SYMA®
RADIO-CONTROLLED PRODUCT

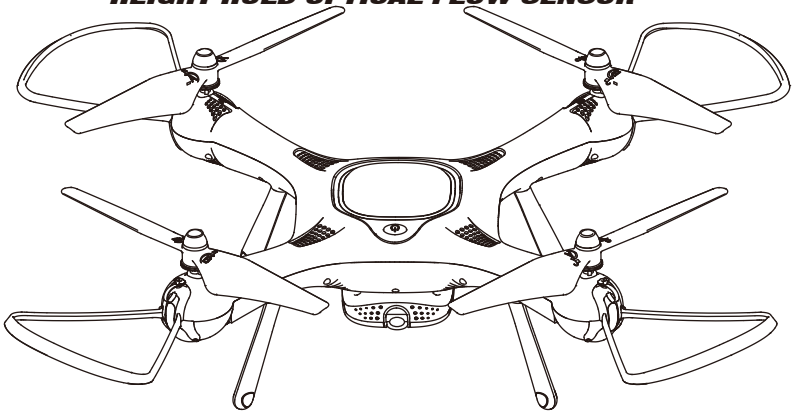
12+

X25W

GYRO REMOTE CONTROL SERIES

2.4G

AERIAL PHOTOGRAPHY DRONE 720P CAMERA CAMERA GIMBAL
HEIGHT HOLD OPTICAL FLOW SENSOR



1 USER MANUAL

BC

MAIN FEATURES

- ●Special 4-axis structure - fast and agile. Suitable for flying in spacious indoor and outdoor areas.
- ●Built-in 6-axis gyroscope, barometer and optical flow sensor ensures accurate position hold.
- ●Capable of doing 360 degrees stunts.
- ●Headless mode for easy flying.
- ●Auto take-off and landing - easy and safe flying.
- ●HD camera - enjoy aerial photography with real-time WiFi video transmission.
- ●Trajectory Flying - new smart phone application feature.

Notice: The company will not be held responsibly for any printing inconsistencies and may or not inform end users regarding any new potential updates.For further information, please vistit the syma website.

Safety Guide

1. Please, keep the small drone accessories out of reach of children.
2. This drone is very powerful. When flying for the first time, avoid sudden movements of the throttle. When ascending push the throttle stick slowly up to avoid unintended damages or injuries.
3. After flying, turn off the transmitter before turning off the drone .
4. Do not keep the batteries in high temperatures areas or near heat sources.
5. It is strongly reccomended to operate the drone at 2-3 meters away from a pilot and other people or animals. Crashes may cause unintended injuries. When landing the drone, avoid crashing it into other people.
6. Adult or experienced RC pilot's supervision is reccomended for children.
7. Non-rechargeable batteries should not be recharged; Batteries should be inserted with a correct polarity; Different types of batteries, new or used batteries should not be mixing.
8. Turn off the drone/transmitter and remove the batteries when not in use.
9. The supply terminals are not be short-circuited
10. When not in use for more than 10 days, take measures to pro-long the drone's battery life by reducing the drone battery level to 40%-50% of it's capacity (fully charge the battery then fly the drone for half of it's flying time).
11. Keep away from the rotating blades (rotating blades my cause bodily injuries, or damage to property).
12. To avoid interfering with air traffic control signals avoid flying a drone within 5000 meters of an airport. Avoid operating RC equipment during the periods set by the local authority.
13. Only use the included charger.
14. Liquids can be used to clean the product. Turn off the equipment and unplug the charger from the power source before cleaning the drone. Perform routine inspection of the charger (check: port, shell and other parts) on a regular basis. If any abnormalities are found, immediately stop using the equipment until it is fixed.
15. Attention: please assemble the aircraft with the guidance of adults.
16. Do not look directly into the LED lights of the drone as it can damage your eyes.
17. Open the battery cover of the toy with screwdriver.
18. The packing has to be kept since it contains important information.

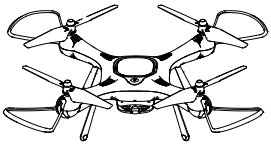
Repair and maintenance

1. Use clean and soft cloth to clean the product.
2. Keep away the product from heat sources.
3. Avoid water exposure to this product. Moisture may cause damages of the aircraft electronic parts.
4. Transformers used with the aircraft should be examined regularly,such as the cord,plug,enclosure and other parts,In case of any damages is found, please stop using it unless it is repaired or replaced.

