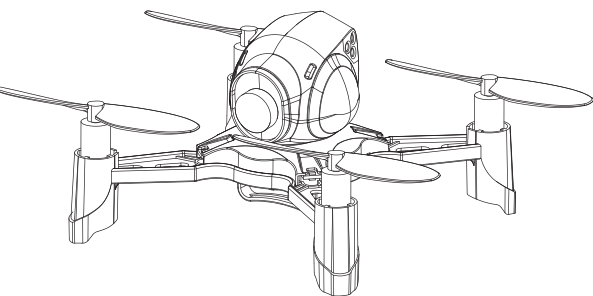# DIY RACING DRONE MANUAL

14+

Thank you for choosing our product.
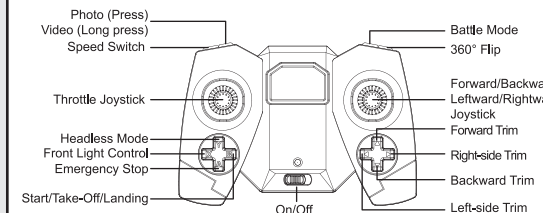Please read the manual carefully before use.

Important Notices:

1.The product adopted gyroscope technology is a four-axis drone,is able to fly in small space or out doors.This drone shows outstanding flying performance when the wind speed is less than 18 mph.

2.Radio frequency 2.4GHz is used by this drone, which enlarged the control range and make it possible to fly the drones by multipilot without any interference.The drone has four-channel basic functions:move forwards/backwards,bend left/right, turn left/right,360° flip and fight against function.

3.For safe flying,please read the manual completely before using.Package and manual should be reserved for referring.
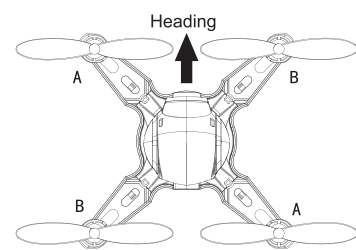

SAFETY RULES

1. In order to avoid accidents, please put all small parts of the drone away from children.
2. Push up the throttle joystick of the transmitter slowly to avoid accidentally crashing.
3. After flying, it is necessary to turn off the power of the drone and the remote controller.
4. Please do not put the battery of the drone to high-temperature, moist place (ac, etc. in fire or near to electric heating equipment).
5. Stay away from obstacles and electrical hazards.
6. Children should be guided by the adult for playing the drone, and the drone should be controlled within the sight range of the operator.
7. Non-rechargeable battery should not be charged, and please pay attention to the polarity during battery installation; do not mix the old and new batteries or types of batteries.
8. When the drone is not in used, please turn off the power of the remote controller and the drone, and take out the batteries.
9. Installing/Replacing batteries must be undertaken by a competent adult.
10, Do not directly look at the light source.

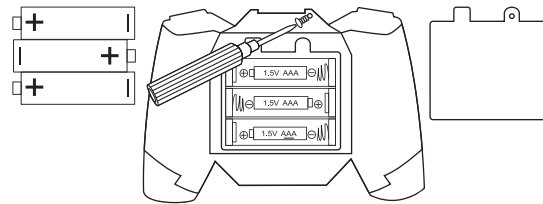### INSTALLATION INSTRUCTION FOR REMOTE CONTROLLER AND MOBILE PHONE FRAME

Photo (Press)
Video (Long press)
Speed Switch

Throttle Joystick

Headless Mode
Front Light Control
EmergeNcy Stop

Start/Take-Off/Landing
On/Off

Battle Mode
360° Flip

Forward/Backward/
Leftward/Rightward
Joystick

Forward/Backward/Rightward/
Joystick
Forward Trim
Rightward Trim
Backward Trim
Leftward Trim

Note: 'Photo' and 'Video' functions are available only in WiFi version.

