



DOMINATOR HDO+

FPV goggles with 1080p OLED displays and DVR
Model FSV1123_04 · User Manual



Do not leave the goggles in direct sunlight - the optics focus the sunlight and burn spots into the OLED displays. Such damage is not covered by warranty.

Importer: Rotorama, s.r.o. · www.rotorama.cz

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1. Introduction and Safety

1.1 Introduction

Congratulations on purchasing the **Fat Shark Dominator HDO+** modular 1080p OLED FPV goggles with integrated DVR for analog recording. To ensure your continued enjoyment, please take the time to read through this operating manual thoroughly before using.

There are many feature changes from the previous generations of the Dominator goggle line. Even if you are a long-time Dominator user, it is recommended that you read this manual to understand what features have been changed and added.

1.2 Product Compatibility

The HDO+ has been designed to adhere to established video standards and is compatible with any product also adhering to accepted video standards. As it is impossible to test every product combination, some troubleshooting may be required when mixing components. The HDO+ has been thoroughly tested with ImmersionRC gear, which Fat Shark recommends for best results.

1.3 Important Product Warning

DO NOT LEAVE THE HEADSET EXPOSED TO DIRECT SUNLIGHT. Sunlight will magnify through the optics and burn holes in the OLED colour filter (appears as white open areas). This will not be covered by warranty. Keep the goggles in the protective case when not in use.

1.4 Safety Instructions

- Power the goggles only within **7-25 V** (2S-6S battery). A higher voltage may permanently damage the goggles.
- With FPV goggles on you cannot see your surroundings. Do not use them while walking or driving. When flying a drone, have an observer next to you watching the surroundings and the aircraft.
- Handle Li-Po batteries with care: do not use a swollen, mechanically damaged or overheated battery, never charge it unattended and store it in a fireproof bag.
- Protect the goggles from moisture, dust, drops and extreme temperatures. Do not disassemble them.
- Clean the lenses only with the supplied cleaning cloth, without solvents or cleaning agents.
- If you experience eye strain, headache or nausea, take the goggles off and take a break.

2. Product Contents

Qty	Item
1	Dominator HDO+ Headset
1	Carrying Case
1	Lens Cleaning Cloth

※ The receiver module (VRx) and the battery are not included and must be purchased separately.

3. HDO+ Headset Overview

Front view (top) and inside view (bottom):



Fig. 1 – Front view and inside view

No.	Description
①	AV IN/OUT port (3.5 mm)
②	Power input
③	Module door (receiver module bay)
④	MicroSD card slot

Top view (top) and bottom view (bottom):



Fig. 2 – Top view and bottom view

No.	Description
①	Channel selection buttons (CH)
②	Display 5-way switch (DISPLAY CONTROL)
③	Volume buttons (VOL)
④	DVR 5-way switch (ANALOG RECORD)
⑤	HT button (head tracker)
⑥	IPD and focus controls
⑦	Power / fan button
⑧	Receiver module on/off switch (RX)
⑨	Earphone jack (3.5 mm)
⑩	Mini DIGITAL VIDEO IN port (labelled HDMI IN on the goggles)

4. Setup

The HDO+ has many features that can be customized to the individual pilot. This level of personalization requires some interaction to properly set it up for each individual. The following topics are items to be aware of while tuning your HDO+ to you.

4.1 Getting Started

- ① Open the module door and insert the receiver module (VRx).
- ② Connect a 2S-6S battery (7-25 V) to the power input. Use a fully charged battery.
- ③ Switch the goggles on with the power button; the same button also controls the anti-fog fan.
- ④ Use the channel selection buttons to find the image of your video transmitter (VTX).

4.2 Optical Adjustments

In addition to a larger field of view and higher resolution OLED panel, the HDO+ has a completely updated optical engine that allows for both focus and interpupillary distance (IPD) adjustment. Getting these dialed in dramatically improves the visual experience.



