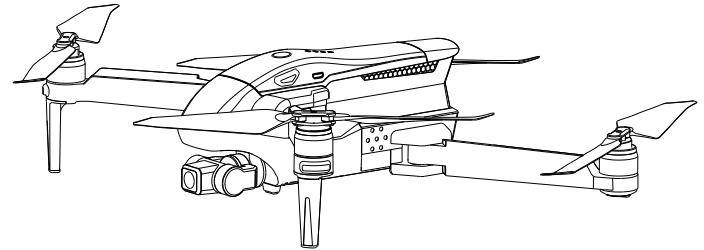


# X20

## Instructions

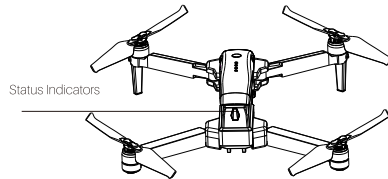
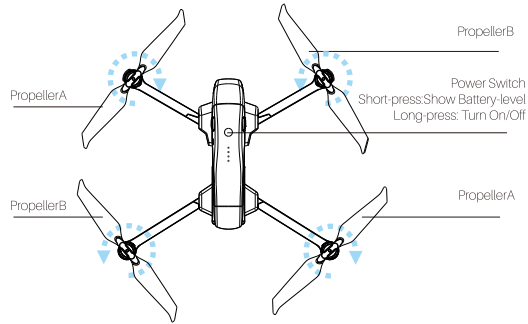
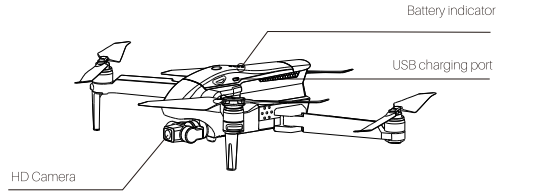


**English**

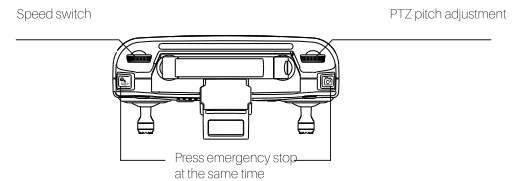
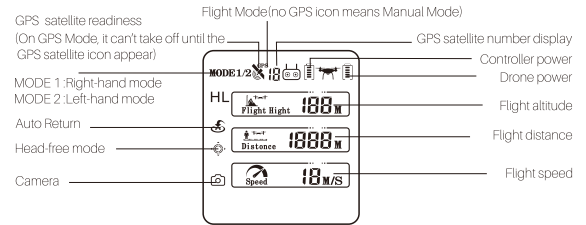
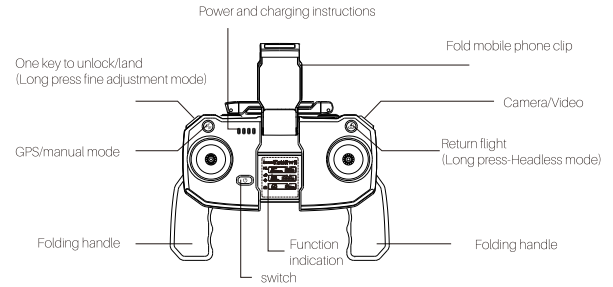
01 - 20



## 1.0 DRONE'S DETAILS



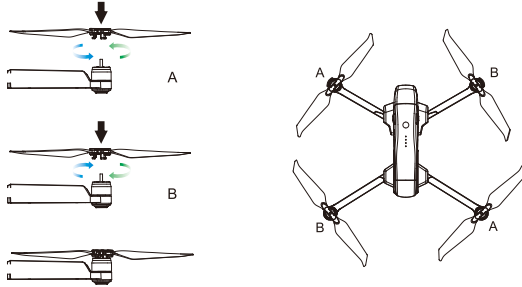
## 2.0 TRANSMITTER DETAILS



Note! Do not press emergency stop in non-emergency state while flying.

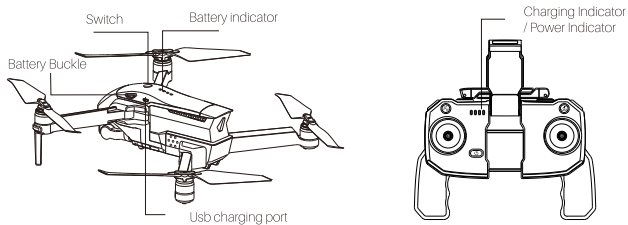
### 3.0 PROPELLER INSTALLATION

1. Distinguish the position of the A or B blade corresponding to the aircraft according to the illustration.
2. Align the blades with the motor shaft on the aircraft and press down to the end, and then rotate it into place to let the blades snap onto the motor base (A propeller rotates counterclockwise, B propeller rotates clockwise).

