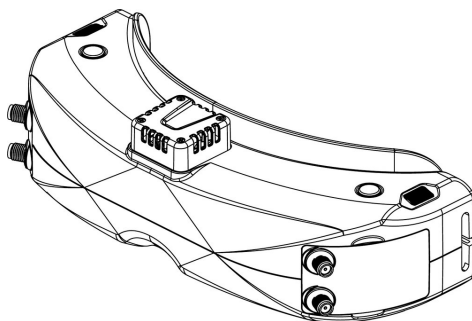




SKY040 Pro

FPV goggles with OLED screen and 5.8 GHz SteadyView
receiver
User Manual



Do not expose the lenses to direct sunlight, otherwise the screen will burn in.

Manufacturer: SKYZONE (www.skyzonefpv.com) · Importer: Rotorama, s.r.o. · www.rotorama.cz

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1. Safety and regulations

1.1 Safety instructions

Do not expose the lenses to direct sunlight. The optics concentrate the sunlight on the screen and the screen will burn in permanently. In sunlight, always put the goggles down with the lenses facing downwards or store them in the case.

- Power the goggles only from a **2S to 6S LiPo** battery (DC 6.5–25.2 V) using the supplied power cable, or from USB 5 V. Do not exceed the stated supply voltage range.
- Never charge LiPo batteries unattended, do not use damaged or swollen cells and protect the connectors against short circuit. Disconnect the battery from the goggles after use.
- With the goggles on, you cannot see your surroundings. Do not walk or drive while wearing them; stand or sit in a safe place during the flight.
- Take breaks during longer use. If you feel nausea, dizziness or eye strain, take the goggles off.
- Protect the goggles from moisture, dust, impacts and drops. Do not disassemble or modify the goggles.
- This product is not a toy. It is intended for persons aged 14 and over.

1.2 Regulations and frequencies

Regulations (EU) 2019/947 and 2019/945 on unmanned aircraft apply in all EU member states, but national implementing rules differ from country to country – registration portals, minimum pilot age, geographical zones, mandatory insurance, permitted frequency bands and maximum transmitting power. The information in this chapter describes the situation in the Czech Republic. If you use the product in another country, you must follow the regulations of the country in which you operate it.

- The goggles contain a 5.8 GHz video **receiver**. The user is responsible for making sure that the video transmitter (VTX) in the drone transmits on a permitted frequency and with permitted power.
- In the Czech Republic a video transmitter may be operated in the **5725-5875 MHz** band with a maximum power of **25 mW e.i.r.p.** (CTU general authorisation VO-R/10). The channel table in Chapter 2.4 also contains frequencies outside this band – the whole **E** and **L** bands, channel **F8** and channels **R1, R2, R7 and R8**. You must not operate a video transmitter on these frequencies in the Czech Republic.
- When flying FPV with goggles in the open category, an **unmanned aircraft observer** who keeps direct visual contact with the drone must stand next to the pilot.

2. Product description

2.1 Introduction

The SKYZONE SKY040 PRO is an upgraded version of the SKY040, with a 1280 × 720 OLED panel and new 42-degree optics, giving a better and more immersive FPV experience than the SKY040. The SKY04 series is the first Skyzone goggle with focus adjustment; the high-resolution screen has vivid colours and high contrast, so the pilot can see more details when racing.

With the SteadyView receiver, the receiver merges two signals into one, avoiding image tearing and rolling and making the image more stable and clear in challenging conditions. The newly designed optics with focus adjustment and a large field of view give pilots a more immersive FPV experience.

The new OS offers 10 languages. With the shuttle wheel and the new user interface, the pilot can set all settings just by rolling the wheel without taking off the goggles.

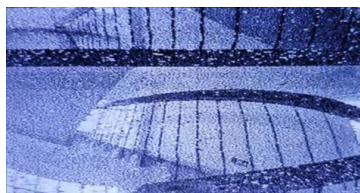


Image with a weak signal in conventional diversity mode (left) and with the SteadyView receiver (right) – illustrative image by the manufacturer

2.2 Package included

- ① SKY040 Pro goggles – 1 pc
- ② Receiver module – 1 pc
- ③ Faceplate – 2 pcs (wide and narrow)
- ④ Sponge with velcro – 1 pc
- ⑤ Zipper case – 1 pc
- ⑥ Power cable – 1 pc
- ⑦ Head tracker cable – 1 pc
- ⑧ 5.8 GHz 2 dB antennas – 2 pcs
- ⑨ Video/audio cable – 1 pc
- ⑩ USB-C cable – 1 pc
- ※ User manual – 1 pc

