

KYLIN FPV 250

INSTRUCTION MANUAL



Thank you for purchasing Kylin 250 FPV , in order to have easy and enjoyable flying experience, please read this manual carefully before your first fly.



www.kdsmodel.com

Version No: 20150814

⚠ Product introduction

Kylin 250 FPV is NOT a toy, it's a combination of many high-tech electronics and can be dangerous due to improper operation. Please take care of your safety and don't fly in public or crowded places. Neither manufacturer nor distributors/dealers will be responsible for accident caused by improper operation or wrong setting.

Beginners should be accompanied by experienced pilots or get trained when fly.

Away from high voltage wires, wireless towers, etc., which are prone to interfere flight.

Please DON'T fly in rainy days, and be away from moist environment.

Before flying, confirm first if there's any other pilots fly at same frequency, because of which the FPV might get out of control due to same frequency interference.

Product introduction

Kylin 250 FPV is in hierarchical structure with the battery in middle, so any 3D movement can be precise, stable and flexible. With the kit we offer free 280mm arm and 6045 props, pilots can upgrade to FPV-280 easily without changing any other parts or electronics. All parameters are well-tuned in factory, simply restore to factory default parameters can correct any wrong setting.

Batteries suggested to use on Kylin 250 FPV:

For beginners: 2200mah 3S can have longer flight time;

For primary level pilots: 1300-1500MAH 3S, speed racing;

For advanced level pilots: 1300-1500mah 4S, high speed racing.



Full carbon plates in three different thicknesses on Kylin ensure the strength and flexibility.



5.8G video transmit 32ch and 800 TVL HD video camera reveal the realistic flying environment and transmit first person view in HD quality with max speed.



Adjustable camera plate can change camera elevation and keep the camera horizontal view in any flight.



All electronics integrated on PCB board (include CC3D, OSD, PMU) makes maintenance and change easy.



5.8G video transmit 600mw 32ch with 800 TVL HD video camera, the most real show the flying environments.



The core power technology for Kylin 250 FPV is and the high-resistance magnetic steel brushless motor 2204-2300KV, it can meet the power requirement for all pilots.



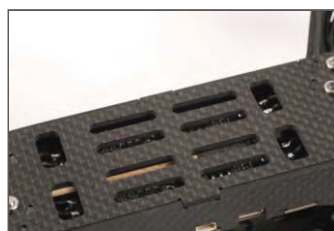
2.5mm full carbon arms are crash-resistant and protect motor from any damage.



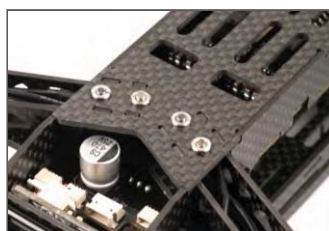
Matted black injected canopy with high anti-resistance performance reduces drag coefficient effectively, and protects electronics inside.



For RTF, the radio AT9 have set in three modes to satisfy different level pilots: beginners, primary level, advanced level.




