Hawk eye 鹰眼航拍

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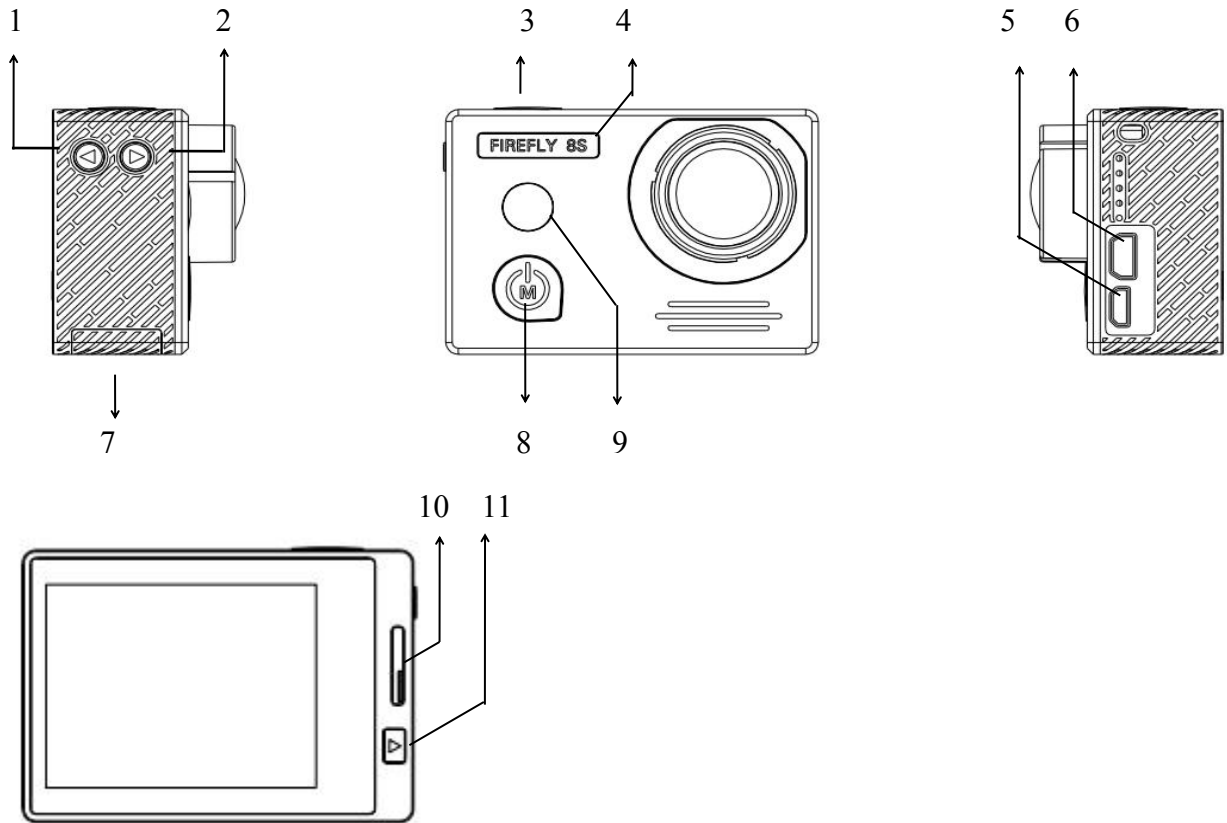*Explore the new world!*

FIREFLY 8S

4K SPORTS DV

■ Ambarella A12S75

■ 6 axis Gyro Image Stabilization

■ WiFi + BT 3.0 Remote control

■ 2 inch high brightness LCD screen

■ SONY IMX117 12 Mega WDR CMOS Sensor

Ver 1.4

Contents

Features :

1.UP button.

2.DOWN button.

3.OK button

4.Photo(Green)/Video(Blue) LED.

5.HD output

6.Mini USB.

7.Battery door.

8.Power button/Mode button.