2.3 Specifications

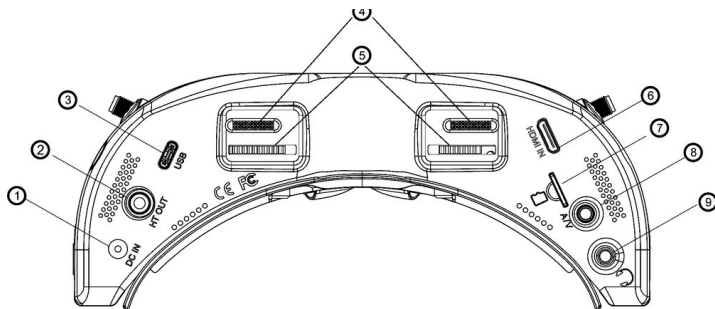
Parameter	Value
Model	SKY040 Pro
Screen	OLED
Resolution	1280 × 720
Field of view (diagonal)	42°
Aspect ratio	4:3 / 16:9
Focus range	–6 to +2 (suitable for near- and far-sighted users)
Interpupillary distance (IPD)	58–71 mm
Receiver	5.8 GHz, 48 channels, SteadyView
Receiver sensitivity	–98 dBm ± 1 dBm
Antenna ports	2× SMA-K, 50 Ω
DVR	MJPEG, 60 fps, MOV files, 6 Mbps
Memory card	SD, Class 10 recommended, up to 128 GB, FAT32
HDMI input	60 fps
Power supply	DC 6.5–25.2 V (2S–6S LiPo battery) / USB 5 V
Power consumption	720 mA @ 12 V
Menu languages	10
Head tracker	3-axis accelerometer, 3-axis gyroscope

2.4 Band/channel table

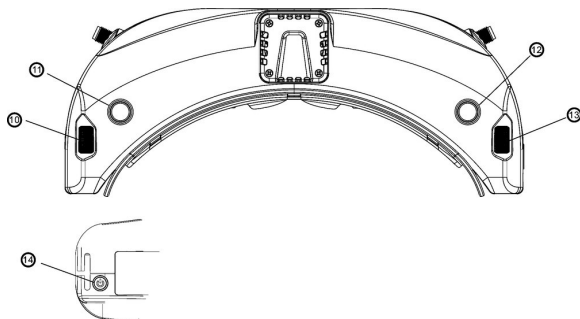
Band	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
E	5705	5685	5665	5645	5885	5905	5925	5945
F	5740	5760	5780	5800	5820	5840	5860	5880
R	5658	5695	5732	5769	5806	5843	5880	5917
L	5362	5399	5436	5473	5510	5547	5584	5621

Frequencies are given in MHz. Band R (RaceBand) is used in RF Racing mode.

2.5 Diagram of controls and ports

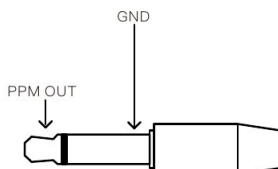
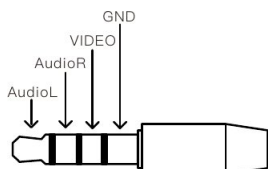


Ports and optics adjustment (1-9)



Controls, receiver module and power button (10-14)

1	DC port DC IN (5.5 × 2.1 mm)	2	Head tracker port (HT OUT)
3	USB-C port	4	IPD slider
5	Focus adjustment wheel	6	HDMI input
7	SD card slot	8	AV input / output
9	Earphone jack	10	Left wheel - volume / mode
11	Left button - record / delete	12	Right button - system menu / head tracker
13	Right wheel - channel / band / search	14	Power / fan button



AV jack pin-out (left) and head tracker jack pin-out (right)

3. Getting started

3.1 Quick start guide

- ① Install the antennas and the faceplate.
 - ② Use the power cable to connect the battery to the goggles. The goggles can be powered by a 2S to 6S LiPo battery. Hold the power button to turn the goggles on.
 - ③ **Focus adjustment:** move the focus adjustment wheel to focus. Close one eye and adjust the focus; you can pop up the OSD menu as a template. When the image is clear, repeat the process with the other eye.
 - ④ **IPD adjustment:** move the IPD slider until there is no double vision of the image.
- ✱ In the system menu, select the battery type (2S–6S) so that the goggles show the real capacity of the battery (see Chapter 5.5).

