FIMI X8 SE User Manual

Please read the user manual carefully before using and keep the manual for future reference.

Services & Support

FIMI provides X8 SE users with tutorial videos and the following information:

1. *FIMI X8 SE User Manual*

2. *FIMI X8 SE Quick Start Manual*

3. *FIMI X8 SE Disclaimer and Safety Operation Instructions*

Users are advised to watch tutorial videos before using the product and read *FIMI X8 SE Disclaimer and Safety Operation Instructions* carefully and get to know the process of using by going through *FIMI X8 SE Quick Start Manual*. For more product information, please refer to *FIMI X8 SE User Manual*. Please download the firmware and watch the tutorial videos through the link below https://www.fimi.com/fimi-x8-se.html

4. Please scan the QR code below to download Fimi Navi app


Product Instruction

X8 SE is a foldable and portable quadrotor drone integrated with aerodynamics, intelligent control, wireless communication and other advanced technologies, which can realize the functions of long-distance remote control, intelligent flight, precise landing,etc. The three-axis mechanical stabilized gimbal equipped by the drone can shoot 4K 30fps HD video and perform HD real-time image transmission. The APP relates to minimalism with a larger image, rich features and fast connection. The remote controller is compatible with ipad mini in its maximum range and the sticks are detachable.

Package List
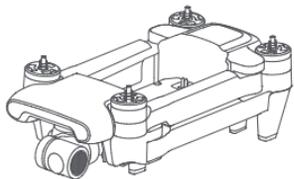
Drone x 1
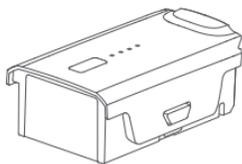
Battery x 1

Charger x 1
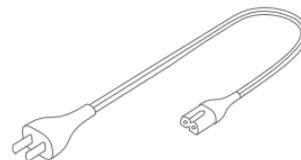
AC cable x 1
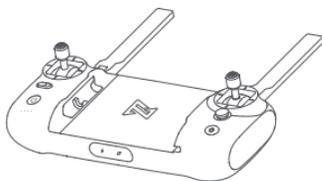
Remote controller x 1
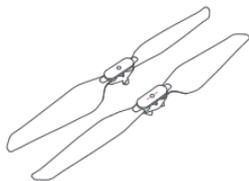
Positive propeller x 3
Reverse propeller x 3

Instruction x 2

Product Introduction

1 Drone

Positive propeller

Power button

Battery level indicators

Reverse propeller

Integrated gimbal camera

Flight status indicator

Landing gear

Optical flow camera

Ultrasonic detecting module

Motor

Drone tail indicator

Battery buckle

1 Remote controller

Flight mode/auto return

Left stick

Stick storage slot

Mobile device holder

Right stick

Power button

Battery level indicators

USB port

Charging port

Cable slot

Five-directional button

Auto take-off/land button

Left dial

Record button

Shoot button

Antenna

Right dial

Drone

Flight Mode

GPS Mode (Standard)

GPS module is used to achieve precise hovering, and intelligent flight function is supported in GPS mode. Users can enable Sport Mode or Beginner Mode in the flight settings. When the Beginner Mode is on, the flight speed, flight distance, flight altitude and RTH altitude will be limited. In sport mode, The maximum flight speed is 18m/s, the maximum ascending speed is 5m/s, and the maximum descending speed is 4m/s.

VPU Mode (Optical Flow)

Optical flow module is used to achieve precise hovering, and intelligent flight function is not supported in VPU mode. The maximum flight speed is 10m/s, the maximum ascend speed is 3m/s, and the maximum descending speed is 2m/s. The drone, flying above bright ground with clear texture, will switch to VPU mode automatically when GPS signal is poor.

ATTI Mode (Posture)

The drone enters ATTI mode under the condition of poor GPS signal or compass interference. In ATTI mode, the drone will drift in the horizontal direction and do not support the intelligent flight function. Therefore, in case of an accident, the user should choose a location with good GPS signal and open area to fly. Once the drone enters ATTI mode, please land to a safe place as soon as possible.

Note: Sport Mode is not available when the operational altitude up to 2400 meters.