9.Selfie Mirror.

10.MicroSD card slot.

11.Playback button.

Performance and Specifications:

	Photo resolution	16M/14M/12M/8.3M/5M/3M
	AV output format USB Port	PAL/NTSC
	HD Output	YES
	Kind of MicroSD card supported	U3(**Note:Low speed sd card will cause unstable**)
	Maximum size of MicroSD card supported	128G
	Wi-Fi +BT 3.0 remote control	YES
	LCD screen size	2 inch 640*480
Specifications	Camera size	59×41×21 MM
	Weight	70g
	Battery Capacity (Battery is detachable)	1200mAH，3.85V
	Battery life	About 1.33 hours （25℃ enviroment）
	Time to complete charging	About 3 hours (5V 1A power supply, and power off while charging)
	Compressed format	H.264
	Video/photo format	*.MP4 / *.JPG
Optical Parameter-Wide angle version	Diaphragm	F/2.8 ，6 glasses
	Angle	Diagonal 170 degrees
Optical Parameter - distortionless version	Diaphragm	F/2.8 ，11 glasses
	Angle	90 degrees
Electric Parameter	Working Voltage	5V
	Power supply	1A

Button Functions

Name	Functions	Descriptions
Power/Mode Button	Turn on/off camera; select modes	Press once, camera ON; press for 3 seconds, camera OFF; press to switch photo /video mode.
OK Button	start/stop recording	
UP Button	move upwards	move upwards /**Shortcut key for screen save**
DOWN Button	Move downwards	Enter menu setting/move downwards **Press for 3 sec, WIFI ON/OFF**
Playback Button	Playback	

01H30 → 01H30 means：01 Hour 30 Minutes
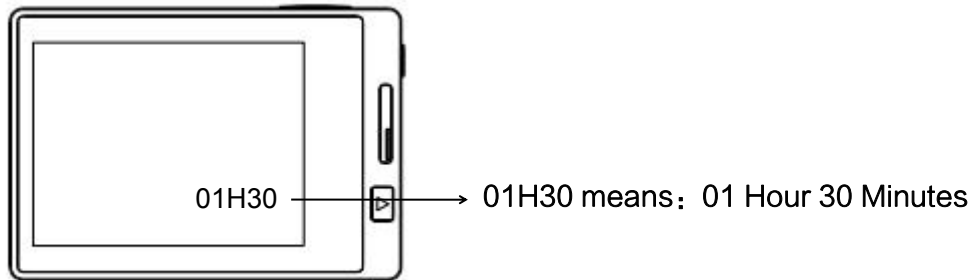
Video settings:

In video preview mode, press "Down button" will enter menu:
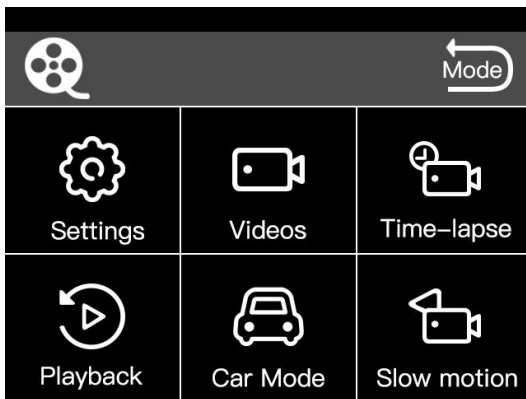
Settings: Press OK button to enter setting menu.

Videos: Select Videos and press OK button to enter normal video mode.

Time-lapse: Select time-lapse and press OK to enter time-laps mode. To adjust time-lapse please refer to "Timelapse Video" menu.

Playback: Select playback and press OK button to enter.

Car Mode: Select Car Mode and press OK button to enter. In Car mode, Auto DVR and Loop recording will be turned ON.

Slow Motion: Select Slow motion and press OK button to enter. In this mode, it will record videos in slow motion.

