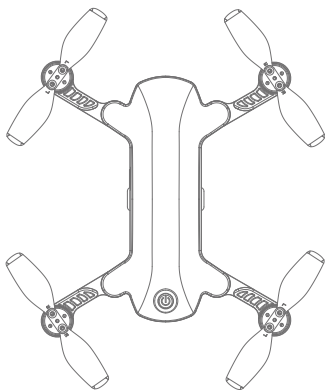


Fairy Drone

User Manual



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NOTICE

In order to fly safely and responsibly, please stay informed on the rules regarding remote controlled aircraft in your local region, and follow these regulations at all times.

SAFETY PRECAUTIONS

1. Flight safety tips

- (1). The drone needs GPS signal for outside positioning, please ensure that the flight site is open to GPS signal, and away from the crowd, ponds, buildings, trees, towers, other dangerous materials and area with interference to GPS signal.
- (2). Due to the site, weather, electromagnetic interference or any other reasons, that causing the aircraft drift, or rise rapidly and continuously above six meters, please press the "landing button" to the aircraft emergency landing!

2. Requirements for flight environment

- (1). Indoor flight is based on visual detection and ultrasonic positioning, flight areas need rich texture underneath.
- (2). Indoor flight needs in sufficient lighting environment (illumination > 15lux), do not fly on the ground that has strong reflection.

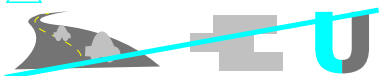
Note: Keep away from the crowd, trees, wires and buildings while flying.



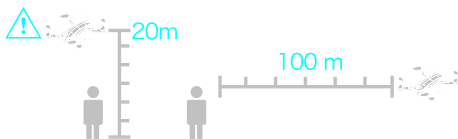
Note: Do not fly under strong wind (>3m/s), rain, lightning, snow, foggy weather.



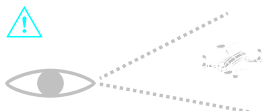
Note: Do not fly on highways, strong metal or other site with strong magnetic field.



Take Note about the flight height and range:
Please control the aircraft below 20 meters height, and within 100 meters range.

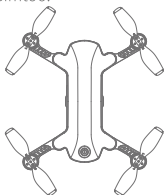


To fly within your sight:
Avoid flying to tall buildings and other places that may block your visual.



IN THE BOX

Before using this product, please check whether all the following items are included in the product package. If you have missing items, please contact Simtoo.



Aircraft*1+Battery*1



Controller*1 (Optional)



Cable*1



User Manual*1



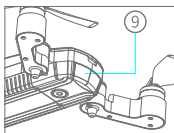
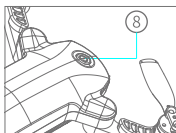
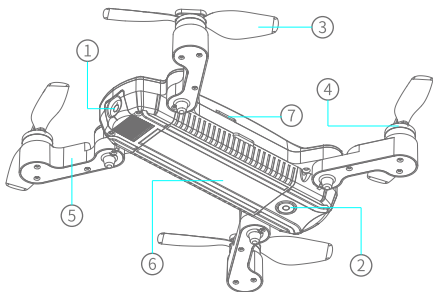
Charging port*1



Screw driver *1

MEET FAIRY DRONES

Fairy flight control system is integrated in the aircraft body, uniaxial PTZ is located in the front. Hi-definition image and video transmission system is also built in for high-definition images and videos transmission. The user can control the aircraft by installing the official APP on the mobile device.



- | | |
|------------------|-----------------|
| ① Camera | ⑥ Battery |
| ② Optical System | ⑦ TF Card Slot |
| ③ Propeller | ⑧ Switch On/Off |
| ④ Motor | ⑨ Indicator |
| ⑤ Arm | |

SPECIFICATION

Aircraft

Weight	140 g
Unfold size	143*130*33mm
Folded size	128*66*33mm
Diagonal distance	175mm
Max rise speed	2 m/s
Max take off speed	1.5m/s
Max flight altitude	4000m
Max hover time	16min
Working temperature	0~40 °C
GPS	UBLOX M8N SupportGPS&GLONAS
Hover accuracy	Vertical: +/-0.5m, Horizontal: +/-1.0m
Working environment	Sufficient illumination conditions, reflectivity >20%, illumination >15lux

Wireless

Frequency	2.400-2.4835 GHz
Max range	100 m (without interference)

Charger

Input voltage & current	5V-2A
Output voltage & current	8.7V-1A

Camera

Sensor	1/2.5inch CMOS, effective pixel 800P
Camera len	FOV115°
IOS range	100~3200
Photo shooting mode	Single shooting, burst timing
Video resolution	1920*1080 30fps
Support file system	FAT32
Format	Photo: jpg, Video: mp4
Memory card	Class 6+, 4G+ ,FAT32

Intelligent battery

Capacity	970mah 7.37wh
Voltage	7.6V
Battery type	LiPo 2S
Working temperature	5°C~40°C

