



**BETAFPV**

—— 模拟图传 | Analog VTX ——

# VR04

FPV眼镜 | FPV goggles

使用说明书 | USER MANUAL

第 I 版 2025-12-05



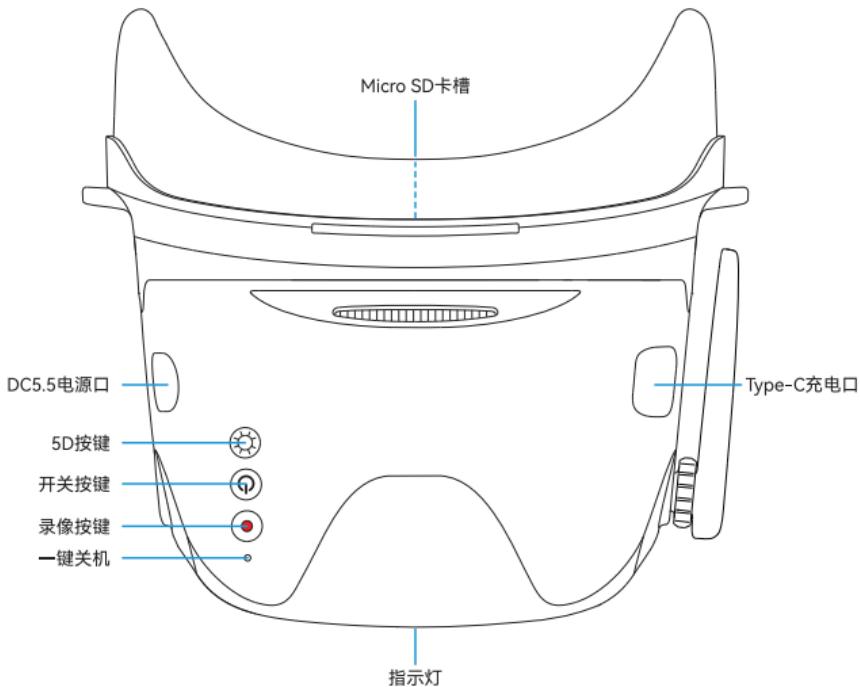
VR04 FPV眼镜是BETAFPV开发的一款FPV视频眼镜，保持了BETAFPV一贯的极简操作和外观设计，轻盈舒适的人体学造型，将给模型爱好者们带来不一样的使用体验。

## 1. 产品参数

整机规格	尺寸	168.8x182.1x98.5mm
	重量	约400g
	视频制式	N制/P制
	支持通道	48CH
屏幕	屏幕尺寸	4.3英寸
	屏幕分辨率	800*480
电源	电池	3.7V, 2000mAh
	普通模式续航	约2小时
	录像模式续航	约1小时10分
	最大充电电流	1A
接口	天线接口	RP-SMA
	充电口	Type-C
	卡槽	Micro SD卡 (支持FAT系统, 最高支持64GB, 建议C10)
录制	分辨率	480P
	文件格式	AVI

