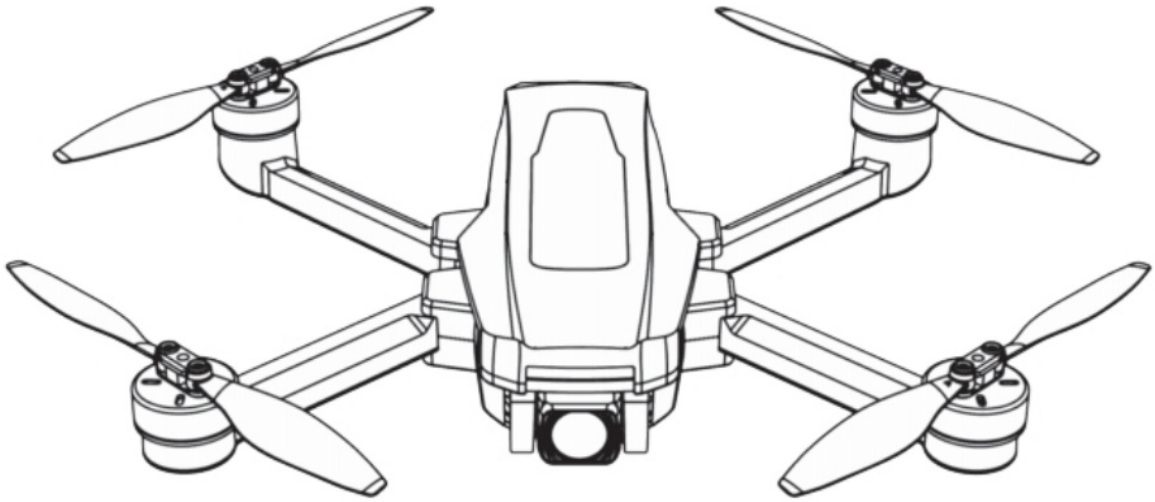
TSRC M7 GPS Drone Instruction Manual

M7 GPS Drone
Instruction Manual

Contents

M7 GPS Drone



Dear Customer,
Thank you for your purchase! As long as you contact us by email, there are many promotions to share with you and help you solve the problems. Wishing you good luck every day!

WARNING NOTE
In order to ensure the requirements of the electromagnetic environment of aviation radio stations (stations), the use of various model remote controls is prohibited in the area with the center point of the airport runway as the center of the circle and the radius of 5,000 meters. During the period of radio control orders issued by relevant state departments, the use of model remote control shall be stopped as required.

DISCLAIMER AND SAFETY GUIDELINES

In order to make it more convenient and safe for you to use this product, please read all contents of this manual carefully before using this product, and keep this manual for future reference.
DISCLAIMER AND SAFETY GUIDELINES

1. In order to protect the legitimate rights and interests of users, please be sure to carefully read the instructions, disclaimers and safety instructions provided by us before using this product.
2. This product is not suitable for use by persons under the age of 14. Persons under the age of 14 must use under the supervision and guidance of adults with UAV flying experience.
3. Once you start to use this product, you shall be deemed to have read, understood, recognized and accepted all terms and contents of the instructions, disclaimers and safety instructions of this product.
4. In the process of using this product, please be sure to strictly abide by and implement the requirements including but not limited to the instructions and safety instructions. For all personal injuries, accidents, property losses, legal disputes, and other adverse events causing conflicts of interest caused by violations of the use behavior or force majeure factors indicated in the safety instructions, the user shall bear the relevant responsibilities and losses, and our company and the agent shall not be liable for any.
5. Users use this product directly or indirectly for any violation of legal provisions, our company and the agent will not be responsible.

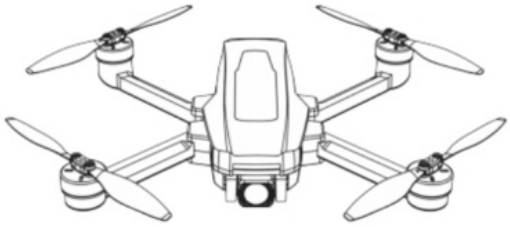
SAFETY GUIDELINES

1. This product is not suitable for use by persons under the age of 14 and others who do not have full capacity for civil conduct.
2. This product has high-speed rotating propeller and powerful flight power, which has certain risks during operation. Do not approach and touch the product while it is in operation.
3. When using this product, please stay away from airports, railways, highways, high-rise buildings, power lines and other dangerous environments.
4. When using this product, please stay away from mobile phone base stations, high-power transmitting equipment and other high lectromagnetic interference environment.
5. When using this product, please stay away from all kinds of manned aircraft.
6. Do not use this product in rain, thunder, dust, fog, snow, wind, low temperature and other harsh environment.
7. This product is not waterproof design, do not operate this product near the water.
8. When operating this product, please always maintain a safe distance of about 10 meters between the drone and people or animals.
9. Please keep the drone within the operator's visual range at all times.
10. Do not hover or fly this product over the crowd, do not frighten others for fun.
11. Do not operate this product near places where children play.
12. Do not use this product to chase vehicles or affect the normal operation of vehicles.
13. In non-emergency situations, do not turn off the motor when the product is flying in the air.
14. This product can not be used in the case of tobacco and alcohol, fatigue, taking drugs, physical discomfort, etc.
15. Please check this product before each use, including but not limited to the solidity of parts, cracks and wear of the body and propeller, battery power, the effectiveness of the indicator light, etc. If any exception is found, stop using it immediately and replace the corresponding parts.
16. The abnormal working status of the drone may have an accident, do not start the propeller or reluctantly fly.
17. Do not attempt to block any moving parts in the operation of this product.
18. Do not modify this product, or use this product for purposes other than the original design.
19. Do not operate this product in the no-fly zone of laws and regulations.
20. Due to the variety of materials used in the aircraft, high temperature will damage the internal structure of the drone, and lead to unpredictable consequences, so please keep the drone equipment away from heat sources and avoid exposing the drone to direct sunlight for a long time.
21. Please follow the product instructions to operate.
22. Please use the original parts for maintenance and replacement.
23. Lend to other personnel for operation, please ensure that the operator understands and complies with this safety notice.
24. Do not mix different types of batteries.
25. Do not use expanded, leaked or damaged batteries.
26. Do not be near flammable materials (such as carpets, solid wood furniture and wood floors, etc.) when the battery is charging.
27. Please use the original configuration of the charging cable charging, do not use other brands and damaged charging cable charging.
28. Please keep a safe distance from the high-speed rotating propeller, so as to avoid the risk of strangling and cutting.
29. Do not use the model near the ear! Misuse can lead to hearing damage.
30. The aircraft should be used as far away from other electrical equipment and magnetic objects as possible, they

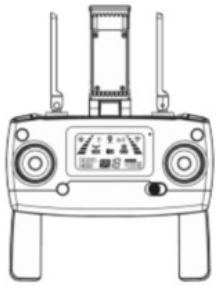
may cause interference with each other.

31. Please do not short circuit, squeeze the battery, so as to avoid explosion.
32. The motor is a heating part, do not touch, so as to avoid the risk of burns.