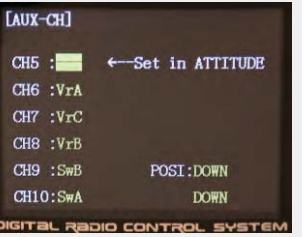


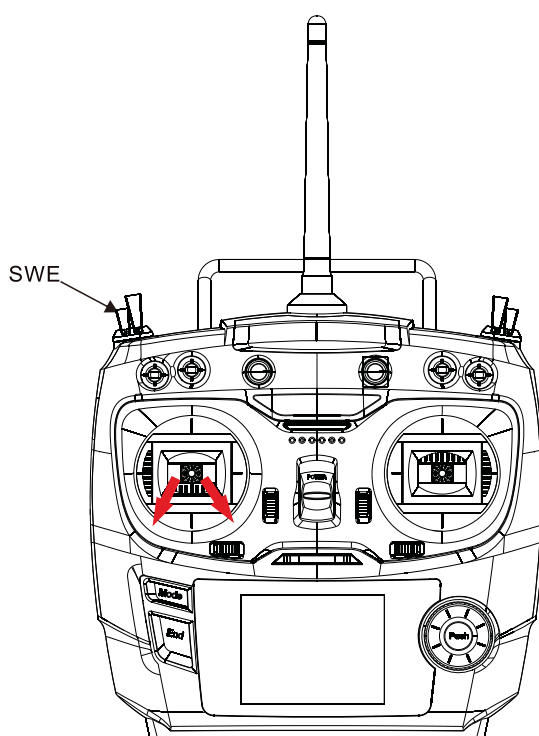
High-efficiency 20A ESC



Embedded nuts make maintenance easier.

AT9 transmitter Settings

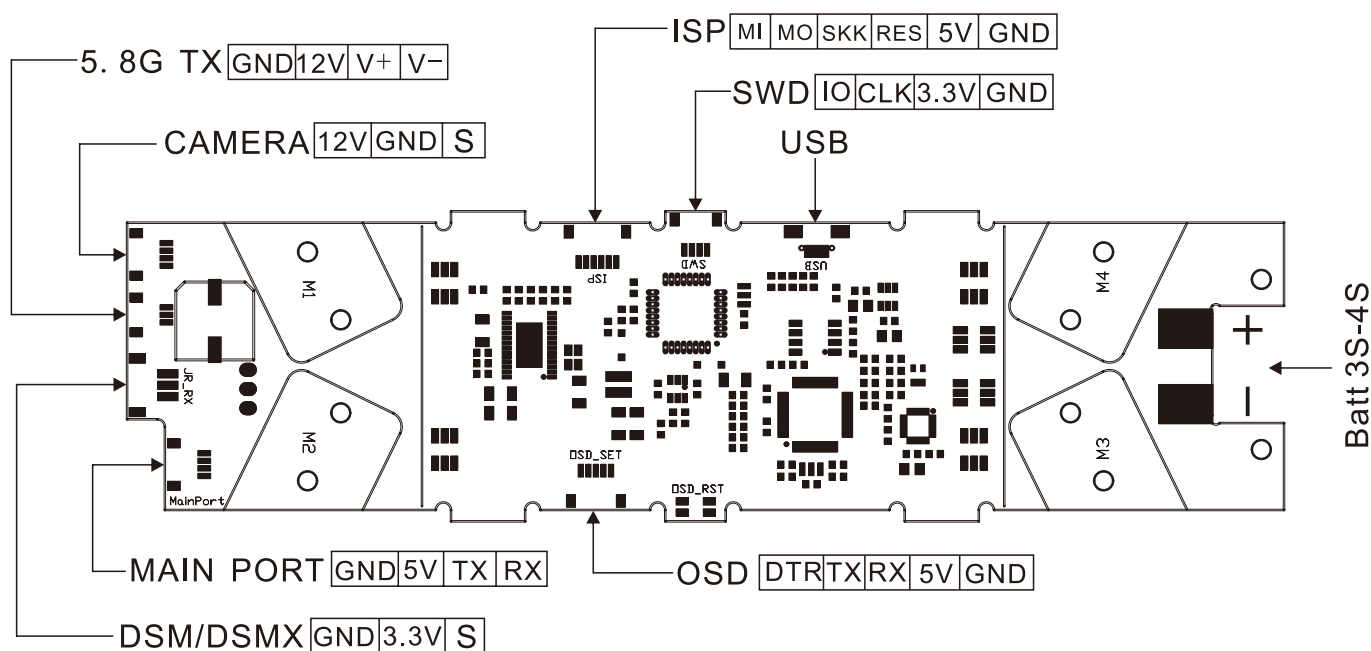
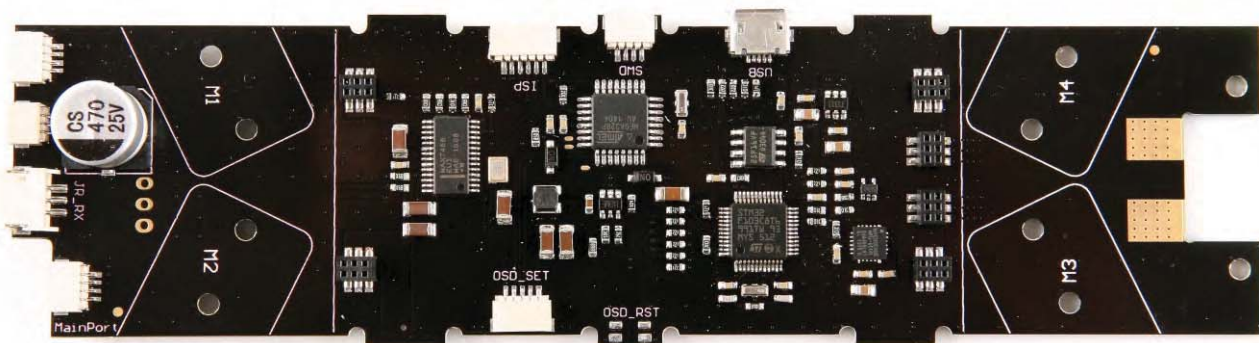
 <p>[BASIC MENU] Model-001 > < AIRCRAFT PARAMETER D/R, EXP TIMER MODEL SEL. MOTOR CUT TRAINER MODEL TYPE LOGIC SW END POINT TRIM SERVO SUB-TRIM F/S RECEIVE REVERSE AUX-CH DIGITAL RADIO CONTROL SYSTEM</p>	 <p>[MODEL TYPE] RESET:Execute TYPE: AIRCRAFT AILE-TR:ON ATL: ON BLEV-TR:ON DIGITAL RADIO CONTROL SYSTEM</p>	 <p>[BASIC MENU] Model-001 > < AIRCRAFT PARAMETER D/R, EXP TIMER MODEL SEL. MOTOR CUT TRAINER MODEL TYPE LOGIC SW END POINT TRIM SERVO SUB-TRIM F/S RECEIVE REVERSE AUX-CH DIGITAL RADIO CONTROL SYSTEM</p>	 <p>[AUX-CH] CH5 : ←Set in ATTITUDE CH6 : VrA CH7 : VrC CH8 : VrB CH9 : SwB POSI:DOWN CH10: SwA DOWN DIGITAL RADIO CONTROL SYSTEM</p>
1. Enter the MODEL TYPE	2. Choose Aircraft mode	3. Enter the AUX-CH menu	4. Set the CH5 channel to SWE