Drone indicators

	Drone indicators	Drone status
1	All indicators are breathing	Self-checking
2	All indicators are on	Drone on the ground: self-check fails
		Drone in the air: internal error
3	The red and green indicators are on and the yellow indicator is flashing at regular intervals	Ready to fly / in flight
4	All indicators are flashing twice	Low battery alerts
5	All indicators are glaring	Battery is low, land as soon as possible
6	The yellow indiator is flashing	Drone firmware is updating

red — green

Drone heading

yellow
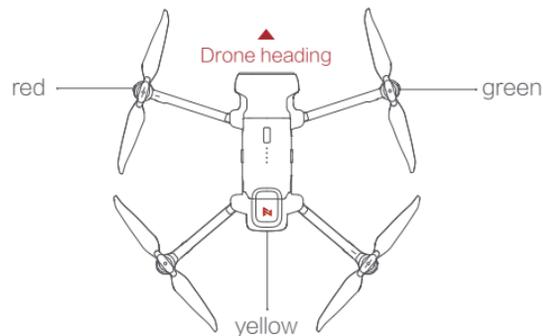
Safety Protection

Failsafe Return

Failsafe return is only supported in GPS mode. When the GPS signal is good, the compass is working normally and the drone records the return point successfully, if the wireless signal of the drone and the remote controller is interrupted over 2 seconds , the flight control system will take over the control of the drone and plan the return route according to the original flight path, and the drone will fly back to the return point. If the drone and the wireless remote controller signal is reconnected in the return process, the user can turn off App return hint or re-toggle the auto return switching to flight mode to cancel, and the drone will hover at the current position.

current altitude≥return altitude

home point

current altitude<return altitude

ascend first
(the default altitude is 30m)

home point
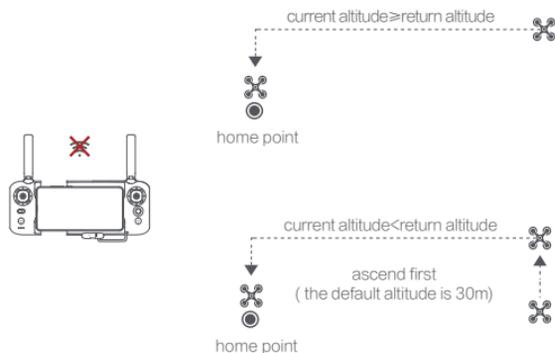
Low-power Protection

In flight, when the battery level is only enough for RTH, App advises users to return, and the drone will return automatically after 10 seconds countdown. When the battery level is only enough for landing, App advises users to land as soon as possible, and the drone will land automatically after 10 seconds countdown. When the battery level is at 10% usage left, the drone will be forced to land.

normal battery level

critical low battery   low battery

0%   10% 15%   30%   100%

landing battery level   RTH battery level   current battery level
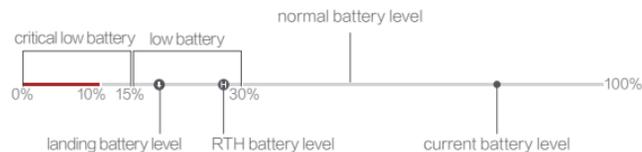
Hovering on the Edge of No-fly-zone

The drone will automatically hover in the restricted flight area designated by the state, such as the edge of airports, and the App will appear corresponding hints. The user can use sticks to control the drone to evacuate from the edge of no-fly-zone, but sticks cannot control the drone to fly into the no-fly-zone.

hover

No-fly-zone

Intelligent Flight

Auto Take-off

When the drone meets Auto Take-off conditions, long press auto take-off/land button 2 seconds to take off. In GPS mode, the drone will take off to an altitude of 4 meters and hover for sticks control. In VPU mode, the drone will take off to an altitude of 1.2 meters and hover for sticks control.
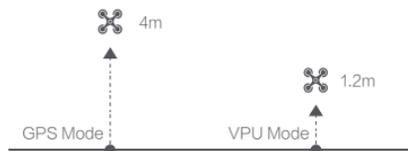
Auto Landing

When the drone meets auto landing conditions, long press auto take-off/land button 2 seconds to land vertically.

Note: Users can short press the auto take-off/land button to exit intelligent flight.

Auto Return

When the drone is in flight, the user can toggle the auto return switch to the right to return the drone. When the return distance is less than 10 meters and flight altitude is less than 3 meters, the drone will ascend to 3 meters first and return to the home point; if the flight altitude is greater than or equal to 3 meters, the drone will directly return to the home point at the original altitude. When the return distance of the drone is greater than or equal to 10 meters and the flight altitude is less than 30 meters, the drone will ascend to 30 meters and return to the home point; if the flight altitude is greater than or equal to 30 meters, the drone will directly return to the home point for landing at the original altitude. The user can toggle the auto return switch to the left to exit Auto Return.
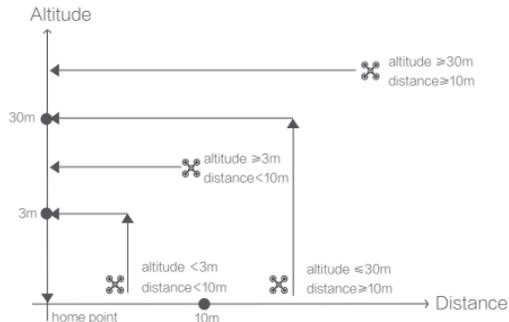
Smart Track

Smart Track is supported only in GPS mode. The user can choose Trace, Profile, or Lock in the App menu, the drone will trace the subject chosen at the App interface at a distance.