PARTS LIST



Drone x 1

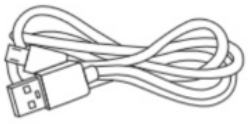


Remote Controller x 1

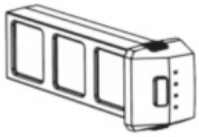
Spare Propeller x 4

User Manual x 1

Screwdriver x 1

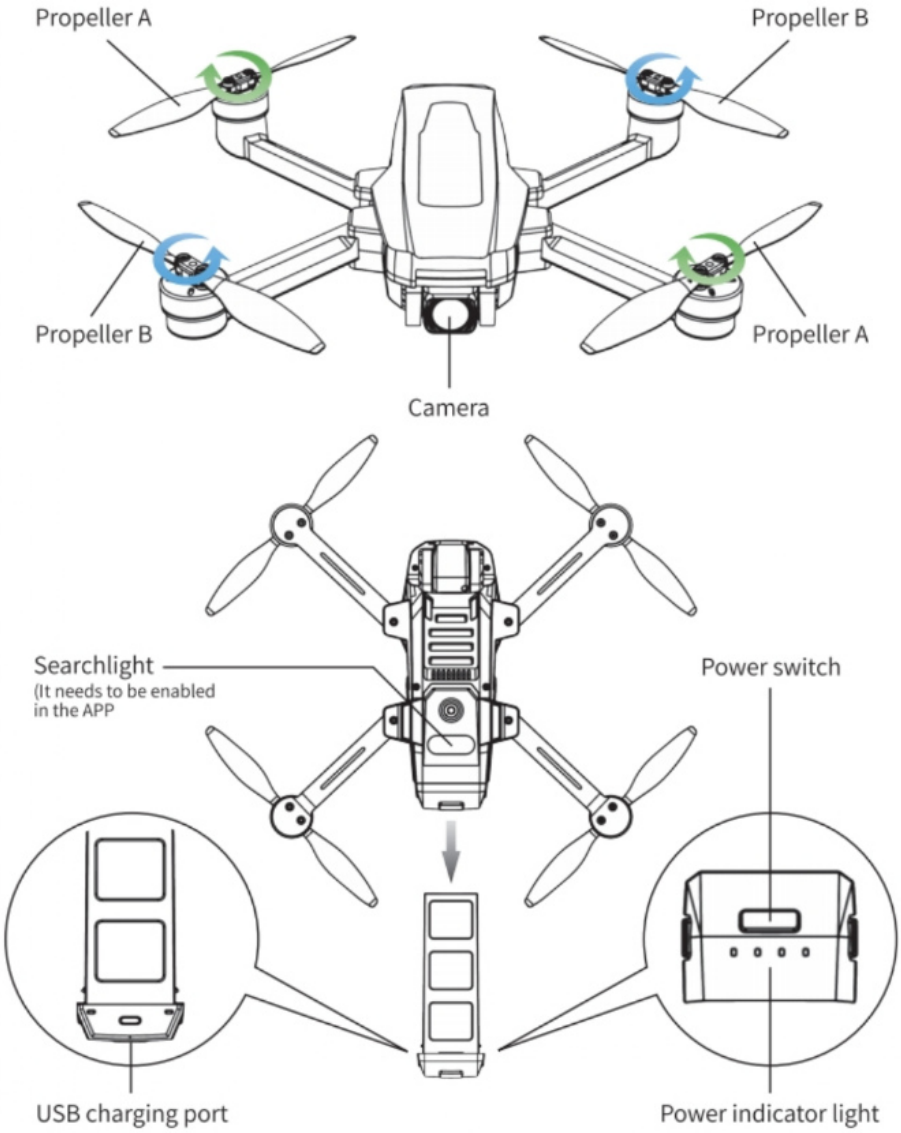


USB Charging Cable x 1

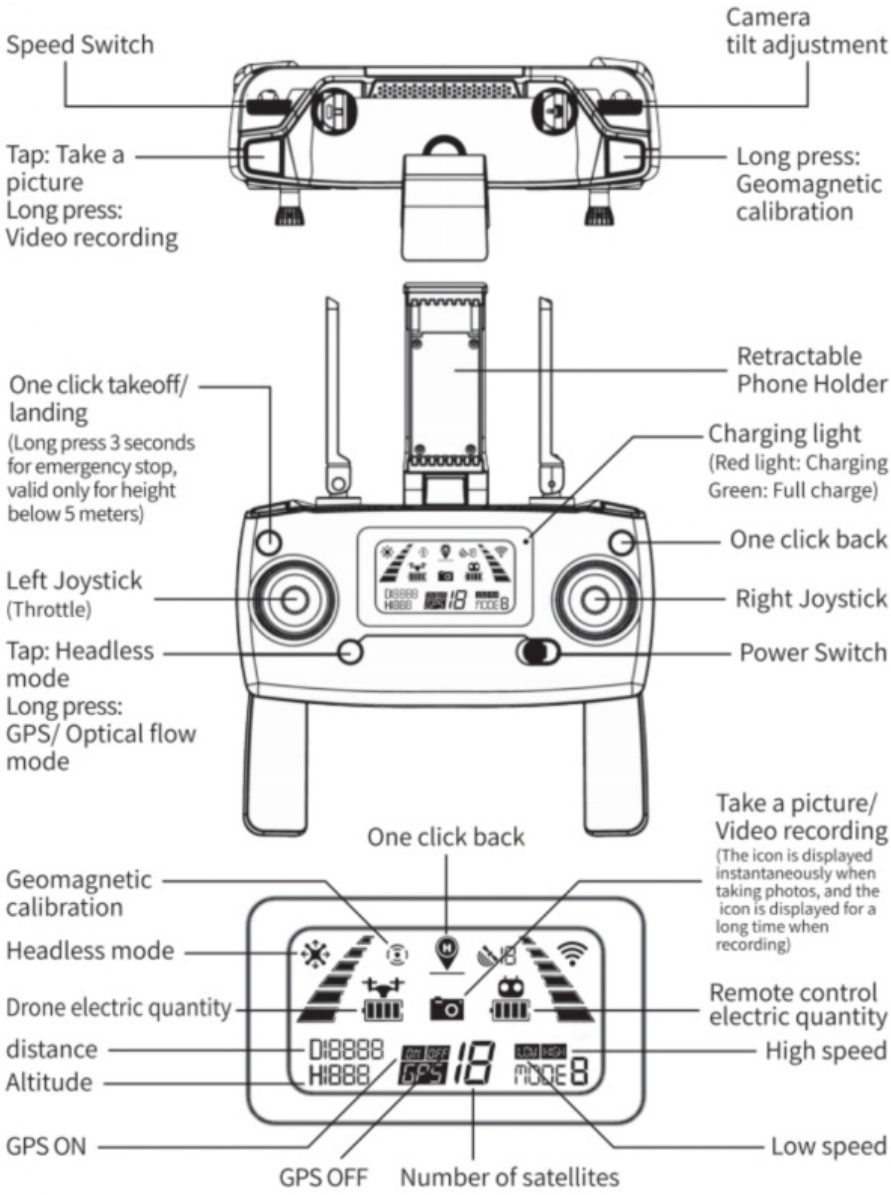


Drone Battery x 1

DRONE INTRODUCTION

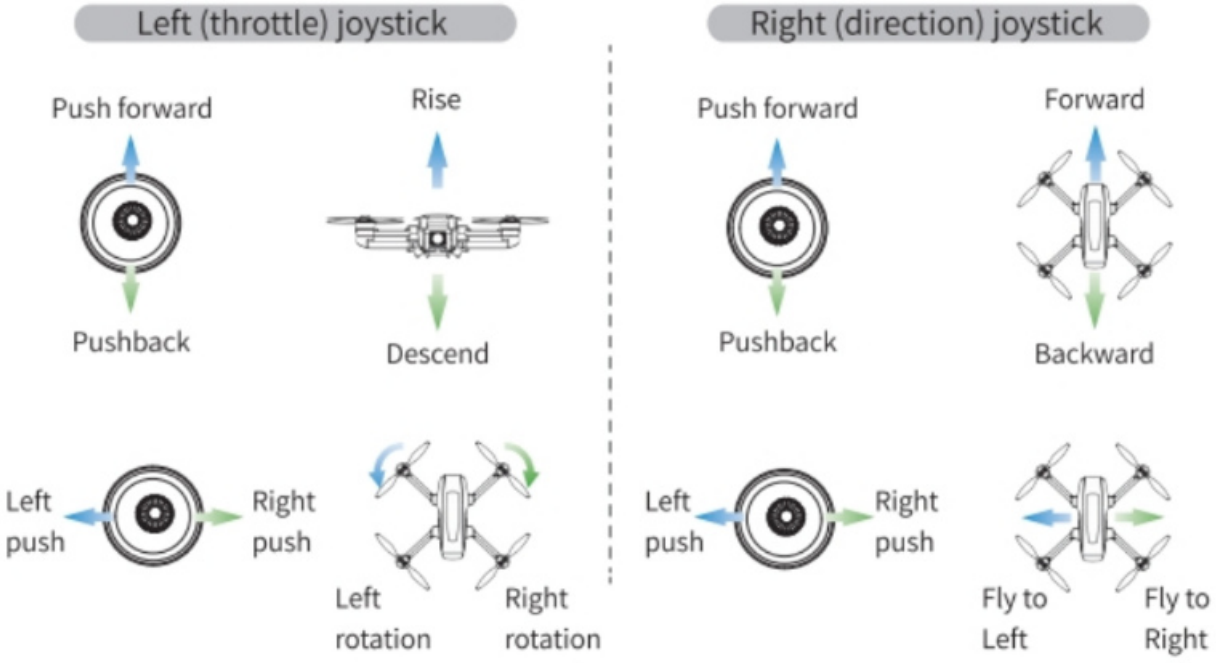


REMOTE CONTROLLER INTRODUCTION



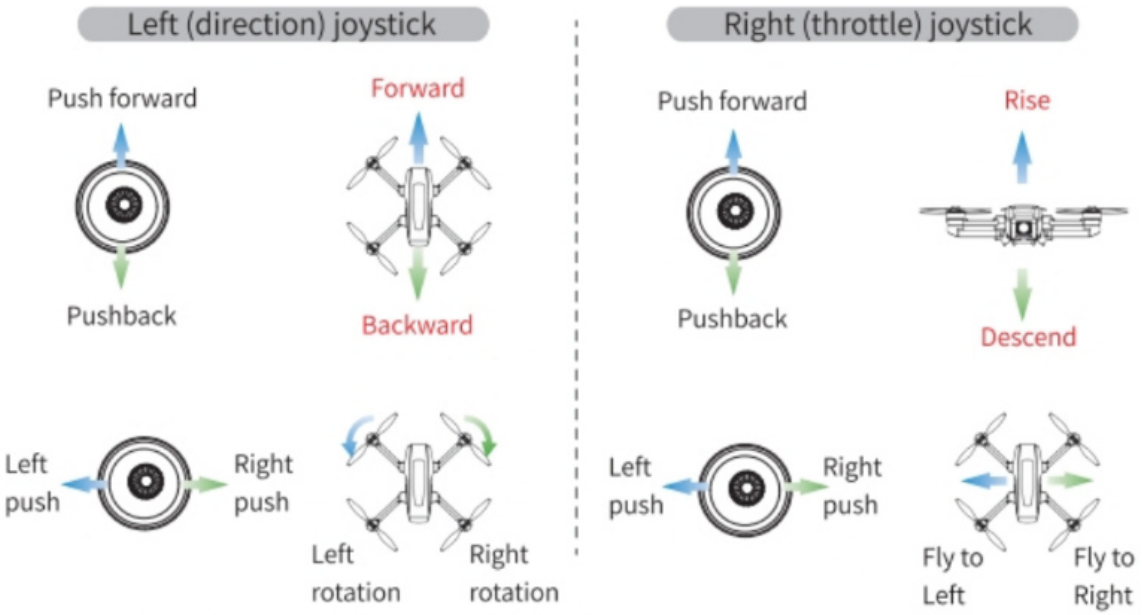
OPERATING MODE SWITCHING

MODE 2 (DEFAULT MODE)



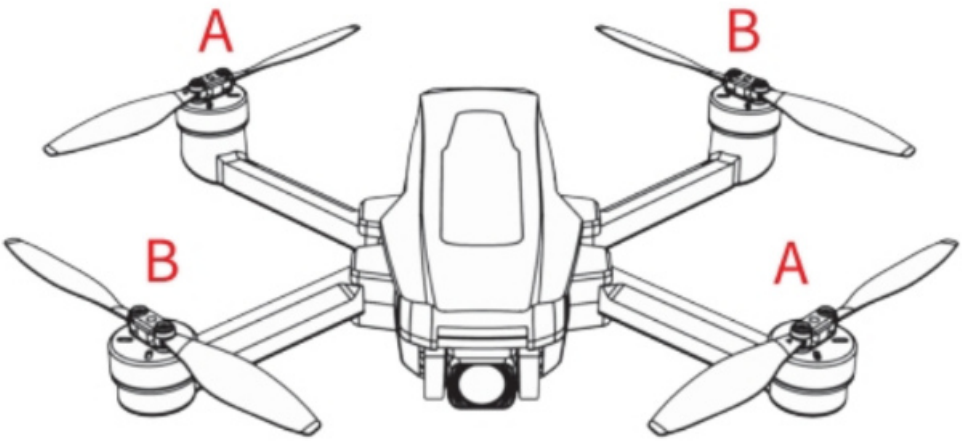
MODE 1

You can enter mode 1 by holding down the camera button and turning on the remote control power at the same time.

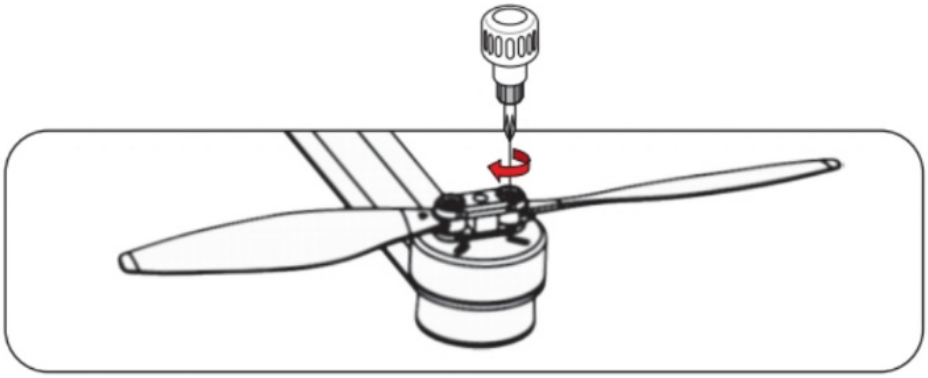


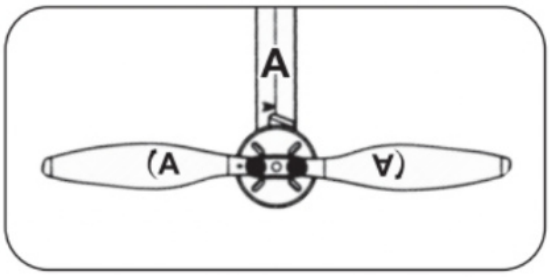
INSTALLATION GUIDE

Propellers



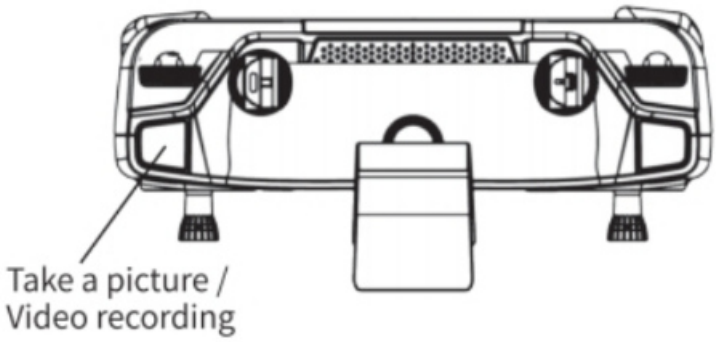
Please follow the diagram to ensure that all propellers are installed in the correct orientation, if the installation is wrong, the aircraft will not fly normally.