Box Contents

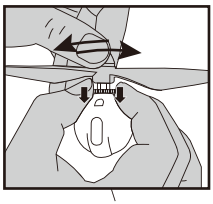
Items included:

- **Drone**
- **Transmitter**
- **User Manual**
- **Blades X4**
- **USB Charger**
- **Blade Protective Guard X4**
- **Mobile Phone Mount**



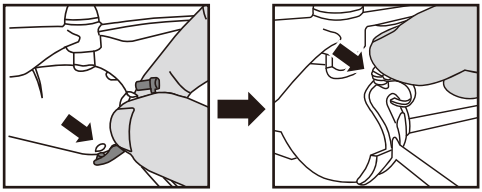
Installing the Blades and the Blade Protective Guards

Installing the blades



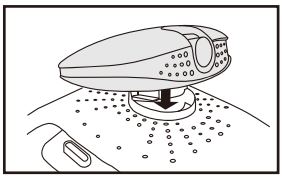
To remove the blades, press down on the blade nut and rotate the blades marked “A” clockwise, and the blades marked "B" counterclockwise. To tighten the blades, rotate the blades marked “B” clockwise and the blades marked “A” counter-clockwise.

Installing the Blade Protective Guards

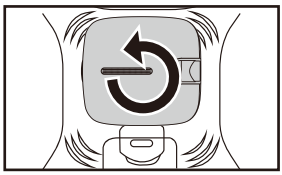


Locate the blade guards by placing them into the slots below the motors. Refer to the image.
After, insert the plugs into the slots above the blades protective guards. Refer to the image.

Installing the Camera

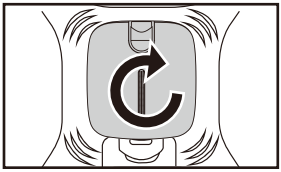


1. Plug the camera’s wires into the drone

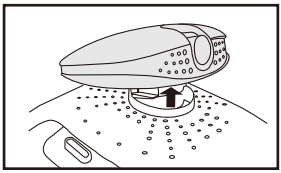


2. Install the camera into the drone camera’s slot. To fix the camera rotate it counter-clockwise.

Uninstalling the Camera

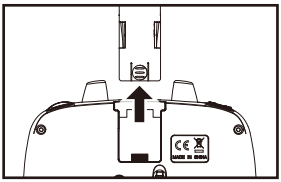


1.Rotate the camera clockwise.

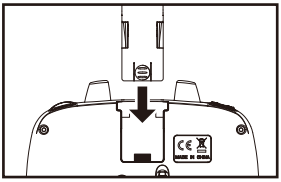


2.Gently lift the camera and after unplug the camera's wires from the drone.

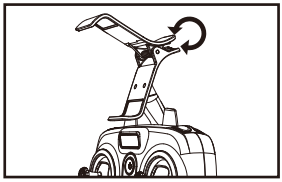
Installing the Mobile Phone Mount



1. To remove the mobile phone mount, pull it up from the back of the transmitter.

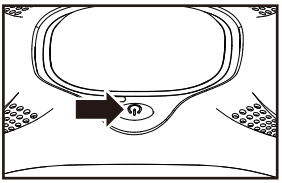


2. To install the mobile phone mount, insert it into the mobile phone mount's slot at the back of the transmitter.

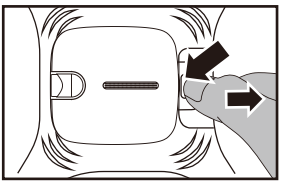


3. To adjust to phone holder to the required size, use phone holder mount's clips.

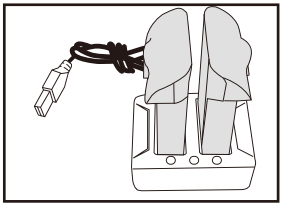
Changing and Charging the Drone's Batteries



1. Gently press the on/off button to turn off the drone.



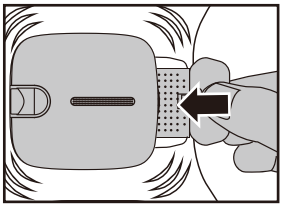
2.To remove the battery, press on the release button and at the same time pull out the battery.



