



02C

FPV GOGGLES

FPV GOGGLE
USER MANUAL



System Content



FPV GOGGLE



Carry case



*HDMI A-C(Separate purchase)



AV cable



Power cable



Futaba data cable

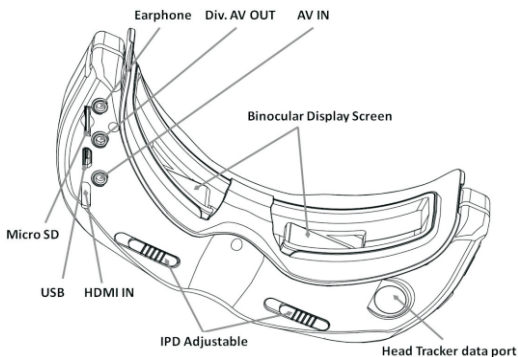
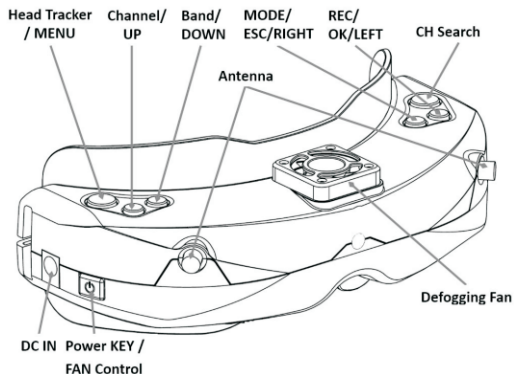


JR data cable



5.8G 2dBi antenna X 2

Function Diagram



Operation Guide

SKY02C FPV glasses are built with two 5.8GHz receiving modules, two antenna ports and two display modules, SKY02C FPV glasses work in diversity reception mode. supports 6 bands and 48 channels (see the Specifications Description for details).

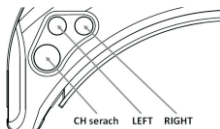
Quick Start

Preparation

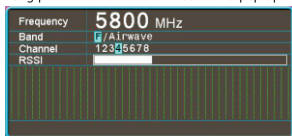
- Install lens, eyeshade, antenna and storage card for FPV.
- Connect power to SKY02X FPV glasses, long press the power button to turn on the machine (and then long press the power button again to turn off the machine).
- Press short <UP/DOWN> button to adjust channels and keep consistent with the transmitter to view the images taken by the camera.
- Slide the IPD adjuster to adjust interpupillary distance (IPD).

Channel search

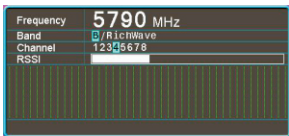
- Button function.



- Long press the <CH Search> button to pop up the channel search menu.



- press the <CH Search> button to execute channel search (repeatable). Channel search is conducted from low frequency to high frequency. After 48 channels are searched, the device will work at the strongest channel. The histogram displays the signal intensity of every channel. You may press the <LEFT> button and the <RIGHT> to choose the desired channel manually. The signal intensity will be updated in real time.



- After exiting from the search menu, the device can work in the current search to the channel.

RF Racing

- The <RF Racing> mode is specially set for the game. In this mode, the camera can work only on the eight channels of the R band. The regulating channels of <CH> button will be increased, while the regulating channels of <BAND> button will be decreased. The channel search function can be only used to scan the eight channels of the R band.

Functions of Buttons (For the functions of buttons in playback mode, see the description in the “Playback” section)

TRACK Button:

- In normal mode, press short to reset the head tracker.
- Hold the Menu button 3s to enter menu setup.
- In menu state, switch 4 main menus with such button.

CHANNEL Button:

- In RF mode, press short to cycle adjust channels.
- In RF, HDMI IN, AV IN or PLAYBACK mode, Long press 3s to turn up volume.
- In menu state, press such button to choose upward.

BAND Button:

- In RF mode, press short to cycle adjust bands.
- In RF, HDMI IN, AV IN or PLAYBACK mode, Long press 3s to turn down volume.
- In menu state, press such button for choice.

REC Button:

- In RF or AV IN mode, press short to take videos and again to stop.
- In menu state, press such button to confirm.
- In channel search state, press such button to choose leftward.

MODE Button:

- In preview state, press short to switching operation mode.
- In menu state, press such button to exit.
- In channel search state, press such button to choose rightward.

SEARCH Button:

- In RF mode, hold such button to search, hold it 3s to enter or exit from the search menu.