As shown in the picture on theright, the prop eller with the letter “A’ must be installed on the arm with the letter “A”. The propeller with the letter “B” must be installed on the arm with the letter “B”.

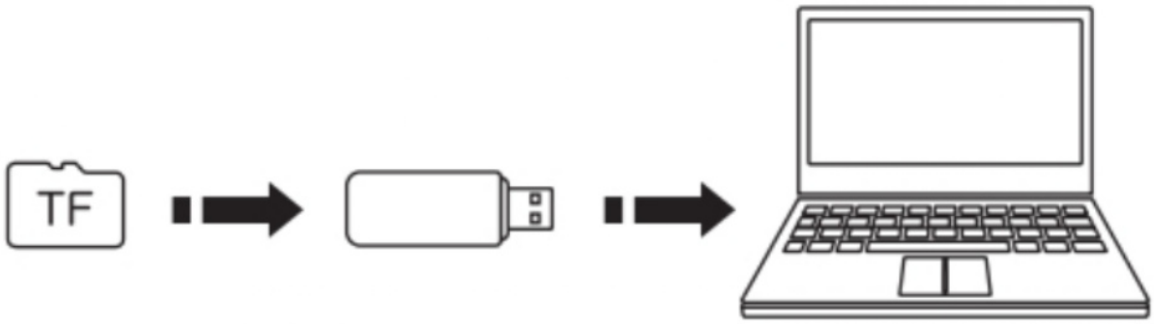
Camera



1. Tap the ” , ” button on the remote control, or click the ” ” button on the APP interface. When you hear the sound prompt, the APP makes a” click “sound, indicating that the camera takes a photo.
2. long press the ” ” button on the remote control, or click the ” ” button on the APP, hear the sound prompt, and the APP will display the recording timing, indicating that the camera is recording.
3. Long press “ ” on the remote control againorclick” “on the APP to stop recording and save the video to the APP And TF card. (Please do not take pictures when recording)

   Attention:

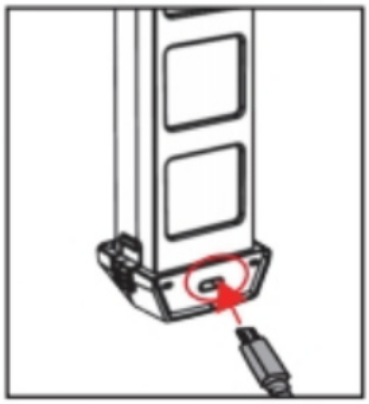
   When using the “TSRC” APP, the original pictures and videos captured by the camera will be compressed and saved to the phone.