In Trace mode, the heading will always lock at the target and trace it from the back at a distance.

heading → moving direction →

In Profile mode, the heading will always lock at the target and trace it from the side at a distance.

drone moving direction →

heading

moving direction →

In Lock mode, the drone will hover at a place with its heading trace its target 360-degree if the default speed is 0. The user can also adjust flight speed, and the drone will fly around the target at a certain distance.

flight speed =0m/s

camera tracking 360°
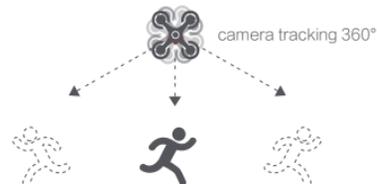
flight speed ≠ 0m/s
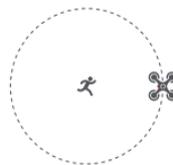
Note: In Smart Track, users should always make sure to avoid people, animals and obstacles in the tracking path to ensure the flight safety. Users should comply with local laws and regulations when using the function.

Orbit

The user can select Orbit mode in the App. When set a central point and radius, the drone will fly around the central point at a default speed. If set point of interest, the heading will be locked at the POI.

· Fly to a central point to set the central point

· Fly away from the central point to set radius

· Set flight speed, move direction and heading. If the heading is free,the user can drag a rectangle around a POI

Central point

POI
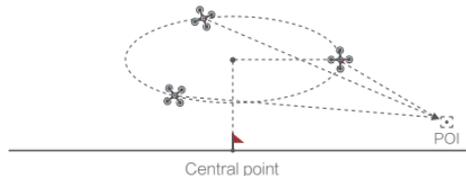
If sticks are moved in flight, the flight altitude or radius will be changed. Taking Mode 2 as example:

Ascend

Counter-clockwise

Clockwise

Descend

Left stick

Radius zoom out

Direction&Speed

Direction&Speed

Radius zoom in

Right stick

Tap-fly

The user can select Tap-fly in the App. Tap map to choose a destination and set flight speed, the drone will fly over there at a default speed in a straight line. If set point of interest, the heading will be locked at the POI

· Tap map to choose a destination

· Switch to image interface to drag a rectangle around the POI

· Set flight altitude and speed

POI

drone   destination
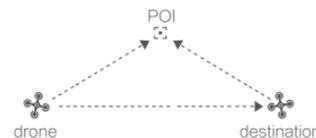
Dronie

The user can select Dronie,including Rocket and Invert,in the App. In Rocket mode, the drone flies upward with the camera pointing downward at the subject to shoot a video. In Invert mode, the drone flies backward and upward with the camera locking at the subject to shoot a video.

· Drag a rectangle around a POI

· Set flight speed and altitude, the flight control center will estimate flight time automatically

· The drone automatically adjusts its place

· 3 seconds count down to fly away to shoot a video once the drone completes adjustment

Rocket

fly vertically upward

pitch: −90°

target

Invert

fly backwards and upwards

0° < pitch<90°

target
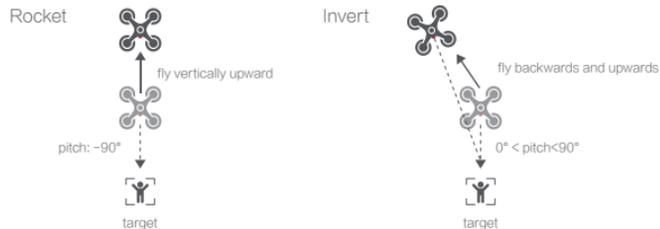
Course Lock

The user can select Course Lock mode in the App. The drone saves current fly direction as heading. The user can control sticks to adjust direction of head and gimbal, but the forward direction remains unchanged.

Tripod Mode

The max speed of the drone is 1m/s, and the max rotation speed is 60° /s. In Tripod Mode, operation sensitivity is lowered simultaneously to shoot more stable and smooth video.

Aerial Mode

The brake distance is lengthened and the angular speed of rotation is limited to make sure the shooting videos are more stable and smooth

Note: Course Lock is enabled in Aerial Mode, Users can turn it on in the APP

Spiral Mode

The user can select Spiral Mode in the App. Set the central point and radius, the drone will spirally fly upward and shoot a video simultaneously, showing a sense of space.

· Fly to a point to set as the central point

· Fly away the central point to set radius

· Set spiral direction and flight distance to start and shoot a video at the same time

· The mission interrupted if the user moves sticks

radius

central point
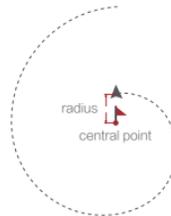
SAR Mode

The user can select SAR Mode in the APP. With real-time GPS coordinates, the drone could help user to search and rescue.

