

SPY HAWK

2.4GHz RC Series 4 channel

INSTRUCTION MANUAL



- video recording
- 3 Axis gyro autopilot system
- GPS return module

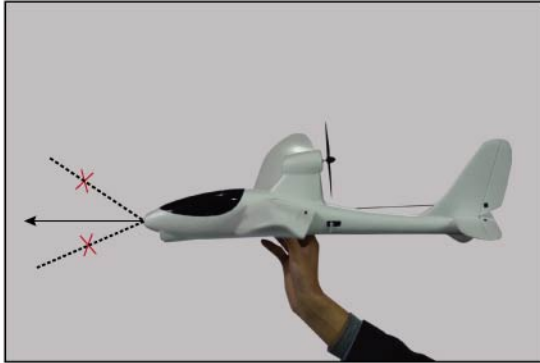


SPECIFICATIONS COLOURS AND CONTENTS MAY VARY FROM ILLUSTRATIONS.

8 How To Take Off

8.1 The direction and strength of the wind will have a great effect on your model. Always launch your aircraft into/against the direction of the wind.

8.2 Keep the aircraft horizontal (the nose pointing at the horizon) push the throttle to around 75% and gently throw.



9 Auto Pilot system

9.1 Your aircraft is equipped with a 3 Axis gyro balance system making it easier to fly and enabling the aircraft to cope with gusts of wind.

9.2 Auto pilot function can be switched ON/OFF as shown in diagram below. It is advised to switch autopilot OFF when landing where possible to preserve the life of the servos.

Minimize the throttle to zero and then press EXIT button to switch ON/OFF autopilot function.

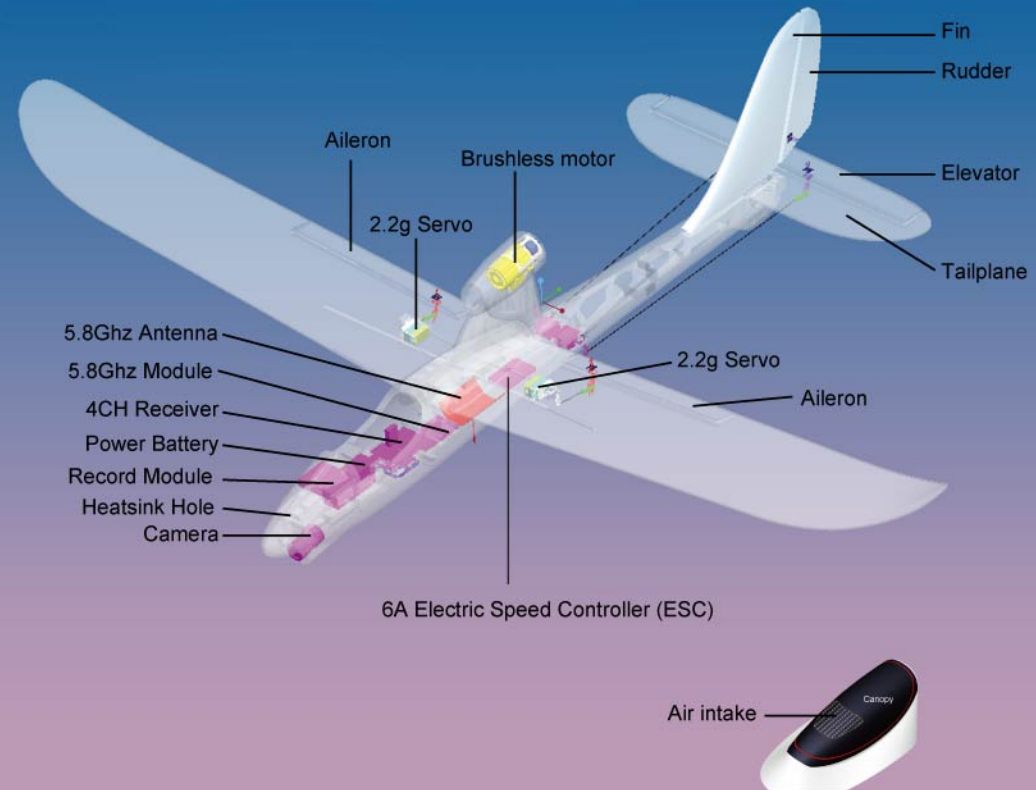


16

SPY HAWK

2.4Ghz R/C SERIES 4 CHANNEL
5.8 Ghz FPV/FIRST PERSON VIEW

H301F



1

1 Assembly Instructions

The aircraft is already 90% pre-assembled so there is little to do before flight. Please refer to the following assembly steps to assemble your aircraft.



