

COBRA V

FPV GOGGLES

FPV视频眼镜



USER MANUAL 用户手册

Revision 1 眼镜蛇V 第一版

Languages 语 言

English ----- P.1 - P.8

简体中文 ----- P.9 - P.16

Introduction

Congratulations on purchasing the COBRA V FPV video goggles. To ensure your continued enjoyment, please take the time to thoroughly read through this operating manual before using.

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Product Warning

Sunlight will magnify through the optics and burn holes in the LCD color filter. This will not be covered by warranty. Keep goggles in protective case when not in use. **Do not leave headset exposed to direct sunlight.**

Product Compatibility

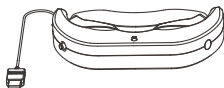
The COBRA V has been designed to adhere to established video standards and is compatible with any product also adhering to accepted video standards. Due to the high number of different manufacturers and variation in quality, it's impossible for us to have tested with every product combination and some troubleshooting may be required if mix/matching components. The COBRA V has been thoroughly tested with DTS gear. For best results and no compatibility issues, we recommend DTS gear for your accessory products.

Product Contents

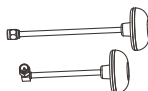
Carry Case



FPV Goggles



5.8GHz Circular Polarization
Antenna 110mm (I Shape) x 1
65mm (L Shape) x 1



External Charger Holder



Diopter Lens
(-2.0D · -4.0D · -6.0D)



Equipment Required

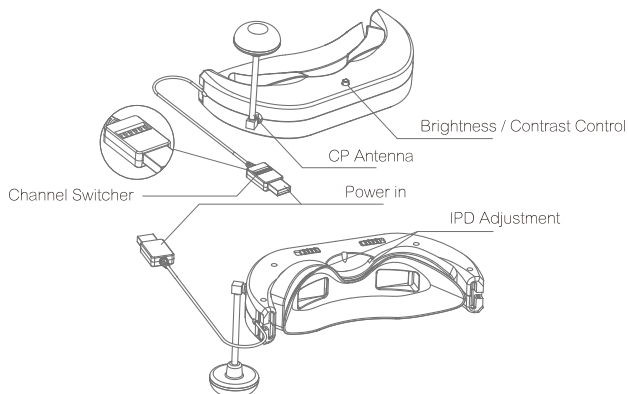
External Charger



Anti-fogging Agent



Controls Diagram



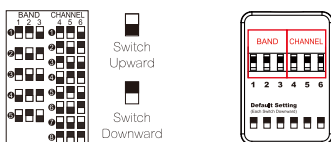
Brightness / Contrast Control: pressing left and right decreases/increases display brightness. Press forward/back decreases/increases contrast.

IPD Adjustment : Slide left and right adjust Interpupillary Distance.

Channel Switch : Switch to select different 5.8Ghz channels

Channel Switch Diagram

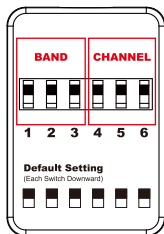
Default ALL switch (White) downward



ISM Channel : 5.8Ghz, 40 channels as below:

Band \ Channel	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
2	5658	5695	5732	5769	5806	5843	5880	5917	Race
3	5705	5685	5665	5645	5885	5905	5925	5945	Band E
4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

5.8GHz Video Frequency Setting for Cobra V

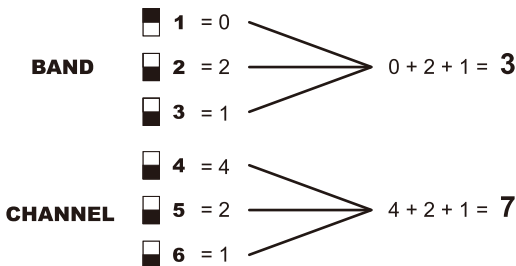


Channel Calculation Method

	Switch NO.	☒ Switch Upward Value	☐ Switch Downward Value
BAND	1	4	0
	2	2	0
	3	1	0
CHANNEL	4	4	0
	5	2	0
	6	1	0

Switch NO. 1/2/3 are **BAND** and NO. 4/5/6 are **CHANNEL**.