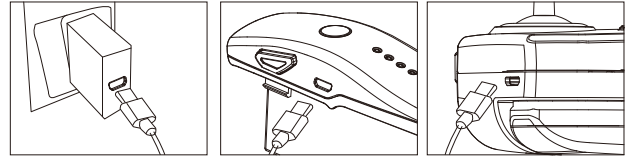


### 4.0 CHARGING BATTERIES

1. The best temperature range of charging temperature is 5-40 degrees.
  2. Please use mobile phone charger with output voltage above 5V.15A.
  3. The power indicator flashes during charging, the level of battery corresponds to the number of flashing lights.
- When all lights are on and stop flashing, meaning the charging is completed. When power on, all lights of power indicator light up.
4. The charging indicator lights up when the remote controller, once it finishes charging, the lights go out.



ⓘ Do NOT turn on the power without removing the PTZ protector.



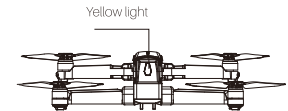
#### ⓘ Note

All instructions and warnings must be strictly followed. Improper handling of LiPo batteries may cause fire, personal injury or property damage.

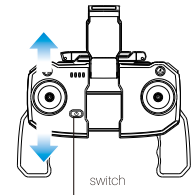
1. Please do not exceed the recommended charging voltage and current. If the battery starts to swell under any circumstances, stop using it immediately. Failure to do so may result in fire.
2. If the battery is severely deformed or broken due to improper operation, stop using it immediately. Failure to do so may result in fire.
3. Do not put the battery into fire or heat the battery.
4. The battery must be stored at room temperature and dry place.
5. Do not store the battery in or in direct sunlight.
6. Do not pierce the battery case with a sharp object and avoid hitting the battery.
7. Do not use a nickel-cadmium or nickel-metal hydride battery charger. Rechargeable battery charge with an incompatible charger may cause a fire.

### 5.0 Remote control and aircraft binding

1. Put the battery into the aircraft, place it on a level ground, and turn on the power of the aircraft. At this time, the aircraft will automatically enter the frequency-matching state, and the aircraft's taillight flash.

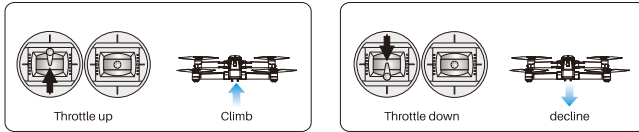


2. Turn on the remote control and hear a drip, the left-hand throttle stick is pushed up to the top and then pulled down to low, the remote control makes a beep again, the frequency is successful, the tail indicator of the drone turns red and green lights alternate Flashing, enter the star search state.

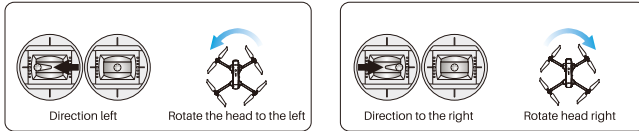


## 6.0 First flight command Aircraft operation method:

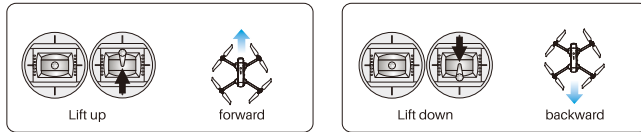
accelerator



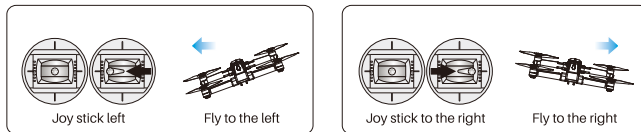
direction



Lift



direction



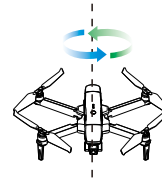
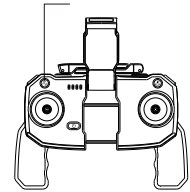
## 7.0 AIRCRAFT TAILLIGHT STATUS INDICATION

Attitude mode	LED lights	Instructions
Manual mode		Yellow light is always on
Satellite signal searching		Alternating red and green, waiting for satellite status
Satellite signal searching done		The taillights flash slowly in green
Return flight		Red light, return mode
A low-level electricity		The red light flashes slowly
Secondary low electricity		The red light flashes automatically to land
Headless mode		Yellow light flashes slowly