1. At the tailplane evenly coat with adhesive white glue



2. Bond the tailplane bonding to the body firmly



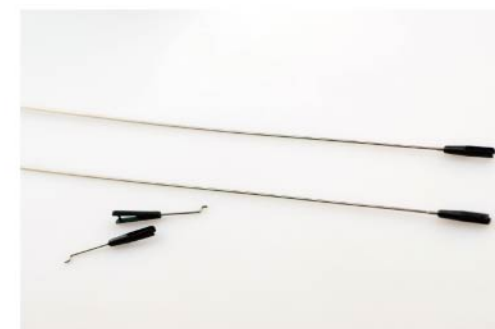
3. At the bottom of the fin evenly coat with white glue



4. Bond the fin to the body firmly



5. Adjust the fin and tailplane to a vertical 90 degree

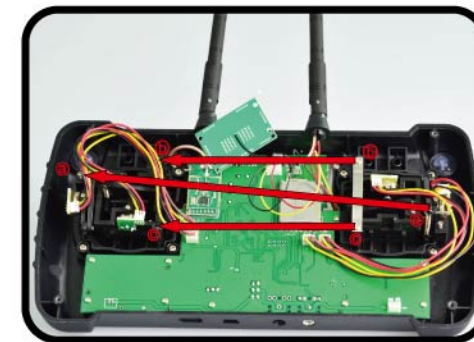


6. Prepare 2 short servo rods and 4 long servo rods

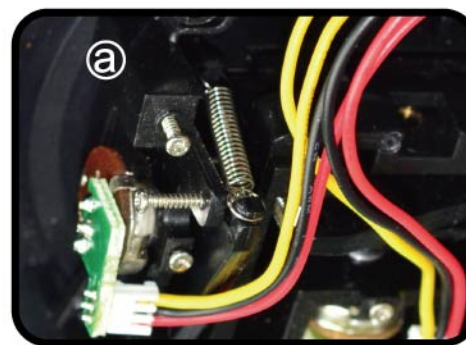
7.MODE1 AND MODE2 REVERSE SETTING



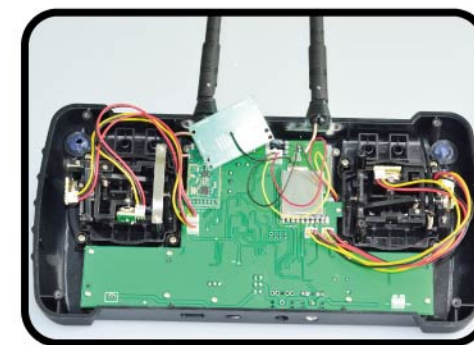
7.1. Open the cover of Transmitter by unscrewing the 4 screws as picture shows



7.2. Unscrew a,b,c screws and move screw b,c and the spring to the other side and fix it in place with screws, and test the stick to see if it has smooth movement



7.3. Important. Lift the arm and insert the screw a from left side.



7.4. Finished

7.5 Hold down ENT key for 1 Second to enter setting status. Press ENT key to enter reverse setting status. Move arrow to Stick mode with up/down key, push the move stick from up to down 6 times, the Mode 2 will change to Mode 1 automatically, Press EXT key to confirm and exit, Power on again then it will work.

5805	HUBSAN	7.7V
Setreverse	X	
Setssensitive	X	
Planetype	Helicopter	
Expertmode	Yes	
Stickmode	Mode2	

6 Video Recording

Note:

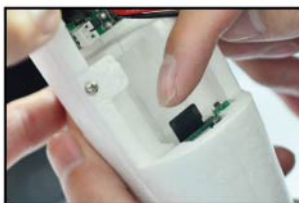
Always turn OFF the power to the aircraft before inserting or removing the SD card.