Resolution: select from4K 30fps(16:9),4K 25fps Super-view, 2160P 30fps(4:3), 2.7K 30fps(4:3),2.7K 30fps Super-view, 2.7K 30fps(16:9),2.5K 60fps(16:9), 2.5K 30fps(16:9), 1440P 60fps(4:3),1440P 30fps(4:3),1080P 120fps(16:9),1080P 60fps(16:9),1080P 30fps(16:9), 1080P 60fps Super-view, 1080P 30fps Super-view,960P 120fps(4:3),960P 60fps(4:3), 960P 30fps(4:3), 720P 240fps(16:9),720P 120fps(16:9),720P 60fps(16:9),720P 30fps(16:9),720P 120fps Super-view, 720P 30fps Super-View ect.

Video Quality: Super.Fine, Fine, Normal.

Auto Lowlight: Off,On. When turn this function On, camera will drop the **frame rates** to increase the video's brightness.When this function turn ON, will save power consumtion.

Gyro Sensor: Off,On. Avaliable in 1080P 60fps and 1080P 30fps.

Motion detect:Off ,Low,Medium,High. When turn this function ON and press OK button, it will record video when motion detected.

Dual files: off,on. When turn on, it will save a low resolution file when recording. Small file is easy to share via WiFi. **We suggest to turn this function on while using APP to download/playback videos.**

Video stamp: Off,Date,Time,Date/Time. this option allows you to stamp the date/time on the video.

Timelapse Video : to start/stop time-lapse video at 1 / 3 / 5 /10 / 30 /60sec intervals. Note: this function will make videos look like fastforward.

Loop record: off,1min,2min,3min,5min. If cycle recording mode is selected, the video will be cut into setting-minute segments. The earliest files will be covered when the TF card is full. (This mode is suggested to be used in vehicle monitoring.)

Microphone Volume:off, 50%,60%,70%,80%,90%,100%.

Sharpness : Strong, Normal and Soft.

AWB:Auto White Balance.
     Auto,Incandescent,D4000,D5000,Daylight,Couldy,D9000,D10000,Flash,Fluorescent,Water,Outdoor.
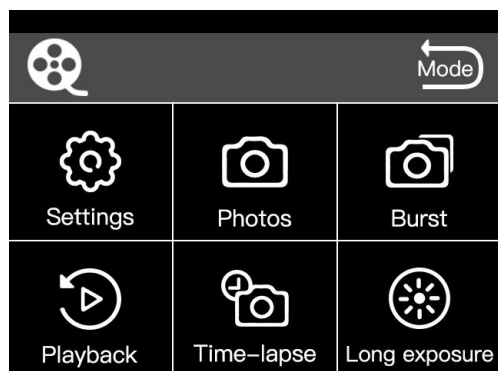
EV Value: -2.0,-1.7,-1.3,-1.0,-0.7,-0.3,0.0,+0.3,+0.7,+1.0,+1.3,+1.7,+2.0.

ISO: Auto,100,20,400,800,1600.

Metering: Center,Multi,Sopt. **Note: different meter ways will make the footage brightness different.**

Photo settings:

In photo preview mode, press Down button to enter menu:

Settings: Press OK button to enter setting menu.

Photos: Select Photos and press OK button to enter normal photo mode.

Busrt: Select Burst and press OK button to enter Burst photo mode. To adjust it, please refer to "Photo Burst"

Playback: Select playback and press OK button to enter.

Time-lapse: Select time-lapse and press OK to enter. To adjust time-lapse please refer to "Timelapse Photo" menu.

Long exposure: Select Long exposure and press OK to enter. To adjust Long exposure please refer to "Long exposure" menu. (Use this mode at night).

Image size:16M,14M,12M,8.3M,5M,3M（1M=1Mega pixels）.

Photo Quality: Super.Fine,Fine,Normal.