3. Insert the battery into the charging cradle. Plug the USB into a power outlet. When charging, the charging light will glow red and the cradle's light will be green. Unplug the charger when the lights go off. Charging time: about 150 minutes.

Warning: only standard 5V chargers are safe to use (input of 2A).

Note: current flow will affect charging time of the battery.



4. Once charging is completed, install the battery into the drone.

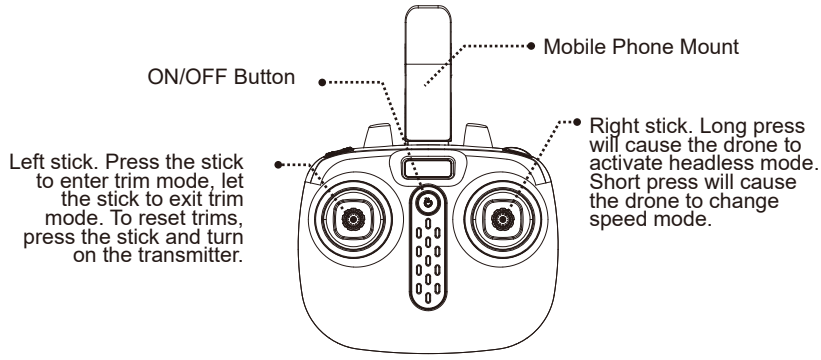
Charging time is about 150 minutes. Drone hover time is about 12 minutes.

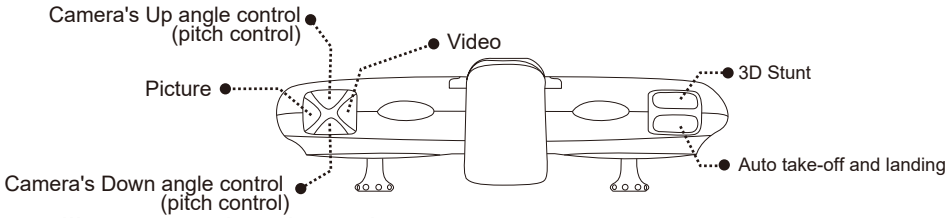
Important: battery charging information.

- Do not keep the battery in high temperature areas, such as fire or heat sources. Otherwise, it may damage the battery or even trigger an explosion.
- Do not put the battery into water. Store the battery in a cool and dry environment.
- Avoid dismantling the batteries.
- During the charging of battery, avoid leaving the charging place.
- Rechargeable batteries should be removed from the toy before being charged.
- Rechargeable batteries should only be charged under the supervision of adults.
- Exhausted batteries should be removed from the aircraft.
- Caution: Risk of explosion if battery is replaced with incorrect ones,Please dispose the batteries according to the instructions.

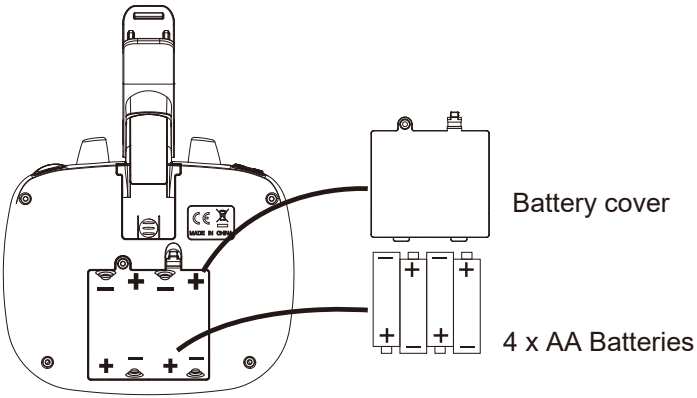
Understanding the Transmitter

Transmitter functions:





Installing transmitter batteries:

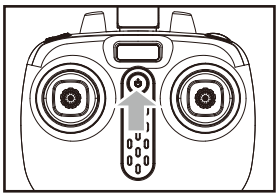


Transmitter battery installation: open the battery cover at the back fo thhe transmitter. Install 4pcs AA batteries according to the polarity indications (Note: batteries are not included).