RF Mode

- Press the <CHANNEL> button to adjust channels and <BAND> button to adjust bands in circular manner, then the screen will display BAND, CH and frequency.
- Support channel search.

Image Adjustment

- In the image setup menu, you may set such parameters as Brightness, Contrast, Saturation, Hue and



Sharpness to as to achieve personalized display effect.

- On the function item to be set, press the <OK> button to enter setup state, press the <UP/DOWN> button to zoom in/out images with images displaying the adjustment effect in real time; press the <ESC> button to back to the previous menu.
- It is recommended to set such parameters in very clear image state.

Head Tracking

- Head tracking needs initialization time. When powered on, be sure to keep the product horizontal and stable. When you hear "Beep", it means the initialization is completed and you may start to use head tracking; or you may press the <TRACK> button shortly when this device keeps stable to use such function normally.
- Press short <TRACK> button to reset the PPM signal to the central location with warning tone.
- In menu, you may set PPM channels as CH5-CH6, CH5-CH7, CH5-CH8, CH6-CH7, CH6-CH8 or CH7-CH8.
- Pan Tracking range: 180° (90° for left and right respectively), 120° (60° for left and right respectively), 90° (45° for left and right respectively), 90° as default.
- Tilt Tracking range: (60° for left and right respectively), 90°(45° for left and right respectively), 60°(30° for left and right respectively), 90° as default.
- Pan Correction: Via such setup, you may separately compensate the central deviation of Pan. You may set it at 0~10 levels, and the actual compensation angle is related to the turning angle of the cradle head.
- Tilt Correction: Via such setup, you may separately compensate the central deviation of Tilt. You may set it at 0~10 levels, and the actual compensation angle is related to the turning angle of the cradle head.
- PPM Reverse: <Normal> as default setup, <Pan> as the reverse of such channel, <Tilt> as the reverse of such channel. <Pan & Tilt> reverse in two directions.

Recording

- It is recommended to format the storage card that is initially installed. (See "Format SD Card" section hereinafter for details).
- You may use the Record function in both RF mode and AV IN mode. In normal state, the screen will display  and SD Card Capacity Information; in such case, you may press the <REC> button to activate video recording; then the device will activate video recording with the icon  appearing in red and recording time starting to count.
- In preview state, you may press the <PHOTO> button to take photos with warning tone heard. (You cannot take photos during video recording)
- In default state, the video recorded also includes sound. You may close "REC Sound" in the system menu. In such case, you may record the video without sound.
- You may inactivate the whole video module to power save.
- In order to ensure reliability, in video state, if the capacity of the card is less than 0.5GB, the device will automatically stop recording videos; if less than 0.01GB, the function of taking photos will be ineffective.

Playback

Functions of Playback Button:

- In RF mode or AV IN mode, Long press <REC> button to enter the playback mode.

- REC < PLAY/PAUSE/OK> button.
- PHOTO < STOP/BACK> button
- BAND < PREVIOUS/ Fast Backward > button.
- CHANNEL < NEXT/ Fast Forward > button.
- TRACK < DELETE> button.
- In playback mode, you may directly preview the video or photo in the storage card and the back 4 digits of the file name appears on the upper right corner. In case of video, the recording duration of the file will appear under the file name.
- In the process of playing a video file, you may press the < Fast Backward/Fast Forward > button for 2X, 4X, 8X play, and press the <PLAY > button to restore normal speed. When the play is over, the image will stay on the first frame of this file. In such case, press the < STOP > button to back to the previous state to have other operations or replay the video.
- When browsing the files in the storage card, to delete one file, press the < DELETE> button to pop up the "Delete" menu, and press the <OK> button to delete the desired file.
- This device may be unable to identify the other files taken by other devices.

Fan

- The built-in fan can not only used for defogging, but also can be used to dissipate the heat within the product. The speed of fan can be set in the system menu.
- Press the POWER button to start up/stop the fan for defogging.

HDMI IN

- This device supports HDMI IN. When the HDMI IN connection cable is inserted, it may automatically turn off the radio reception module to save power.
- When the resolution format supported is identified, images may automatically appear; otherwise, the inbuilt test image of 8 color bar.

AV IN

- This device supports AV IN. When the AV IN connection cable is inserted, it may automatically turn off the radio reception module to save power.