Long exposure: 1/30 second, 1 second,2 seconds,5 seconds, 10 seconds,30seconds, 60 seconds. **Note:If you use long exposure mode at day time, photo will be over exposure.**

Photo Stamp: Off, Date, Time, Date/Time. When turn this function ON, you could stamp the date time on videos.

Self Timer: Off, 2S,3S,5S,10S,30S,60S.

Photo Burst: 3 Pcs/Second, 5Pcs/Second, 10Pcs/Second.

Timelapse Photo: 3S,5S,10S,30S,60S.

Sharpness: Strong, Normal,Soft.

AWB(Auto White
Balance) :Auto,Incandescent,D4000,D5000,Daylight,Couldy,D9000,D10000,Flash,Fl
uorescent,Water,Outdoor.

EV Value: -2.0,-1.7,-1.3,-1.0,-0.7,-0.3,0.0,+0.3,+0.7,+1.0,+1.3,+1.7,+2.0.

ISO: Auto,100,20,400,800,1600.

Metering: Center,Multi,Sopt.**Note: different meter ways will make the footage brightness different.**

System Setup settings:

Quick Capture: Off , On.   ON: It will capture videos when power on.

Delay Off: off,5S,10S,20S,30S,60. (avalibale When Auto record turn ON).

TV Mode: NTSC,PAL.

Light Frequency: Auto, 50HZ, 60HZ.

LCD Brightness: Low, Medium, High. Set LCD brightness, **when set it low, the power consumption will be saved.**

Auto shutdown: Off, 2Min,3Min,5Min,10Min. When there're no operations, the machine will auto shutdown.

Screen Off: Off,30S,1Min,3Min,5Min. When there're no operations,will power off the screen.

Status LED: Off, 1,2,3. Set the action LED light on the machine.

Beep: Off,On. Turn ON/OFF beep voice on the machine.

Time Setup. Set the date time of the machine, or you could upate date time with the APP throught WiFi.

Date Format:Y/M/D,D/M/Y,M/D/Y.

Language: English, Chinese,Rusaian.

BT Pair.
How to pair BT remote controler: Set this menu ON, the machine will keep searching BT remote controler. Press any key of the remote controler, and the controler's light will turn on. Keep pressing any key of the remote controler until searching function finished and they will paired. Note: When Camera power ON , it will keep searching BT remote controler for 20 seconds, if you keep pressing contoler's key (about 5 times), they will be pared automaticly. Bluetooch remote controler is not in stander package.

WiFi: ON,OFF. Turn Wifi ON/OFF, or you press and hold "Down key" for 2 seconds. Turn Off WiFi, the power consumption will be saved.

WiFi SSID. You can change WiFi name.

WiFi Password. You could change WiFi passwords here.

Format. Format the MicroSD card.

Default Setting. Set to default settings. **Note: if the camera has any problems, you could use this function.**

Version. Check version number here and could update firmware here.

How to update firmware:
a.Delete all the files in MicroSD card , and then copy update file to MicroSD card("FIREFLY_FWUPDATE.bin" , you could download it on our website [www.CNfpv.com).](www.CNfpv.com)

b.Put MicroSD card into camera and power on.

c.Switch to system menu: Version.

d.Press OK button to check the update fimware, if detected firmware is right, select "yes" to update.

e.Once confirmed, camera will update automaticly.

f.It will take 1-2 minutes to update. When update finish, it will power on, and then will reboot..

g.Detele firmware update files.

Wi-Fi :

Please check our website(**www.CNfpv.com**) or the QR code to find our APP. You can use a Smart phone/tablet to view or take photos and videos via Wi-Fi connection.

1. Download and install app from the app store on your smart phone/tablet, or scan the QR code behind.
2. Turn camera's Wi-Fi on.(in system setting menu or **press and hold "Down button" for 2 seconds**).
3. In your smart phone's or tablet's Wi-Fi network settings, connect to the camera's Wi-Fi network named "FIREFLY_xxxx", enter the password. Default password is "12345678".
4. Open the FIREFLY app on your smart phone/tablet. You will now be able to control the camera with your smart phone/tablet plus view, playback and share selected content.