## 2. 基本功能

### 2.1 按键功能介绍



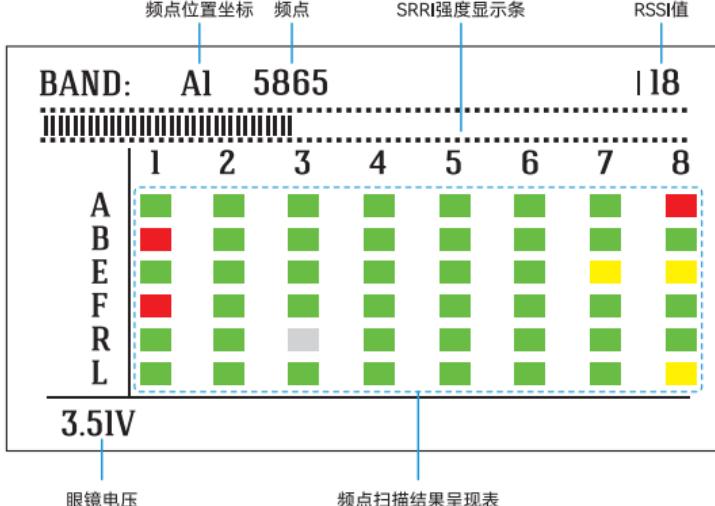
- **开关按键**

通过长按开关按键5秒钟进行开启/关闭眼镜的操作。

- **5D按键**

快速搜频：长按5D按键2-3秒钟，开始搜频，3秒钟后发出提示音，并显示对应的FPV穿越机画面，快速搜频完成。

频点扫描：短按5D按键一次，进入扫频界面。再短按一次，可以退出频点扫描界面。扫频界面如下图所示。

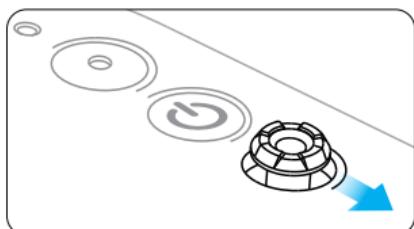


在频点扫描界面上，长按5D按键2秒钟启动扫频，3秒后显示扫频结果。画面中不同的颜色表示各个频点目前的占用，其说明如图所示。绿黄红三种颜色标识该频点的信号的强度：

- 绿色:  $0 < \text{RSSI} < 20$ , 该频点没有占用;
- 黄色:  $20 < \text{RSSI} < 70$ , 该频点有干扰或者被占用, 信号较弱;
- 红色:  $70 < \text{RSSI}$ , 该频点有有飞机占用, 信号较强;
- 白色: 当前FPV眼镜所接收的频点。

在频点扫描界面下，5D按键可以上下左右选择不同的频点。通过5D按键调节眼镜到想要设定的频点，比如选择绿色部分的频点，这些频点没有人使用，信号干扰比较小，再设置飞机到对应频点就可以重新绑定。

屏幕调节：连接飞机情况下，将5D按键向后按3秒，可对屏幕亮度、对比度、饱和度、色调进行调节。



» BRIGHT	60
CONTRAST	30
SATURATION	25
TINT	50
EXIT	

- 录像按键

在FPV画面下，短按录像键开启/停止录像，长按录像键进入/退出回放界面。

- 一键关机

当出现无法关机时，可通过镊子轻触一键关机键进行关机。

注意：使用前应确认电量充足，建议电压在3.7V以上（短按5D键查看），将头带正确安装，并调整到个人舒适的尺寸。

## 2.2 频点选择

本FPV眼镜支持完整的5.8G图传频点的接收。即有6个频段（Band，分别为Band-A、Band-B、Band-E、Band-F、Band-R、Band-L）、有8个频道（Channel、CH-1、……、CH-8），一共48个频点，如下图完整的频点表所示。

	CH 1 (MHZ)	CH 2 (MHZ)	CH 3 (MHZ)	CH 4 (MHZ)	CH 5 (MHZ)	CH 6 (MHZ)	CH 7 (MHZ)	CH 8 (MHZ)
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

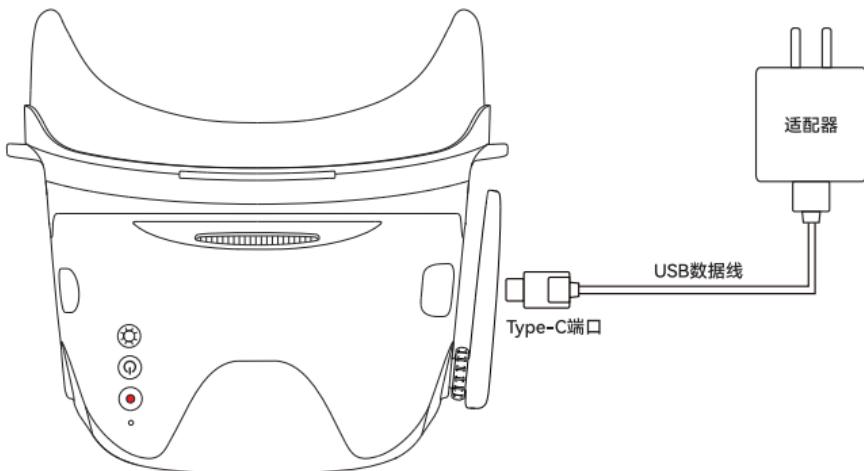
一般使用时将5D按键长按2秒钟，自动搜索空间中信号强度最强的频点，以获得飞机的FPV画面。

