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SKY ZONE Cobra X V2 Extended Range Set Fpv Goggles User Manual

Contents

SKY ZONE Cobra X V2 Extended Range Set Fpv Goggles

Specifications

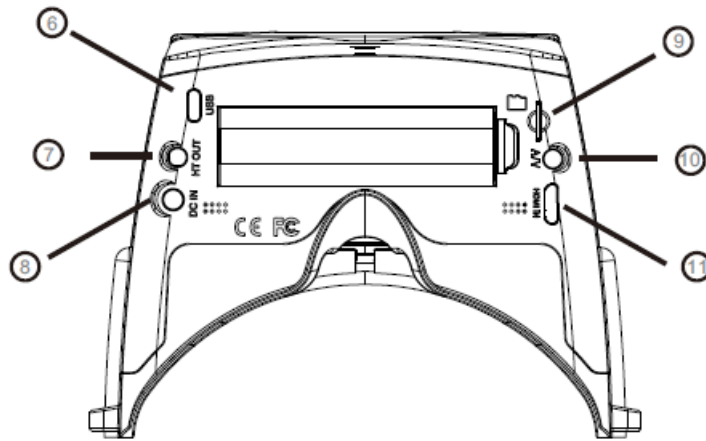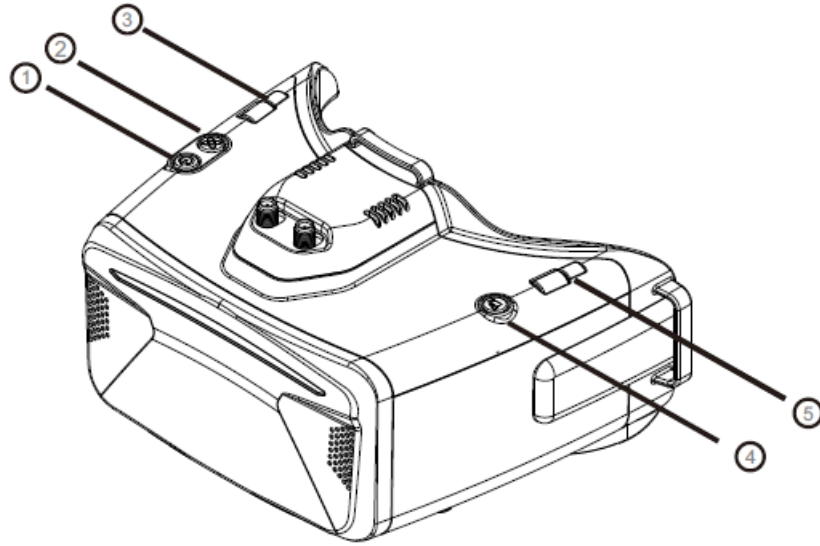| Specs			
Model	Cobra X V2	Cobra S	Cobra SD
Screen	LCD	LCD	LCD
Resolution	1280X720	800X480	800X480
FOV(Diagonal)	50°	50°	50°
Aspect Ratio	4:3/16:9	16:9	16:9
Receiver	5.8Ghz 48 CH SteadyView Receiver	5.8Ghz 48 CH SteadyView Receiver	5.8Ghz 48 CH Diversity Receiver
Language	10 Language	English/Chinese	English/Chinese
Power Supply	1Cell 18650/DC 6.5-25.2V/USB 5V	1Cell 18650/DC 6.5-25.2V/USB 5V	1Cell 18650/DC 6.5-25.2V/USB 5V
Power Consumption	12V 0.63A 5V 1.5A	12V 0.59A 5V 1.4A	12V 0.59A 5V 1.4A
DVR	H264, 60fps,MOV 6Mbps, SD up to 128Gb	MJEPG, 30FPS	MJEPG, 30FPS
Head Tracker	3-axis Accelerometer, 3-axis gyroscope	3-axis Accelerometer, 3-axis gyroscope	3-axis Accelerometer, 3-axis gyroscope
Dimentions	122*165*100mm	122*165*100mm	122*165*100mm
Weight	332g	332g	332g