AV OUT

- The AV OUT port outputs the audio and video signals of diversity reception.
- The earphone port may connect with a headset. When this device is powered on every time, be sure to minimize the volume of the headset in order to prevent large noise from affecting your hearing.

Format SD Card











- Enter the system menu, choose the option of "Format SD Card", press the <OK> button to enter the setup state, press the <UP/DOWN> button to choose <YES>, and the <OK> button again to format.

- Be careful to use such function, because, after such operation, **all** files in the storage cards will be deleted.

Factory Settings

- Enter the system menu, choose the option of "Factory Settings", press the <OK> button to enter the setup state, press the <UP/DOWN> button to choose <YES>, and the <OK> button again to restore **all** the functional settings in the menu to factory settings.
- Restore factory settings not delete the files in SD card.

Screen OSD

-  Video recording icon: In normal state, such icon is white; in video recording, it is red. If you cannot take a video for any reason, for example, the video module is inactivated, the storage card is full or the faulty, such icon will be in red, like .
-  Photo icon: In video preview state, press the <PHOTO> button to display such icon in red, indicating one photo has been taken.
-  Storage card icon: In normal state, it appears in its original color followed by capacity in GB (1,000MB), when the storage card is full, it will be in red.
- Mode icon: RF, HDMI, AV IN and PLAYBACK mode.
-  Icon: RSSI Signal Intensity Indicator.
-  Mode: After this device is connected to PC, such icon will appear. In such mode, you may manage the contents in the storage card of this device via PC operation, (you may have Playback, Copy and Delete on PC).
-  Play/Pause icon.
-  Fast Backward/Fast Forward icon: when operating Fast Backward/Fast Forward operation, you will see such icon followed by corresponding speed rate.
- Power supply icon: If you do not want this device to monitor power voltage, you may set the power supply in DC IN and then the screen will display a <DC IN> icon. If battery is used for power supply, you may set the battery pack voltage range in 2S, 3S, 4S, 5S or 6S, and then the screen will display corresponding battery icon, in detail,  stands for Full battery and  for Low battery.
- Channel icon: Display "BAND" and "CH".

Specifications (SKY02C)

Binocular Display		FOV		30 degrees (Diagonal)							
		Resolution		854X480(WVGA), 1,229,760 color sub-pixels							
		Brightness		350cd/㎡							
		Interpupillary distance (IPD)		59-69mm Adjustable							
Wireless Receiver	ISM 5.8GHz 48 Channel, Diversity receiver.										
	Preset	CH 1		CH2			CH3			CH4	
	Frequency	5733M / 5771M		5752M / 5790M			5809M / 5847M			5828M / 5866M	
	Custom Frequency	Band	CH 1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	
		A	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M	
		B	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M	
		E	5705M	5685M	5665M	5645M	5885M	5905M	5925M	5945M	
		F	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M	
	R	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M		
	L	5362M	5399M	5436M	5473M	5510M	5547M	5584M	5621M		
Sensitivity		-90dBm±1dBm									
Antenna port		2 X SMA,50ohm									
Head Tracker		Sensor		Inertial and gyro							
		Output		PPM 8 channel, Optional 5-6CH,5-7CH,5-8CH,6-7CH,6-8CH,7-8CH							
Record		Micro SD		Support to 32GB							
		Compression		MJPEG, 30fps, AVI							
		Picture		JPEG							
		Record rate		6Mbps							
AV Signal		Video Standard		NTSC/PAL							
		Video output level		1.0Vp-p Typ. / 75ohm							
		Audio output level		1.0Vp-p Typ. / 10Kohm							
AV Port		Div. AV OUT(3.5mm4P)		Diversity Video, Audio output							
		EAR OUT(3.5mm3P)		Stereo 16Ω/150mW							
		AV IN(3.5mm4P)		Video、Audio input							
		HDMI IN(HDMI /C-Type)		HDMI 1.4 specification 1920x1080p60, 1920x1080p50, 1920x1080i60, 1920x1080i50, 1280x720p60, 1280x720p50, 576p, 576i, 480p, 480i, PC Format(Not all)							
Power Supply		DC IN		DC 7~26V/ 1A							
		Power Consumption		12V input: 4.8W							
Dimensions				168(L)X92.5(W)X41(H)mm (Not include prominent part)							
Weight				210 g (Not include package box)							
Operating Temperature				0℃~+60℃							

Specifications (SKY02C)