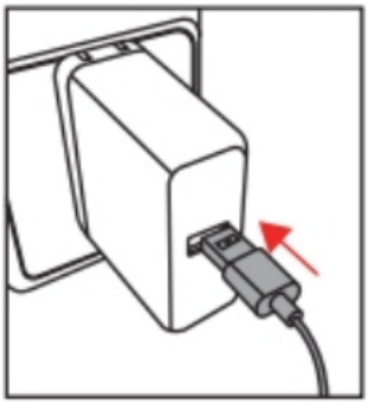
4. The original pictures and videos captured by the camera will be saved on the TF card.
   Tap TF card on camera to remove TF card. After the TF card is loaded into the card reader, the card reader is connected to the USB interface on the computer to read the data on the TF card. You can click the " " button on the APP to read the captured pictures and videos.

BATTERY CHARGING GUIDE

Drone battery charging



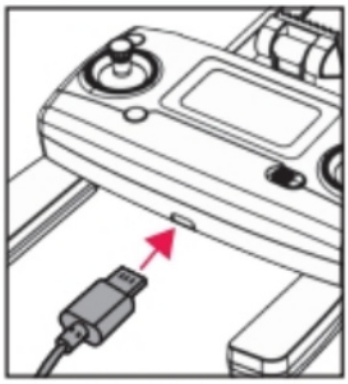
Charging time: about 300 minutes
(depends on charging power)



Mobile phone adapter:
5V ⎓ 1A / 2A

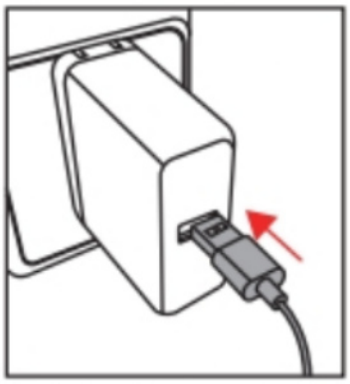
Take out the battery from the battery compartment of the fuselage, use the USB charging cable to connect to the charging port of the battery, and then connect it to the computer USB port or USB adapter (5V/2A) for charging. When charging, the green indicator light of the battery flashes; when fully charged, the 4 green indicator lights of the battery are always on.

Remote control Charginig



Remote control charging time:
about 60 minutes

(Red light: Charging) (Green: Full charge)



Mobile phone adapter:
5V ⎓ 1A / 2A

As shown in the picture above, after connecting the remote control tox the USB charging cable, connect the USB

charging cable to the computer USB port or USB adapter (5V/2A) for charging.

Note: When the remote control is in low power, icon " on the LCD screen of the remote control will start to blink, accompa- nied by the sound of “beep” and “beep”, at this time, please stop flying to charge the remote control as soon as possible.

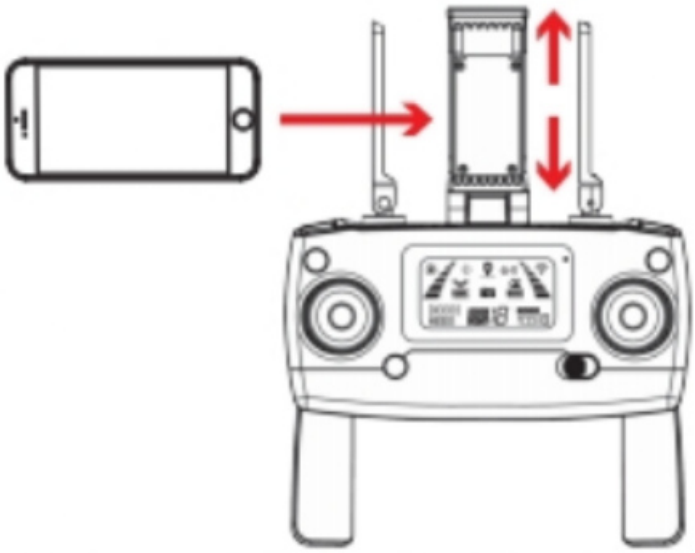
APP INSTALLATION AND OPERATION

Download/install the APP
Please scan the QR code below to download the “TSRC PRO” app to use the relevant features.

IOS system, domestic / foreign Android system

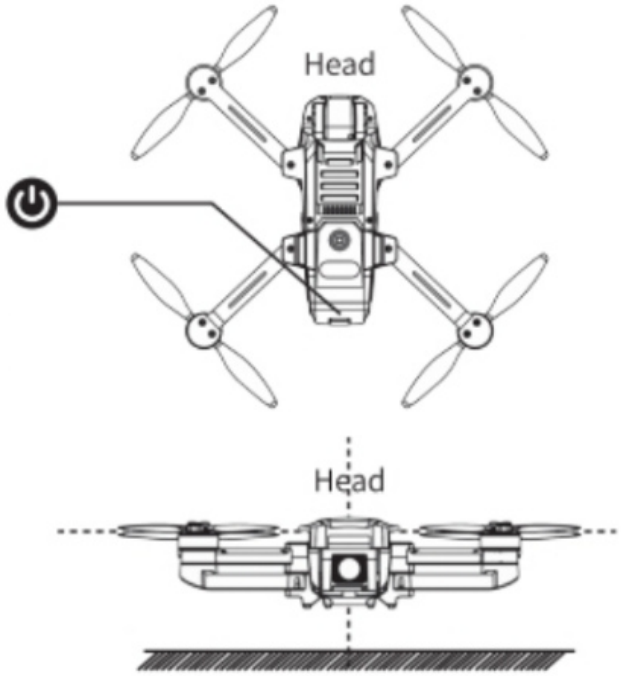
http://www.vison-st.com/app/download/tsrc_pro

Applicable mobile system version
10S 7.0 or later / Android 4.4 or later.
Wi-Fi Connection

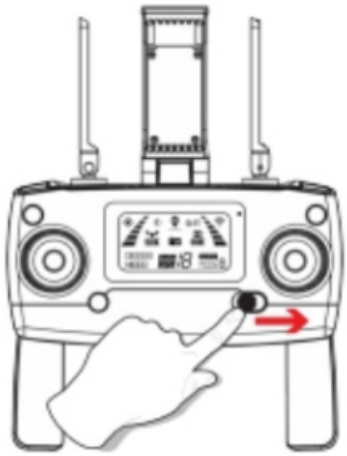


As shown in the picture above, stretch the phone holder until it can clamp the phone, so that it can be operated on the phone later.
Then turn on the aircraft, then turn on the smartphone, and go to the phone’s Settings screen to start the search for available Wi-Fi networks: If you are using an iPhone, select “Settings” – > WLAN; If you are using Android, select Settings – > Wireless and Networking – > Wi-Fi.
Select the Wi-Fi signal named “TSRC-****”.
After the Wi-Fi signal is successfully connected, the connection between the aircraft and the phone will be automatically established. At this point, exit the Settings menu and enter the installed “TSRC” APP application.
In the APP operation interface, you can see the current status of the aircraft and perform corresponding operations.
Note: All instructions below use Mode 2 (left hand throttle stick) as an example!
Frequency matching

1. After the battery is loaded into the aircraft, long press the power switch button of the aircraft battery to start the aircraft.
2. Place the drone on a flat surface and make sure the head of the drone is facing straight ahead and the tail is facing straight behind (i.e. the operator).