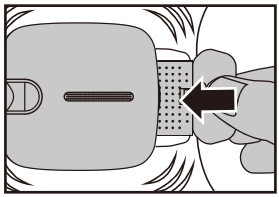
1. When installing the batteries, ensure the polarity of the batteries match the polarity of the battery compartment.
2. Do not mix old and new batteries.
3. Use only batteries of the same type.

Preperation for Flight

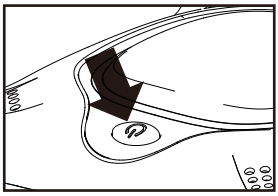
1. Flight preparation



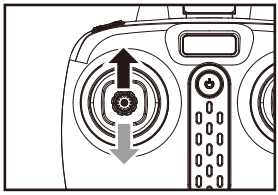
Step1: Turn on the transmitter.



Step2 :Install the drone’s battery.

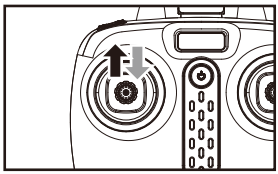


Step 3: Turn on the drone

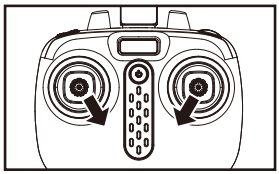


Step 4: Move the left stick (throttle) fully up and after fully down. The drone indicator lights will turn solid (glow) indicating the drone is ready to fly.

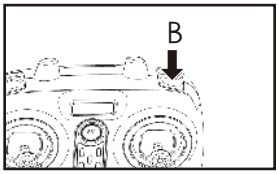
2.Arming Motors



Method 1: Move the left stick (throttle) fully up, after let it come back to the middle and the motors will start spinning.



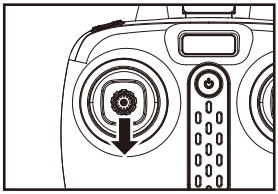
Method 2: Push both sticks at the same time (left stick to the bottom-right corner and the right stick to the bottom-left corner) and hold for 1 second and the motors will start spinning.



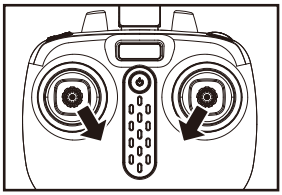
Method 3: Place the drone on a flat level surface and after press the B button. The drone will take-off, and hover at the preset height.

1. If the drone flies out of control range, the drone indicator lights will start flashing slowly and after the drone will slowly descend.
2. If the transmitter turns off or the transmitter battery runs low, the drone will slowly descend. Turn on the transmitter again, re-pair the unit and continue to fly.

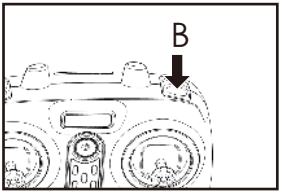
3.Disarming Motors



Method 1: Push the left stick (throttle) fully down and hold it there for 2-3 seconds and the motors will stop spinning.



Method 2: Push both sticks at the same time (left stick to the bottom-right corner and the right stick to the bottom-left corner) and hold for 1 second and the motors will stop spinning.

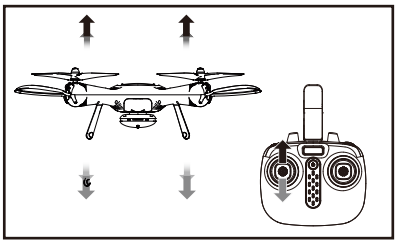


Method 3: After the drone is in stable hovering position, press the B button and the drone will slowly land. Motors will be automatically disarmed.

Fly the Drone

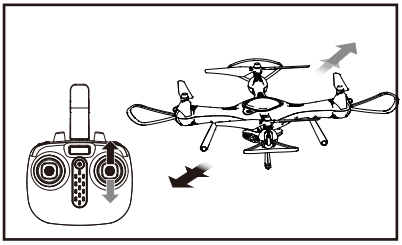
Operations

Ascend/Descend



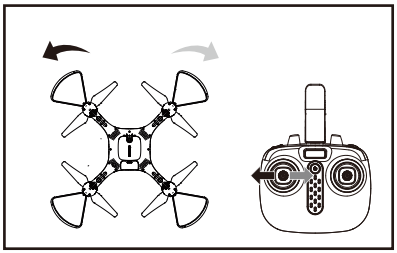
When the left stick (throttle) is moved up/down, the drone will ascend/descend.