For example, if we want to select the 5925Mhz frequency, refer to the "ISM frequency matrix - 40 channels" matrix (Please refer to P.3) and we will find it is **BAND 3 CHANNEL 7**. For the setting and equation, please refer to the diagram as below:

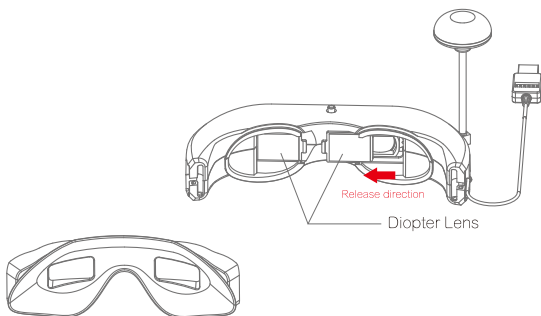


Caution: Switch NO.4/5/6 to downward, it is mean **CHANNEL 8**.

Switch NO.1/2/3/4/5/6 to downward, it is mean **BAND 8 CHANNEL 8**.



Diopter Lens (GWY006979 - contains three kinds of diopter lens)



For near sighted users, diopter lens insert sets are available that include -2, -4 and -6 dpt. Peel off rubber eye cups and insert into slots seated in front of the lens. Replace rubber.

- Remove Protect Rubber
- Insert Diopter Lens
- Replace Protect Rubber

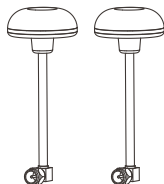
Please apply Anti-fogging Agent on the diopter lens before use to prevent the fog in operation.

Circular Polarized Antenna

(RHCP - GWY006902 / LHCP - GWY006903)

The best performance enhancement for your dollar, circular polarized antenna are manufactured to machine tolerances and final tested with top and RF equipment for the best performing CP antenna on the market.

CP antenna naturally reject multipathing and have no mismatch polarization when your aircraft banks - resulting in no rude range losses during acrobatic flight.



Specifications

Optics

- 30° Diagonal
- Interpupillary Distance : 59.5mm - 67.5mm
- Optional Diopter Lens Inserts -2.0D • -4.0D • -6.0D

User Controls

- Channel Selection
- Contract / Brightness Control
- IPD Adjustment

Battery Spec.

- DC 5V / 0.5A or above (Equipment Required)

System

- NTSC/PAL auto selecting
- Video Signal : CVBS 1.0VP-P75Ω

Mechanical

- Ergonomic molded goggle with adjustable headband
- Rubber eye cups for ambient light reduction
- Weight ~190g

Display

- Two full color micro WVGA LCSs (854x480 Lines)
- Virtual Image Size : 72inch (2 meters distance)
- Vtx Singal : 5.8G
- Brightness : 350cd/m2
- Operation Temperature : 0° C - 45° C
- Storage Temperature : -20° C - 70° C

Buzzer Function

- Can be used in aircraft lithium battery low voltage alarm function, prevent over-discharge to damage lithium battery (DTS Q180/Q220 have been set up this function)

Trouble Shooting

Observation	Possible Cause / Solution
No Image on all Channel (Dark Grey)	Ensure TX is on and camera connections solid
Dark grey on one Channel Static on the rest	Tx is working normal. Camera is not connected or lens cap left on
Lots of interference lines (horizontal lines)	Choose a cleaner channel.
Lots of interference lines (horizontal lines) when using 5.8Ghz receiver	- Check to see if cause is harmonic interference from 2.4Ghz RC controller (turn radio on/off) - Use CH1 on TX/Goggle - Check correct frequency antenna is used
No Image on all Channel (Black Screen)	TX has no power. Check to ensure TX LED is lit.
Static on all Channel	Ensure the Channel of Vtx and Goggle Rx are matching
Short Range	- Ensure 5.8Ghz antenna was installed - Check for other sources of interference - Ensure transmitter has clear LOS to headset. - Test in wide open area away from any obstructions. - Ensure compatible antenna was installed. Do not use other manufacturers antenna they may be a dual-band antenna and the slot interface is not SMA.
White dots on LCD display	You were careless and left goggles exposed to sun. Sun burn off LCD color filter.

Operational advice

- For best performance, select a channel that has the least amount of interference. While the transmitter is turned OFF, turn on the video headset and look at the screen as you check each channel. Clear channels will have a consistent static background. Channels with interference will have horizontal static lines.