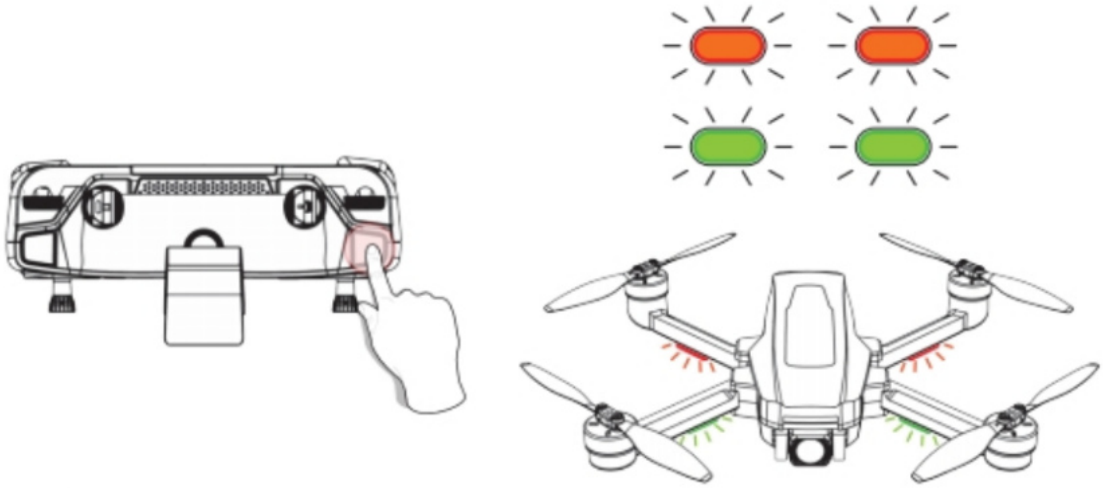


3. Asshown in the picture on the right, flip the power switch to the right to turn on the power of the remote control. After the power is turned on, the LCD screen of the remote control will light up and display all the ICONS, and at the same time sound “beep”.

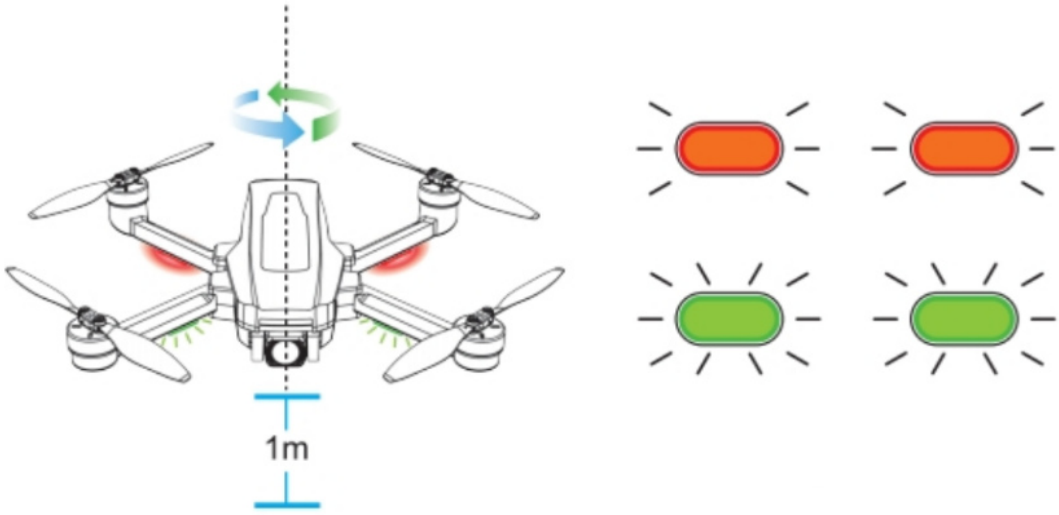


4. After turning on the power of the remote control, the remote control is matching the frequency, and the four electric dimmer lights of the aircraft arm and the searchlight are flashing at the same time. When the sound of “beep”, “beep” and “beep” is heard, the frequency matching is successful, the searchlight of the aircraft is extinguished, and the status of the UAV is displayed on the LCD screen.

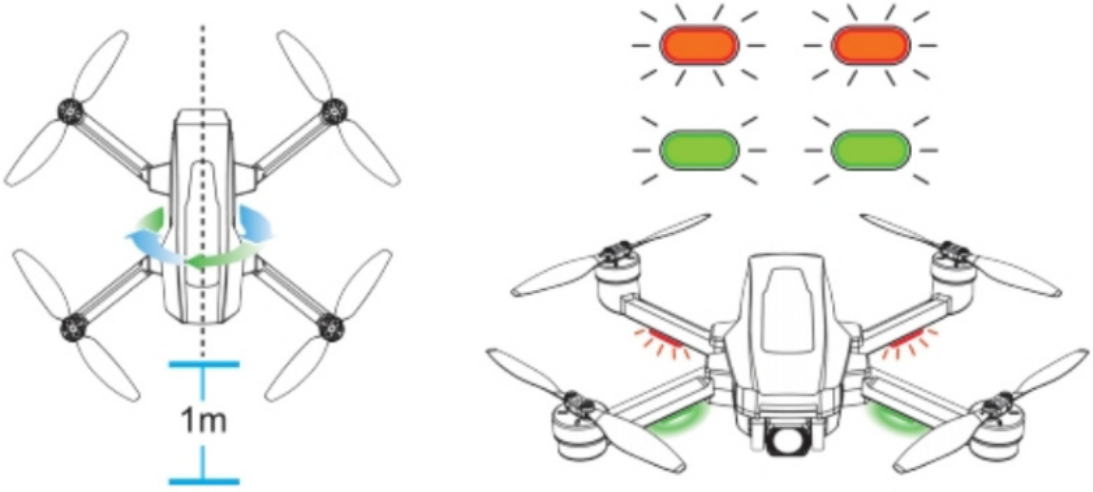
Geomagnetic calibration



Step 1:
As shown in the figure above, long press the button on the remote control, and the green and red lights on the aircraft can flash intermittently to carry out the second step.

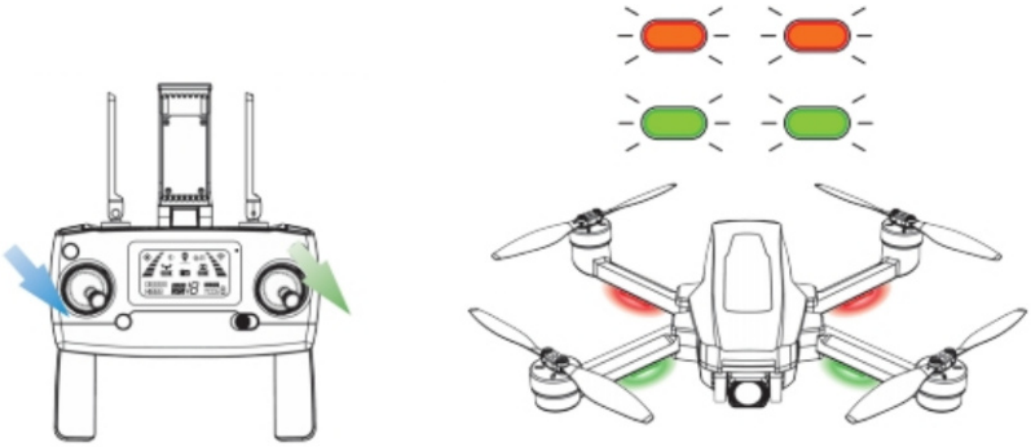


Step 2:
As shown in the figure above, rotate the fuselage of the aircraft horizontally (360°) at a distance of about 1 meter from the ground.
When the sound of “beep” is heard from the remote control, the red indicator light of the aircraft becomes steady on (the green light flashes intermittently), step 3 can be carried out.



Step 3:
As shown in the figure above, make the aircraft about 1 meter from the ground with the nose down (or up) and rotate the fuselage vertically (360°). When the remote control makes a “beep” sound, the green light of the aircraft will be on in indoor mode, and the red light will blink (green and red light will be on in outdoor mode), that is, the geomagnetic calibration will be completed.