Forward/Backward



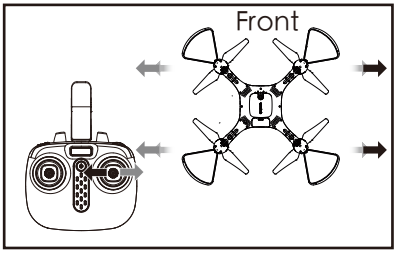
When the right stick is moved up/down the drone will fly forward/backward..

Left/Right Rotation



When the left stick (throttle) is moved left/right the drone will rotate to the left/right.

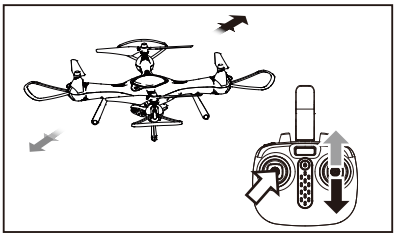
Left/right



When the right stick is moved left/right the drone will fly to the left/right.

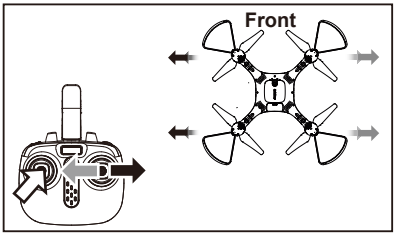
Trimming

Forward/Backward Trim Control



If the drone drifts quickly forward or backward while hovering, please adjust forward/backward trim. Press the left stick and hold it, then move the right stick forward/backward until the drone starts hovering as normal.

Left/Right Trim Contro

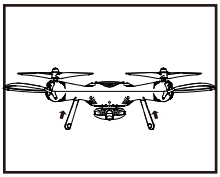


If the drone drifts quickly to the left/right while hovering, please adjust left/right trim. Press the left stick and hold it, after move the right stick to the left/right until the drone starts hovering as normal.

Product Features

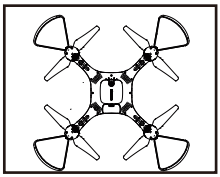
1. Low-Voltage Protection:

When the drone battery voltage is low, the drone indicator lights will start flashing. After this warning, return your drone to the desired place and land it.



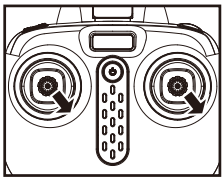
2. OverflowProtection:

When the drone is in the air and the propellers collide with objects or become jammed, the drone overflow protection will be activated.



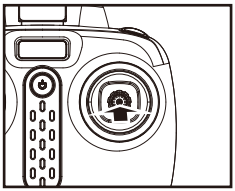
3. Balance Calibration:

Place the drone on a flat level surface and after, push both sticks to the lowest right corners and hold them there for 2 to 3 seconds. The drone indicator lights will start flashing quickly. Wait until the drone indicator lights stop flashing and turn solid again (glow) indicating successful balance calibration.



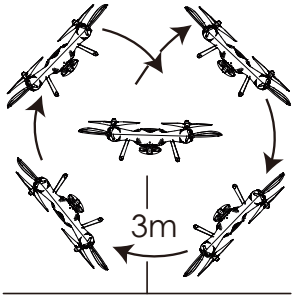
4. Low/High Speed Mode:

Low speed mode is the default mode. To change the speed mode gently press the right stick once, the transmitter will emit two beeps indicating high speed mode. Gently press the right stick again and the transmitter will emit one beep indicating low speed mode.



5.3D Stunts:

After the basic operational skills are mastered, you can start performing 3D stunts. The recommended safety height is no lower than 3 meters above the ground. Press the 3D stunt button (top right button on the transmitter) and at the same time push the directional stick completely forward/backward/left/right. The drone will perform forward/backward/left/right 3D stunt.



Notice: Fully charged drone battery will ensure the best 3D stunts performance.