当然，我们也可以使用5D按键切换到指定的频段，使用频道按键切换到指定的频道，以便让FPV眼镜工作在指定的频点上。

## 2.3 FPV眼镜充电

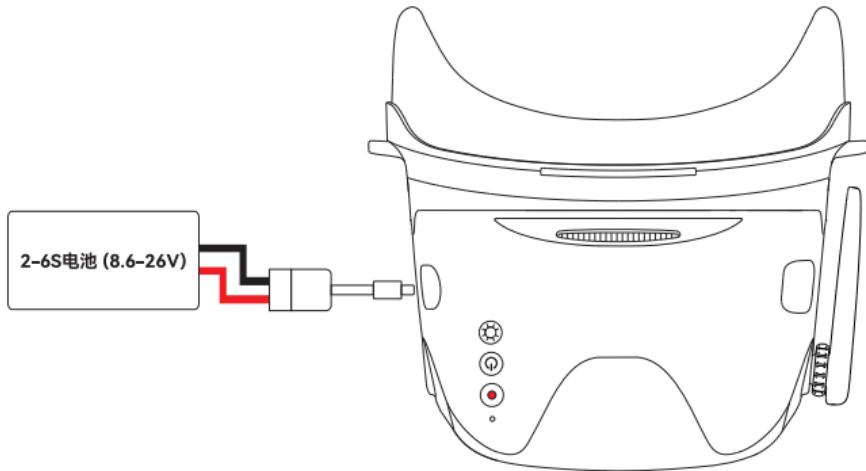
FPV眼镜已经内置了2000mAh的电池。当电压在低于3.4V时每隔10秒发出一次提示音，即表示需要重新充电，电压值也可通过短按5D键进入频点扫描界面查询。充电方式如下：

- 使用Type-C线连接FPV眼镜和适配器（5V输出的适配器即可，例如手机充电器）；
- FPV眼镜上LED指示灯红色常亮，表示正在充电中；开机时LED灯由红灯变蓝色，关机时由红灯变为熄灭，表示充电结束。



注意：眼镜不支持快充协议，无法快速充电。

该FPV眼镜还支持通过DC5.5接口外接电池供电。该接口支持2-6S电池输入，输入电压范围8.6-26V。



注意：使用DC5.5接口外接电池供电时，没有低电压报警。务必注意外接电池电压，防止外接电池电压过放。使用外部电源供电时，会同时给FPV眼镜的内置电池充电。

### 3. 录像功能

#### 3.1 开始/停止录像

FPV眼镜支持录像功能，短按录像键即可开始与停止录像。

- 在Micro SD卡槽插入Micro SD卡（只支持FAT32系统，且最大支持64G）；
- 短按录像键后，视频左上角会出现一个红点，并且发出滴滴两声；
- 等待8秒后视频左上方红点和录像指示灯（红色）开始闪烁，同时一行红色的数字出现并开始计时，表示开始录像；
- 短按录像按键，2-3秒之后视频左上角红点停止闪烁，计时数字消失，红色录像指示灯熄灭，表示录像停止。