Image interface: show real-time coordinate and time of the drone, support digital zoom, screen shots to share online

Map interface: show real-time coordinate and time of the drone in ordinary map and satellite map, screen shots to share online

Waypoint

Choosing waypoint and drawing route both are available at map. The drone flies along waypoint route at a default speed. If set point of interest, the heading will be locked at the POI. The user can select a way to set waypoints, including choosing points in flight or on the map, historial routes.

Choosing points in flight:

1. control the drone to a point to set as a waypoint
2. using sticks to set flight altitude and heading direction, dials to set gimbal angle, and actions when reaching the waypoint
3. when all waypoints ready, please set waypoints routes attribute, incuding flight speed, heading direction, action at the destination
4. POI is enabled when executing waypoints

Choosing points on the map

1. tap map to add waypoint
2. set waypoint attribute, including flight altitude, action at the destination, rotate direction
3. drag the POI icon to the map, and set its a;titude and relate waypoints
4. when all waypoints ready, please set flight speed, failsafe action, and action at the destination
5. POI is enabled when executing waypoints

Historical routes

1. preview the waypoints and its attribute by entering Favorite list
2. tap to start and show the real-time waypoints trace

Waypoint

heading

POI
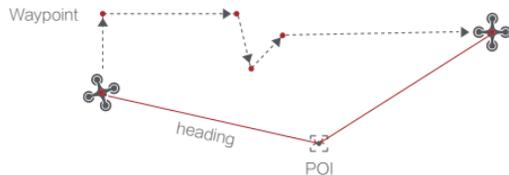
Precise Landing

In the process of Return to Home, the optical flow sensor will match landing pad features above the home point. Once matched successfully, the drone will land on the landing pad precisely.
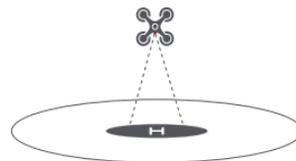
Fix-wing Mode

In Fix-wing Mode, the drone can only fly forward, not backward. The user can use sticks to control flight speed and course as showed below (America Mode).

Left stick	push upward	up
	push downward	down
	toggle left	turn left
	toggle right	turn right
Right stick	push upward	accelerate
	push downward	decelerate
	toggle left	turn left
	toggle right	turn right

Assembly and Disassembly

1 Propellers

· Unfold the front and rear arms of the drone.

· Attach the gray marked propellers to the motor mounting base with gray marks on the arms.

· Ensure the propeller is pressed to the bottom of the mounting base.

· Rotate the propeller to the end of the lock direction until the propeller gets bounced and locked.

· Press the propeller forcefully and rotate the propeller along the unlock direction to remove the propeller.
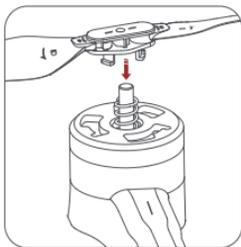
Safety tips:
If the propeller is damaged, please replace them to ensure flight safety and efficiency.Check if the propeller is properly installed and fastened before each flight.Stay away from the rotating propeller to avoid cutting.

Note: Take the installation of reverse propeller as an example.

Battery

The intelligent battery of FIMI X8 SE has a capacity of 4500mAh, a voltage of 13.05V. This type of battery employs high energy cell, advanced battery management system, and charge and discharge functionality.

Assemble and disassemble

· Push hard the battery, after the battery installed in place, there will be a "click" sound.

· To remove the battery, you need to press the battery buckle on both sides of the battery to pull out the battery.
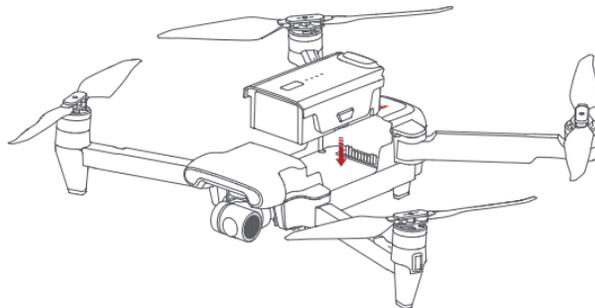
Charging

- Connect the battery,charger and AC cable as shown below, and plug the charger into a power outlet
- When the battery is in charge, the battery level indicators are flashing
- When the battery is fully charged, the battery level indicators go out
- It takes about 2 hours to fully charge the battery
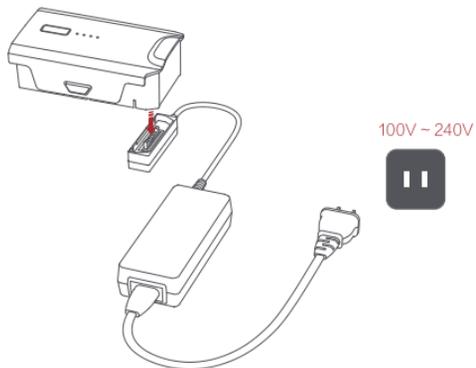
100V ~ 240V