Left/right throttle unlock schematic diagram

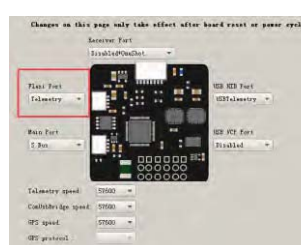
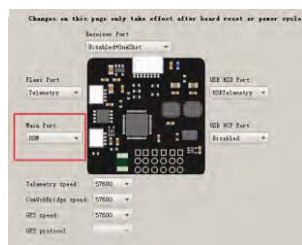
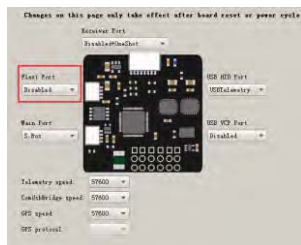
Safety-of-flight items

1. Before Take-off, please open the transmitter first, and ensure the throttle lever is in lowest point, Then on aircraft power supply, waiting for aircraft self-inspection. Blue lights flash turn intermittent flash for self-checking, Self-checking process do not moving the aircraft.
2. The throttle lever at in minimum, The rudder rocker to the right keep 3 seconds, When the blue lights flicker fast, unlock has been success, push the throttle to fly.
3. The throttle lever at in minimum, The rudder rocker to the left keep 3 seconds, When the blue light is intermittent flicker, the throttle lock success. Or wait for 30 seconds, throttle will automatic lock, For security, can gently push the throttle lever to check whether has been locked.
4. SWE switch, has set up three flight mode :
The first gear (back) normal mode
The second gear (middle) flexible mode
The third gear (forward) manual mode