Heading

A   B

B   A

Note: When setting or replacing the propellers please refer to the A/B position as pic shows.
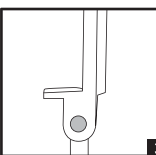

REMOTE CONTROLLER BATTERY & PHONE HOLDER INSTALLATION

Phone Holder Installation and Adjustment

1. First, push out the slot cover of the phone holder.

2. Then, insert the phone holder into the slot at the top of the remote controller to install the phone holder.
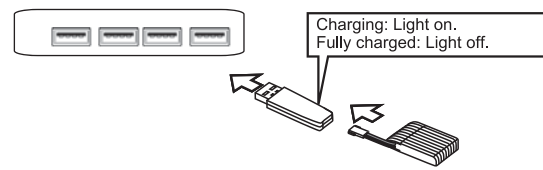
3. Adjust the phone holder for the mobile phone.

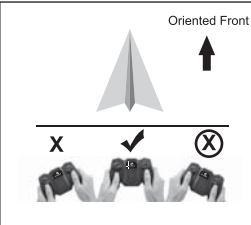Note: The phone holder is available only in WIFI version.

Drone Charging:

Pull out the battery from the drone, and then connect one end of the USB adapter wire to the USB interface of a computer and connect the other end to the battery charging socket. During charging,the USB light goes on; after fully charged, the USB light goes off.
It typically takes up to 60 minutes to fully charge the battery from empty.

Charging: Light on.
Fully charged: Light off.

HEADLESS MODE

★ Activate the headless mode:
When you activate the headless mode, the onboard flight computer aligns the drone movements to be corresponding to the user. In headless mode,the drones front direction is aligned to the drone co ntroller, you don't need to worry about the direction the drone is facing.Press head less mode button to activate it and the lights start blinking.
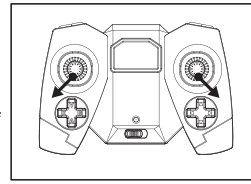
★ Exit the headless mode:
press the headless mode button once again to exit the headless mode.

As the figure shown in above, under the headless mode, whichever direction you saw it, the drone moves comparable to your direction, or the direction of the drone controller.
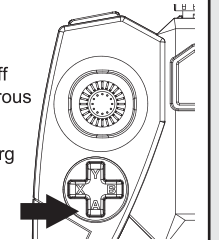
CALIBRATION

★ The drone can sometimes not respond to the trim adjustments you make if it has experienced numerous crashes against hard objects, In this situation, a recalibration of the drone's 6-axis gyro sensor is required. This procedure will usually correct a consistent drifting problem & altitude holding problem.
Hold the controller's joysticks in this position (as pic,) until the drone's status lights blink rapidly. Wait a few seconds for the calibration process to finish. Once the lights glow solid, you're ready to a perfect flight again.

EMERGENCY STOP

★ Emergency stop:
Press emergency stop button (A) will cut off motors' power supply. It may cause dangerous like crashes on person.

Only stop the flying drone when it's in emergency situation for it may cause crashes.
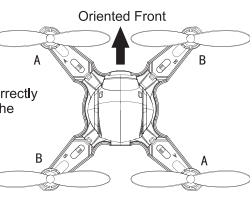

PROPS INSTALLATION

If the propeller of the drone is damaged or destroied, you can replace it with the blades provided in the accessory package.

The propeller of the drone should be installed correctly according to the letters carved in the blade and the positions indicated in the figure,

Blades installation: hold the top of the propeller, align to the rotor and press, to the end.

NOTICE FOR TAKE-OFF

1: Match the frequency

Insert the battery plug into the power socket of the drone and turn on the power switch of the remote controller; after the drone LED light blinks quickly, push the left operating stick of the remote controller to the highest point and then pull to the lowest point; after the remote controller sends a "beep" sound, the frequency matching is finished and the drone LED light becomes steady.

2: Calibration

Please refer to calibration section.
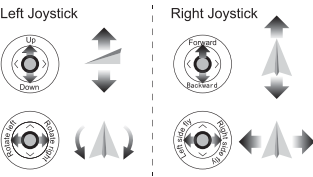Note: It is suggested to calibrate the drone before take-off!