- If using on a quad or multicopter type aerial vehicle you pretty much have to upgrade to the SpiroNET circular polarized antenna to get any decent range and good video link. Dipoles are suitable for foam planes.

- Always perform a range test before flying. This includes AV and RC controls. Some RC receivers can be affected by the proximity of other electronic devices particularly the AV TX.

- Try to space out your components as much as possible to avoid interference to your RC control range (keep stuff away from RX)

- Ensure your transmitter antenna has clear line of sight from the aircraft. Try to get the antenna out and away from the body.

- Until experienced, practice flying in a familiar area to avoid becoming disorientated.

- Due to antenna characteristics, there is a “null” in line with antenna direction. You may experience excessive video breakup when flying overhead

- 5.8Ghz signal strength drops off very fast, stay safely within solid AV range.

- For maximum distance it is very important that a clear line of sight exists between the transmitter and the video headset. Two of the worst causes of interference are human bodies and reinforced concrete.

- Place your TX antenna in open area in a vertical orientation

- Multipathing (reflections off buildings/ tall objects) causes signal cancellation and result in broken video. Fly in open areas away from buildings or other tall structures (i.e. barns, hills). Multipathing can be solved by upgrading to SpiroNET antenna.

- 5.8Ghz AV with 2.4Ghz RC controllers: 2.4Ghz may cause harmonic interference on Ch2 - Ch7 of the 5.8Ghz AV (Ch1 not affected). The headset has been equipped with a high pass filter that will allow the system to work with CE certified 2.4Ghz RC controllers. However, the filtering may be insufficient to remove noise from overpowered non CE certified controllers. If you experience interference from your RC radio, change the AV channel to channel 1.

- Although you don't require any license to operate this device, you are still legally responsible for operating in a responsible manner.

前 言

感谢您选择GWY的产品。为了让您能够更好的了解和使用此产品，我们衷心的希望您认真地阅读完这本说明书之后再进行相关操作，并请妥善保管以备后用。如需了解更多资讯，请访问官方网址：

www.zondahobby.com (英文), www.zondahobby.com.cn (中文)。

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产品警告

绝不可以长期将产品暴露在阳光之下，阳光会放大，甚至烧穿液晶彩色滤光片的光学元器件。出现这种情况，我们将不负责保修。不用时，请将视频眼镜装回保护盒中。

绝对禁止阳光直接射入视频眼镜！

产品实用性

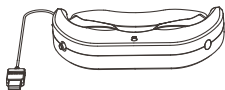
本产品设计时依据通用的视频标准，可兼容所有采用这一标准的任何其他厂家的同类产品。鉴于同类厂家及产品种类众多，品质参差不齐，我们无法通测所有其他厂家产品，故无法为您混用装备提供详尽指导。但我们的产品与所有GWY产品都有做兼容测试。故建议您若需要搭配其他装备，请采用GWY的配件。

包装物及配件

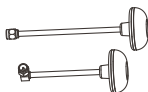
便携保护盒



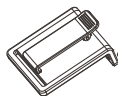
视频眼镜



5.8Ghz蘑菇天线
(右旋直角+90度角)



移动电源固定座



近视镜片

-2.0D(200度)/-4.0D(400度)/-6.0D(600度)