Binocular Display	FOV		30 degrees (Diagonal)								
	Resolution		854X480(WVGA), 1,229,760 color sub-pixels								
	Brightness		350cd/㎡								
	Interpupillary distance (IPD)		59-69mm Adjustable								
Wireless Receiver	ISM 5.8GHz 48 Channel, Diversity receiver.										
	Preset	CH 1		CH2			CH3			CH4	
	Frequency	5733M / 5771M		5752M / 5790M			5809M / 5847M			5828M / 5866M	
	Custom Frequency	Band	CH 1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	
		A	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M	
		B	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M	
		E	5705M	5685M	5665M	5645M	5885M	5905M	5925M	5945M	
		F	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M	
		R	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M	
	L	5362M	5399M	5436M	5473M	5510M	5547M	5584M	5621M		
	Sensitivity		-90dBm±1dBm								
	Antenna port		2 X SMA,50ohm								
Head Tracker	Sensor		Inertial and gyro								
	Output		PPM 8 channel, Optional 5-6CH,5-7CH,5-8CH,6-7CH,6-8CH,7-8CH								
Record	Micro SD		Support to 32GB								
	Compression		MJPEG, 30fps, AVI								
	Picture		JPEG								
	Record rate		6Mbps								
AV Signal	Video Standard		NTSC/PAL								
	Video output level		1.0Vp-p Typ. / 75ohm								
	Audio output level		1.0Vp-p Typ. / 10Kohm								
AV Port	Div. AV OUT(3.5mm4P)		Diversity Video, Audio output								
	EAR OUT(3.5mm3P)		Stereo 16Ω/150mW								
	AV IN(3.5mm4P)		Video、Audio input								
	HDMI IN(HDMI /C-Type)		HDMI 1.4 specification 1920x1080p60, 1920x1080p50, 1920x1080i60, 1920x1080i50, 1280x720p60, 1280x720p50, 576p, 576i, 480p, 480i, PC Format(Not all)								
Power Supply	DC IN		DC 7~26V/ 1A								
	Power Consumption		12V input: 4.8W								
Dimensions			168(L)X92.5(W)X41(H)mm (Not include prominent part)								
Weight			210 g (Not include package box)								
Operating Temperature			0℃~+60℃								

影响听力。











格式化 SD 卡

- 进入系统菜单，选择 **Format SD card** 选项，按<OK>按钮进入设置状态，按<UP/DOWN>按钮选择<YES>，再按<OK>按钮将执行格式化操作。
- 请谨慎操作此功能，格式化后将删除存储卡中所有的文件。

出厂设置

- 进入系统菜单，选择 **Factory settings** 选项，按<OK>按钮进入设置状态，按<UP/DOWN>按钮选择<YES>，再按<OK>按钮将菜单中所有功能设置恢复至出厂默认状态。
- 恢复出厂默认设置并不会删除 SD 中的文件。

屏幕 OSD

-  录像图标：正常情况显示白色，录像过程以红色显示；如果因为某种原因不能录像，例如：录像模块被关闭、存储卡满或者存储卡错误导致不能启动录像，将显示红色 。
-  拍照：在视频预览状态按一次<PHOTO>按钮，显示一次红色拍照图标，表示拍摄了一张照片。
-  存储卡图标：正常情况显示本色，后面跟容量信息，并以 GB（1000MB）为单位，当存储卡满后显示红色图标。
- 模式图标：RF, HDMI, AV IN, PLAYBACK 模式。
-  图标：RSSI 信号强度指示器。
-  模式：当本机连接 PC 后，显示该图标，在此模式下可通过 PC 的操作来管理本机存储卡中内容，（可进行 PC 端回放，拷贝，删除）。
-  播放/暂停图标。
-  快退/快进图标，在执行快退/快进操作时，该图标后面紧跟其相应的倍速。
- 电源图标：如果不需要本机监测电源电压，则设置为 DC IN 供电方式，屏幕显示<DC IN>图标，如果使用电池供电，则可以设置电池包电压范围，可选择范围有：2S, 3S, 4S, 5S, 6S, 且屏幕显示对应的电池图标， 表示满电量状态， 表示低电量状态。
- 频道图标：显示 BAND 和 CH。

- AV Out 端口输出分集接收的音频和视频信号。
- Earphone 端口可连接头戴式耳机，视频眼镜每次上电后都将耳机输出的音量设置为最低，以防止过大噪音。