6.1 Remove the canopy to locate the SD card slot



6.2 Insert the SD card

Note: Avoid removing the SD card and re-inserting again too quickly otherwise the recording module will not work properly



6.3 The video record time will start to count when recording is started. (See methods below)



6.4 You can start/stop recording by either pressing the button next to the SD card slot on the aircraft or using the remote



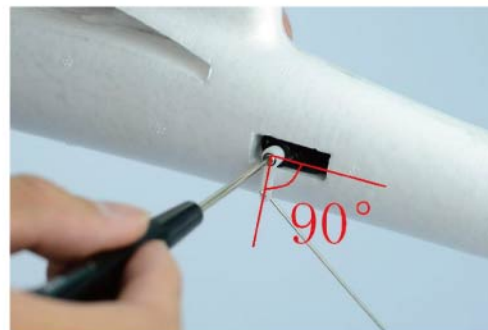
6.5 Start/Stop recording using the remote



IMPORTANT NOTE:

Try to avoid letting the airplane rest for any longer than 2 minutes, otherwise the camera module will OVERHEAT! This will result the screen on the remote going dark and poor recording pictures.

There are cooling vents on the canopy to keep the camera module below 60°C. DO NOT cover this vent or prevent the airflow into the camera compartment.



7. Screw the servo arm onto the Elevator servo, keep the servo arm vertical as picture shows



8. Connect the servo rod to the Elevator servo angle



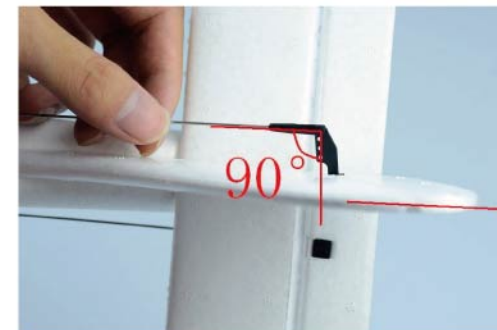
9. Adjust the servo rod and servo angle so that they are vertical



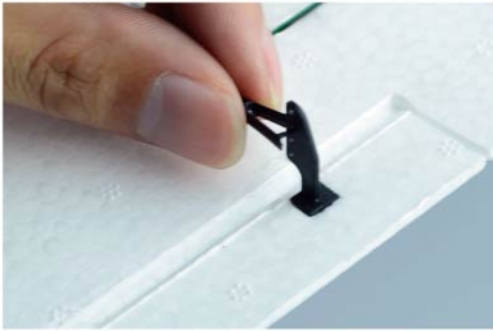
10. Keep the servo arm vertical as picture shows



11. Connect the servo rod to the Rudder servo angle



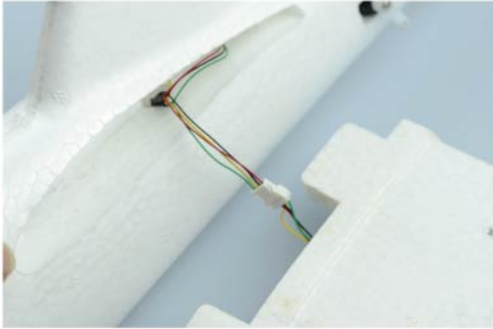
12. Adjust the servo rod and servo angle so that they are vertical



13. Connect the servo rod to the Aileron servo angle



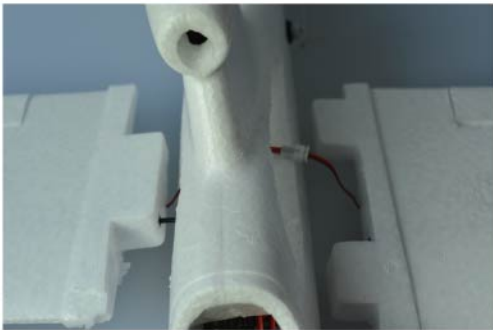
14. Adjust the servo rod and servo angle in a vertical position