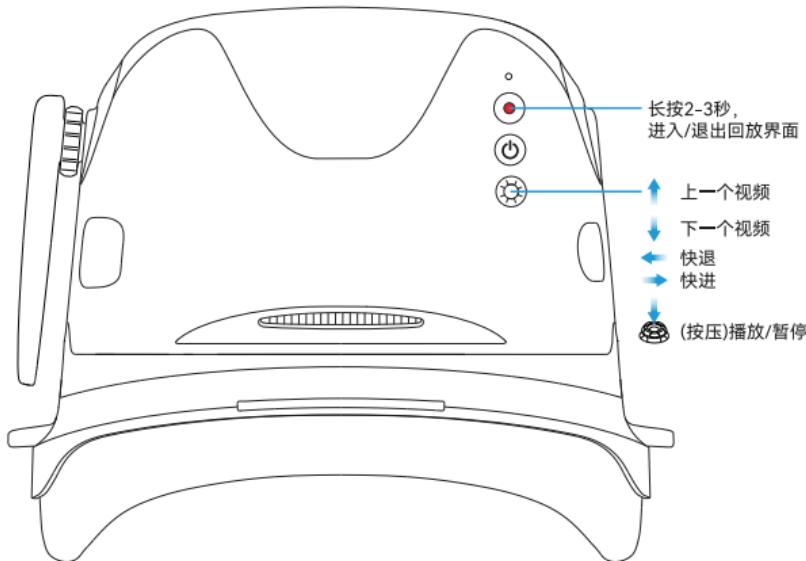
注意：按下录像键后大约需要8-10秒启动录像，请耐心等待。

注意：每段录像的时间最长为10分钟，单次录像超过10分钟时，会自动建立一个新的录像文件。

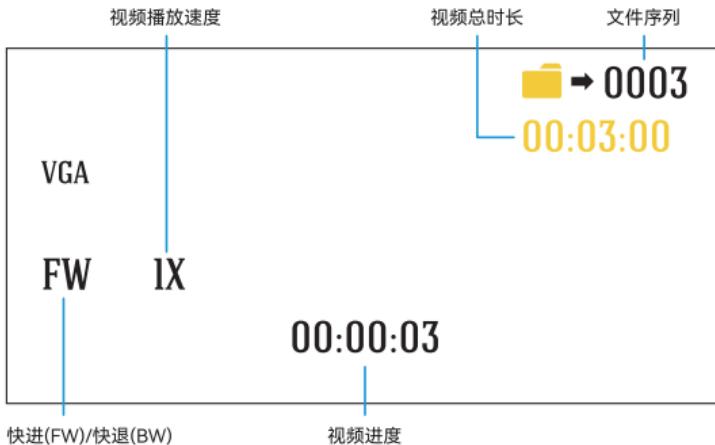
### 3.2 录像回放

FPV眼镜支持录像回放功能，操作步骤如下：

- 首先确认已插入Micro SD卡，且卡内有录制的视频文件；
- 长按录像按键2-3秒，发出滴滴滴三声，并且屏幕出现LOADING DVR...字样；
- 根据视频文件的数量和大小，等待8-10秒加载完成，进入视频回放（DVR）界面；
- 进入视频回放界面后，按键的功能改变，如下图所示；
- 在视频回放界面中再次长按录像按键2-3秒，可以退出视频回放界面。