Remarks

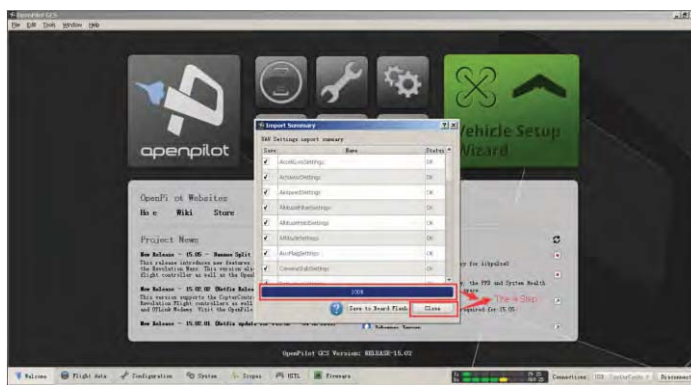
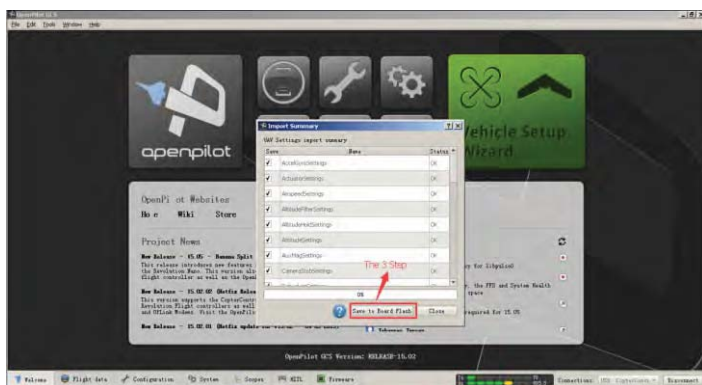
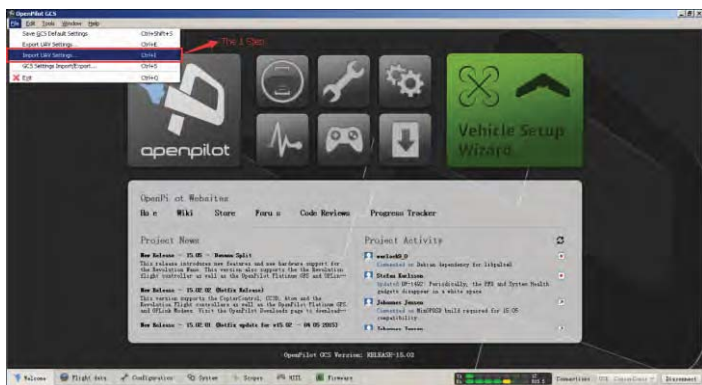
1. When using S.BUS and DSM receiver, Main port for the idle state, can't insert any other plugs.
2. OSD default is FLEXI Port, This FPV PCB plate is a built-in Flexi port, No external socket.
3. When setting the OSD parameters, need to close the FLEXI port in setting software.