自备品

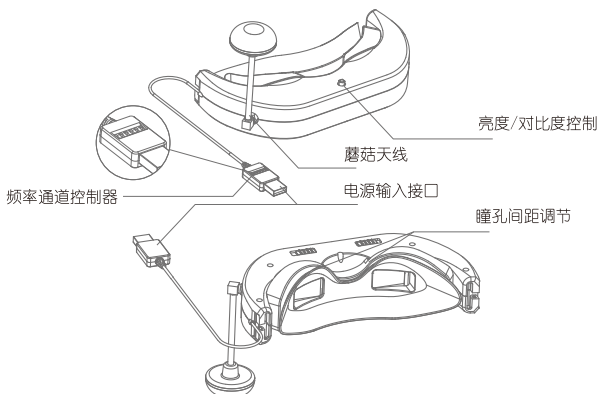
移动电源



防雾剂



控制示意图

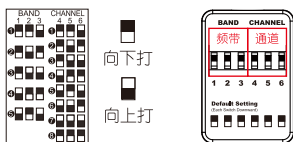


亮度/对比度控制：左推降低，右推增加屏幕显示的亮度。前推降低，后推增加屏幕对比度。

瞳孔间距调节：通过左右滑动此开关来调整眼睛瞳孔的间距。

频率通道选择：上下拨动此开关可设置不同的5.8Ghz通信频道。

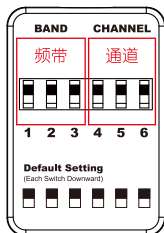
通信频道更换示意图： 预设设置全部开关（白色）向下打：



5.8G频带通道划分的国际标准表：

频带 \ 通道	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
2	5658	5695	5732	5769	5806	5843	5880	5917	Race
3	5705	5685	5665	5645	5885	5905	5925	5945	Band E
4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

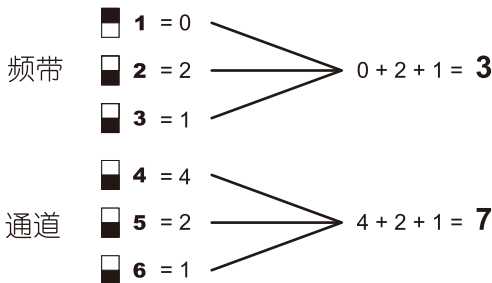
Cobra V 视频眼镜对频方法



拨码开关分组及位置数值

	开关编号	☐ 向上打数值	☑ 向下打数值
频带	1	4	0
	2	2	0
	3	1	0
通道	4	4	0
	5	2	0
	6	1	0

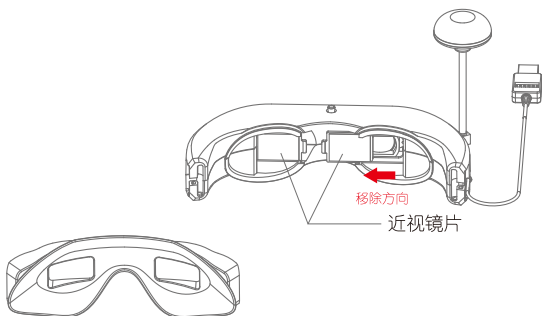
6个开关分为2组, 123号开关为一组, 用于设置频带, 456号开关为一组用于设置通道。如果要设置“5925”Mhz的频点, 根据《拨码开关分组及位置数值》表及《5.8G频带通道划分的国际标准》表(详情请参阅第11页), 那么拨码开关就要设置到《频带3 通道7》如下图所示



注意: 456号通道开关同时往下打, 代表《通道8》, 如果全部开关(123456号开关)都往下打, 就是《频带8 通道8》. 如下图所示



近视镜片 (GWY006979-包含3种规格近视镜片)



为近视用户而设，附有近视镜片套装，规格包括-2.0(200度)，-4.0(400度)，-6.0dpt(600度)。

插入方法见上图。

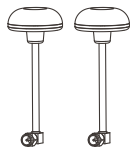
- 拆下眼睛保护软胶框
- 插入近视镜片
- 装上眼睛保护软胶框

为了防止在使用过程中，视频眼镜镜片起雾，可以在使用之前将镜片做防雾处理(在镜片表面抹上防雾剂)。

蘑菇天线(右旋天线 - GWY006902/ 左旋天线 - GWY006903)

性价比最高，无论是做工上的公差配合，还是与顶级高频设备的匹配上，蘑菇天线是目前市场上最好的天线。

蘑菇天线天生能改善多径衰减，并且没有极性匹配要求，使您在大范围做特技飞行时不会有信号丢失情况出现。



视频眼镜规格

光学元件

- 30度角度偏差
- 瞳孔间距：59.5mm-67.5mm
- 可选插入式近视镜片，包含：-2.0D,-4.0D,-6.0D三种规格

用户控制

- 通信频道选择
- 对比度/亮度调节
- 瞳孔间距调节

电池规格

- 供电DC 5V/0.5A或以上(自备品)