使用上述按键可以在DVR界面进行录像切换、播放/暂停、快进/快退等操作。



注意：长按录像键后大约需要8-10秒的时间载入视频回放界面（DVR界面），请耐心等待。

#### 4. 注意事项

使用后请关闭电源保存，如果长时间不使用，请每三个月充电一次，否则会损坏电池。  
低电量报警后请尽快停止使用并重新充电，否则可能出现直接关机或者电池损坏的风险。

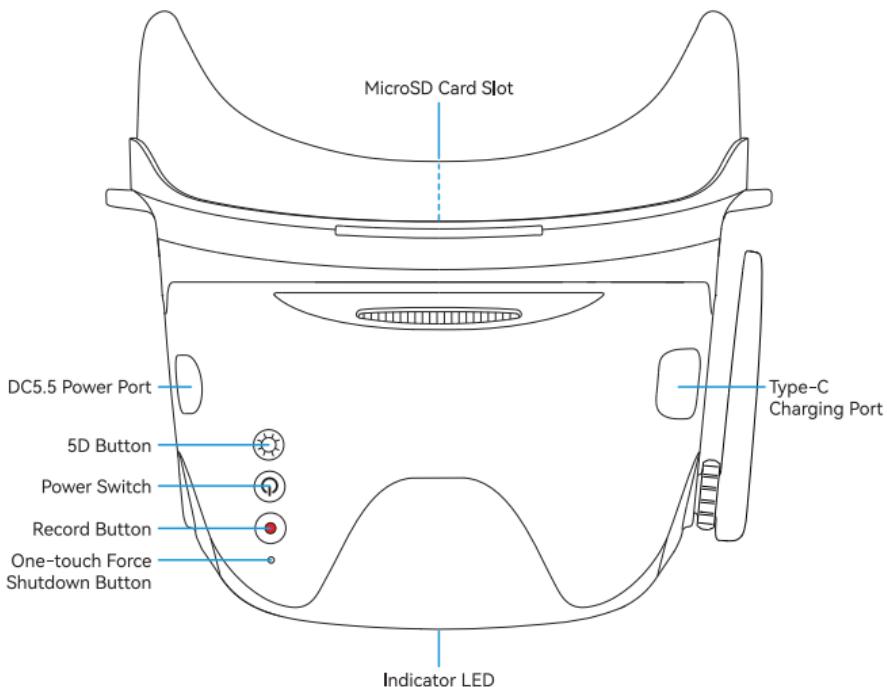
VR04 is the FPV goggles developed by BETAFPV. It adheres to BETAFPV's design philosophy for featuring a minimalist appearance, straightforward operations, and ergonomic design. The goggles aim to deliver an enjoyable user experience for all FPV enthusiasts.

## 1. Specification

Specifications	Size	168.8x182.1x98.5mm
	Weight	About 400g
	Camera Format	NTSC/PAL
	Supported Channel	48CH
Screen	Size	4.3 inch
	Resolution	800*480
Power	Battery	3.7V, 2000mAh
	Run Time (Normal Mode)	About 2 hours
	Run Time (Record Mode)	About 1 hour 10 minutes
	Maximum Charging Current	1A
Port	Antenna Port	RP-SMA
	Charging Port	Type-C
	Card slot	MicroSD Card (Supports FAT format, supports maximum 64GB storage. C10 is recommended)
Record	Video Resolution	480P
	File Format	AVI

## 2. Basic Function

### 2.1 Button Operation



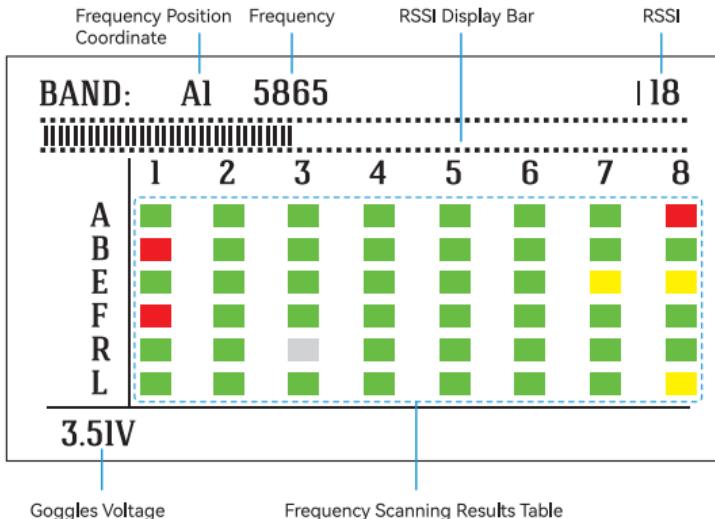
- Power Switch

Press and hold the button for 5 seconds to turn the goggles on or off.

- 5D Button

Quick frequency search: Press and hold the 5D button for 2-3 seconds to activate frequency search. There will be a beep after 3 seconds, and the best available frequency will be selected automatically. Quick frequency search is completed.

Frequency scan: Short press the 5D button once to enter frequency scan interface. Press it again to exit.