BAND/CHANNEL table

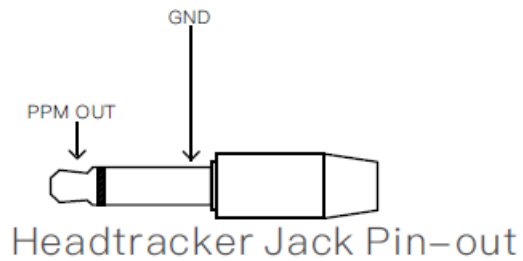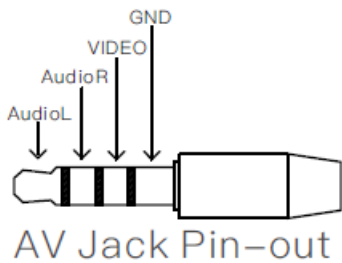| BAND/CH table								
BAND/CH	CH 1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
A	5865M	5845M	5825M	5805M	5785M	5765M	5745M	5725M
B	5733M	5752M	5771M	5790M	5809M	5828M	5847M	5866M
E	5705M	5685M	5665M	5645M	5885M	5905M	5925M	5945M
F	5740M	5760M	5780M	5800M	5820M	5840M	5860M	5880M
R	5658M	5695M	5732M	5769M	5806M	5843M	5880M	5917M
L	5362M	5399M	5436M	5473M	5510M	5547M	5584M	5621M
Sensitivity	-98dBm±1dBm							
Antenna port	2 X SMA-K,50ohm							

Package Included

1. Goggles*1
2. Receiver Module*1
3. Head Strap *1
4. Power Cable*1
5. Headtracker cable*1
6. 5.8GHz 2dD antennas*2
7. Video/Audio Cable*1
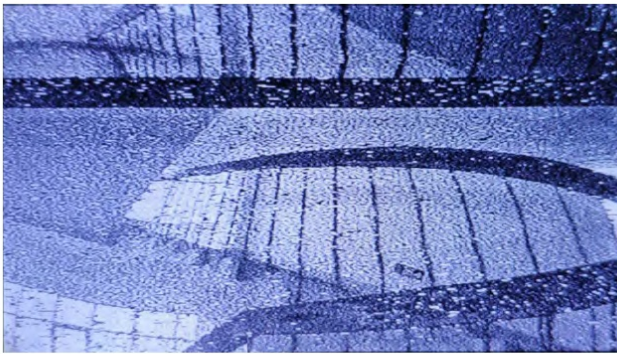8. USB-C Cable*1
9. User Manual*1

Diagram

1. Power/Fan
2. System Menu/Headtracker reset
3. CH/BAND/Search
4. Record/Delete
5. Mode
6. USB C port
7. 3.5mm Head tracker port
8. DC PORT(5.5*2.1mm)
9. SD card slot
10. AV IN/OUTPUT
11. HDMI input

AV Jack Pin-out

Headtracker Jack Pin-out

Introduction

The SKYZONE Cobra X * is an FPV goggle with a 1280*720 high-resolution LCD screen, the screen has vivid color and high Luminance, and the pilot can see more details in the racing. With a SteadyView receiver, the receiver merges two signal to one, avoid image tearing and rolling when the signal is weak, and make the image more stable and clear in challenging condition. The goggle support pilot wears glass while fling. The new OS with 10 languages* to set select, pilot have no trouble with the menu system, with the shuttle wheel and new user interface, the pilot can set all the settings just by rolling the wheel without take off the goggle. the goggles can power by a 1 cell 18650 battery or 2~6s lipo battery, the USB charging and DC charging make goggles simple to use in the filed.

Diversity

SteadyView

SKYZONE Cobra S has 800*480 resolution, and UI only has 2 languages.

DO NOT EXPOSE THE LENS DIRECT TO SUNLIGHT, OTHERWISE THE SCREEN WILL BURN IN.

Quick Start Guide

1. Install the receiver and antenna.
2. Plug the battery into battery bay or use power cables to connect battery to the goggle, goggle can power by 2~6cells lipo battery, hold the power button to turn on.

Band and Chanel setting

1. Press the right wheel, then roll the right wheel to change channel, press the wheel again switch to band setting mode, then roll the wheel to change the band.
2. No wheel operation for 3 seconds goggle will quit RF setting mode .
3. Hold the right wheel to pop up search menu, press the right wheel to start auto search, after searching all the frequency, receiver will work on the strongest signal. roll the right wheel to manually select the channels, short press the right wheel to quit search.

Some cameras on market didn't follow standard NTSC/PAL signal, cause the receiver confusing in Mix mode, It will cause image getting dark, color distortion, rolling image, user can switch to diversity mode to solve this issue.

Sometimes the auto-search channel is not accurate, user may need manually select the channel.