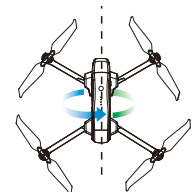
## 8.0 CALIBRATION MAGNETIC SENSOR

- Long press the mode button, the remote controller beeps and the aircraft's taillight is solid red, starting the calibration.
- The aircraft rotates 360 degrees horizontally to calibrate the X axis. After the aircraft lights green, the axis calibration completes the aircraft head rotating 360 degrees upward.
- After the aircraft's rear lights return to the state of green light flashing slowly (with stars) or red light green lights alternately flashing slowly (search for stars), calibration is completed.

Long press the mode key



X-axis calibration,  
aircraft horizontal rotation



Y-axis calibration,  
aircraft horizontal rotation

## 9.0 LOWELECTRICITY RETURN ANDELECTRONIC FENCE

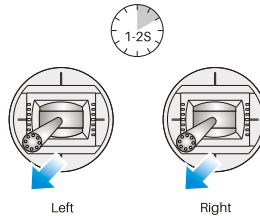
1. The aircraft is equipped with an electronic fence. When it is fully charged or does not enter low-power protection, the maximum flight distance is 500 meters and the maximum altitude is 200 meters.
2. When the aircraft enters the first low-voltage, it will return to the distance within a radius of 50 meters, the height dropped to 20 meters, if the aircraft does not exceed the electronic fence, it will not enter the return flight.
3. The aircraft can still be controlled autonomously in the electronic fence, but cannot enter the following flight modes such as following, orbiting, and waypoint planning.
4. When the aircraft enters the secondary low-voltage in the electronic fence and will land in place.

### ① Attention:

The aircraft enters the low electric return flight, even in the electronic fence also must land as soon as possible, in order to avoid the battery the over-discharge phenomenon.

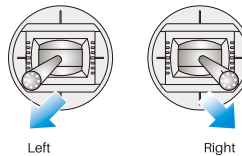
## 10. GYROSCOPE CALIBRATION

1. Protect frame, the flight attitude can be corrected by horizontal calibration.
2. As shown in the figure: move the left and right rockers to the lower left corner simultaneously for 1-2 seconds. At this time, the aircraft's indicator flashes rapidly and the aircraft enters horizontal calibration. When the taillights of the aircraft flash, indicating the horizontal calibration is completed.



## 11. Start your first flight

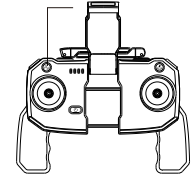
1. Place the connected aircraft horizontally on the ground ensure that the tail of the aircraft is facing you and the head of aircraft is at the front.
2. As shown in the figure, at the same time, move the joystick to the lower left corner and the lower right corner respectively, and the motor starts. Again, as shown in the figure, the rocker is used to emergency close the motor.



## 12. MANUAL CONTROL MODE

When flying in GPS mode, it is impossible to control the circle drawn on the spot, and the forward does not go straight, the aircraft is flying in one direction quickly, and the geomagnetism is interfered. Please press the remote control GPS/manual mode to exit the GPS mode and enter the manual mode. At this time, the tail light turns yellow, manually lower the aircraft, and recalibrate the geomagnetic field before taking off.

GPS/manual mode



## 13. One button unlock / One key landing

The remote control and the aircraft are successfully matched, and the search star is completed. The aircraft is in the safe flight state of the GPS. Press and hold the unlock/landing button to hear the drop button. At this time, the aircraft is automatically unlocked and then the throttle can be pushed off. During the flight, long press the unlock/landing button, and when the button is released, the aircraft automatically enters the landing. After landing on the ground, the throttle stick pushes up the aircraft to release a key drop.

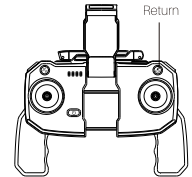
One key to unlock/land



## 14. One-key return

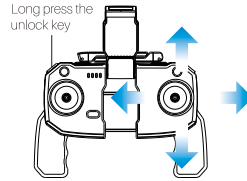
1. The aircraft leaves 20 meters from the take-off position. Press the one-key home button.
2. The red light of the tail light of the aircraft is always on. When the height of the aircraft is less than 20 meters, it will climb to 20 meters and begin to return home. If the height is greater than 20 meters, enter the return flight directly.
3. The aircraft returns to the take-off position and hovers after a little hovering. After landing on the ground, the motor turns off automatically.