Battery Charging:

Connect the camera to a computer or phone charger using the included USB cable. Use 1A charger, and turn off the camera when charging will increase the charging rate(**Press and hold Mode key for 3 seconds could shutdown the camera**). The Charging Status Light it will turn OFF when the battery is fully charged.

Transferring Files:

1. Connect the camera to a computer via the included USB cable, and then turn on the camera.
2. Double click "My Computer" and locate "Removable Disk". Enter "Removable Disk" and you will find all photo and video files in AMBA folder.

External Microphone:

Please buy our external microphone for FIREFLY 8S. When plug in the microphone, the camera will Beep and the microphone works.
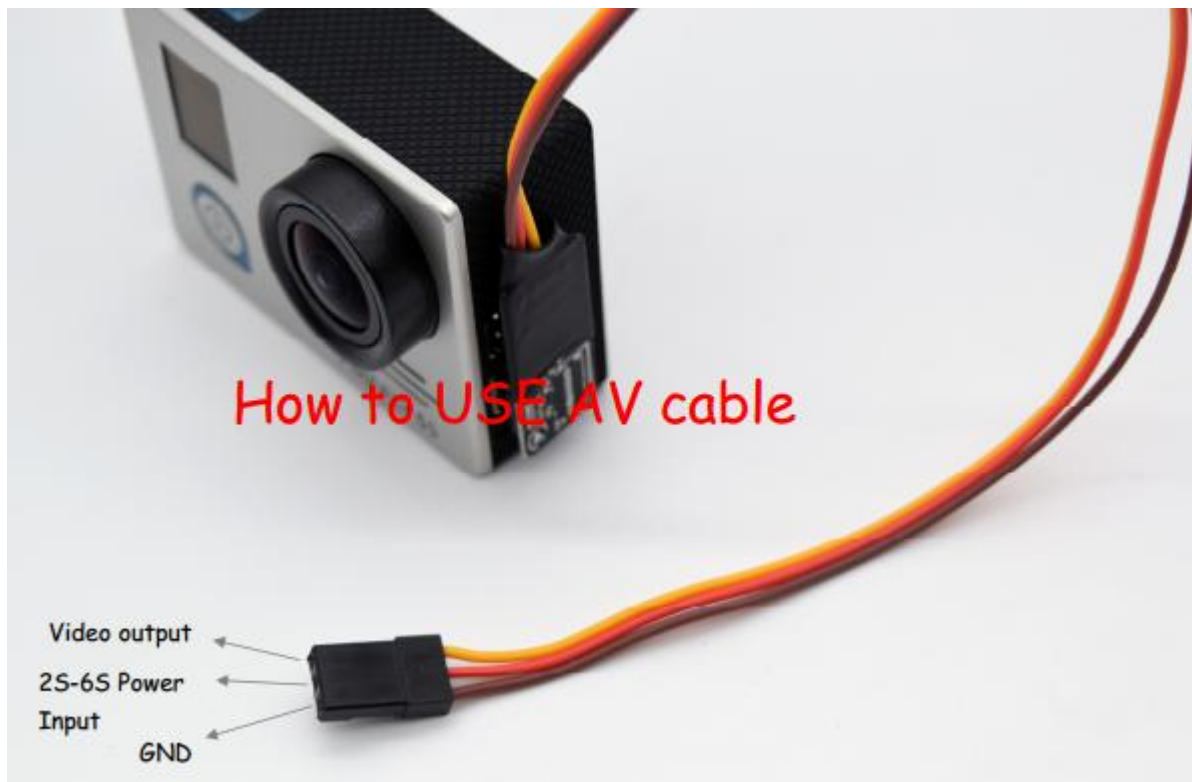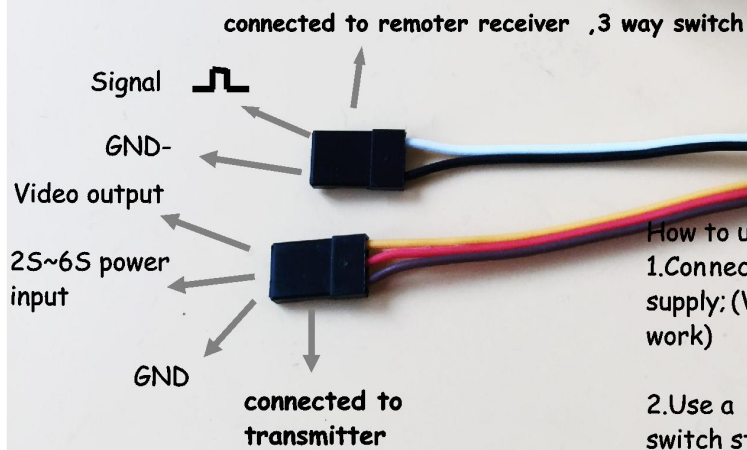
Accessories :
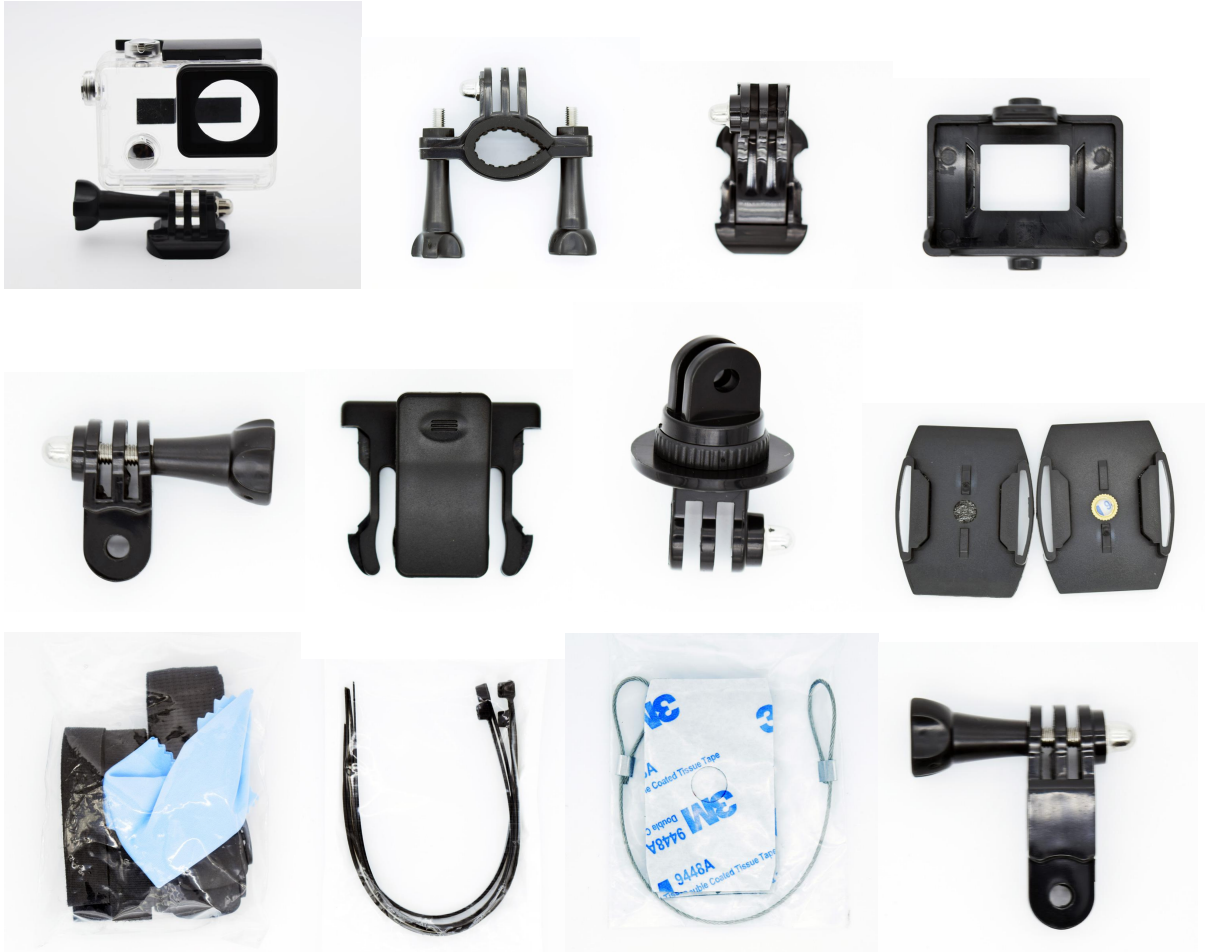
Instruction for accessories：