GYRO calibration

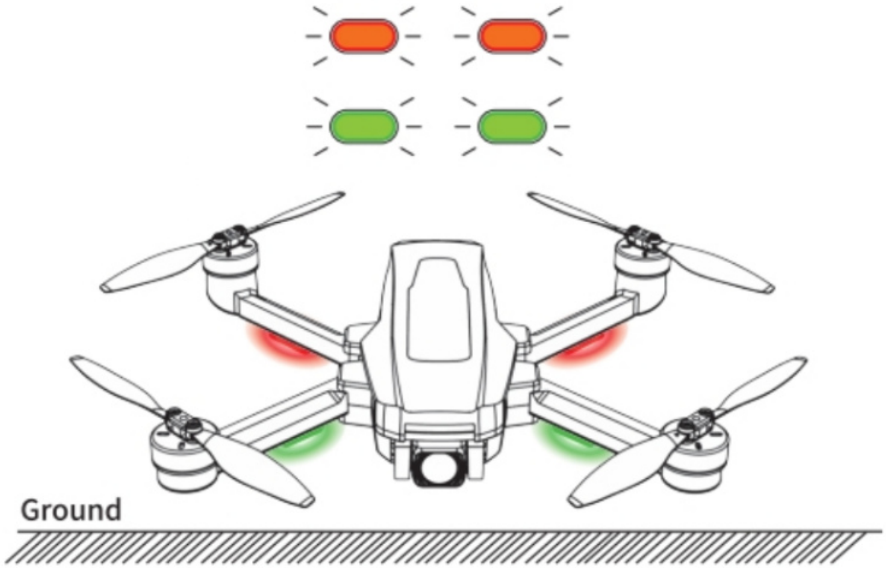


After frequency calibration, push the left and right operating rods to the “5 o ‘clock” direction at the same time as shown in the above figure. When the green and red indicators of the aircraft turn from fast flashing to steady on, and make a “beep” sound, it indicates that the gyroscope calibration is completed.

- When doing gyro calibration, be sure to put the drone on a horizontal surface, otherwise it will affect the flight!
- It is recommended that operators perform geomagnetic calibration before each flight!

GPS/ Optical Flow Mode

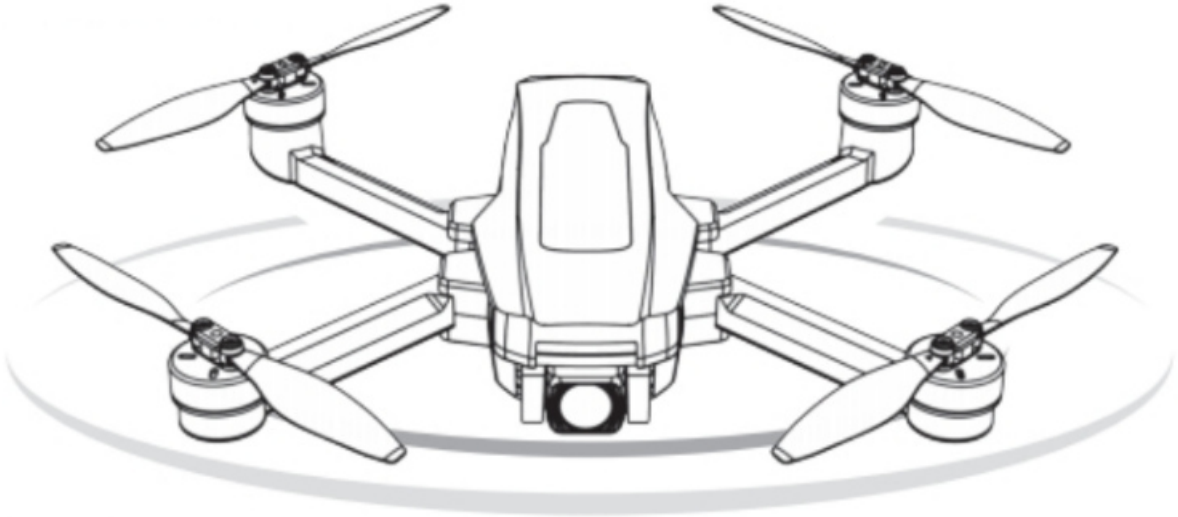
- **GPSsignalsearch**



As shown in the figure above, after the geomagnetic calibration is complete, place the aircraft on a flat horizontal surface without external signal interference sources. At this time, the green light on the aircraft is steady on, and the red light is blinking, indicating that the aircraft is searching for GPS signals. The GPS signal search process takes about 3 minutes, when the green and red lights on the aircraft are steady on; After the remote control emits a “beep” prompt tone, it means that the GPS signal search is complete.
(In GPS mode, you need to wait until the GPS signal search is completed before you can operate the takeoff).

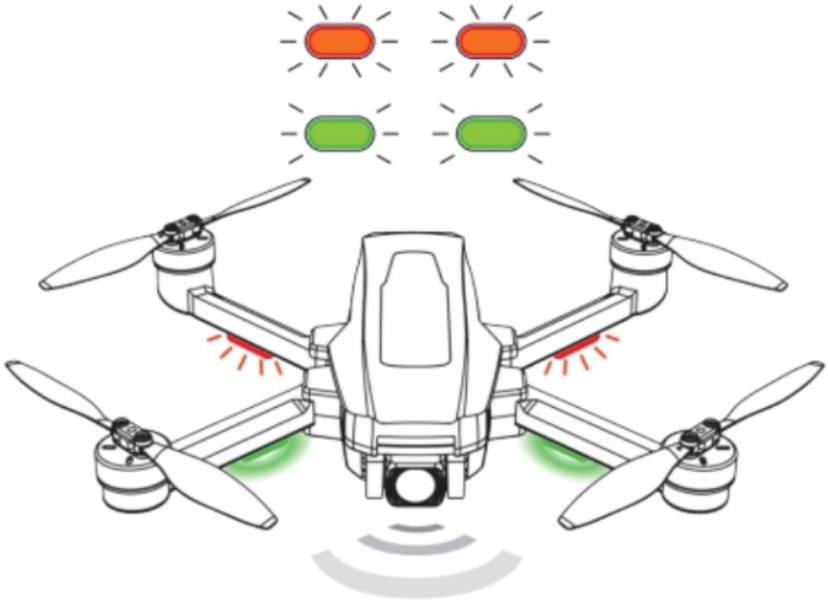
GPS mode

Suitable for outdoor empty place without signal interference, the drone and remote control frequency, calibrate the geomagnetic and gyroscope, wait for the aircraft to search for the satellite, turn on the default GPS mode.



Optical flow mode

If you are flying in an open place indoors, long press the “eps” button on the remote control for 3 seconds, the remote control emits a “beep” sound, indicating that the GPS mode has been turned off, and switches to the optical flow mode. After the switch is completed, the green light on the aircraft is steady, and the red light flashes intermittently and slowly.

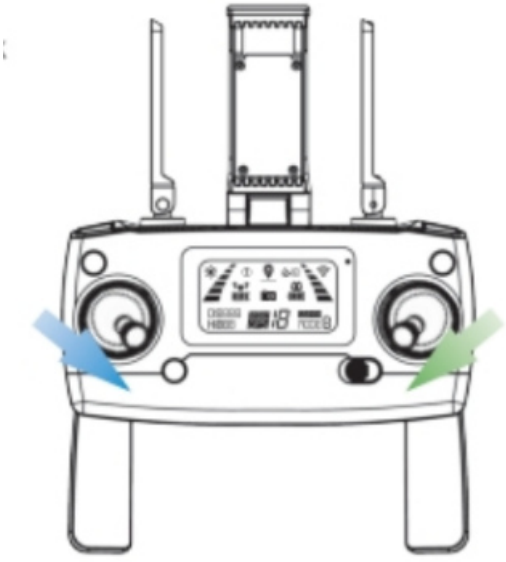


Motor unlock

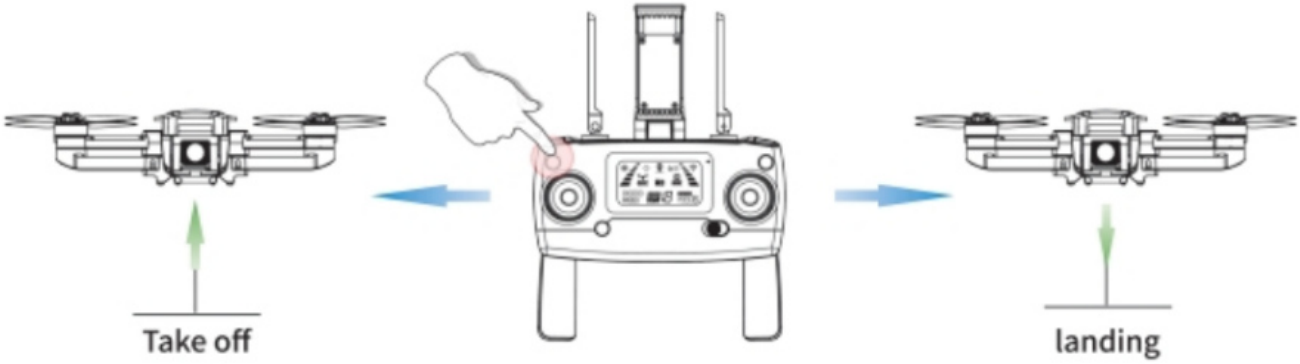
Push the left joystick on the remote control to the 5 o clock direction, and the right joystick to the 7 o' clock direction. The motor automatically unlocks and starts, and push up the throttle joystick directly to take off. Cancel motor unlock:

The left joystick on the remote control is pushed to the direction of 7 0″ clock, the right joystick is pushed to the direction of 50″ clock, and the motor stops working. After the motor is unlocked, it will automatically stop working after 20 seconds of no operation.