3.2 Channel, band and receiver mode

- ① Press the right wheel, then roll the right wheel to change the channel. Press the wheel again to switch to band setting and roll the wheel to change the band. Press the wheel again to select the receiver mode (Diversity or Mix).
- ② If the wheel is not operated for 3 seconds, the goggles quit the channel setting.
- ③ Hold the right wheel to pop up the search menu. Press the right wheel to start the auto search – after searching all frequencies, the receiver will work on the strongest signal. Roll the right wheel to select channels manually. Hold the right wheel to quit searching.

✱ **The auto search is sometimes not accurate. In that case select the channel manually.**

► Receiver modes

Mode	Description
MIX1	Provides basic fusion processing to reduce excessive intervention of the circuit on the picture.
MIX2	Improves synchronisation stability, especially under weak signal, to maximise synchronisation and lock the video.
MIX3	Enhances the synchronisation signal on the basis of Mix2, maximises the stability of the video image and the compatibility with other display devices. In this mode the brightness of the video signal is reduced.
DIV	Fusion processing is turned off and the receiver works in traditional diversity mode – the audio and video signal of the channel with the highest RSSI is selected.

3.3 Volume

- In all preview modes, roll the left wheel to adjust the volume.
- The volume setting is only effective for the earphones, not for the AV OUT volume.
- The volume setting is not saved after power-off, so that the volume is not too high in AV IN or RF mode.

3.4 Drone Finder mode

Install a patch antenna on the receiver. Long press the left wheel to enable the drone finder function (long press again to disable it). The buzzer frequency is synchronised with the RSSI – the stronger the signal, the faster the buzzer beeps.

4. Mode menu and playback

4.1 Mode Menu

Short press the left wheel to pop up the mode menu.

- **RF Normal** – normal 48-channel receive mode.
- **RF Racing** – the receiver works on RaceBand only.
- **RF Third-Party** – mode for an external third-party receiver. The goggle buttons cannot control the external receiver and the goggle OSD cannot read its band/channel.
- **AV IN** – analogue video input. NTSC and PAL are switched automatically. The receiver module is turned off automatically to save power.
- **HDMI IN** – HDMI input. The receiver module and the video recording module are turned off automatically to save power.
- **Playback** – review of the DVR files.

4.2 Playback

- Roll the right wheel to choose a DVR file, short press the right wheel to play and pause.
- Use the left wheel to adjust the volume.
- While playing, roll the right wheel to fast forward or fast backward.
- Press the right button to quit the DVR playback.
- Press the left button to delete the DVR file.

5. Settings

5.1 Head tracking

- The head tracking button is on the right side of the goggles.
 - The gyro requires an initialisation time. After power-on, keep the goggles horizontal and stable as long as possible. The initialisation is done when you hear a beep.
 - Hold the HT button to reset the PPM signal to the centre; the goggles beep when the button is pressed.
 - The PPM signal is available on the head tracker port (HT OUT, see Chapter 2.5); the head tracker cable is included in the package.
- ※ Disabling the head tracker saves the gyro initialisation time and speeds up the boot of the goggles.

5.2 Image

In the image setting menu, the presets Standard, Bright, Vivid and Soft and three user profiles (User 1/2/3) are available. In the user profiles you can adjust brightness, contrast, saturation, hue and sharpness to suit different environments. The four presets cannot be changed.

5.3 DVR

- The left button starts and stops recording.
- The built-in DVR records MJPEG (60 fps, MOV files). A Class 10 SD card up to 128 GB is recommended.
- The SD card must be formatted to FAT32. You can format it in the system menu (*Format SD*).
- Recording works in both RF mode and AV IN mode.
- Sound is recorded by default; sound recording can be turned off in the system menu.
- **Automatic recording:** when enabled, recording starts as soon as a video signal is detected. Recording can be stopped manually at any time with the REC button.

A sudden power disconnection during recording damages the file being recorded. After entering Playback mode, the goggles automatically check the last DVR file and repair it if it is damaged.

- **Auto&Follow** – the DVR starts recording automatically when the video signal is on and stops 30 s after the signal is cut. When the signal is on again, the DVR starts recording again.
- **Follow** – press the REC button to start recording manually. The DVR stops 30 s after the signal is cut and starts again automatically when the signal returns.

Press REC again to stop recording manually and save SD card space.

- **Cyclic recording** – turns overwriting of the oldest recordings on or off when the card is full.
- Recordings are automatically divided into multiple files. The file length can be set in the menu to 5, 10, 20 or 30 minutes; the default is 30 minutes.