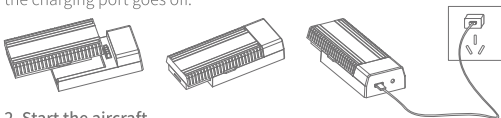
APP/ FPV

APP name	Fairy
Real-time transmission	720P 30fps
Delay time	150ms

PRE-FLIGHT PREPARATION

1. Battery charging

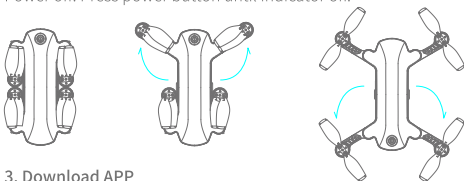
Charging: Plug the battery onto the charging port and then connect the power supply through adapter. During charging process; the red LED light on the charging port is always on. After fully charge, the red LED on the charging port goes off.



2. Start the aircraft

Expand the aircraft's four arms and place fully charged battery into the aircraft on a horizontal position, then long press the power switch on the back of the aircraft, hearing a starting sound and the indicator light will on. Keep the aircraft still until finished its self-checking (indicator turn from blinking slowly to fast and then slowly)

Power off: Press power button until indicator off.



3. Download APP

Before the first flight, you need to install the official APP into the mobile device. Please scan the QR code on the box to download the APP and install, or search "Fairy" on the APP store or Android Google market to download and install.

4. Connect the aircraft and APP

After power up, search and connect WiFi "XT175-xxxxx" from the mobile device WIFI settings, (default password: 1234567890), then run the APP and click Connect to enter the user interface.



Note: Only for Android 5.0 or above or IOS 8.0 or above.

Icons



User manual: Aircraft Operating Instruction



Local media library: Save local photos and videos



Home key: Return to the home page



Settings: Click for the setup interface



GPS status: Shows the GPS Signal strength and accuracy(HDOP)



Height: Shows the current height of the aircraft from the ground



Horizontal distance: Shows the current distance of the aircraft from the take off point



Battery status: Shows the current battery power level



Hidden: Hides/Shows the operating buttons on the right side of the operation interface



Take-off: Click for take off, after take-off, the icon changes to the Landing button.



Landing: Click for landing, once landed, the icon changes to the take-off button



Return home (Limited to GPS mode): Click to return home. During the returning process, click it again to change back to the GPS mode



Switch flight mode: Click and select flight operating mode



Buttons mode: Click  to enter button control mode, click  to switch to other operation mode.



Joysticks mode: Click  to enter joysticks control mode, click  to switch to other operation mode.



Motion sensing mode: Click  to enter Motion sensor control mode, click  to switch to other operation mode



Throttle: Control the flight height



Direction: Control the flight direction



Camera mode: Switch to photo mode.



Video mode: Switch to video mode.



Shutter: Click to take pictures or start recording videos.



Beauty: Click for Beautify Photo function.



Media library: Click to enter the camera media library.



Video library: Click to enter the video library.



Multi-select: Click to select all / un-select all.



Download: Click to download the selected items to your mobile device.



Delete: Click to delete the photos / videos from memory card of camera.



Previous page: Click to return the previous page.



Next page: Click to go to the next page.



Exit: Click to exit the current page.

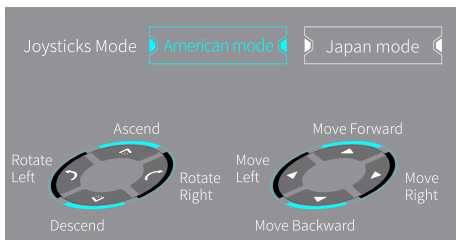
Accelerometer calibration

Connect to mobile phone and do the calibration on the APP Setting accordingly until shows calibrated successfully.

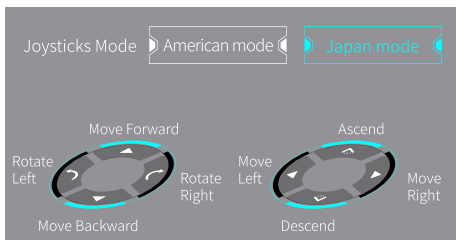
Joystick setting

Users can set their own favorite joystick mode via the joystick setting.

American mode: Left hand throttle, as shown in the figure below, Ascend / Descend and Turn left / Turn right operations are on the left joystick, forward / backward and left / right on the right joystick.



Japan mode: Right hand throttle, as shown in the figure below, forward / backward and left / right are on the left joystick, Ascend / Descend and Turn left / Turn right operations on the right joystick.



Sensitivity setting (unavailable for Optical-flow Mode)

Users can set their own preferable sensitivity via the Sensitivity settings. Sensitivity: Primary, Intermediate and Advanced, the higher sensitivity, the more responsive of the aircraft operation and also the greater the magnitude of the action.