15. Connect Aileron servo electrical wire on each wing



16. The two wings will meet inside the fuselage, Ensure the bolt lines up and slots together



17. Insert each wing into the fuselage, carefully avoiding trapping the Aileron servo wires as you do



18. Ensure the wings are mounted properly
NOTE: If the wings come loose after many flights, you may want to consider using a small amount of glue to hold them more securely

4 Equilibrat Instruction

4.1 When controller and aircraft are checking signal code, please keep the aeroplane motionless until the LED on receiver stops flashing.

5 Li-Po Battery Charging

5.1 The aeroplane is equipped with a LiPo battery:

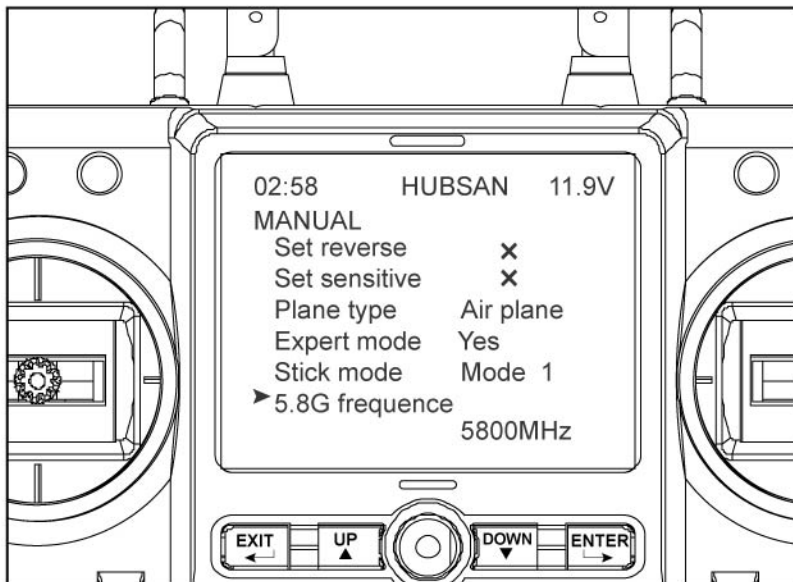
7.4V 2 Cell 450mAh x 1 unit



5.2 Connect battery to balance charger and wall charger, the two LED lights will turn red whilst charging and turn green when charging is finished.

Always partially charge your LiPo battery before storage. LiPo batteries retain a charge over a reasonable period; It is not normally necessary to recharge stored LiPo batteries unless stored for periods longer than 3-6 months.

If your LiPo battery has been over-discharged, it will not be possible to recharge it again.



Battery Mounting

Notice:

- >Do not mix old and new batteries
- >Do not mix different types of batteries
- >Do not charge non-rechargeable battery.



Open the cover



Take out the holder



According to the correct polarities, install 8 x AA battery



Insert the plug into the power jack



Return the holder back to the compartment



Fasten the screw



19. Screw the propellor onto the motor shaft paying attention to the thread direction. You may need to hold the motor axle with some small pliers to tighten it. Be careful not to bend or damage the motor axle if you do this.



20. Apply the stickers



21. Fuselage Sticker



22. Tailplane sticker



23. Install the battery



24. Minimize the throttle and power on.



25. Connect the battery

NOTE: DO NOT insert or remove the SD card while power is ON



26. Replace the canopy



27. The centre of gravity of the aircraft should be balanced. Locate the 'G' markings under the wings to test before flight



28. Move the position of the battery forward or backward to ensure the center of gravity is around the "G" point. Test this by balancing on your fingertips.

3 5.8Ghz Technical Tips.

