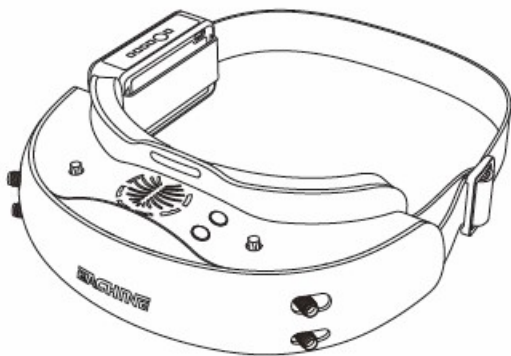


# ***EACHINE***

## **Eachine *EV200D* NEW 5.8G FPV Goggles**



White/Black  
User Manuals

# Contents

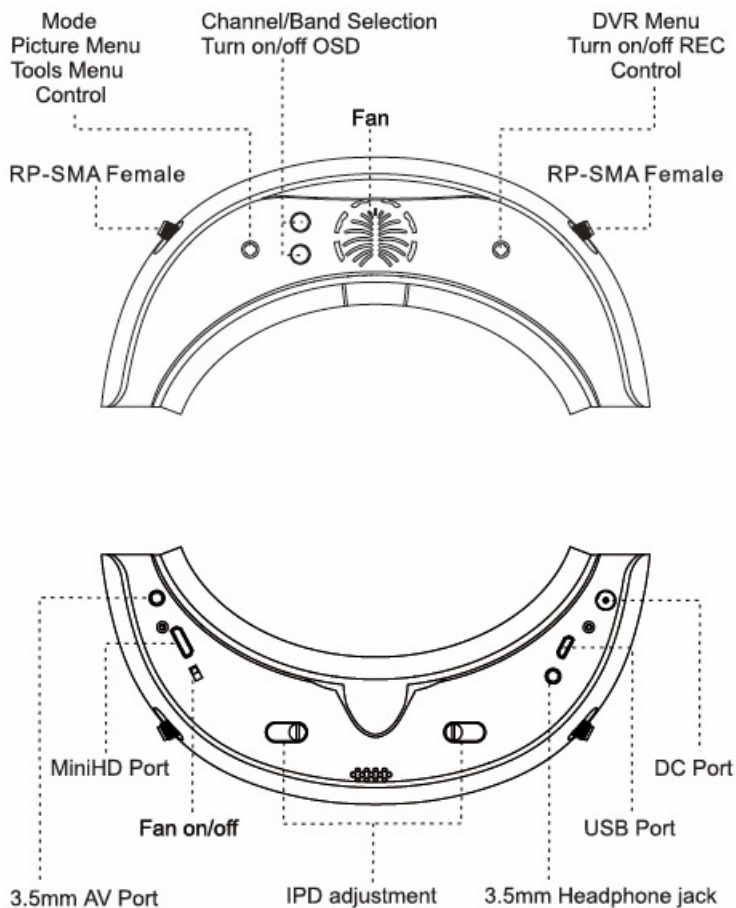
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## Package Included

Eachine EV200D Goggles *1	Battery*1
HD Port cable*1	USB data cable*1
Zipper case*1	Sponge*1
Lens wiping cloth*1	User Manuals*1
FPV receivers*2 (Only set B available)	

# Diagram



## Product specifications

<b>FOV</b>	42° ( Diagonal )
<b>Type</b>	Plastic optic module
<b>Resolution</b>	1280*720
<b>IPD</b>	56 ~ 72 mm (Adjustable)
<b>Video Format</b>	NTSC/PAL Auto/Manual selecting
<b>User Controls</b>	Channel/Band selection Mode (Regular/Racer/HDMI 2D/HDMI 3D/AV 2D/AV 3D) Brightness/Contrast/Saturation/Volume Turn on/off Fan/OSD/DVR
<b>Digital Video</b>	Integrated analog mode DVR (support RF/AV IN) Micro SD card and up to 32G. Video compression format AVI
<b>Ports</b>	3.5mm AV in/out port 3.5mm stereo earphone port DC-IN/USB-IN/HD-IN port
<b>Battery</b>	7.4V,1800mAh Li-Po battery with LED indicator can power the external DVR
<b>Frequency</b>	5.8GHZ 5333 ~ 5945MHZ
<b>Operating Temp</b>	-10C° ~ 40C°
<b>Dimensions</b>	196*90*40mm
<b>Weight</b>	155g
<b>Packaging</b>	240*140*100mm