Fig. 3 - ① IPD sliders, ② focus adjustment wheels

The suggested method for optical adjustments is to first power on the headset and get a stable image. This can be done by using a VRx with an external camera, the AV in, or even the DVR menu. Once you have a stable image, go through the following steps:

- ① **Coarse focus adjustment:** as you move your thumb from left to right while wearing the goggles, you will move the lenses in toward the headset. It is recommended that you start by moving both lenses all the way in. Close one eye and slowly move just that lens out until the image comes into focus. Once it works well with one eye, repeat the process with the other eye.

- ② **Coarse IPD adjustment:** close one eye and use the IPD adjustment to centre the image. Once the image is centred, close your other eye and centre the image.
- ③ **Fine adjustment:** open both eyes and look at the merged image. It may not appear great yet. At this point, make small adjustments to the focus and IPD for each eye until it feels visually comfortable and merges into a single crisp picture.

※ It can be helpful to do the focus adjustment first, as some users will find that changing focus can cause the IPD to shift slightly. IPD adjustments should be the final correction. Once the headset is adjusted, it should hold its position and not require more adjustment over many uses.

4.3 Head Strap and Face Fit

The HDO+ has been designed to fit a larger number of face shapes. The first thing to notice is that it ships with Arc inserts between the face padding and the Velcro layer. These inserts may give a tighter fit, or make the fit too narrow and less comfortable. Press the HDO+ up to your face with and without the Arc inserts to determine which you prefer for reasons of both comfort and light leakage. Some pilots find the “goldilocks” fit by only using a single arc on one side. It does not impact optical alignment, so experimentation is strongly encouraged.

Once you have configured your HDO+ for your preferred face fit, put on the head strap, mount the battery and make any final adjustments to your head strap tightness to finish personalizing your HDO+ to your specific fit requirements.

4.4 Display Configuration

The HDO+ lets you tune the actual OLED panels and drivers to the parameters you prefer. We recommend a few flights on the default setting, but experienced pilots may start adjusting right away.

To access the complete *Image Settings* menu, press and hold the display 5-way switch for 2 seconds. Moving the switch up and down navigates between setting categories, and pressing right or left increments or decrements the value.

Setting	Max.	Meaning
Contrast	20	standard display setting
Brightness	20	standard display setting
Sharpness	20	standard display setting
Saturation	20	standard display setting
Power	100	maximum power provided to the OLED panels

Increasing *Power* makes whites brighter but significantly increases power consumption and shortens battery life. Keep *Power* at or below 50.

5. General Operation

5.1 Display Controls

Brightness/contrast control: on the display 5-way switch, pressing left and right increases/decreases display contrast and forward/back increases/decreases brightness.

Display mode selection: a short vertical press of the display 5-way switch scrolls through the modes *Analog 4:3*, *Analog 16:9* and *DIGITAL VIDEO IN*. The OSD indicates the mode.

5.2 Channel Select

Pressing the channel up/down buttons incrementally increases/decreases the channel from 1 to 8 (see the relevant receiver module for the channel map). The goggles beep on channel change; a long beep sounds at the top and bottom channel limits.

5.3 Low Battery Warning

The HDO+ supports batteries from 2S to 6S. The low-voltage alarm triggers at the following values:

Battery	Alarm triggers
2S	6.8 V $\pm$ 0.2 V
3S	10.2 V $\pm$ 0.2 V
4S	13.6 V $\pm$ 0.2 V
5S	17.0 V $\pm$ 0.2 V
6S	20.4 V $\pm$ 0.2 V

※ For each type of battery, the low-voltage alarm only takes effect when the battery is charged to more than 80 % when connected. Therefore always connect a fully charged battery.

5.4 Volume Control

Each press of the button increments the volume up or down. Standard earphones can be used with the Dominator HDO+.

5.5 RX Power Switch

The RX module power is independently controlled via this switch. If a module is inserted but the desired video source is via the AV cable, the RX module needs to be turned off to avoid image conflict.

6. DVR Operation

6.1 Important Notes

- The SD card **must be formatted before use** to ensure stable recording.
- The DVR is for analog recording only – no HD recording.
- Do not place other files that you want to keep on the SD card. The DVR may not recognize the file space and write over your files. Use a dedicated SD card.