Press and hold for 2 seconds to activate frequency scan, result will be displayed after 3 seconds. The different colors on the screen indicate the current status of each frequency as follows. Signal quality of each frequency is indicated by red, yellow and green:

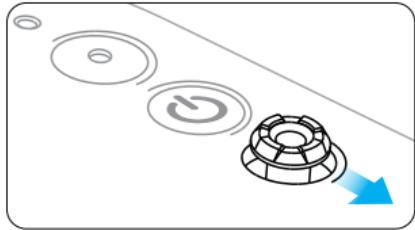
- Green ( $0 < \text{RSSI} < 20$ ): Frequency is available.
- Yellow ( $20 < \text{RSSI} < 70$ ): Frequency has moderate interference from another transmitter.
- Red ( $70 < \text{RSSI}$ ): Frequency is completely in use by a transmitter.
- White: The strongest signal which the goggles received in this scan.

In the frequency scan interface, slide the 5D button up, down, left, or right to manually select the frequency.

Pilots can select the goggles frequency by pressing the 5D button.

For example, Select a frequency channel with green status. These frequencies are unoccupied, leading to minimal signal interference. Set the quadcopter to the corresponding frequency and adjust the goggles to match.

Screen adjustment: When the drone is connected, press and hold the 5D button backward for 3 seconds to adjust the screen brightness, contrast, saturation and tint.



» BRIGHT	60
CONTRAST	30
SATURATION	25
TINT	50
EXIT	

- Record Button

In the FPV interface, short press the record button to start or stop recording and long press to enter or exit the DVR interface.

- One-touch Force Shutdown Button

When it cannot be shut down normally, please use tweezers to gently press the one-touch force shutdown button.

Note: Before use, please make sure that the battery is fully charged. The recommended voltage is 3.7V or above, short press the 5D button to check the voltage. Install the headband correctly and adjust it for a comfortable fit.

## 2.2 Frequency Selection

The FPV goggles can receive 48 frequency in the 5.8GHz spectrum, distributed across 6 bands (A, B, E, F, R, and L) of 8 channels (CH-1, ....., CH-8), as shown below:

	CH 1 (MHZ)	CH 2 (MHZ)	CH 3 (MHZ)	CH 4 (MHZ)	CH 5 (MHZ)	CH 6 (MHZ)	CH 7 (MHZ)	CH 8 (MHZ)
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
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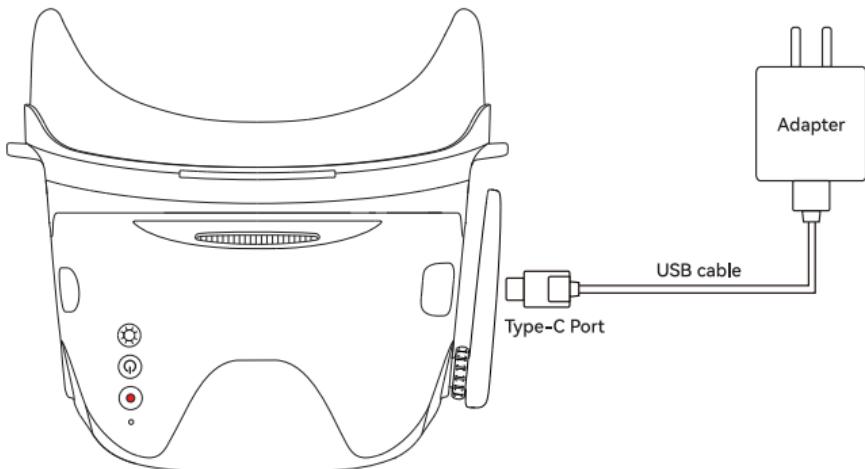
Press and hold the 5D button for 2 seconds to automatically search for the frequency point with the strongest signal in the space to obtain the FPV picture of the quadcopter. User can also shortly press the 5D button to switch to the designated band and use the Channel Button to switch to the designated channel so that the FPV goggles can work on the designated frequency point.