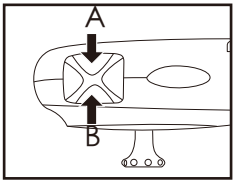
6. Pictures/ Videos:

①Pictures: press the Picture button on the transmitter. The drone indicator lights and the camera light (red light) will flash once, indicating that the picture was taken successfully.

② Videos: press the Video button on the transmitter. The drone indicator lights and the camera light (red light) will start emitting quick double flashes followed by one long flash indicating the video is being recorded. Press the Video button again and the drone indicator lights will turn solid (glow) indicating that video recording has stopped.

7.Camera Angle Control (Pitch angle)

To control camera angle press A or B button and the camera will move up or down. Refer to the image.



8.Optical Flow and Height Hold:

①Optical Flow

The optical flow sensor is automatically activated after the drone is turned ON. Hover the drone at the desired place and the optical flow sensor will hold the drone's position.

Note: 1. The position precision hold is approximately 0.5 meters, though deviation may occur.

2. Pay attention to the following conditions as they have an impact on the quality of optical flow signal:

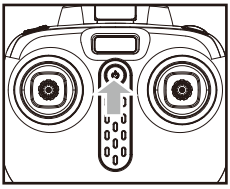
- Insufficiently light environment (not enough light)
- Light reflective floor
- 12 meters or more above the ground
- Wind strength is greater than light breeze

② Height Hold:

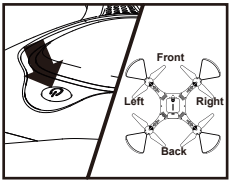
Use the left stick (throttle) to achieve the desired height and after allow the left stick to fall back to its default middle position.

9. Headless Mode:

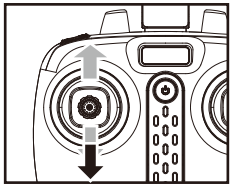
①.Setting Forward Direction



1. Turn on the transmitter.

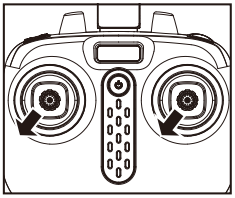


2. Turn on the drone and after position the drone with it's front facing forward direction.



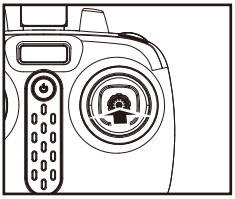
3. Move the left stick (throttle) fully up and after fully down. The transmitter will emit one long beep indicating successful pairing and defined forward direction.

②. Calibration

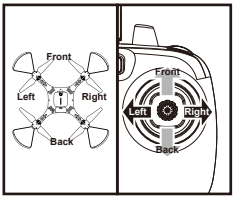


When in headless mode, the forward direction may start deviating due to numerous crashes. Re-set the forward direction and after push both sticks simultaneously to the lowest left corners. The drone indicator lights will start flashing and after 3 seconds will turn solid (glow) indicating successful calibration.

③.Activating/Deactivating Headless Mode:



After successful pairing observe the drone indicator lights and wait until they turn solid (glow). Press the right stick and hold it for 2 seconds, the transmitter will emit 3 beeps indicating headless mode is activated. Press the right stick agian and hold it for 2 seconds after the transmitter will emit one long beep indicating headless mode is deactivated.



When flying in the headless mode, it does not matter in which direction the front of the drone is facing. It will fly forward/backward/right/left relative to the position of pilot.

10.Smart Phone Application

①Android/IOS Phone Software Download Instructions

Android: Please download and install the software SYMA FLY from www.symatoys.net or scan the QR code.
IOS: Please download and install the software SYMA FLY from App Store, or scan the QR code.

Tips: QR codes can be found on the packaging box or at the last page of the user manual. New Syma App versions can be found at www.symatoys.net or alternatively using App Store/Google Store.

②For more information, please relate to the App.

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

NOTE: 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.

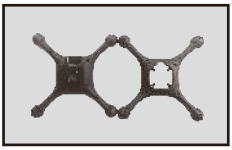
"This device complies with FCC radiation exposure limits set forth for general population (uncontrolled exposure).
This device must not be collocated or operating in conjunction with any other antenna or transmitter."

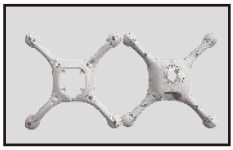
Decoration of Conformity Inserts:
"Hereby, GuangDong Syma model aircraft Industrial co.,ltd, declares that this drone is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU."