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Accessories installation instructions(Not in stander package):

How to USE AV cable

Video output
2S-6S Power
Input
GND

How to remotely control camera to take photos/record videos

connected to remoter receiver ,3 way switch

Signal ⊓_

GND-

Video output

2S~6S power input

GND

connected to transmitter

How to use:

1.Connect this control module to power supply; (Voltage must lager than 5V,or it can't work)

2.Use a 3-way toggle switch ,and keep the switch stay at the middle before power up ;

3.Power up , Toggle swtich up to take one photo; toggle the switch middle and then up again to take another photo.

4.Toggle swtich down and stay still to record videos; toggle switch middle to stop recording.

5.Trouble shoot:
  a. Make sure 3 way switch has outpu signal.
  b. let the 3 way switch stay at the middle, and the Camera stay idle; then try again.
  c.Toggle up, pulse width is : 1ms; middle: 1.5ms; down: 2ms.

Trouble shooting:

1.First of all if the camera has any problems: set it to default
settings first （refer to :*System Setup settings*).

1.if the video quality is not satisfied or if the camra have any problems: try to set it to default
settings first （refer to :*System Setup settings*).

2.Videos are not smooth: (refer to :*System Setup settings*)

a.Set the video resolution to :*1080P 60FPS*   b.Set Gyro :*ON*
c.Change a player(Quicktime player).

*3.*Battery endurance time is not enough: a.set LCD Brightness to Low; b.turn off the camera when charging(**Press and hold Mode key for 3 seconds could shutdown the camera**)c.Set to Photo mode when standby.d.Auto low light set ON. d.Turn WiFi OFF.

4.Charging time too long: when charging, press and hold Mode key for 3 seconds to turn the machine power off.

5.Video and sounds are no sync: A.copy the video to computer.   B. Change a player(Quicktime).

6.Can't record/Camera unstable/record and then stop: A.Make sure card speed is U3. B. Format MiroSD card(One FIREFLY) once. **Suggest MicroSD cards: Sandisk Extreme U3，Sandisk Extreme Pro U3,Sandisk Extreme PLUS U3,Lexar 1000x U3 ，SONY SR-64X U3**

7.Machine is heat. a. Set to Photo Mode when standby. b.take it out of the waterproof case. c.Not Use it in a sealed enviroment

8.Camera no response. Take battery off and assemble again.

9.For more information please visit our website: www.CNfpv.com/
www.HawkeyeFirefly.com

10.How to use BT remote controler: please refer to Bluttooth pair. **Note: When Camera power ON , it will keep searching BT remote controler for 20 seconds, if**

you keep pressing contoler's key (about 5 times), they will be pared automaticly.

11.WiFi playback speed is slow. When you want to use WiFi to playback videos, we suggest to turn "Dual Files" ON. When this function is turned ON, it will save a low resolution file. The files named "xxxxB", we call it B file. When playback via WiFi, play the B file will be much faster.

12.Photos over expoure: Change Metering: Center,Multi,Sopt.

FCC STATEMENT：
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.