3: Low Battery Alarm

The drone LED light blinks when it's poor of power and the drone should be stopped and charged. Please fly the drone after fully charge.
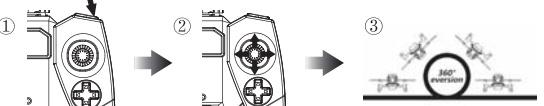
OPERATING METHOD

1: Basic Operation

The default mode of the remote controller is "American Hand"mode,The left joystick is used to control the flying height and direction,and the right joystick is used to control the drone to move forwards/backwards and left/right side-by.

Left Joystick   Right Joystick

2: 360° Flip

Fly the drone at least 3m from the floor,, Press the 360° flip button and push the right joystick to select the direction for roll forwards, backwards, leftwards and rightwards. The drone will do a 360° flip action according to the direction you chosen.
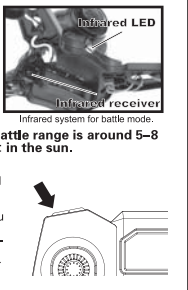

3: Battle Mode

Being shot at the first time, the drone hovers around a circle and the light goes blinking.
Being shot at the second time, the drone hovers around two circles and the light goes blinking.
Being shot at the third time, the drone hovers around three circles and the light goes blinking.
After being shot the fourth time, the drone slowly lands to the ground; then the motors stop and the light glow solid, The drone can fly again by restarting.
Note: Need two drones to activate battle mode, and the battle range is around 5–8 meters,The battle distance will be getting short when fight in the sun.

4: High/Mid/Low Speed Switch

When you first connect to your drone, it will automatically be in speed 1 mode, That is the lowest speed and perfect for indoor flying, Press the speed switch button to change the speed,
The transmitter will make sounds to let you know which speed gear you chosen, One short beep for speed 1, two short beeps for speed 2 and three beeps for speed 3 which is the highest speed and is great for outdoor flying,
Learn to fly at the lowest speed, and then increase the speed rate after you've mastered all flying skills,
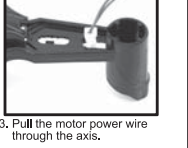
ASSEMBLING

1. Install the flight controller (power LED) in the main body correctly.
(power socket should be put into the place which has the "+" sign)

2. Install the top cover,
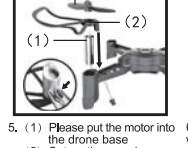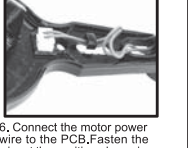
3. Pull the motor power wire through the axis,

4. Put the motor into the sleeve note that the red and blue wire should put into the red socket,the black and white put into the white socket,
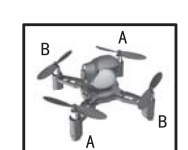
5. （1）Please put the motor into the PCB,Fasten the screw
（2） Set up the guard
（3） Set up the propeller

5, Connect the motor power wire at the position shows in the picture,

6,Connect the power supply at the head of the drone to the PCB, and install to the main body,

7,Install the propellers to the right motor as pic, shows.

8,Connect the power supply at the head of the drone to the PCB, and install to the main body,

9,Install the drone,s battery into the battery holder,

10, Connect the battery power supply to the drone and finish the assembly,

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Package Contents

1. Motor	X4	2. Propeller	X8
3. Main Body	X1	4. Main PCB	X1
5. Manual	X1	6. USB Adapter	X1
7. Phone Holder (only for WIFI version)	X1	8. Battery	X1
9. Camera	X1	10. Remote Controller	X1
11. Propeller puller tool	X1		
12, Guard	X4 (Buy separately)		

*: Common version excludes the camera PCB.

NOTICE

● Keep far enough from the flying drone to avoid accidents.
● Please do not look at the light beam directly.
● The drone will not take off when out of power, Also, lack of power will shorten the control distance.
● Please do not fly the drone In case of damage or distortion. Get it repaired immediately.
● Please take out the batteries of the remote controller and the drone to avoid product damage caused by battery leakage.
● Avoid crashing and impacting.

Tips   During flight, it is normal for the drone to go off-course slightly,But if it drifts constantly without any input from the controller sticks, you have to adjust the trim controls to compensate for the drifting,

ATTENTION:
When the drone is 30 centimeter away from the ground or the ceiling, the drone may become unstable due to the influence of the airflow caused by the propellers.