## 2.3 Charging the FPV Goggles

The FPV goggles have a built-in 2000mAh battery. When voltage is below 3.4V, there will be a beep sound ringing every 10s and this indicate that the goggles needs to be recharged. User can also press the 5D button to check the voltage.

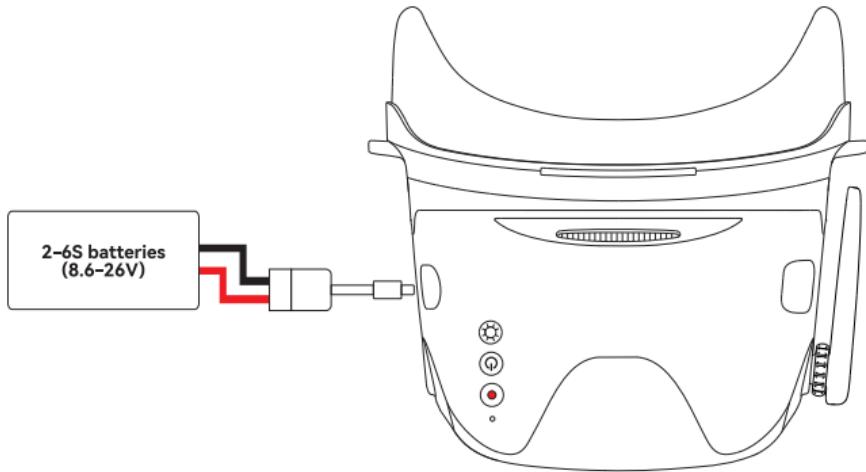
The steps to charge the goggles battery:

- Connect FPV goggles and adapter with the Type-C cable (5V output adapter is allowed, such as mobile phone charger) ;
- The Charging Indicator LED will be solid red when charging. The Indicator LED changes from red to blue to indicate that the goggles are turning on. When it changes from red to off, it means the goggles are fully charged.



Note: This device doesn't support fast charging protocols, hence the device cannot be fast charged.

The FPV goggles also support an external battery power supply via the DC5.5 power port. This interface can accept 2-6S batteries and the input voltage range is 8.6-26V.



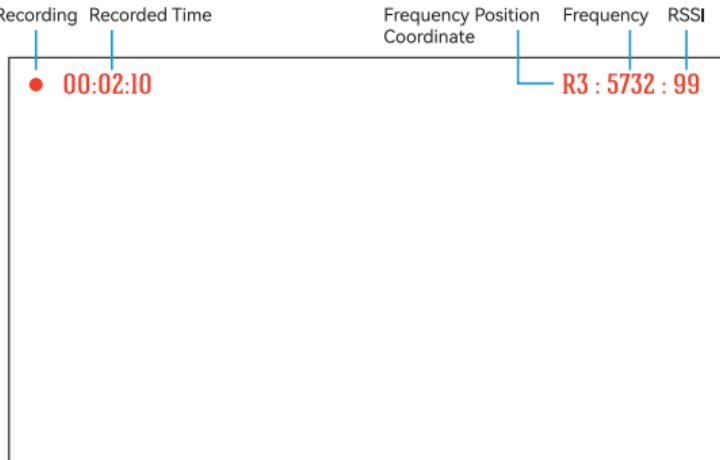
Note: When using the DC5.5 power port to connect an external battery, there is no low voltage alarm. Please be sure to pay attention to the external battery voltage to prevent over-discharge. When connected to external power, the built-in battery will charge simultaneously.

### 3. Recording Function

#### 3.1 Start/Stop Recording

VR04 FPV goggles support video recording function, short press the record button to start or stop video recording.

- Insert a microSD card into the card slot, FAT32 format only and maximum 64G;
- After short pressing once the record button, a red dot will appear in the upper left corner, and there will be a "beep-beep" sound from FPV goggles;
- Wait for 8 seconds, the red dot and the recording indicator LED will start flashing. At the same time, a timer appears on the screen, indicating the start of recording;
- Short press once the record button. After 2-3 seconds, the red dot in the upper left corner stop flashing, the timer disappears, and the red record LED indicator turns off. This indicates the goggles has stopped recording.