Turning on and off

- Short press+long press power button 2 seconds to power on/off
- Short press to check battery level
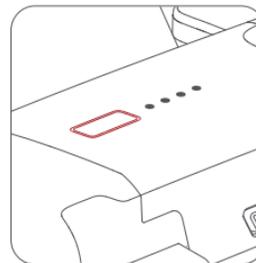
Gimbal and Camera

Camera

The camera, equipped with 1/2.3 inch CMOS and wide-angle lens with 26mm equivalent focal distance, supports 4K 30FPS HD videos and 12megapixel photos to shoot a blockbuster easier. It also owns various shooting modes, including single, burst, time lapse, panorama shot and slow motion, for different scenario.

Drone TF card

· When installing TF card to the drone,please unfold the arms of the drone first and open the interface protection cover
· Insert the TF card with the literal upward into the TF card slot
· When removing TF card, press the TF card to pop out
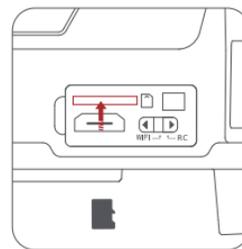
Note:Support Micro SD (U3 and above) 8 ~ 64GB, recommend to use

Sandisk Extreme Pro V30 32G	Sandisk Extreme Pro V30 64G
Sandisk Extreme V30 32G	Sandisk Extreme V30 64G
Samsung Pro Endurance 32G	Toshiba Exceria Pro 64G
Lexar Professional 1000X 32G	

Gimbal

FIMI X8 SE combines a light weight 3−axis mechanical gimbal with the latest professional control algorithms and ±0.004° control accuracy, which provides a stable shooting platform for camera. The pitch axis, default to tilt from 0° to −90° , can be adjusted by left dial of remote controller or App.

0°

−90°
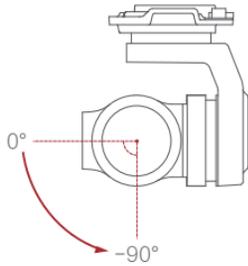
Operating Mode
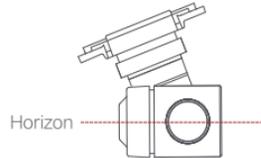
Horizon

Follow Mode:
The roll axis does not move with the drone and always keep the gimbal horizontally, which suits for shooting stable videos

Parallel
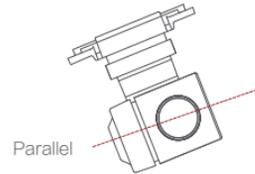
FPV Mode:
The roll axis rotates with the drone to provide a first person view

Remote controller

With ergonomic design, it is easier and more precise to control. There is no complicated operation to connect App, just plug in and it works. The remote controller fully charged can work about 4.5 hours.

Turning on and off

· Short press+long press power button 2 seconds to power on/off
· Short press to check battery level

Charge

· Connect the remote controller to a power adapter as show below
· When the RC is in charge, the battery level indicators are flashing
· when the RC is fully charged, the battery level indicators go out
· It takes about 4 hours to fully charge the RC in the powered off condition

5V ⎓ 2A
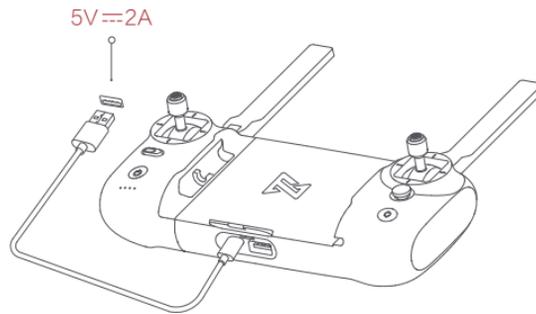
Assemble Device

· Tighten the mobile or pad on mobile device holder by extending the holder to the left.
· Open the interface protection cover on the RC bottom.
· Connect your phone and the RC with a USB cable.
· Connect the drone and update firmware according to instructions in Fimi Navi app.
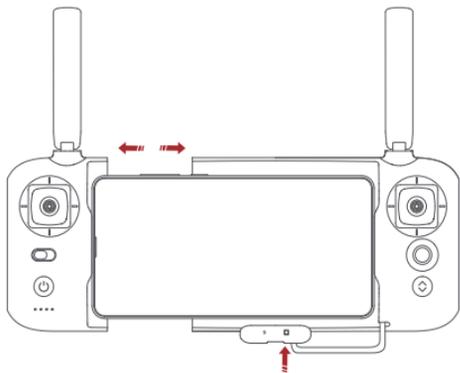
Note: The cable slot is reserved on the right side of the RC.