## Mode/Menu control

- Mode:**
- a. **Regular mode:** Default mode after booting . Short press "mode" button vertically to switch HDMI 2D/3D or AV 2D/3D.
  - b. **Racing mode:** Long press "mode" button vertically until first beep to switch mode from 4 pilots/6 pilots/8 pilots. For example: 4 pilots /6 pilots/8 pilots/exit racing mode switching circularly.
  - c. **Auto search:** Long press "mode" button vertically until second beep to enter auto search.

- Menu:** Long press "mode" button toward the left until it beep, entering menu page. Short press "mode" button vertically to switch PICTURE page to TOOLS page.  
In PICTURE page, there are BRIGHTNESS/ CONTRAST/SATURATION /VOLUME ;  
In TOOLS page, there are ZOOM (16:9(Default)/4:3) and S-ROLOC (AUTO/PAL/ NTSC/ SECAM), press "mode" button forward or backward to selecting , when selected option turns into red, press mode button towards the left or right to change settings.

### NOTE:

**Under menu page, it will auto-exit if no operation done within 7~10s.**

## Channel/Band select

- Channel:** Short Press channel up/down buttons will cause the channel to incrementally increase/decrease from channels 1 to 8 (refer to frequency table).

- Band:** Long press channel up/down buttons will cause the band to incrementally increase/decrease from band A to H (refer to frequency table).

- Turn on/off OSD:** Press channel up and channel down button simultaneously to turn on/off OSD.

## DVR

Built-in DVR H.264 Encoded Video .

Video Format : Auto toggles between NTSC or PAL.



DVR Recording file resolution : NTSC at 720\*480 or PAL at 720\*576.

Video file container : AVI.  
High-quality Video encoding with H.264, 30fps.  
Autosave Files when power outage during the recording.  
Storage speed  $\geq$  10 (Class 10) high speed SD card recommended.

**•DVR funtion is invalid if no SD card inserted.**

**•Whether SD card is inserted**

**a. Check SD slot.**

**b. Under REC mode, screen will display SD card symbol as  ;  
If no SD card inserted, screen will display symbol as .**

**c. REC function and playback function are unavailable if no SD card is inserted.**

### **Recording:**

Under RX mode(available SD cards), long press DVR button vertically until second beep to enter REC mode. Short press DVR button vertically to start recording(REC character change from green to red), press DVR button vertically again to pause recording (REC character change from red to green). Long press DVR button vertically until first beep to exit REC mode.

Under REC mode, short press DVR button vertically, if goggles beep continuously and exit REC immediately, saying that SD card run out of memory. Please change a SD card or format this SD card.

### **Playback:**

Under REC mode, long press DVR button towards the right until it beeps to enter Play Video List page.

Press DVR button towards the forward/backward/right/left to select a video and short press DVR button to play.

Under play status, short press DVR button vertically to pause video play ; short press DVR button towards the left or right to back or fast forward play, short press DVR button vertically to return to normal video play. Long press button towards the right until first beep to return Play Video List page; long press button towards the right until second beep to return REC mode.

In Play Video List page, long press DVR button towards the left until first beep to enter Playback, where users can Delete or Protect files.

Press DVR button towards the left or right to switch to Move Mode or General Settings, long press DVR button towards the right until first beep to return Play Video List page, long press DVR button towards the right until second beep to return REC mode.