3.1 Keep the FPV 5.8Ghz antenna pointing as straight down as you can to give you a clear video picture and avoid interference. See Fig 1 below

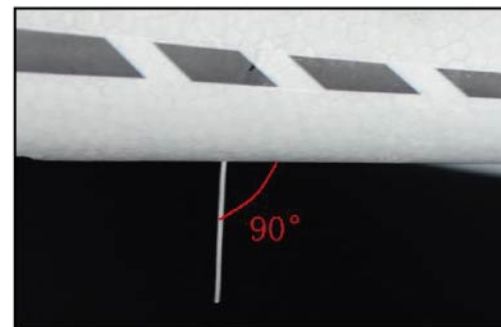


Fig 1

3.2. Live video distance is around 300-400 meters, Please keep your transmitter antenna pointing at the aeroplane to ensure you have a good signal and a clear live video picture. See Fig 2 below



Fig 2

3.3. Frequency selectable 5.8Ghz

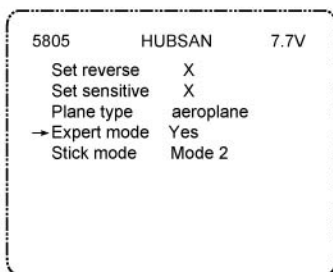
Your transmitter will find the best frequency to ensure the quality live video transmission automatically, in case there is any interference in your location, you can change 5.8Ghz from the range 5.710 to 5.920 GHz to get longer range and better video transmission.

Hold down ENTER key for 1 second to enter setting status, move arrow to **5.8G frequency** with up/down key, press ENTER key again and select the frequency you need with up/down key, hold down EXIT key for 2 seconds to confirm and exit.

2.3.1 EXPERT MODE

In expert mode, the sensitivity can be adjusted even further (up to 100) to give the user even more ability to manoeuvre the aircraft. Follow instructions below to switch this on/off.

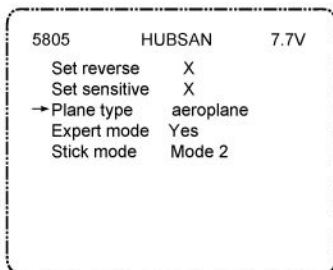
Hold the ENT key for 1 second to enter the settings menu. Move the arrow to "Expert mode" with the up/down keys. Press ENT to switch between Yes and NO for expert mode on or off.



2.4 SENSITIVITY SET UP

Your Hubsan transmitter can operate other selected aircraft types within the Hubsan range. If you should need to change the modes to fly a different model follow the instructions below.

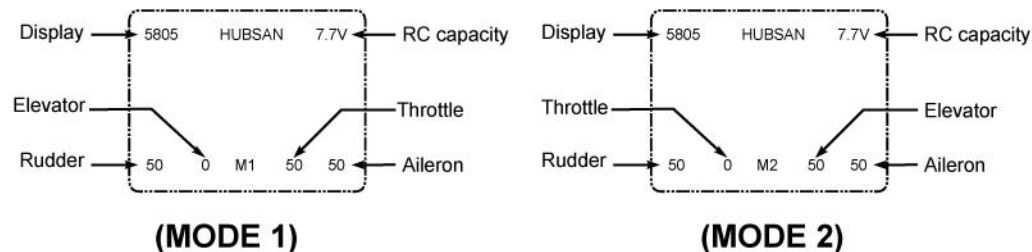
Hold the ENT key for 1 second to enter the settings menu. Move the arrow to "Plane type" with up/down keys. Press enter to switch between Aeroplane and the Helicopter. Hold the EXT key for 1 second to confirm and exit.