6.2 Recording

Recording is controlled with the DVR 5-way switch.

- ① After powering the goggles, turn on the DVR by depressing vertically and holding the DVR switch for 1 full second (long press). The red DVR LED should now be solid.
- ② Ensure an SD card is inserted and short press to start recording. The LED will slowly flash (approx. 2 times per second); a single beep sounds on record start.
- ③ Short press again to stop recording. The LED turns solid; a double beep sounds on record stop.

6.3 Playback and DVR Menu

After turning on the DVR and in stop-record mode (solid LED), press and hold the DVR switch for 1 second (long press) to enter the menu.

► Playback – press right to enter

- The first file will be selected and a preview will be displayed. Press up/down to change the selected file, press right to play it.
- During playback, up/down controls playback speed or rewind, a right press pauses/unpauses the video and a left press returns to the main menu.

► Format – press right to enter

- *Execute* – press right again to begin formatting the SD card.

► Record – press right to enter

- **Default mode:** no recording begins until the button is pressed to start.
- **Auto Start:** the DVR starts recording when the headset is powered on.
- **Auto Start Continuous:** the DVR starts recording when the headset is powered on and overwrites the file if the SD card memory is full.

Press up/down to select the recording mode and right to confirm the selection. Press left to exit to the main menu.

7. Connections and Specifications

7.1 AV Connector Pin-out



Fig. 4 - 3.5 mm AV connector

No.	Signal	AV cable wire colour
①	Ground (GND)	—
②	Video	yellow
③	Audio right	red
④	Audio left	white

7.2 DIGITAL VIDEO IN Input

The DIGITAL VIDEO IN port can be connected to digital video sources via a mini-to-mini cable. It is recommended that the cable is first connected to the video source and only then the HDO+ is turned on. This allows the source device to initialize using its own power supply rather than power from the goggles.

※ Most connectivity issues with this input are due to either incorrect source output settings or a faulty cable. Before assuming the input is defective, try connecting alternative video sources and alternative cables.

7.3 Specifications

Parameter	Value
Field of view (FOV)	50° diagonal
Interpupillary distance (IPD)	57-70 mm, adjustable
Focus	+2 to -6 diopters, adjustable
Displays	2× Seeya 0.49" OLED
Resolution	1920 × 1080
Display modes	AV 4:3, AV 16:9, DIGITAL VIDEO IN 16:9; NTSC/PAL auto-selecting
Audio	stereo
Power supply	7-25 V (2S-6S)
Analog DVR	microSD up to 32 GB; 6 Mbps, MJPG, 30 fps, AVI; playback of native recordings (no codec support); upgradeable via SD card
Interface	3.5 mm AV in/out, power input, 3.5 mm 3-pole earphone port, microSD, RF module bay, power button
User controls	channel selection, volume, mode selection, display (brightness and contrast), DVR, power / fan
Mechanical	ergonomic molded headset, adjustable headband
Dimensions	169.2 × 80 × 45.5 mm
Weight	235.8 g

7.4 Manufacturer Technical Support

Documentation and troubleshooting: fatshark.helpscoutdocs.com, manufacturer support: support@fatshark.com. The manufacturer asks that support is attempted in this order: ① research the Fat Shark help docs, ② contact the retailer, ③ email Fat Shark support. Warranty claims are handled by the retailer (see chapter 9).

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:** the type designation (FSV1123_04) and the manufacturer's identification details are given on the product and its packaging.

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

9.1 Rights of the buyer under Czech law

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 manufacturer's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- 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.

9.2 Manufacturer's warranty terms

❖ **The following text is the manufacturer's original warranty statement.**

The system can be exchanged for a new unit within 7 days for any manufacturing defects if returned in new condition. The video headset is warrantied for repair for 2 years if there are no signs of excessive use. The buyer is responsible for shipping costs. Beyond the warranty period, the manufacturer will provide repair services.