AV 输出

- 视频眼镜支持 AV IN 功能，当插入 AV IN 连接线，则自动关闭无线接收相关模块以节省电量。

AV 输入

- 视频眼镜支持 HDMI IN 功能，当插入 HDMI IN 连接线时，会自动关闭无线接收模块以节省电量。
- 识别到支持的分辨率格式则会则自动显示画面，否则则会显示内置 8 色阶测试图形。

HDMI 输入



- 内置风扇不仅用于除雾，同时也可以对产品内部进行散热，在系统菜单中可设定风扇转速，POWER 按键可启动/关闭风扇。

风扇

- 本机可能不能正常识别除本机拍摄的文件以外的其他文件。
- 在浏览存储卡的文件时，如果需要删除某个文件，则在浏览到该文件时按<删除>按钮，将弹出删除菜单，按<OK>按钮可删除当前文件。
- 或再次播放。
- 当播放完时，画面停留在该文件的第一帧画面上，此时需要按<停止>按钮返回至预览状态，执行其他操作。
- 在播放视频文件过程中，可按<快进/快退>按钮进行 2X, 4X, 8X 快速播放，并按<播放>按钮恢复至正常速度，则会在文件名称下方显示该文件的录制时长。
- 在回放模式下将直接预览存储卡中的视频画面或照片，右上角显示文件名称后 4 位编号，如果是视频文件，则会显示文件名称下方显示该文件的录制时长。
- TRACK <删除>按钮。
- CHANNEL <上一个/快进>按钮。
- BAND <上一个/快进>按钮。
- PHOTO <停止/返回>按钮。
- REC <播放/暂停/OK>按钮。
- 在 RF 模式或者 AV IN 模式长按<REC>按钮可进入回放模式。

回放模式按钮的功能：

回放

- 为保证可靠性，在录像状态卡容量少于 0.5GB 则自动停止录像，当少于 0.01GB 时不能启用拍照功能。
- 您也可以关闭整个录像模块以节省电量。
- 默认情况录制视频的同时也包括声音，可以在系统菜单中关闭“录制声音”功能，则只录制视频信号。（不能在录像过程中拍摄照片）。
- <REC>按钮启动录像，启动录像后以红色显示，并开始记录录制时间。
- 在 RF Mode 和 AV IN Mode 都可以使用录像功能，正常情况屏幕将显示和<存储卡容量信息>，此时可按（见后面的 Format SD card 描述部分）。

录像

- Tilt Correction：通过此设置可单独补偿 Tilt 的中心偏移，0~10 个等级可设置，实际补偿的角度跟云台转动角度有关。
- PPM Reverse：<Normal>为默认设置，<Pan>为该通道反向，<Tilt>为该通道反向，<Pan & Tilt>为两个方向都反向。

按钮功能（回放模式的按钮功能请见后面“回放”部分描述）

TRACK Button:

- 在正常模式短按为 Head Tracker 复位功能。
- 长按 MENU 按钮 3 秒可进入菜单设置状态。
- 在 MENU 状态使用该按钮切换 4 个主菜单。

CHANNEL Button:

- RF 模式短按为频道按钮，可多次短按则循环调节频道。
- 在 RF、HDMI IN、AV IN、PLAYBACK 模式长按 3 秒可调节音量加。
- 在 MENU 状态为上选择。

BAND Button:

- 在 RF 模式短按为波段按钮，可多次短按则循环调节波段。
- 在 RF、HDMI IN、AV IN、PLAYBACK 模式长按 3 秒可调节音量减。
- 在 MENU 状态为下选择。

REC Button:

- 在 RF、AV IN 模式短按可进行录像，再次短按可停止录像。
- 在 MENU 状态为确定按钮。
- 在频道搜索状态为左选择。

MODE Button:

- 在预览状态短按可切换模式。
- 在 MENU 状态为退出按钮。
- 在频道搜索状态为右选择。

SEARCH Button:

- 在 RF 模式长按为搜索键，长按 3 秒进入频道搜索菜单或退出搜索菜单。

RF 模式

- 按<CHANNEL>按钮调节频道，按<BAND>按钮调节波段，可循环操作，屏幕上显示 BAND 和 CH 以及频率。
- 支持频道搜索功能。

图像调节

- 可在图像设置菜单设置图像的 Brightness、Contrast、Saturation、Hue、Sharpness 参数，以达到个性化显示效果。
- 在要设置的功能项上按<OK>按钮将进入设置状态，按<UP/DOWN>按钮调节大小，并且图像上将实时显示调节效果，按<ESC>按钮返回上一层菜单。
- 建议在较清晰的图像画面状态设置这些参数。