Shooting and Recording

· Press the shoot button to take a photo. A photo is taken when you hear 2 short sounds.
· Press the record button to record video. Recording starts when you
· hear 2 short sounds. Press again to stop recording with 4 short sounds.
· During recording, short press the shoot button to capture a picture. (only support 1920x1080 25|30|50|60fps)
· The pitch angle of the gimbal can be controlled by toggling the left dial up and down. The right dial can adjust EV/ISO.

Record button

Shoot button

Shortcut Buttons

- Toggle the auto return button to the left when the drone is in flight, the drone will return to the home point.

- In the process of auto return, toggle the auto return button to the left, the drone will hover at place and wait for sticks instructions.

- Push the five-directional button up default to access map or FPV
- Push the five-directional button down default to gimbal center or down
- Toggle the five-directional button left default to turn on/off battery info interface
- Toggle the five-directional button right default to turn on/off self-check interface
- Press the five-directional button center default to turn on/off media

- Right dial to adjust EV/ISO value
- Left dial to adjust pitch angle of gimbal

- When auto take-off/land button turns white, it can be pressed to take off or land
- When the drone meets auto take-off conditions, long press 2 seconds to take off
- When the drone meets auto land conditions, long press 2 seconds to land
- When the drone is executing intelligent flight, short press this button to exit

Sticks Control

Mode 1

Forward
Counter-clockwise — Clockwise
Backward
Left stick

Up
Left — Right
Down
Right stick

Mode 2

Up
Counter-clockwise — Clockwise
Down
Left stick

Forward
Left — Right
Backward
Right stick

Mode 3

Forward
Left — Right
Backward
Left stick

Up
Counter-clockwise — Clockwise
Down
Right stick

Remote Controller Pairing

When a new remote controller or drone is replaced, please pair the remote controller and the drone again as shown below:

· Turn on the drone

· Turn on the RC, long press the power button 15 seconds until hearing constant beep sound，and the power button red light flashes

· Short press the code pairing button on the drone , the yellow indicator on the drone goes out

· The code pairing succeeds when the power button on the RC turns white and the yellow indicator on the drone keeps on
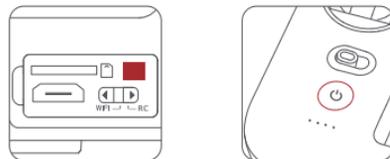
Remote indicators

	Remote indicators	Remote status
1	Power button's red light is on	Weak signal or not connected to the drone
2	Power button's white light is on	Normal signal
3	Power button's red light flashes	RC Pairing or upgrading firmware
4	Power button's white light flashes	Recording videos
5	Auto take-off/landing button's red light is on	Auto take-off or landing not enabled
6	Auto take-off/landing button's white light on	Ready for auto take-off

APP

Download and install Fimi Navi app, register a FIMI user account before login, and select FIMI X8 SE to enter device

Image Interface

1. Real-time Flight Parameters

↕ 28.8m: vertical flight altitude from the home point

↔ 32.8m: horizontal distance from the home point

VS1.23m/s: vertical speed

HS1.80m/s: horizontal speed

⬇ : Estimated landing battery

Ⓗ : Estimated RTH battery

2. Drone Status

In flight: current flight status

GPS: current flight mode,including GPS、VPU、ATTI

╲＿＿＿╱ : drone real-time power

3. Signal Status and General Settings

📡 : show GPS signal status, 0–6 indicates poor with red; 7–12 indicates good with yellow; 13 and above indicate excellent with white. Tap to enter flight control settings

📶 : show image transmission signal strength

📶 : show the RC signal strength, tap to enter RC setting

📊 : show real-time battery level, tap to enter battery settings

⚙ : tap to enter settings

20:30 : Real-time estimated flight time

4. Map Interface

show the drone real-time location, tap to switch with image interface

5. Metering Mode

tap any place in the image interface for metering, when appearing exposure lock button, click to lock the value.

6. Gimbal and Image Parameters

∠ : Show the current gimbal angle

EV : Show the current EV value

ISO : Show the current ISO value

⊘ : Show the current Shutter value

◯ : Show current color mode

SD : Show the capacity of SD card and its residue

◼◖ : Show video resolution and frame rate in video mode, or image size in photo mode

7. Camera Operation Area

3:26 : Video record length

⁝⁝⁝ : Camera parameter settings, tap to set EV,ISO,shutter,video or photo mode, resolution, video size, white balance, etc.