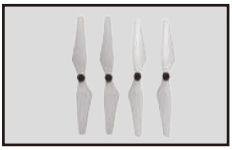
A copy of the full DoC is attached.

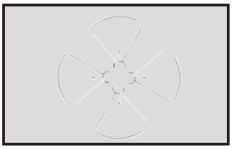
Accessories /Parts (Optional)

Please, look through the parts below. For your convenience, we have specified every part and accessory. The parts and accessories can be purchased through local distributors. Please specify desired colours at the time of purchase.

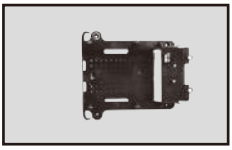

Body(black)


Body(white)


Blade

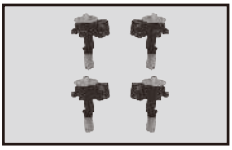

Blade Protective Gear(white)

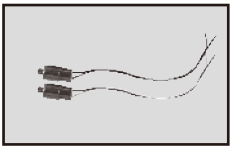

Landing Gear(white)

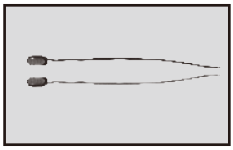

Battery Storehouse

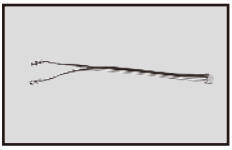

Battery(black)

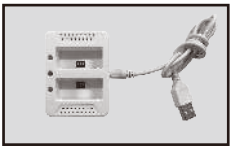

Battery(white)


Motor seat


Motor


LED Light

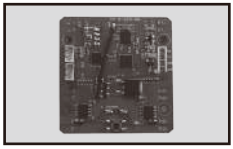

Top LED Light

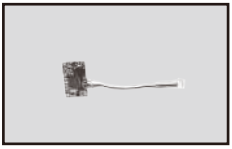

USB Charger


Camera


Inner Shell (black)


Inner Shell (white)