视频系统

- NTSC/PAL制式自动选择
- 视频信号：CVBS 1.0VP-P75Ω

产品结构

- 人体工程学成型，松紧调节带
- 防透光橡胶罩
- 净重约190克

显示规格

- 双全彩WVGA LCD显示屏幕，解析度854x480
- 虚拟图像尺寸：72英寸(距离2米远)
- 图传频率：5.8G
- 光亮度：350cd/m²
- 工作环境：0°C - 45°C
- 储存环境：-20°C - 70°C

蜂鸣器功能

- 可用于飞行器锂电池电压过低警报功能，以防止飞行器锂电池过放而损坏(低电压保护功能仅限于DTS Q180/Q220穿越机)。

异常排除指南

故障现象

可能原因及对策

所有频道都是灰色画面

发射机没有加载视频信号, 请检查发射摄像是否连接

一个频道灰色画面

其他频道显示静态杂讯(雪花)

发射器工作正常, 镜头或镜头信号线脱落
并检查视频眼镜的亮度 / 对比度是否正常

出现水平干扰线

通道信号受到干扰, 换一个没有干扰通道

使用5.8G接收模组时, 出现
水平干扰线

- 检查是否2.4G遥控信号干扰
(关闭遥控器测试干扰是否消失)
- 如果是2.4G遥控信号干扰, 请尝试把发射器和眼镜切换到通道1
- 检查天线是否使用恰当的频率

所有频道没有图像(画面全黑)

没有电压输入, 检查电源连接及电源电量

所有频道显示静态杂讯(雪花)

确认图传发射和眼镜接收频率通道匹配

传输范围过短

- 确认5.8G天线是否已经装上
- 检查附近有没有干扰源
- 确保发射机与视频眼镜之间有良好的可视距离
- 请在开阔区域飞行, 确保发射器和眼镜之间没有障碍物
- 确保使用的是本产品相容的天线。请不要使用其他厂家的天线, 他们的天线可能是双频的, 并且接口不是SMA

液晶显示屏出现白点

可能眼镜曾暴露在阳光下, 阳光会烧穿液晶彩色滤晶片的光学元件, 导致液晶显示屏出现白点的情况

操作建议

- 为获得最佳性能，请选用干扰最少的通道。关掉发射器，启用视频眼镜查看屏幕，当屏幕显示清晰的静态杂信，则该通道没受到干扰；否则，请选用另一通道，以减少干扰。
- 如果使用在四旋翼或多旋翼飞行器上，您需要加强蘑菇天线的强度以获得良好的信号传输。泡沫飞机需要采用双天线。
- 使用前请先调试图传和遥控的有效范围。某些接收端会受到周围电子设备的干扰，特别是高频信号和视频信号的干扰。
- 发射/接收元件的距离尽量保持足够空间，以防止相互干扰。
- 确保飞行器上的发射天线与视频眼镜之间没有障碍物。天线尽量远离身体。
- 除非有丰富飞行经验，新手在飞行时，请在熟悉及空间较大的场地进行飞行，以确保安全。
- 由于天线本身特性缺陷，在某个方向上会有信号传输死角。当飞行器飞过您头顶时，您会发现视频有一瞬间的中断现象。
- 5.8Ghz信号强度传输衰减特别快，请确保在视频信号有效区域内飞行。
- 多径衰减：(由障碍物/建筑物/高大物体等反射而来的信号)会抵消接收信号造成视频中断。飞行时一定要在开阔场地，远离此类障碍物。多径衰减可以通过升高天线解决。
- 5.8Ghz视频信号和2.4Ghz遥控信号控制器：2.4Ghz可能会对5.8Ghz的2到7通道造成干扰。头戴视频眼镜配备有高通滤波功能使得产品能够与通过CE认证的2.4G遥控控制器匹配工作。然而，滤波器可能无法完全滤掉来自非CE认证的功率过高产品。假如您发现有干涉，请把视频通道切换到1通道。
- 飞行前请确保供电电源是否能够满足飞行时间。

Gwy



*Before this model has being significantly changed to another new version, the parts, appearance and the existing version can be developed and modified that would lead to a slight difference from the original design. DTS reserve ALL the Rights of change of parts and contents WITHOUT specified notification.

※本型号机型在尚未进行重大改版之前，配件可能进行调整，外观、型号可能稍有不同。GWY保留配件内容更改权，并不另行通知。

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