NOTICE FOR USE OF LITHIUM BATTERY

● During use, the lithium battery has certain risk and may cause significant personal or property loss.
The user should independently bear relevant responsibility; the manufacturer and the distributor will not control the use (charging, discharging, storage, etc.) of the battery, or bear any responsibility for the personal or property loss.
● In case of battery leakage, please prevent the liquid from contacting skin or eyes. In case of skin contact, please wash the skin immediately with fancy soap and clean water; in case of eye contact; please wash the eye immediately with cold water and seek for medical treatment.
● In case the charger has abnormal smell, noise or smoke, please cut off the power supply immediately.
● Please strictly abide by the following requirement; or else, there will be fire, electric shock or explosion.

Adapter and charging
● Only the original recommended charger can be used for the model; the charger is not a model. Before cleaning, the model should be disconnected with the charger.
● Please do not charge or use the inflated, leaking or damaged battery.
● Please do not excessively charge the battery. After the battery is fully charged, please pull out the charger. After charging; please do not recharge the battery to avoid overheating.
● Please do not charge near any inflammable or on the surface of any inflammable (carpet, wood floor, solid wood furniture, etc.) or conductive object, and observe the battery at any time.
● Please do not charge the hot battery immediately after charge.
● The battery temperature should be between 0℃ and 40℃.
● When the battery is not charged, please pull out the charger.

Use and Storage
● It is forbidden to use the battery with damaged plastic package.
● During use, please do not insert or take out the battery.
● Please prevent the battery from bearing excessive physical impact.
● It is forbidden to use the inflated, leaking or damaged battery, or the battery with abnormal smell.
● Children are forbidden to touch the battery.
● Please do not put the battery in fire, in rain or at moist place, and prevent it from contacting liquid.
● Please do not put the battery in microwave oven or pressure tank.
● Please do not disassemble, drill, distort, cut or knock the battery, or put heavy object on the battery or the charger.
● Please do not clean the battery with solvent, industrial alcohol or any other flammable solvent.
● Please avoid short circuit or direct contact with the electrolyte in the battery, wherein the electrolyte and the electrolyte steam are harmful to human body.
● Please store the product under room temperature, do not put the product under extreme temperature, and avoid the significant temperature change at the product storage place,
● Please do not put the product near the heating source.
● If the drone is not used for a long period of time, please take out the battery.

Recycle
● Please dispose the product as daily garbage. The damaged or unusable battery should be put in the container for specified use,
● The product is composed of electronic component and battery,Please follow the special requirement to dispose the electronics garbage.
● Please well understand local centralized garbage treatment method.

WiFi connection instructions

Apple System (IOS) and Android phone software WiFi connection steps and use.

1. Download and install the software

Users please go to the apple Store (APP Store) to search the Racing FPV , download and install, Or simply scan the qr code
(figure 1) to download and install.

2.The WiFi connection

1. Connect aircraft power supply.
2. Enter the iPhone or the Settings, the WiFi options found in the device name of wi-fi and connect, "tick", said the connection is successful, after the completion of the return.
3. On the iPhone or the open soft Racing FPV, after clicking on the icon to enter the control interface. (as far as possible when flying away from other WiFi signal source environment)

1. Android system to download and install the software

Foreign users in the Google Play to search the Racing FPV download and install, or scan qr code to download and install (figure 2),
Domestic users in 360 mobile phone assistant search Racing FPV download and install, or scan qr code to download and install (figure 3).

2, The WiFi connection

1. Connect aircraft power supply.
2. Enter the iPhone or the Settings, the WiFi option to find the device Wi-Fi name and connect, there "tick" that the connection is successful, complete the set out after the option.
3. In the Android phone to open the software Racing FPV, click on the icon to enter the control interface.
(Try to stay away from other WiFi signal source environment)

IOS APP   Android APP   安卓 APP

figure 1   figure 2   figure 3

Specific instructions please refer to the instructions.

Start the interface

Click this button to enter function setting

Control interface description