Return



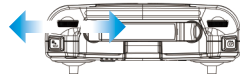
### 15. Fine tuning mode

Long press a key to unlock/land the button and enter the fine-tuning mode. By playing the front/rear/left-right fly sticks, you can fine-tune the aircraft's front-back, left-right, and side-flying offset. Release the button to resume normal mode.



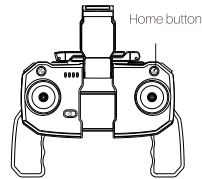
### 16. Speed mode

Adjust the flight speed of the aircraft through the speed adjustment wheel of the remote control. The first and second gears are suitable for aerial photography. The third gear is a sports mode and is not suitable for aerial photography.



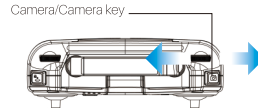
### 17. Remote control left and right hand conversion

Switching left and right-hand mode when the remote controller is off, press and hold the home button of the remote controller, and then turn on the power switch of the remote controller to switch between left and right-hand mode.



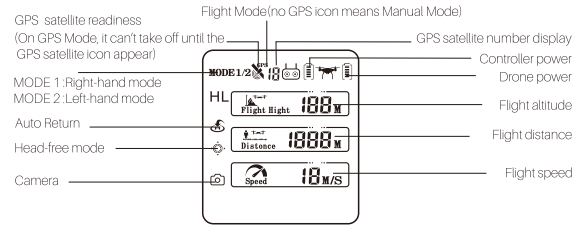
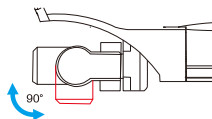
### 18. Camera/Video

The drone can be installed with an SD card. The maximum support is 128G memory card. Please use a high-speed memory card. Short press the camera according to the long press, or you can operate on the APP.



### 19. PTZ pitch adjustment

Adjust the gimbal lens through the gimbal pitch adjustment wheel of the remote control, adjustable from 0-90 degrees.



1. When the battery icon " " is shown on the LCD screen or the APP, and the red lights of the taillight flash slowly, it indicates that the battery is nearly low voltage. In this situation, the aircraft will return automatically unless the flight distance is within 50 meters.
2. When the battery icon " " is shown on the LCD screen or the APP, and the red lights of the taillight flash rapidly, it indicates that the battery is low voltage. In this situation, the aircraft will fallback automatically, and the motor will stop spinning afterwards.

### PRECAUTIONS

- This product is not a toy, please read the manual for the first time or guide the person who has flight experience.
- The propeller must be installed correctly, otherwise the aircraft cannot fly.
- Re-calibration of the magnetic sensor is required to replace the new site.
- When there is no GPS signal or manual mode, the automatic return operation cannot be performed. If there is a secondary low-voltage alarm, please fly the aircraft towards you as soon as possible and land.
- Propeller damage will affect flight, please replace it in time.

## 20. Warning for Android:

Because each Android phone uses a different 5G module, resulting in a large difference in distance, some mobile phones have a difficult transmission distance of 500 meters. There were no 5G modules in individual mobile phones and it was not possible to connect to the aircraft's 5G WIFI. We suggest replacing smartphones launched after 2017.

## 21. APP Operation Instructions

Scan QR code to download and install control software for iPhone and Android Phone.



Google Play/ App Store

Be sure to scan QR code to watch video before operation.



Operation Instruction Video

## 22. Instructions

### 22.1 Connect to WIFI

Turn on the wifi hotspot of the mobile phone, search for the name of the wifi hotspot at the beginning of "SIMREX-X20" and connect it, and then open the control software. At this time, the mobile phone can be clipped on the mobile phone holder for image transmission, and can also directly control the aircraft. (In GPS mode, the GPS can only be used to control the aircraft.)

### 22.2 Control interface diagram

Drone status

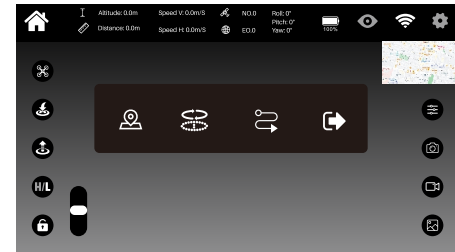
Drone status: Altitude: 0.0m, Distance: 0.0m, Speed V: 0.0m/s, Speed H: 0.0m/s, R.G.O, E.G.O, Roll: 0°, Pitch: 0°, Yaw: 0°, 100%

Control interface elements:

- H: 0.0m Flight height
- D: 0.0m Flight distance
- S: 0.0m/s Horizontal speed
- V: 0.0m/s Vertical speed
- PTZ Viewing Angle Adjustment

Control icons and functions:

- return
- Flight mode
- Camera settings
- Aircraft parameter settings
- Number of GPS
- One-key return
- Taking pictures
- Waypoint planning
- Aircraft power
- one key to take off/landing
- Taking video
- Points of around
- Joystick hide/show
- H/L High speed / low speed switching
- Photo Gallery
- Follow
- WIFI Signal strength
- Unlock/Lock
- MV
- Exit mode
- T-Flash





Before taking off, please understand the meaning of each button operation and check the aircraft battery voltage flight.

Click the unlock button, the button turns red, and the aircraft starts to idle. Click again then it lock and stop moving.

This key is a Rudder volinme button, L red is 80% Rudder volinme H red is 100% Rudder volinme.

After unlocking, press this button to take off, the aircraft automaticallyclimbs to a height of about 1.5 meters and hover.

The arrow points daon as the button of one key landing, and the aircraft automatically lands.

Press this key to return to the takeoff point.

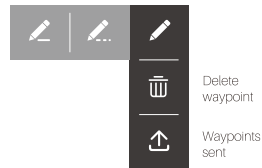
Click to enter the multi-function flight mode, you can choose waypoint planning, follow, points of interest around , click to exit the multi-function flight mode.

### • Waypoint planning mode:

Click to enter the multi-function flightmode, click the to enter the waypoint planning, APP from the image transmission mode to the map mode,then havea waypoint setting dialog box, the waypoint planning setting fence for the mobile phonecoordinates 120 A radius of meters beyond the distance will limit access. The blue point on the map is the coordinate position of the controller and therep point is the coordinate position of the aircraft, and the scale of the mapcan be enlarged or reduced as needed.



Waypoint Multi-flight Pointing flight



### • Pointing flight:

Click the pointing flight icon to enter the pointing flight,mode click on the current map to select the aircraft pointing arrival position, and click to send the waypoint command, and the aircraft will immediately fly to the pointed waypoint and hover. Click the button to delete the current waypoint.

### • Multi-task execution

Click to enter the multi-point flight mode, set multiple waypoints on the APP interface, and click to send the waypoint command. The aircraft will be executed one by one in the order of the waypoints. After the aircraft performs the last waypoint, it will return to the waypoint before planning. position. Press the button to delete the current waypoint.



### • Follow me mode:

to enter the multi-function mode, select to enter the fellow me mode, the head asrcraft face to operator (WiFi connected mobile phone), the aircraft to moving follow operator. Click 3 to exit the follow mode.

### • Points of interest surround mode:

to enter the multi-function flight mode, click to enter the point of interest around, the aircraft centered on the current position, automatically moves a distance to the radius, aileron joystick to choose left or right rotation, front and rear rocker control flight Radius, click to exit the point of interest surround mode.

### • Aircraft Calibrated Accelerometer:

Used to calibrate the installation error of the aircraft, which is helpful for flight stability. Please make sure the aircraft is placed horizontally during calibration. Click to enter the aircraft settings and click to enter the calibration accelerometer. At this time, the aircraft four-point indicator will flash fast. After the corner lights flash, the APP interface exits the acceleration calibration and the calibration is completed. Keep the aircraft stationary during the calibration.

### ● Aircraft calibration geomagnetism:

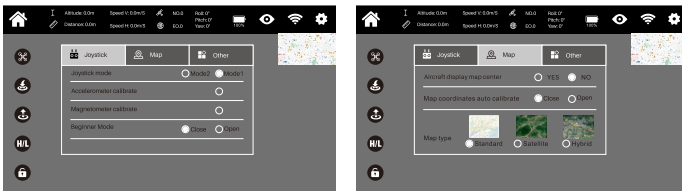
It is recommended to calibrate geomagnetism for the first flight. Calibration geomagnetism can make the aircraft return home more accurately. Calibration geomagnetism should be operated in a relatively open field outdoors. Do NOT calibrate indoors, close to high voltage lines, iron ore, or metal surroundings. Click "⚙️" to enter the aircraft settings, and choose the geomagnetic calibration, the taillight will be solid red. The APP prompts to calibrate the X axis, at this time, the corner lights flash rapidly, the aircraft rotates horizontally and the front light is always on, after the X axis calibration is completed, the lights are solid green. Then enter the Y axis calibration, the front light is still on and the taillight flashes slowly. Rotating the aircraft's nose vertically and wait until the taillight is on, and the Y axis calibration is completed, the lights flash red and green alternatively. Then exit the calibration interface on the APP.