**NOTE:**

If beeper rings, then the button operation is available , otherwise pressing button is unavailable.

## FPV Reveiver

5.8GHZ True diversity RX modules

Receiver Sensivity :  $\leq -93\text{dB}$

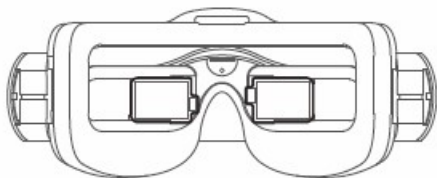
SMA : RP-SMA Female

Size : 42\*30\*10mm

Goggles Supports Open Source RX Modules:

**When using two modules at the same time, the goggle will connect X modules at first, or connect the module on the left side as default**

## Diopter Lens Slots



Compatible with FATSHARK diopter lens 200/400/600 degrees selectable(Diopter lens not included)

## IPD Adjustment

Independent control for both sides, adjust the range of 56 ~ 72mm.



Slider is switch to adjust IPD. (+) means to increase IPD, (-) means to decrease IPD.

## AV Port

3.5mm AV Connector  
AV input & output  
Support external HDMI to AV input  
Support external DVR



## USB Port

- For firmware upgrading.
  - Alternative power supply(5V==2A).
- If multiple power sources are supplied at same time (Like: power Bank and head strap battery) the goggles will draw power from the highest voltage.



## HD Port

The HD port can be connected to HDMI devices via a MiniHDMI to HDMI cable.(Set PC resolution to 720P)

### Order of connection

- Power on goggles and enter HDMI 2D/3D mode.
- Connect HDMI cable to HDMI device.
- Connect HDMI cable mini port to goggles.

### NOTE:

Most HDMI connectivity issues are due to either incorrect monitor settings or faulty HDMI cable. Before assuming the HDMI is defective, try with alternative HDMI sources and alternative cables.

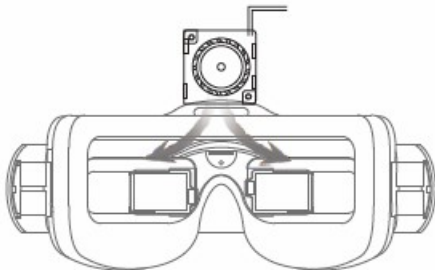
## Mode

In this mode, the best results can be achieved by using the supporting vtx.

### Racing Mode

3 Racing Mode: 4/6/8 pilots 60-80MHz interval between adjacent channels greatly decrease interference.

## Fan



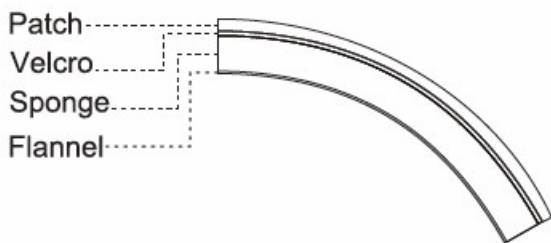
Features : Prevent lens atomization

## Detachable Patch



Snap joint assemblies allows easy replacement and maintenance.

## Replaceable sponge



Using Velcro as a bridge, sponge and flannel can be easily replaced, and Velcro can be used for a long time.

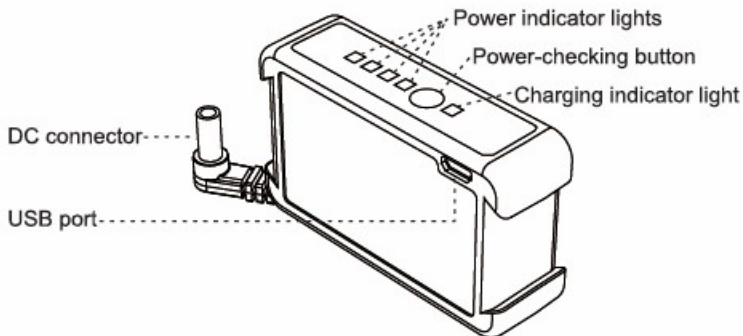
# Battery

## Li-Po BATTERY PACK

7.4V 1800mAh(13.32Wh) with LED indicator(One charging indicator light, one power-checking button and four power indicator lights)