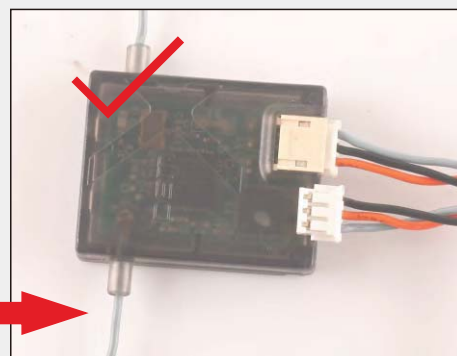
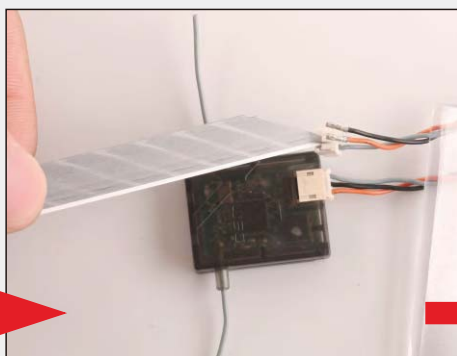
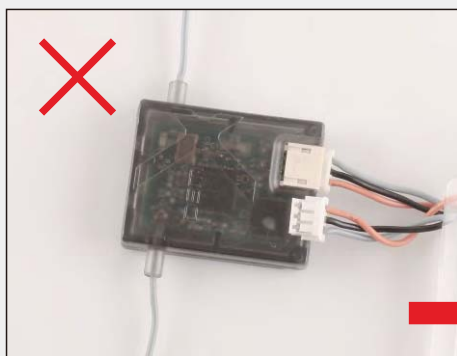
4. OSD Settings, applies only to senior enthusiasts, For beginners, do not set up on its own, because easy to damage the built-in OSD module.

CC3D restore the default parameters

1. From KDS website to download KyLin 250 AT-9 default Parameters , Connect the USB interface, Refer to below import default parameters to CC3D flight control system.
2. Import the debug parameter should be unload the propellers , to avoid the damage caused by out of control.
3. Default Parameters is AT-9 Transmitter parameters , Please adjust parameter if you need change the transmitter.
4. **CC3D software, please login website to download:**
<https://wiki.openpilot.org/display/builds/openpilot+software+downloads>