◉ : Tap to switch between photo and video record

⬤ : Tap to start/stop shooting photos or record videos

◯ : PIV button, only appear in video mode with 1080P

▦ : Media library, tap to download or preview videos and photos saved in Micro SD card

8 Intelligent Flight

Tap to enter intelligent flight interface

⬆ : Auto Take-off

⬇ : Auto Landing

↺ : Auto Return

⇄ : Waypoints

⊙ : Smart Track, including Trace, Profile, Lock

⊙ : Orbit

⚲ : Tap-fly

⋔ : Dronie,including Rocket and Invert

◎ : Spiral Mode

◙ : SAR Mode

⬚ : Aerial Mode

⬚ : Tripod Mode

⬀ : Course Lock

⬗ : Fix-wing Mode

Map Interface
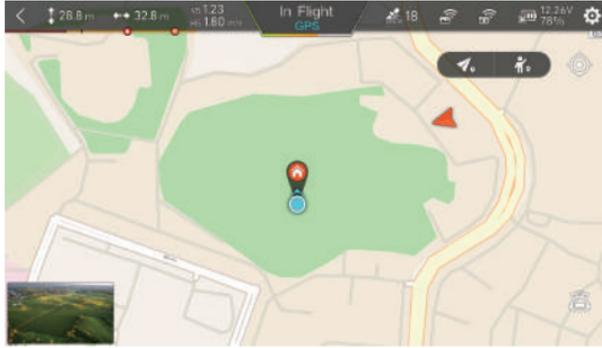
 : Tap to switch between drone position in the screen center or both drone and phone position in the screen center

 : Set current drone position as Home point

 : Set current phone position as Home point

 : Current drone position

 : Home point

 : Current phone position

Prepare to Fly

1 Confirm the drone heading

· The direction of integrated gimbal camera is the drone heading.
· Once the drone is turned on, the heading can be told by navigation indicators.
· The red light and the green light indicate the heading,and the yellow light is the tail.

Drone heading

red ⸻ green

yellow
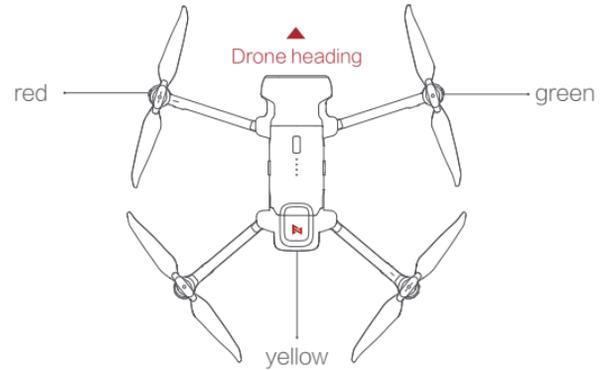
Safety tips: Always keep the tail pointed at the user to avoid direction misjudging.

Check Before Taking off

· Ensure the battery level of the drone and the remote controller are fully charged
· Ensure propellers are assembled correctly and without any damage or ageing
· Ensure the camera lens is clean
· Ensure TF card is inserted

Manual take off

Left stick   Right stick   Left stick   Right stick
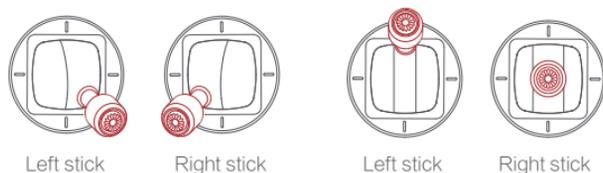
· Keep both sticks to the bottom inner still over 3 seconds, the propellers start spinning
· Release both sticks once propellers have been spinning, and firmly push the left stick upward to take off the drone
· During flight, release both sticks to hover
· At any time during controlled flight, release the sticks and the drone will hover automatically

Manual landing

Left stick   Right stick
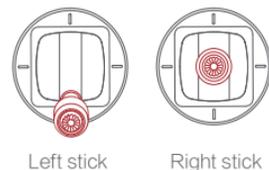
· Slowly move the left stick downward to land the drone
· Once the drone has landed, push and hold the left stick down over 5 seconds, the motors will stop

Safety tips: The drone has no waterproof function. Please be careful of landing environment. Do not land on an inclined plane for safety.

Stop propellers in an emergency

When motors can't properly turn off, please toggle the left stick to the bottom inner in maximum range, and press Auto take-off/landing button for 5 seconds simultaneously, the motors will stop.
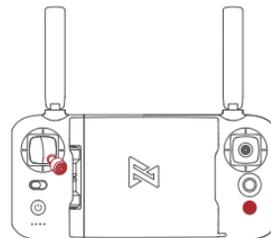
Safety tips: Do not do the above operation during normal flight to avoid motors being stopped in the air.

Flying Condition Requirement

1. The drone is suitable for people above 18 years who have full civil capacity.
2. Make sure to keep some distance from people, animals, trees, vehicles and buildings while using the drone. Please be careful when someone approaches.
3. Keep away from airports, railways, highways, high-rise buildings, utility poles and other dangerous environments when operating the drone.
4. Keep away from the areas with complex electromagnetic signals such as communication base stations and high-power antennas when operating the drone.
5. The flight altitude and distance of the drone corresponding to the take-off point will be limited based on relevant regulations and policies.
6. Do not use this product at the place and time prohibited by regulations and policies.
7. To protect the legitimate rights and interests of users, please follow the product safety instructions when using.
8. Do not operate the drone in bad weather such as strong winds, rain, snow, or fog.
9. Please operate the drone in a broad place with a good GPS signal.
10. It is suggested that user should make the first flight under the guidance of an experienced pro.