**It can simultaneously power the external DVR.**

**Low battery warning :** Buzzer warning if input voltage drops below 6.8V.



## Battery charging

Max charge rate of 1C(DC connector)

USB charging with approved adapter( USB: 5V==2A)

- If the goggles not turned on after power on and make a long rang, it means that the battery voltage is too low, please replace with a fully charged battery.
- It is not recommended to charge the battery via PC USB, since the insufficient current will damage the battery.

## **!** WARNING

Do not open battery case.

Do not use if signs of failure.

Never leave batteries near fire or high temperatures.

Battery may balloon or catch fire if faulty or improperly charged.

Never leave a charging battery unattended.



## Band & Frequency table

Unit:MHZ

Band	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band-A	5865	5845	5825	5805	5785	5765	5745	5725
Band-b	5733	5752	5771	5790	5809	5828	5847	5866
Band-E	5705	5685	5665	5645	5885	5905	5925	5945
Band-F	5740	5760	5780	5800	5820	5840	5860	5880
Band-r	5658	5695	5732	5769	5806	5843	5880	5917
Band-U	5325	5348	5366	5384	5402	5420	5438	5456
Band-o	5474	5492	5510	5528	5546	5564	5582	5600
Band-L	5333	5373	5413	5453	5493	5533	5573	5613
Band-H	5653	5693	5733	5773	5813	5853	5893	5933

### Racing mode frequency

4 pilots	5695	5769	5843	5917				
6 pilots	5533	5613	5705	5785	5865	5945		
8 pilots	5528	5582	5645	5705	5765	5825	5885	5945

## OSD display

### Regular mode:

Display values like: Band-r CH1 5658MHz (refer to frequency table)

### Racing mode:

Mode	Status description
RACER4	RACER4-1
RACER6	RACER6-2
RACER8	RACER8-8

# Trouble Shooting

## No image, display is completely dark

- No power supplied. Check power connections.

## No image, display is glowingdark grey

- If using wireless module, ensure RX is working.
- If using AV in cable, check video source.
- Ensure TX is on and camera connections solid
- Ensure lens cap is removed from camera

## Complete white screen

- LCD driver has failed and needs to be replaced under warranty.  
Contact your retailer.

## Short range

- Ensure 5.8Ghz antenna were installed.

## Power off the goggles or take out the SD card in the process of recording

- The previous recorded video will be saved.
- Please use player like VLC Media to play saved video.

## Replace NTSC or PAL camera under REC mode

- When out of recording status, replace NTSC or PAL camera, REC character color will change from green to yellow, when the color turn back from yellow to green later, it means camera switching is success.

## Upgrading

- SD card upgrading

- 1.Format the SD card and load in the upgrading file **SD\_CarDV.bin**, insert the SD card into the goggle then power it on, the goggle will get into automatic upgrading status and keep beeping, the upgrading will end up with a long alarming. Taking the SD card out to check if the upgrading file **SD\_CarDV.bin** is still there, if not, the upgrading is success, then power it off and restart, otherwise it's not.
  - 2.For upgrading failure(wrong processing, SD card took out, goggle powered off), imperative upgrading operation is necessary.
    - a. Power goggle off, format the SD card and load in the imperative upgrading file **SdFwCode.bin** and upgrading file **SD\_CarDV.bin**.
    - b. Insert the SD card into the goggle then long press DVR button and power it on, release the DVR button when it start beeping, and the upgrading begin, the process will end up with a long alarming. Format the SD card and power off the goggle and restart.
- The upgrading operation for Winband25x40 IC is the same with EV100. ( The SD card must be pulled out )



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