MODE MENU

- Short press the left wheel to pop up mode menu.
- RF normal: this mode is normal 48 CH receive mode.
- RF Racing: this mode will make receiver only working on RaceBand.
- RF Third-Party: in this mode, the goggles button cant control the external receiver, also the OSD of the goggles cant read the band/channel of the receiver.
- AVIN: when enable the AV IN mode. The NTSC and PAL system format can be supported to be automatically switched. The receiver module will be automatically turned off to save power.
- HDMI IN : the receiver module and the video record module will be automatically turned off to save the power.
- It is recognized that the screen and the corresponding resolution information will be automatically displayed in the supported resolution format.
- Playback: in this mode, customers can review the DVR files.

Drone Finder
Install a patch antenna on RX, long press the left wheel to enable the drone finder function(long press again to disable), the buzzer frequency will synchronize with RSSI, the stronger the RSSI is, the rapider of sound the buzzer. * only cobra x have this feature.

PLAYBACK

- In playback mode, roll right wheel to choose the DVR, short press right wheel to play and pause.
- Left wheel to adjust the volume.
- When playing the DVR, roll the right wheel to Fast Forward or Fast backward.
- Press the Right button to quit DVR.
- Press the Left button to delete DVR

Settings

- Short press right button to pop up or quit setting menu.
- Roll right wheel to navigate, press the right wheel to select.

Head Tracking

- The head tracking button is on the right side of the goggles.
- The gyro required for an initialization time. When it is powered on, goggles must be kept horizontal and stable as long as possible. When hearing the sound of a "beep", the initialization is done.
- Hold HT button to reset the PPM signal to the center, goggles will beep when press the button.

Disable the Headtracker can save the gyro initialization time to speed up goggles boot time.

Image

- In image setting menu, customer have standard, bright, vivid, soft and 3 customized files to adjust.
- Customer can adjust Brightness, C S ontrast, aturation, Hue and Sharpness to suit different environment in 3 user 1/2/3, the image setting can not change in 4 pre-set files

Roll the wheel can adjust the brightness.

DISPLAY

- In Display setting menu, customer can change the aspect ratio(4:3 or 16:9), default is 16:9*.
- In Display menu, customer can set the RSSI icon: icon + percentage, Icon, Percentage, disable, alsoadjust the vertical position of the RSSI.
- The Luminance of the screen and be adjust in the menu (3 stages, default is 2).Normally do not set the brightness too high unless the image is dim. COBRA S only has 16:9 Mode.

DVR

- Left button is recording button and stop button.
- Build in DVR H264 encoding, SD card recommend Class10, SD card can support up to 128GB.
- SD card must be formatted into FAT32 , user can get into system menu to select the Format SD .
- The video recording function can be used in both the RF Mode and the AV IN Mode.
- By default, when recording the video (including: recording the sound), the "sound recording" function can be turned oï¬€ in the system menu, and the video signal can be recorded only.
- Automatic recording: enable this function , if the video signal has been detected, the recording function will be activated automatically. The recording function can also manually be stopped by press the REC button.
- **<Auto&Follow>** on, the DVR will auto start recording when video signal is on, and stop recording after 30s when signal is cut, if signal is on again, DVR will start recording again.
- **<Follow>** Press the rec button to manully start recording DVR will stop recording after 30s when signal is cut, but it will auto start recording when signal is on. press rec button agian can manually stop rec to save SD card space. *
- **Cyclic recording Overwriting** of older recordings on or off (in case of storage space is wasted).
- The video recording File will be automatically divided into multiple Files. In the menu system, the video length can be set as: 5 minutes, 10 minutes, 20 minutes and 30 minutes. The default video length can be set as 30 minutes / for each file.
- If the power has been suddenly disconnected during the video recording process, the DVR will be damaged. The goggles have repairing function. After entering into the playback mode, the last DVR will be automatically checked. If it is damaged, the DVR will be automatically repaired.

DISPLAY

- In Display setting menu, customers can set the topbar OSD time, turn off the time off, the OSD always on.
- In Display menu, the customer can set the RSSI icon: icon + percentage, Icon, Percentage, disable, also adjust the vertical position of the RSSI.

- The Luminance of the screen and be adjust in the menu (3 stages, default is 2). Normally do not set the brightness too high unless the image is dim.
- In the Display setting menu, the customer can change the aspect ratio(4:3 or 16:9), the default is 16:9.