5.4 Display

- In the display menu you can set the top bar OSD time or keep the OSD always on.
- The RSSI can be shown as icon + percentage, icon, percentage, or disabled; its vertical position is adjustable.
- Screen brightness: 8 steps (default 5). Do not set it too high unless the image is dim.
- **Sleep Mode** prevents screen burn-in. The time can be set to 1, 3 or 5 minutes (default 3). The goggles detect movement with the head tracker gyro; when they stay still for the preset time, the buzzer beeps and after 10 seconds the screen turns off. To quit sleep mode, move the goggles when you hear the beep.
- In sleep mode the other functions of the goggles keep working (receiver, DVR etc.).
- The aspect ratio can be switched between 4:3 and 16:9 (default 4:3). A small FOV mode is also available, in which the image is cut at the edges of the screen.

5.5 System Menu

✳ **For left-handed users, the wheel and button functions can be swapped to the other side; all functions described in this manual are then mirrored.**

- **Power supply:** choose the battery type (2S to 6S) so that the goggles show the real capacity of the battery.
- **Voltage calibration:** the displayed voltage can be adjusted within ± 0.9 V. Measure the loaded voltage of the battery with a multimeter and set the same value with the shuttle wheel.
- **RSSI calibration:** remove the antennas, turn off the video transmitter (VTX) and select Yes. When the calibration is done, the goggles beep.
- **Language:** English, French, German, Russian, Italian, Portuguese, Spanish, Chinese, Japanese and Korean.
- **Fan:** mainly used for defogging, also dissipates heat. Its speed is set in the system menu; the POWER button starts or stops the fan.
- **Factory Reset:** resets all functions and settings.
- **DVR FW upgrade:** upgrade of the DVR firmware from the SD card.

- **Firmware version:** shows the goggles firmware version, the DVR firmware version and the serial number.

6. Firmware update

Download firmware only from the manufacturer's website www.skyzonefpv.com (Download section) and always use the firmware intended for the SKY040 Pro. Do not disconnect the power or the cable during the update.

6.1 Goggles firmware

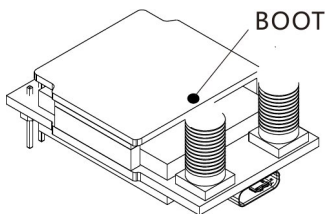
The goggles have been produced in several hardware versions. Before flashing the firmware, check the hardware version of the goggles in the system menu (*Firmware version*) and choose the matching firmware file.

- ① Connect the goggles to the computer with the USB-C cable.
- ② Hold the left wheel and turn on the goggles; the USB cable powers them. Release the left wheel. The computer installs the driver automatically and shows a new removable storage.
- ③ Copy the firmware file(s) (A/B) to this storage. The goggles install the update at the same time.

6.2 DVR firmware

- ① Format an SD card to FAT32.
- ② Copy the DVR firmware to the SD card, insert it into the goggles and turn them on.
- ③ In the system menu choose *DVR FW upgrade*.

6.3 Receiver firmware



BOOT button on the receiver module

- ① Take the receiver module out of the goggles. Hold the BOOT button while connecting the receiver to the computer.
- ② The computer installs the driver automatically and shows a new removable storage.

- ③ Copy the firmware file to this storage (not to the SD card). The update runs while copying; when the copying is done, the firmware upgrade is done.

7. Maintenance and troubleshooting

7.1 Care of the goggles

- Clean the lenses only with a soft optical cloth, without solvents or abrasive materials.
- Carry and store the goggles in the supplied case, away from direct sunlight, moisture and high temperatures.
- Keep the faceplate and the sponge clean; replace them as needed.
- If the optics fog up, turn on the fan with the power button.
- Disconnect the battery when the goggles are not in use.

7.2 Troubleshooting

Problem	Possible cause and solution
The goggles do not turn on	Check the battery charge (2S–6S) and the power cable. Hold the power button.
No image or noisy image	Check the antennas and that the channel and band match the video transmitter. Run the search or select the channel manually. In RF Racing mode the receiver works on RaceBand only – switch to RF Normal.
Buttons do not control the receiver	RF Third-Party mode is selected – switch to RF Normal or RF Racing.
Battery status is not correct	Set the battery type (2S–6S) and, if necessary, calibrate the voltage (Chapter 5.5).
Head tracker does not work properly	After power-on, keep the goggles still and horizontal until the beep. Hold the head tracker button to reset the signal to the centre.
The DVR does not record	Use a Class 10 SD card up to 128 GB formatted to FAT32 (possible in the system menu).
The screen suddenly turned off	The goggles entered sleep mode – move them.

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorاما.cz.
- **Product identification:** type designation (SKY040 Pro); the serial number and the firmware version are shown in the system menu of the goggles under *Firmware version*.

8.3 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also <https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu>.

9. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.