头部跟踪

- 头部跟踪功能需要一个初始化时间，请在上电时让产品保持水平位置，并尽量稳定，待听见 1“哔”声时表示初始化完成，即可开始使用头部跟踪功能，或者在本机保持稳定的状态短按<TRACK>按钮后，可正常使用。
- 短按<TRACK>按钮可将 PPM 信号复位至中心位置，并发出提示音。
- 在菜单中可设置 PPM 通道：CH5-CH6、CH5-CH7、CH5-CH8、CH6-CH7、CH6-CH8、CH7-CH8。
- Pan Tracking range：180 度（左右各 90 度）、120 度（左右各 60 度）、90 度（左右各 45 度），默认 90 度。
- Tilt Tracking range：120 度（上下各 60 度）、90 度（上下各 45 度）、60 度（上下各 30 度），默认 90 度。
- Pan Correction：通过此设置可单独补偿 Pan 的中心偏移，0~10 个等级可设置，实际补偿的角度跟云台转动角度有关。

操作指南

该 FPV 眼镜 SKY02C 内置两个 5.8GHz 接收模组及两个天线端口以及两个显示模组，SKY02X 工作在分集接收模式，支持 6 波段和 48 个频道（详细的波段和频道见规格描述）。

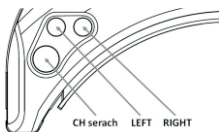
快速入门

准备

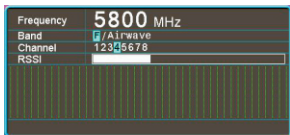
- 为 FPV 眼镜安装好镜片、眼罩、天线以及存储卡。
- 给 FPV 眼镜 SKY02X 接通电源，长按电源键开机（再次长按则关机）。
- 短按<UP/DOWN>按钮调节频道并与发射器保持一致，即可观看摄像头拍摄的画面。
- 可滑动 IPD 调节器调节瞳距。

频道搜索

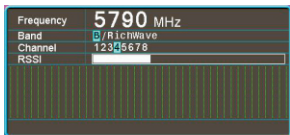
- 按钮功能



- 长按<CH Search>按钮弹出频道搜索菜单



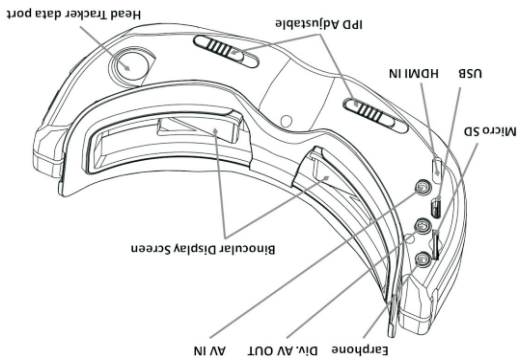
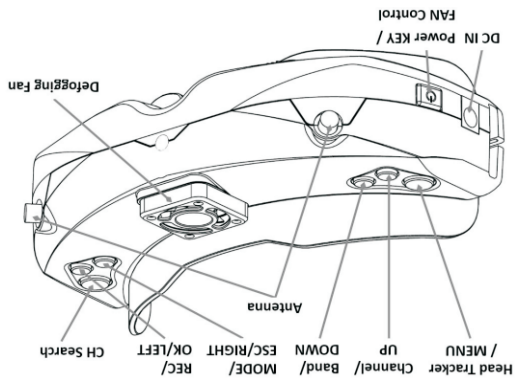
- 短按<CH Search>按钮则执行频道搜索（可重复执行），搜索功能按频率由低至高进行，搜索完 48 个频道后会自动工作在信号最强的一个频道，直方图显示各频道的信号强度，可按 LEFT 或 RIGHT 按钮手动选择频道，信号强度会实时更新。



- 退出搜索菜单时，会以当前搜索到的频道工作。

RF Racing

- <RF Racing>模式专为比赛而设定，此模式下只工作在 R 波段的 8 个频道，<CH>按钮调节频道加，<BAND>按钮调节频道减，频道搜索功能只扫描该波段的 8 个频道。





FPV 视频眼镜



便携收纳盒



*HDMI A-C (单独购买)



音视频线



电源线



Futaba 遥控线



JR 遥控线



5.8G 2DBI 天线 X 2



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SKY ZONE