DSM2/DSMX satellite receiver change of the lines as follow

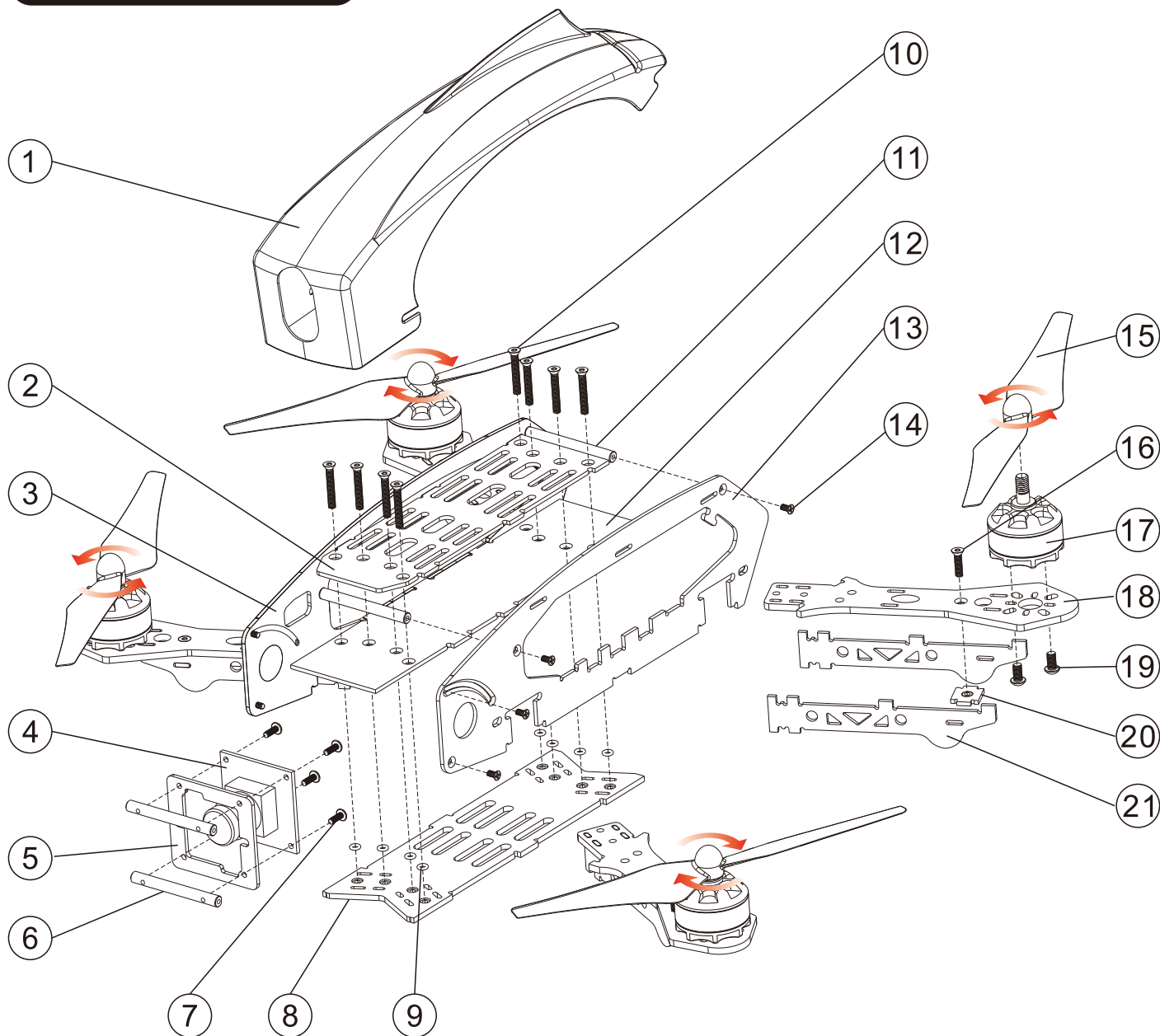


1. Correct DSM2/DSMX Satellite the wiring

2. Use a knife, pick out the black and orange lines , two lines to swapped.

3. As shown in two signal lines swapped

Breakdown Structure



No.	Part No.	Description	Quantity
1	KF-250-18	Kylin250 canopy	1
2	KF-250-13	Frame upper plate	1
3	KF-250-15	Main frame R	1
4	KF-800TVL	Camera HD 800TVL	1
5	KF-250-17	Camera plate	1
6	KF-250-17	Camera mount	2
7	KF-250-17	Round head screw(M2*6)	4
8	KF-250-14	Frame under plate	1
9		O-ring	8
10	KF-250-14	Flat head screw (M2. 5*17)	8
11	KF-250-15	Plastic main rotor holder	2

No.	Part No.	Description	Quantity
12	KF-250-10	KYLIN250 High-Integrate PCB	1
13	KF-250-15	Main frame L	1
14	KF-250-15	Flat head screw (M2*4)	8
15	5045/6045	5"/6" propeller*1 pair	2
16	KF-250-16	Flat head screw (M2. 5*10)	4
17	BL-2204-2300KV	Kylin motor 2204-2300KV	4
18	KF-250-11/12	250/280 Arms 1 pair	4
19	BL-2204-2300KV	Round head screw(M3*6)	8
20	KF-250-16	Tube arm mount	4
21	KF-250-16	Arm support plate	8

Kylin 5.8G Video Transmitter Instruction manual V1.0

Warning and disclaimer

Thank you for purchasing this product, before turning on the power must be installed antenna, otherwise may cause burning damage; Please keep the transmitter and receiver antenna visible (do not cover), otherwise the communication distance will be affected; Please according the local radio regulations, to use this product, correct selection the RF and power stipulated in the law.

Product introduction

KYLIN 5.8G Video Transmitter is working on 5.8GHz (5740- 5825MHz) in the ISM band FM video launch module, Transmitter to signal Simulated modulation and by of wireless sent to receiver, the receiver demodulation then send signals to the display terminal display. When using this product, have of 32 channels is optional, have small volume, low power consumption and high sensitivity, and more characteristics for this product. This product can be widely applied in various fields to realize wireless communication, When applied in the model aircraft activities, please install the transmitter to aircraft, and connect the receiver to display at the same time, Or used have built-in receiver display, displayed video info on the screen.

