Despite SkyDrop vario is well calibrated from production, it can drift within time or geographical position (particularly compass). We recommend to recalibrate sensors, if you feel that one or more functions based on motion sensors are inaccurate (instant vario fusion - Use accel). For more information please visit our support page or contact us by email.

9.5.5. **Factory reset** sets vario to its original factory settings.

smart screen switching

SkyDrop has implemented switching between various home screens, dependent on situation during flight. There are several recognizable modes:

- **Prepare** mode is active after vario start and before launch.
- **Circling** mode is detected, if vario GPS heading makes whole circle. If direction of heading change will switch to other side, detection is reset. Circling mode will return back to normal mode, if there isn't enough heading change during **Circling timeout** time period.
- **Normal** mode is active while flying, but not circling, nor acro.
- **Acro** mode detection is based on G-force measurement and average sink rate (**Acro thold**. value).
- **Landed** mode is active after landing, detected automatically or set manually.

Any of home screens can be set for one or more of these modes, but each mode can be set to only one home screen. We recommend to set relevant widgets to home screen associated to flight mode, e.g. **Thermal assistant** to **Circling** screen.

bluetooth pairing

Due to some production reasons, we had to split hardware versions of SkyDrop to V1 and V2, where different Bluetooth modules are used.

SkyDrop V1 vario is equipped with Bluetooth module with both SPP and BLE modes, while SkyDrop V2 has BLE only.

Please read these documents for more details how to use Bluetooth with most common apps XCtrack on Android and FlySkyHy on iOS.

vps.skybean.eu/manuals/SkyDrop_to_XCtrack.pdf

vps.skybean.eu/manuals/SkyDrop_to_FlySkyHy.pdf

tracklog download

SkyDrop vario generates **IGC** track log files approved by **FAI Civil class 1** certification, sufficient for the highest level competitions or KML logs used by Google. **Vario cannot generates both types in the same time**. All track logs are stored on SD card inside vario. To access them, connect vario (turned off) via micro USB cable to PC, it will connect to computer as mass storage flash disk, and copy your actual flight log from LOGS folder into PC. There is also possible to download track log to mobile phone using OTG cable or adaptor.

power management

SkyDrop is portable device with rechargeable Li-Poly battery onboard, which needs time to time to be filled up. You can use any USB wall charger or another USB host device, even another portable device with active OTG function. We recommend to charge vario before each flight, you never know how far you will fly ☺

technical specification

weight & dimensions – 88g, 98 x 58 x 23 mm (3.8″ x 2.3″ x 0.9″)

memory – 32 GB flash - more than 232 000 hours of flying time :)

USB interface – micro USB 2.0, device only

battery –2000 mAh

operation temperature range – -20 to 45 ºC (0 to 160 ºF)

power consumption – depends on activated functions and vario model 18 to 28 hours.

package includes

SkyDrop variometer with strap, riser mount, hook&loop adhesives, USB cable, printed user manual and hard shell protective pocket.

device update

Please use web online configurator **vps.skybean.eu/configurator2** to update or configure SkyDrop V2 (firmware release starting 8), or use **vps.skybean.eu/configurator** for SkyDrop V1 (firmware 5…). You can see the current firmware version while startup of vario.

1. **Connect SkyDrop (powered off) to the computer** via micro USB cable. Charging screens will appear and vario will connect to computer as flash disk (USB mode shown on LCD).
2. If you don't want to keep your custom settings and just apply new software using factory settings, please skip step 3 and directly go to step 4.
3. After startup, configurator will show the first bookmark menu - Update wizard. Hit "**Load your existing configuration**" button, then select and open configuration file **CFG2.EE** for V2 or **CFG.EE** for V1 from main folder of connected vario. Configurator will process your custom settings and include it into new firmware update.
4. Press "**Download configuration with firmware**" button and store **DROP2.FW** for V2 or **SKYDROP.FW** for V1 file into main folder of vario. Make sure that name of file won't change e.g. to SKYDROP(1).FW or so (this can happen if old unapplied update files are still in device main folder).
5. **Unplug vario** from computer, turn it on and **follow instructions** shown on **vario screen**. Press middle button to confirm question "**Update file found. Apply?**" – press middle button again to confirm "**Update done. SkyDrop will reboot**". Yellow light will show up for several seconds while flashing new software.
6. Turn on vario and choose how to set correct date and time. We recommend to select automatic update from GPS by pressing the middle button.

Hint: If new firmware update will appear while you are on fly adventure, you can apply it also from mobile phone using OTG connection.

motion sensors (IMU) calibration

Accelerometer calibration procedure needs to define six possible positions in orthogonal system. Each of these positions, called X+, X-, Y+, Y-, Z+ and Z-, is detected automatically if vario lies still in given position. Put vario into all 6 positions and wait for beep. Confirmation screen will appear after successful calibration. Press the middle button to confirm and save new calibration data.

Gyroscope calibration is the most simple. After activation leave SkyDrop in calm static position while status bar is running. Press the middle button to confirm and save new calibration data.

Compass (applicable for SkyDrop V1 only) calibration needs to turn vario into all possible positions and rotations. The movement can look like making virtual eights in every axis (the same procedure, like most mobile phones use). Keep rotating while vario beeps, each beep means new maximal compass reading. Again confirm by the middle button to save new calibration data.

important information

By purchasing this device user agrees with terms and conditions of device operation. SkyDrop 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 SkyDrop variometer. We highly recommend to use both hook&loop mount and safety strap when flying with SkyDrop, **hooks go to vario**. Security strap is not unbreakable for your safety, it can hold at least 8kg of tension, what is more than enough for vario body. However we did our best to protect 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 email. If device is broken for any reason, do not hesitate to contact us to solve it.

troubleshooting

If there is something wrong with your vario, or if you need more detailed explanation of any function, please visit our FAQ section at **skybean.eu/content/faq**. If you cannot find the answer, do not hesitate to contact us via email.

contact information

email:

info@skybean.eu

website:

skybean.eu

instagram.com/skybean_vario

youtube.com/c/SkyBeanVarios

facebook.com/skybeanvario

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