SYSTEM MENU

- In Power supply menu, the user can choose battery type(2S~6S) to make sure the goggles show real capacity of the battery.
- Voltage calibration gives user ±0.9V range to adjust the voltage, when calibrate the voltage, use a multimeter to measure the loaded voltage of the battery, then use the shuttle wheel to adjust the voltage on OSD to match the real voltage.
- RSSI Calibration: Turn off VTX then turn on the goggles, make sure the goggles have snow on the screen. In the system menu, select RSSI calibration, choose low, confirm, the goggles will beep twice.
- Then turn on VTX, make sure VTX and goggles are in the same frequency and make sure VTX is at 2m way from goggles, then select High in RSSI calibration, then confirm, the goggles will beep four times
- System Language can select into English, french, German, Russian, Latin, F G R I Portuguese, Spanish, Chinese, Japanese, and Korean.
- **RF MODE in** this mode, the user can choose the Diversity mode or MIX mode, there are some cameras video signal voltage didnt follow standard NTSC or PAL, which caused the picture rolling in MIX mode,Select Diversity mode, it will solve the rolling issue.
    - The built-in fan can not only be mainly 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.
    - User can manually set fan speed to adjust the fan noise

The function of the wheel and buttons can be swapped from left side to the right side , makes to adapt left handed user. when rotary switch is enabled, all the function in manual is changed from left to right

- **Factory Reset** : User can reset all the function and setting in this menu.
- **DVR FW upgrade:** User can upgrade DVR Firmware from SD card in this menu.
- **Firmware version :** Goggles Firmware , DVR Firmware version and Serial Number will shown in this menu

Firmware Update Goggles

1. Connect goggles to the computer.
2. Hold the left wheel when turn on the goggles, the usb cable will power the goggles, release the left button, computer will automatically install the driver , computer will show a new removable storage .
3. copy the Firmware File to folder(Not the SD card). goggles will installing the update at the same time.

Even enabled the rotary switch function, the boot button is still left button. when the copying is done, the firmware upgrade is done.
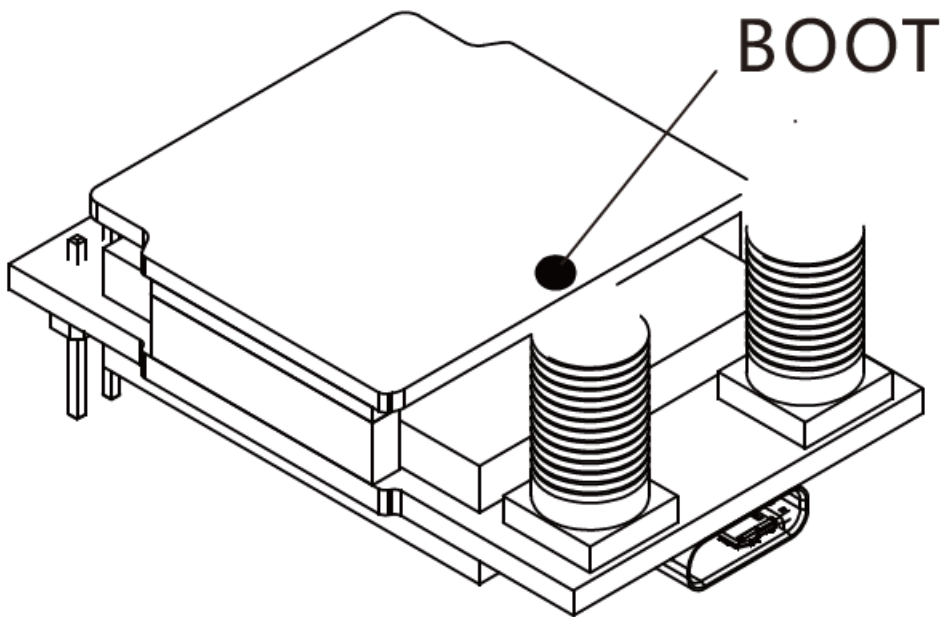
DVR

1. Take a SD card and format the card to FAT32.

2. Copy the DVR Firmware to the SD card , insert it in the goggles and turn it on.

3. Go to the system menu and choose DVR FM upgrade

COBRA S cant upgrade the firmware of DVR

Receiver Firmware

1. Take the receiver out, hold the boot button when connect the receiver to the computer.

2. Computer will automatically install the driver , computer will show a new removable storage .

3. Copy the Firmware File to the folder(Not the SD card). goggles will installing the update at the same time. when to copying is done, the firmware upgrade is done.

Charging

- The goggles inte rated with charging Th g module user can choose USB charge or use barrel connector charge.

- when goggles is powered via barrel connector the external power is also charging the internal 18650 battery.

- DC and Type C can both charge the internal 18650 battery.

- For safety do not charge the battery unattended .

- The 18650 battery bay have protection circuit, if remove the battery without turn off the goggle, the battery will in protection status, to quit protection, the goggle need use DC cable or USB cable to chargethe battery to quit this mode.

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