### ● Novice mode:

The novice mode is set for players who are new to GPS aircraft.

### ● Factory default novice mode:

In this mode, the geomagnetism must be calibrated for each flight before taking off. The APP will pop up and show the geomagnetism calibration interface and complete the calibration by following the instructions. The flight distance is limited to 500 meters, and the flight altitude is limited to 120 meters. After the novice mode is off, the frequency of geomagnetism calibration is changed to every 5 times flying and turn on the novice mode by default, and the flight distance is not limited. When the power is lower than 50%, the aircraft is forced to return when 500 meters away and 120 meters high.

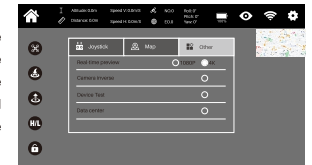


## 23. Common problems and solutions

Common problems	solutions
The remote control can not control the drone, the yellow light of the tail light of the drone flashes	The UAV is not aligned properly, please refer to page 5 of the manual for re-alignment
WiFi cannot be connected, no picture on the phone	Restart the drone
The plane can't take off with good frequency	1 The aircraft default GPS mode, no GPS limit takeoff 2 Please switch to manual mode for indoor flight, please refer to page 11 of the manual 3 After satisfying the flight conditions, you must unlock to take off, please refer to page 11 of the manual.
APP cannot control flight	APP control must be in GPS mode and GPS satellites have been found, but cannot be controlled in manual mode
TF card cannot record video	Please use a high-speed TF card, format the card before using the card speed above C10

## 24. Flight Data Center

Open the start interface of the APP and click the icon in the upper right corner to enter the flight data center. In the data center, you can view the flight data. When the aircraft is out of control, lost, or bombed, you can send the data file of the data to us. We can According to the data, understand the cause of the aircraft failure.



## 25. Recovery of the aircraft

When the aircraft is out of control and lost, you can retrieve the aircraft through the map function on the APP. The red dot on the map is the last position of the aircraft, and the blue dot is the location of the mobile phone. Find the plane quickly. When the point on the phone coincides with the point on the aircraft, this position is probably the position where the plane was last disconnected from the phone, which will help us find the plane long.



## 26. Flight safety precautions

Before the flight, please know safety precautions first, familiarize yourself with your aircraft and then operate.

1. This is not a toy and it is not for children under 14 years old.
2. Do not touch the rotating propeller, it may cause injury.
3. Please take a safe distance from your aircraft during the first flight to avoid damage caused by improper operation.
4. Do not fly near crowds.
5. Do not fly when the weather is bad.
6. Please keep the aircraft in sight, away from obstacles, high-voltage lines, trees, water, etc.
7. Do not fly in the relevant laws or restricted no-fly zones.
8. Do not fly within the Arctic Circle.
9. Do not fly in a place where the electromagnetic environment is complicated, such as a base station or a transmission tower light. Otherwise, the GPS signal may be weak or the remote control may be disturbed, causing the aircraft to become inoperable.

### ⓘ Caveat:

Keep a safe distance from the propeller that rotates at high speed to avoid the risk of streaking and cutting.

### Tips!

The video recorded in SD is best played on the computer.



Fly in Open Areas



Strong GPS Signal



Maintain Line of Sight



Fly Below 400 feet (120m)

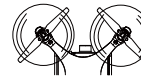


Avoid flying over or near obstacles, crowds, high voltage power lines, trees, airport or bodise of water.

DO NOT fly near strong electromagnetic sources such as power lines and base stions as it mat affect the onboard compass.



DO NOT use the drone in adverse weather conditions such as rain, snow, fog and wind speeds exceeding 10m/s or 22 mph.




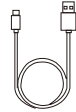




No Fly Zone

Stay away from the rotating propellers and motors



It's important to understand basic flight guidelines, for the safety of both you and those around you. Don't forget to read the Safety Guidelines before flight.

## 27. Machine packing list

Aircraft		1
USB charging cable		1
Remote control		1
lithium battery		1
propeller		8
Phillips screwdriver		1

## 28. Specifications

specification	parameter
Product Size	Diagonal wheelbase 345mm
Flight weight	About 569g
Flight time	About 30 minutes
lithium battery	1
Battery parameters	11.4V 3000mAh
Flight distance	About 500 meters
Flight height	About 200 meters