Checklists: Transmitter *1 / 5.8G antenna *1 / Cable *1

Instructions

- Step 1: please install the antenna to transmitter of KyLin.
- Step 2: please use cable connected to transmitter and video signal source; as shown below to Connect the receiver of KyLin.
- Step 3: Using of RF key Settings, KyLin receiver and transmitter work under the same channel, If the channel indicator light flashing for the same, then the transmitter and receiver work in the same channel.

Channel lights

It is ABEF+CH1-8 channel combined 32 channels As follow
 A Channel combination under have CH1-8 channels
 B Channel combination under have CH1-8 channels
 E Channel combination under have CH1-8 channels
 F Channel combination under have CH1-8 channels
 Push of a button, switch CH1-8 channels, Press the button 2 seconds long switch A, B, E, F channel combination.

SPECIFICATIONS

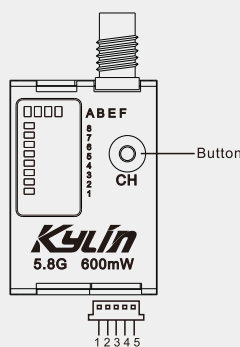
Transmission range 1-6km
 Transmitted power can be according the regulation of different areas, choose to buy. (25mw, 200mw, 600mw).
 Size: 32*22*10mm
 Weight 11.5g
 Working voltage: 3S/4S(11.1V/14.8V) Li-Po battery
DC voltage ranger: 10.0-14.8VDC
Working temperature: -30 ~ 50 C
Frequency Stability: ±20ppm

PRODUCT SPECIFICATION

Modulate		Wideband FM Modulate				
Video Format		NTCS/PAL				
Characteristics	Value	Units				
		Min.	Typ.	Max.		
1	Output impedance	---	---	---		
3	FR1 or(A)	CH1	---	5740	---	MHz
		CH2	---	5750	---	MHz
		CH3	---	5760	---	MHz
		CH4	---	5770	---	MHz
		CH5	---	5780	---	MHz
		CH6	---	5790	---	MHz
		CH7	---	5800	---	MHz
		CH8	---	5810	---	MHz
	FR2 or(B)	CH1	---	5746	---	MHz
		CH2	---	5756	---	MHz
		CH3	---	5766	---	MHz
		CH4	---	5776	---	MHz
		CH5	---	5786	---	MHz
		CH6	---	5796	---	MHz
		CH7	---	5806	---	MHz
		CH8	---	5816	---	MHz
	FR3 or(E)	CH1	---	5751	---	MHz
		CH2	---	5761	---	MHz
		CH3	---	5771	---	MHz
		CH4	---	5781	---	MHz
		CH5	---	5791	---	MHz
		CH6	---	5801	---	MHz
		CH7	---	5811	---	MHz
		CH8	---	5821	---	MHz
FR4 or(F)	CH1	---	5755	---	MHz	
	CH2	---	5765	---	MHz	
	CH3	---	5775	---	MHz	
	CH4	---	5785	---	MHz	
	CH5	---	5795	---	MHz	
	CH6	---	5805	---	MHz	
	CH7	---	5815	---	MHz	
	CH8	---	5825	---	MHz	
4	Operating Voltage	7.0	12	24	V	
5	Supply current	---	280	---	mA	
6	Operating Temperature	-10	---	+85	°C	
7	Video Band width	0	---	8.0	MHz	
8	Audio carrier Frequency	---	6.5	---	MHz	
9	Video Input Level	0.8	1.0	1.2	Vp-p	
10	Video Input Impedance	---	75	---	Ohm	
11	Audio Input Level	0.5	---	2.0	Vp-p	
12	Audio Input Impedance	---	10K	---	Ohm	
13	Weight	---	11.5	---	g	
14	Antenna Connector	RPSMA Connector				
15	Dimensions(LxWxH)	32x22x10mm				

BUTTON FUNCTION:

Discription	Function
Press the button shortly	Change channel from 1 to 8
Press the button for 2 seconds	Change frequency group A.B.E.F



Line 1:VDD_IN(7-24)
 Line 2:GND
 Line 3:VIDEO_IN
 Line 4:AUDIO_IN
 Line 5:GND

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.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.