Once all the lights are steady on, the aircraft can take off normally.



One click take off/land



One-click take-off

After the motor is unlocked, press the one-key take-off/landing button" ↕ " on the remote control, and the aircraft will take off to a height of about 1.5 meters from the ground. At this time, the aircraft can be controlled by the left

and right operating rods.

One-touch landing

During flight, short press the “ ” button on the remote control again, and the aircraft will descend slowly until it touches the ground.

PRODUCT FUNCTION ANALYSIS

APP Application

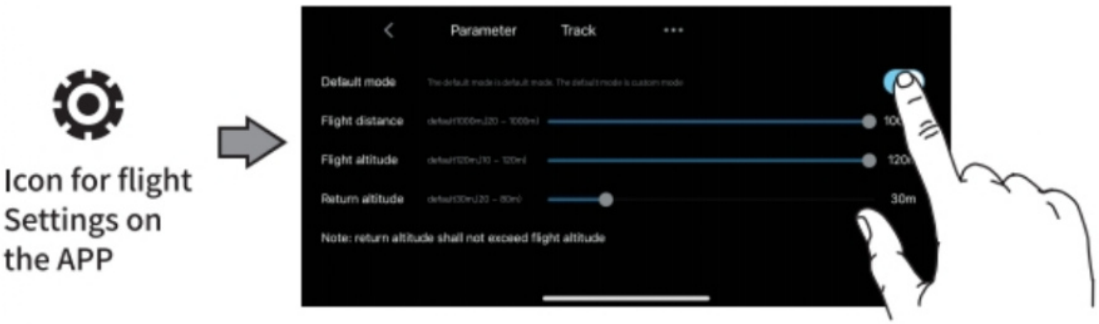
	Back: Return to main screen
	GPS signal: Displays the current GPS signal strength
	Aircraft power: Real-time display of the remaining power of the current aircraft
	One key take-off: The aircraft will automatically take off to an altitude of 1.5 meters One key landing: Thevehicle w ill descend automatically and slowly
	One-click return: The craft will slowly descend to the ground
	Menu: Many functions are available after opening
	Flight Settings; Click to enter the setting interface, you can set the flight mode, flight height/distanc e, return height And looking at flight trajectories and so on
	Take a picture: Click to take one photo at a time

	Video recording: Click once to start recording; Click again to stop recording
	Media library: You can view or share photos or videos you've taken
	Recording: The device can record the operator's voice while the camera is recording, and the audio is synchronized with the image
	Image follow: After locking the following target, the aircraft will autematically control the turning . in p lace, so that the camera will always face to followTarget (This function can only be used in GPS mo de, follow the target should not move too fast to avoid losing the follow)
	GPS follow: The aircraft keeps a distance from the controller and follows the GPS position on the mobile phone to move
	VR splitscreen: Use with VR glasses (purchased separately) to watch 3D image in real time
	Circling: After clicking this function, the aircraft will fly in a circle
	Gesture photo: This feature will be able to use gestures to take pictures
	Route Planning: Able to plan their own flight path
	Zoom: Click this function to change the focal length of the camera
	Lens reversal: Flip the APP interface 180°
	Lens adjustment: This function adjusts the tilt Angle of the camera
	Searchlight switch: This function turns on or off the searchlight on the bottom of the drone sexrchiight automaticall turns of aftes APP is disconnected from fights

Custom mode

After the aircraft is connected to a mobile phone, it enters the default flight mode. In the default mode:

1. Flight distance: 1000M
2. Flight altitude: 120M
3. Intelligent return altitude: below 30M

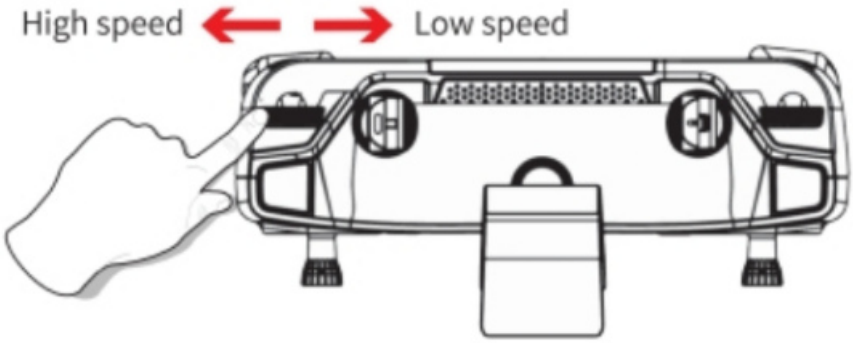


After entering the APP operation setting interface (as shown in the picture above), the user can enter the custom mode after turning off the “Default Mode”. In this mode, the operating parameters can be modified.

Attention:

The modification of operation parameters can only be done in the APP operation setting interface after the aircraft is connected to the mobile phone.

Speed switching



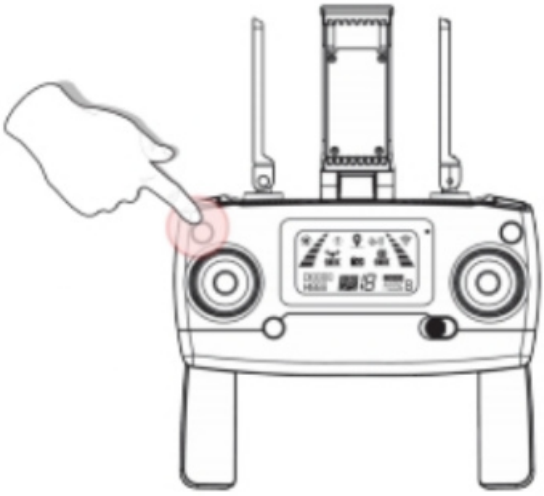
The aircraft is equipped with two speed gears, namely low speed and high speed.

Move the speed adjustment gear of the remote control ”  ” to the right, the remote control makes a” beep “sound, and the” low speed “mode opens; Move the speed adjustment gear to the left, the remote control emits the sound of “beep” and “beep”, and the speed changes to “high speed”.

Tip: The default setting is low gear.

Emergency stop

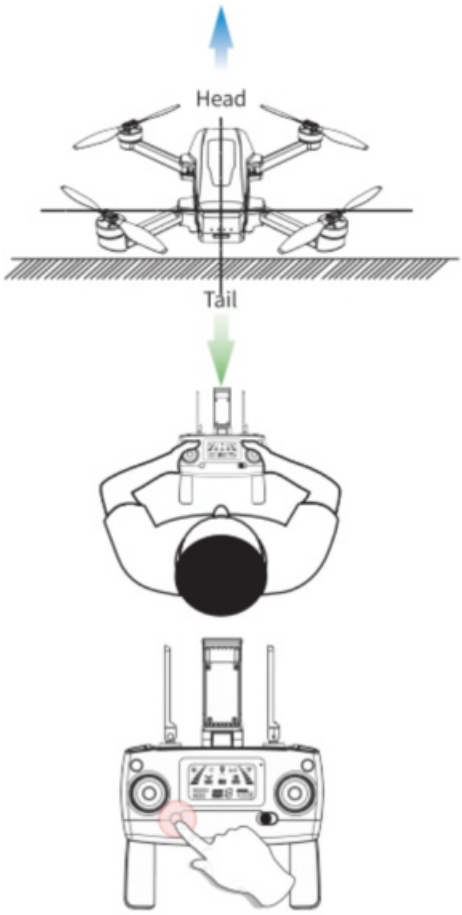
 This function is only applicable to the emergency situation of the aircraft during the flight, and the flight height can be operated within 5 meters, otherwise it is easy to cause unnecessary damage!