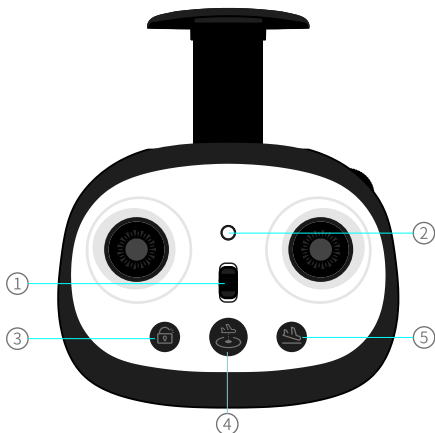
One key return home

The operation requires GPS received more than 10 satellites signal, and HDOP values (the icon under GPS satellites) are less than 2. If meet these requirements, APP will show "GPS Mode" on the upper left corner of interface. During the return home process, the button will turn to blue color, then the button can be pressed again to cancel the return process, and the aircraft will change to hovering status.

CONTROLLER INSTRUCTIONS



Controller use

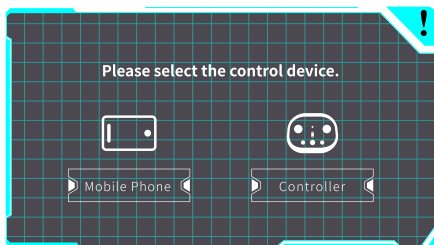


- ① **Switch on/off**
- ② **Indicator**
- ③ **Unlock:** Press to unlock the drone (it will buzze and blue indicator will blink slowly for 5 seconds, and the motors of drone will rotate slowly), then use throttle joystick to take off.(it will locked again if without take-off for 5 seconds.)
- ④ **Hover:** Press Hover and give short buzzer, the drone will be in hover mode. (Hover mode requires HDOP value less than 2.0 or the indicator turn green). Keep pressing the button  to switch to return home mode, it will give long buzzer.
- ⑤ **Landing:** Press for landing at current location, during landing once press again switch back to hover mode.

Binding

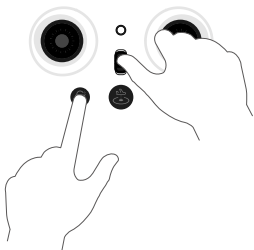
1. Plug in the battery and power on the drone.
2. Power on the controller and it will start binding automatically.
3. Controller's blue indicator blinks while binding, and the blue indicator will stay always on after binding done.

Notice: If you want to see FPV video on mobile phone, please select "Controller" mode when both controller and phone are connected to drone.

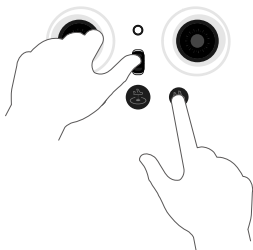


Throttle mode switch

American Mode: Keep pressing Unlock button  and power on the controller until buzzer "bibibi".



Japanese Mode: Keep pressing Landing button  and power on the controller until buzzer "bibibi".



Notice: American/Japanese mode control instruction please refers to page8 for joysticks instructions.

Indicator

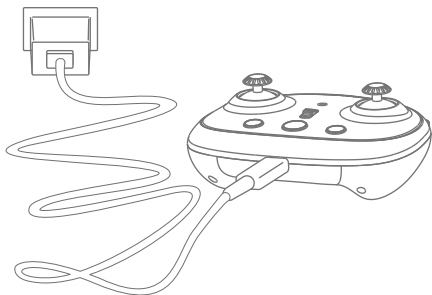
Charging: Indicator will keep red when charging and will be off after fully charged.

Binding: Indicator will blink blue when binding and will keep blue after binding finished.

Power: If the controller's power is low, blue indicator will fast blink and make buzzer noise.

Charging

Connect the controller with micro USB cable and Adaptor for charging. (Adapter and cable are not included in package).



SAFETY PRECAUTIONS

When the battery power is lower than 25%, the APP interface will prompt "Battery Low" message. When the power is less than 15% the aircraft will land automatically. The maximum control distance of mobile phone is about 50 meters and the maximum control height is 15 meters. If the Standard version aircraft is flying out of the range and losing connection, the aircraft will return home automatically.

HINTS AND TIPS

1. When the aircraft is deviated during the ascending process, please perform the accelerometer calibration.
2. When click take off button, the aircraft has no response, please restart the aircraft. The reason of this condition is that aircraft did not remain stationary when the aircraft was turned on or when the flight was taking off, which cause the failure to complete the Gyro calibration.
3. When the aircraft is out of control, please click one key landing.
4. In case of the propeller does not completely stop, It is strictly prohibit to press downward, push, or shake the aircraft, otherwise it may cause the aircraft out of control, or lost the signal.
5. Do not fly in a dark environment or at night, this is to avoid affecting the operation of the aircraft visual system which might lead to the aircraft out of control, or lost of signal.



Please make sure to read the entire manual carefully, familiarize with product features and exercise before the actual operation. Improper operation may cause injury, or result in product damage and property damage.

Note:

*. 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.

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

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.

RF Exposure: A distance of 20 cm shall be maintained between the antenna and users, and the transmitter may not be co-located with any other transmitter or antenna.

Content is subject to change without further notice.

For latest manual please refers to our website:

www.simtoo.com/documents.php

If any question or advice please contact via email: info@simtoo.com