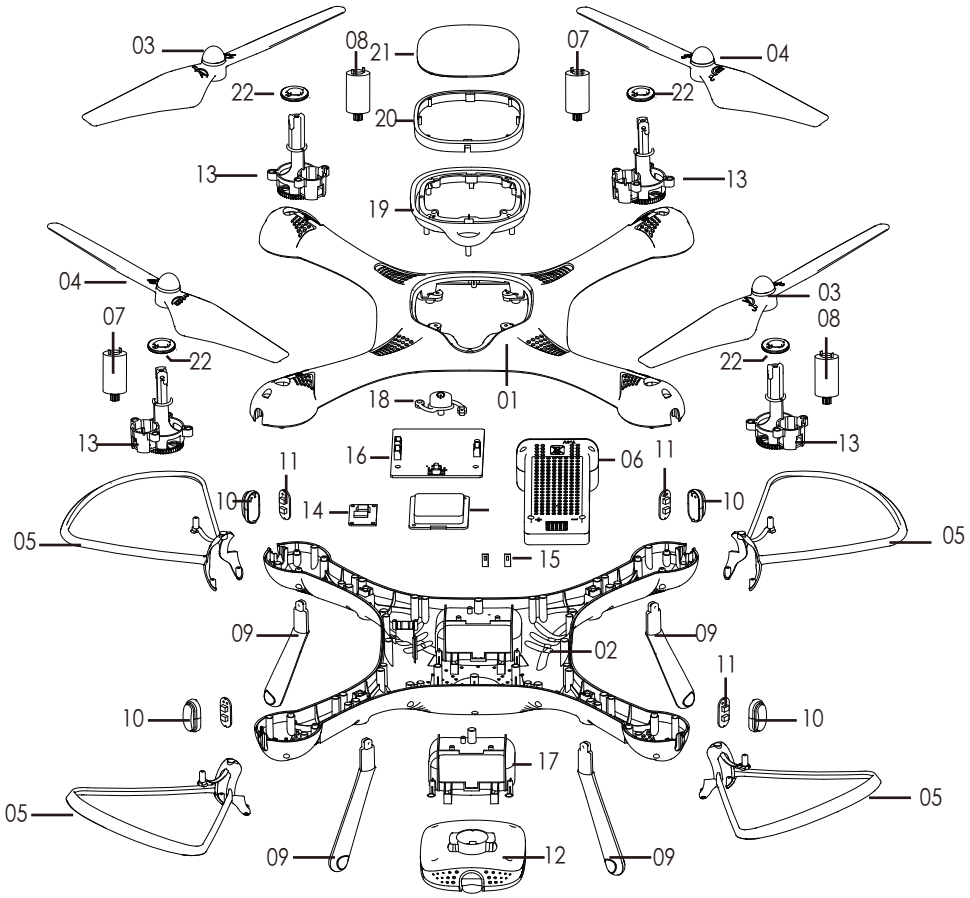

Circuit Board


Optical Flow Circuit Board


Remote Control

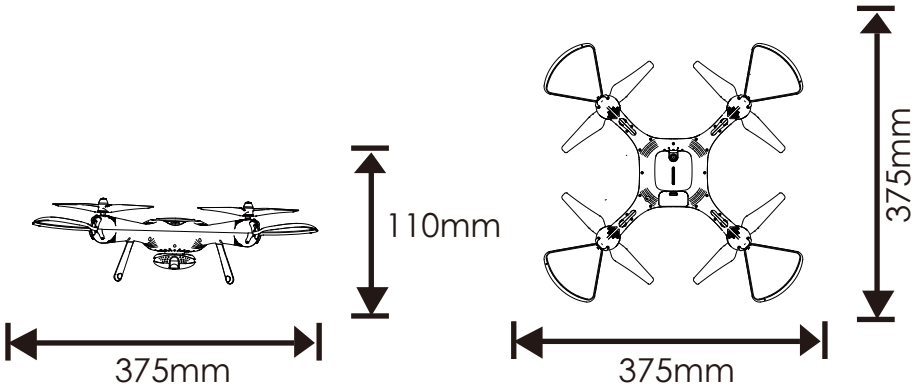

Mobile Phone Mount

Product Main Parts and Components



Serial number	Component/ Part Name	Quantity	Serial number	Component/ Part Name	Quantity	Serial number	Component/ Part Name	Quantity
01	Top Main Body	1	09	Landing Gear	4	17	Battery Storehouse	1
02	Bottom Main Body	1	10	LED Light Protective Cover	4	18	On/Off Button	1
03	Clockwise Blades	2	11	LED Ligh	4	19	Inner Shell	1
04	Counter-Clockwise Blades	2	12	Camera	1	20	Outer Shell	1
05	Blade Protective Guard	4	13	Motor Seat	4	21	Top Cover	1
06	Battery	1	14	Optical Flow Circuit Board	1	22	Blade Lock	1
07	Counter-Clockwise Motors	2	15	Top LED Light	4			
08	Clockwise Motors	2	16	Main Circuit Board	1			

Main Specifications



Drone length: 375mm Drone width : 375mm
Drone height: 110mm Motor Size : ø10x20
Battery : 7.4V 1000mAh lithium battery

TroubleShooting

Problem	Reason	Solution
The drone does not respond.	1. The drone has activated low-voltage battery protection. 2. The transmitter's battery is low, the transmitter indicator light flashes.	1. Recharge the drone's battery. 2. Change the transmitter's battery.
The transmitter sticks are not sensitive.	1. The transmitter battery is low. 2. There is another transmitter with the same frequency causing interference.	1. Change the transmitter's battery. 2. Please change flying location.
The drone is unstable when hovering or quickly drifts in one direction.	Balance calibration is needed.	Perform balance calibration. Please relate to page number 8.

Problem	Reason	Solution
When in headless mode the forward direction deviates.	Numerous crashes.	Re-set forward direction. Please relate to page number 10.
The drone does not hold the set altitude.	1. Balance calibration is needed. 2. Flying the drone in severe weather. 3. Heavy crash impacts gyroscope calculations.	1.Perform balance calibration. Please relate to page number 8. 2. Avoid flying the drone in severe weather conditions (strong wind, rain, snow, fog, thunder etc). 3. Perform balance calibration. Please relate to page number 8.

Android APP

iOS APP

Manufacturer:
Guangdong Syma Model Aircraft Industrial Co., Ltd.
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