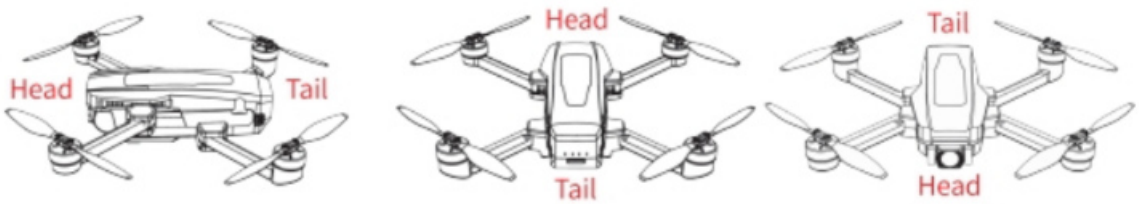
Long press the “ ” button of the remote control for about 3 seconds to “emergency stop”, at this time, all the motors willimmediately stop rotating, and the aircraft will immediately fall.

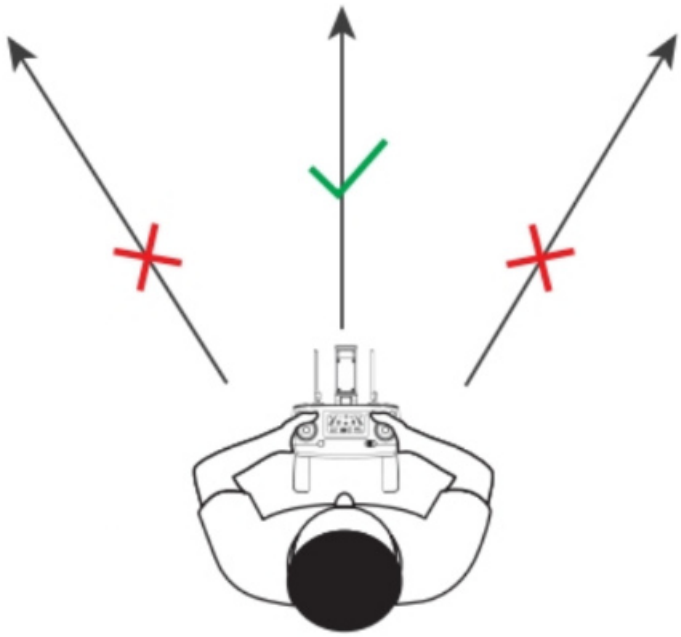
Headless mode

A Please use this function after you are fully familiar with the “headless mode” function, otherwise, it is easy to lose the drone, causing unnecessary losses.



1. Short press the headless mode button ” GPS”, the remote controlemits a “beep” sound, and the green light of the aircraft flashes, indicating that the aircraft has entered the “headless mode”.
2. Press the headless mode button ” GPS “again, and the remote control makes a “beep” sound, indicating that the aircraft exits the “headless mode”.



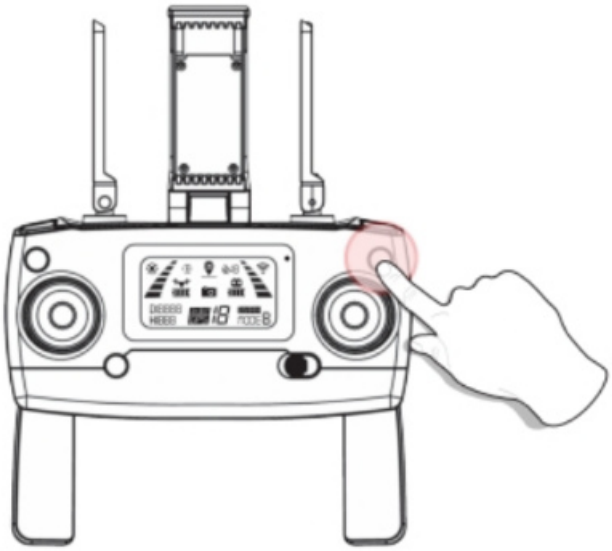


(It is recommended that the operator's orientation be consistent with the orientation of the drone's take-off head)
In headless mode, the forward direction of the aircraft is determined by the head direction of the aircraft when it takes off. We recommend that the orientation of the operator be consistent with the orientation of the aircraft take-off head.
When the operator pushes the direction joystick forward, the drone will fly forward; If the operator pushes the direction joystick backward, the drone will fly towards the operator; If the operator moves the direction joystick left/right, the drone moves left and right relative to the operator.
Since the operator's operating direction is very important to the realization of the "headless mode" during takeoff, after entering the "headless mode", please keep your operating direction consistent with the direction of the head of the drone when it takes off, so as not to cause confusion in the operating direction, resulting in unnecessary loss and damage.

One click back

Only implemented in GPS mode
The return to home (RTH) function allows the drone to return to its last recorded departure point.
There are three types of return (RTH) :
Intelligent return / low power return / lost contact return

Intelligent return



Short press the one-key return button ” ” to start the intelligent return function, and the remote control will start to sound “beep”. The drone will automatically return to the vertical above the take-off point and then slowly descend to the take-off point. Press the” ” button again to exit the return procedure, and pull down the throttle joystick to lower the drone to a safe area.

Low power return

When the battery is low, it will trigger a low-power return, at which time all the indicators of the aircraft flash.
When the low-power return is activated, the drone will fly back to about 25 meters away from the operator, at this time, the operator can still operate and control the drone. At this point, pull down the throttle joystick to land the drone in a safe place. When the battery runs out, the drone will automatically return to the set take-off point. Note: Please do not push the direction joystick when entering the low power RTH, if you push it, the return will fail, and the aircraft will be atrisk of being lost.

Lost contact to return

If the aircraft and the remote control lose connection, the aircraft will automatically enter the return mode, and the indicator light on the aircraft will flash. The aircraft will automatically return to the departure point. If the aircraft and the remote control are connected again during the return journey, the operator can regain control of the aircraft.
Note: This drone is not equipped with obstacle avoidance.

BASIC PARAMETER INFORMATION

DRONE

- Model: M7
- Weight: 435g
- Operating temperature: 0° C to 40° C

DRONE BATTERY
Capacity: 3000mAh
Voltage: 7.4V
Battery type: Lithium battery
Power: 22.2Wh
Charging time: about 300 minutes (Depends on the charging power supply and the remaining battery power)
Charging temperature: 5° C~ 40° C
REMOTE CONTROL

- Operating frequency: 2.4GHz
- Capacity: 500mAh

- Voltage: 3.7V
- Battery type: Lithium battery
- Operating temperature: 0° C to 40° C

APP/ REAL-TIME IMAGE TRANSMISSION
Application: TSRC
Real-time image transmission frequency: 5GHz ISM
Real-time image transmission quality: 1080P@25fps
Latency: Low latency (depending on situation and mobile device)
Operating system: 10S 7.0 or later/Android 4.4 or later
CAMERA

- **Lens Angle:** FOV 120° f /2.0
- **Photo format:** JPEG
- **Photo resolution:** 4K
- **Video format:** MP4
- **Video resolution:** 3840 x 2160p (stored in TF card) 1920 x 1080p (stored on your phone)
- Maximum bit rate: 20fps
- Supported file format: FAT32
- Operating temperature: 0° C to 40° C
- Memory card type: SD card (CLass 10 / U1 and above) Supports a maximum of 128 GB

USB CHARGING CABLE
Voltage: 5V
Rated power: <10W
FCC Statement
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, andX
2. this device must accept any interference received, including interference that may cause undesired operation.

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 thatinterference 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. Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment. RF Exposure Information

The device was evaluated to meet general RF exposure requirements. This equipment should be installed and

used with a minimum distance of O mm between the radiator and your body.

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Documents / Resources

	TSRC M7 GPS Drone [pdf] Instruction Manual M7 GPS Drone, M7, GPS Drone, Drone

References

- User Manual