Maintenance and Calibration

Remote Controller Calibration

Please try to calibrate the remote controller when you detect inconsistencies between stick control and drone flying.

- Select "RC Calibration" in the remote controller menu
- Tap" Start" to calibrate the center, do not move sticks
- Skip to sticks calibration once the center calibration succeed
- Skip to dial calibration once the sticks calibration succeed

Note: Please turn off the power of the drone before calibrating the remote controller. RC calibration is not available in flight

Compass Calibration

If the magnetic field changes, the compass needs to be recalibrated to ensure flight safety. If the drone's compass needs to be calibrated, the App will give corresponding hints and guidance. After entering the flight control menu, please select "compass calibration", and then calibrate based on prompts on the App.

Note: Please connect the drone before calibration. Compass calibration is not available in flight.

Gimbal Calibration

- Click "gimbal calibration" and enter the calibration page in the gimbal settings menu.
- After the drone is placed smoothly, click to start calibration.
- Do not move the drone during the calibration process.
- After the calibration is completed, the App interface shows "Calibration succeed".
- If the App interface shows "Calibration failed", please recalibrate.

Note: Gimbal calibration is not available in flight.

Propellers Maintenance

Propellers are wearing parts. When they're damaged, replace them in time to ensure flight safety and efficiency.

Battery Maintenance

Do not throw the battery into fire; Do not batter the battery; Lithium battery's capacity reduces significantly in low temperature conditions. Do not use the battery when it is below 5 degrees. Do not place the battery under the burning sun.

Gimbal Maintenance

The gimbal of X8 SE, integrated with the drone, does not need to disassemble. Please be careful not to scratch the camera when store the drone. Please keep the camera clean for better image quality.

Drone Self-check

The drone enters the self-check when the drone is powered on. If the self-check failed, App will pop up corresponding hints.

Firmware Upgrade

Please check the firmware version regularly, new version will be pushed by Fimi Navi App to prompt users to update. Please download new firmware when the App is connected with the drone and remote controller

Basic Specification

Drone

Product model: FMWRJ02A5
Dimensions: 204×106×72.6mm
Diagonal size: 372mm
Take off weight: About 786g
Flight time: About 33min*
Max ascending speed: 5m/s
Max descending speed: 4m/s
Max flight speed: 18m/s
Satellite positioning systems: GPS/GLONASS
Hover accuracy:
Vertical:±0.1m (Within the ultrasonic detecting range)
±0.5m (when GPS positioning is active) Horizontal: ±1.5m
Operating temperature: 0° C ~ 40° C
Suitable altitude: ≤5000m
Operating frequency: 5.725~5.850GHz

Charger

Rated input: 100~240V~50/60Hz 1.5A
Rated output: 13.05V ⎓ 3A
Rated power: 39.15W

Remote controller

Net weight: About 373g
Dimensions: 203.8×91×46.6mm
Operating frequency: 5.725~5.850GHz
Type: Rechargeable lithium battery
Capacity: 3900mAh
Nominal voltage: 3.7V
Input: 5 V ⎓ 2A
Max transmission distance: About 5000m*
Operating temperature: 0 ~ 40° C
Suitable altitude: ≤5000m

Battery

Type: Rechargeable lithium battery pack
Weight: About 275g
Capacity: 4500mAh
Voltage: 11.4V
Limit voltage: 13.05V
Energy: 51.3Wh
Charging ambient temperature: 0° C ~ 40° C

Gimbal

Controllable rotation range: 0° ~ −90°（Pitch）
Angular vibration range: ± 0.004°
Lens: FOV 78.8°
Camera aperture: f2.2
Camera focal distance: 4.73mm
Equivalent focal distance: 26mm
Sensor: 1/2.3" CMOS
Effective pixels: 12M
ISO range: 100 – 3200（Video）, 100 – 1600（Photo）
Shutter speed: 8 ~ 1/8000s
Max video resolution: 3840 x 2160 | 30fps | 25fps | 24fps
Max birate: 100Mbps
Max photo resolution: 4000×3000
File system: FAT32 / exFAT
Image format: JPG, JPG+DNG
Video format: MP4
Memory card type: Micro SD（U3 and above）8 ~ 64GB

Note:
The 33 minutes flight time refers to constant speed at 7m/s (no wind) with fully charged and low cyclic battery. Remote control distance reach to 5km (FCC) in open area and no interference . All above testing and data come from FIMI laboratory, errors may occur in actual use for operating and environmental changes.