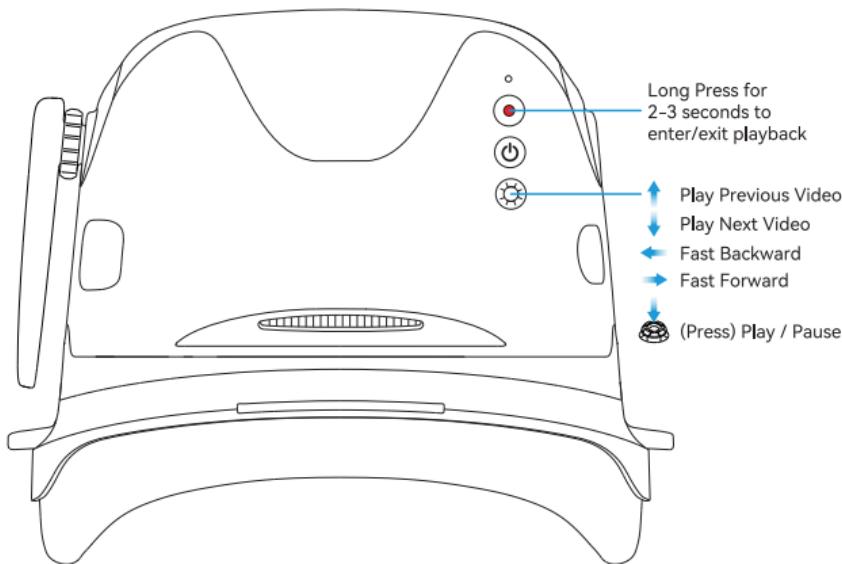
Notes:

1. After pressing the record button, the DVR recording function will take about 8-10 seconds to be activated, please wait in patience.
2. The maximum length of each recording is 10 minutes. When a recording exceeds 10 minutes, a new recording file will be created automatically.

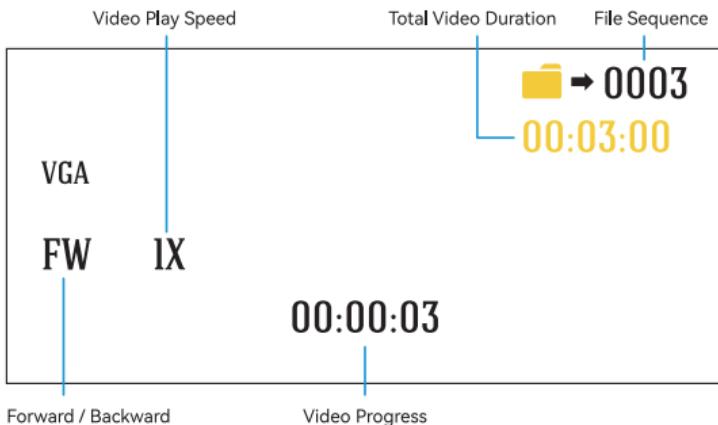
### 3.2 DVR Function

VR04 FPV goggles support DVR replay function, operating steps are as follows:

- Ensure a microSD card with recorded files has been inserted into the slot;
- Long press the record button for 2-3 seconds until you hear three beeping sounds and see "LOADING DVR..." on the screen;
- Wait about 8-10 seconds (depending on the file size) to finish loading and enter the DVR interface;
- After entering the DVR interface, button functions are redefined and explained by image shown below;
- Long press the record button for 2-3 seconds in the DVR interface again to exit.



Use the buttons as illustrated in the image above to play, pause, fast forward or fast backward your recordings.



Note: After long pressing the record button, the playback (DVR) interface will take about 8-10 seconds to be activated, please wait in patience.

## 4. Attention

Please turn off the power after use. If the device has been left unused for a long time, please recharge it every three months. Otherwise, the battery will be damaged. After hearing the low battery alarm, please stop using the goggles and recharge ASAP. Otherwise, there may be a risk of direct power shutdown, and possibly damage the battery.





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