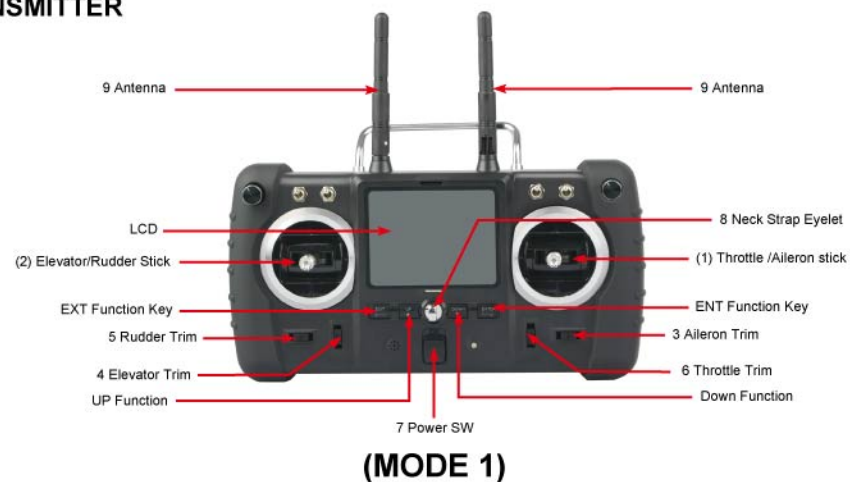
2 2.4Ghz/ 5.8Ghz Transmitter

2.1 Identification and functional keys

Main Menu



TRANSMITTER



Input Key Function

S/N	Identification	Function
1	Throttle/Rudder Stick	Forward and backward movement of the stick will make the aircraft increase or decrease speed respectively. Left and right movement of the stick makes the aircraft yaw left/right respectively.
2	Elevator/Aileron Stick	Forward and backward movement of the stick makes the aircraft nose point up/down respectively. Left and right movement of the stick makes the aircraft roll left/right to initiate a turn.
(1)	Throttle /Aileron stick	Forward and backward movement of the stick will make the aircraft increase or decrease speed respectively. Left and right movement of the stick makes the aircraft roll left/right to initiate a turn.
(2)	Elevator/Rudder Stick	Forward and backward movement of the stick makes the aircraft nose point up/down respectively. Left and right movement of the stick makes the aircraft yaw left/right respectively.
3	Aileron Trim	Aileron trim subsidiary adjusts left and right roll.
4	Elevator Trim	Elevator trim subsidiary adjusts up and down movement.
5	Rudder Trim	Rudder trim subsidiary adjusts left and right yaw.
6	Throttle Trim	Throttle trim subsidiary adjusts speed of motor.
7	Power SW	Pushing up switches on the power transmitter, pulling down switches it off.
8	Neck Strap Eyelet	For the attachment of a neck strap which eases the tension of your hands from holding the transmitter.
9	Antenna	Transmits wireless signal
10	CHG (Optional)	Can be used to charge the rechargeable battery pack (excluded) inside the transmitter (at charge current 50mA, Voltage ≤ 12V.) Notice: It is dangerous to charge a non-rechargeable battery pack via this charge port. It is dangerous to use the accompanied wall adapter as a DC power supply.
11	DSC (Optional)	Connects to the data cable of computer simulator.

2.2 Reversing channel setup

If you would like to reverse any of the stick functions due to personal preference then follow instructions below. Be aware this will change the controls back to front.

Hold the ENT key for 1 second to enter the settings menu. Move the arrow to 'Set reverse' with up/down keys. Press ENT to enter reverse settings menu. Move the arrow using the up/down keys to select the control you would like to reverse (Elevator/Aileron/Throttle/Rudder). Press ENT to switch between reverse and normal. Hold the EXT key for 1 second to confirm and exit.
Note-'Normal'is the recommended default setting.

```

5805      HUBSAN      7.7V
Set reverse  -
→Elevator  Normal
Aileron     Reverse
Throttle    Normal
Rudder     Normal
Set sensitive X
Plane type  aeroplane
Expert mode No
Stick mode  Mode 2
    
```

2.3 SENSITIVITY SET UP

If you would like to change the sensitivity of any of the stick functions then follow instructions below. A higher sensitivity will enable larger/faster movement of the aircraft, while a lower sensitivity will enable smaller/slower movement.

Hold the ENT key for 1 second to enter the settings menu. Move the arrow to 'Set sensitive' with up/down keys. Press ENT to enter sensitivity menu. From here you can use the corresponding Elevator/Aileron/Rudder trim switches to alter the value of sensitivity to each stick. Hold the EXT key for 1 second to confirm and exit.

```

5805      HUBSAN      7.7V
Set reverse  X
Set sensitive -
Elevator    40
Aileron     50
Rudder     50
Plane type  aeroplane
Expert mode No
Stick mode  Mode 2
    
```