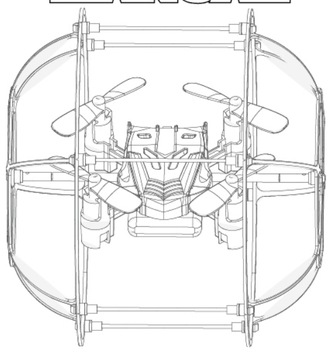
SYMA

12+

INSTRUCTION MANUAL



944842 mini

2.4GHZ CONTROLLER USB CHARGE GORO

- Mini quadcopter
- Four coreless motor
- 3.7V 200mAh li-po battery
- Flight time more than four minutes

1.INTRODUCTION

Thanks for using Skytsch products. This is the first helicopter which can fly outdoor in a weather. In order to play Helicopter more convenient and easy, please read it carefully before playing. Meanwhile,please keep it well, and take itfor vefevence when adjustment and maintenance.
Flight vehicle can satify you whatever rainy or sunny, even when outdoor wild grade 2, it will keep moving.

IMPORTANT NOTES

It is not a toy. Mini quad copter it is, but still dangerous, please play it according to the user manual. Any assemble or improper operation is limited, otherwise will lead to accident.
Attention, manufacture or distributor would not respond to any duty when your spare part is out of use, improper assemble and unsafety used. It is suitable for 14+,we could not respone to your lose and injury for wrong operation.
Model hobby require high technical to play and easy damage, after unpacked, will cause spare part spoilage, we will consider the return condition according to its status.

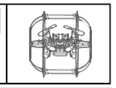
2.SAFETY NOTES

⚠WARNING

Mini model quad copter, also a dangerous toy. You had better play it far from the group. Any improper assemble or damage part or umfamiliar control may lead to accident. Player should pay attention to the safety.

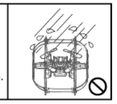
⃠PORBIDDEN **Special despecial design for indoor&outdoor, please keep it away form obstacle**

This product is suitable for indoor and outdoor playing. Please choose the space without obstacle, and keep distance from the people and pets. Don't play it near heat and lines and power source to avoid crash and electric hit or fire, take care.



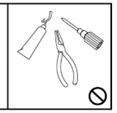
⃠PORBIDDEN **PREVENT MOISTURE**

R/C models are composed of many precision electrical components. It is critical to keep the model and associated equipment away from moisture and other contaminants. The intorduction or exposure to water or moisture in any form can cause the midle to malfunction resulting in melfunction, or a crash. Do not operate or expose to rain or moisture.



⃠PORBIDDEN **PROPER OPERATION**

To avoid potential fire hazard from batteries, please do not short, reverse polarity, or puncture batteries. Battery charging must be done under supervision at all time, and at location out of reach by children. Double check the four AA batteries are rechargeable NI-CD/MH batteries before charging.The manufacturer or this product will not be liable for accidental damages incurred by charging non-rechargeable batteries.



⃠PORBIDDEN **SAFETY NOTE FOR NI-MH BATTERIES**

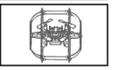
Make sure the batteries are installed based on polarity indicated in the case and do not mix batteries of different chemistry/spec. Please take out the batteries if you are not going to use for a long time to avoid potential leakage which may damage the transmitter. Please dispose depleted batteries according to local laws and ordinances. Do not dispose improperly.

⚠CAUTION **KEEP AWAY FROM HEAT**

R/C models are made of various forms or plastic. Plastc is very susceptible to damage or deformation due to extreme heat and cold climate. Make sure not to store the model near any source of heat such as an oven, or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.

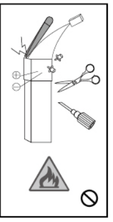
⚠WARNING **OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT**

The products are suitable for more than 14 years old age. At the beginning it will have some certain difficulty in learing, suggestion guidance by exprienced when playing.



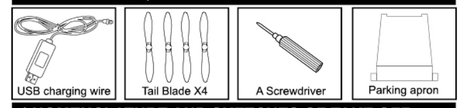
⃠PORBIDDEN **SAFETY NOTE ON LI-POLYMER BATTERIES**

Li-polymer batteries poses higher operational risks compared to other battery chemistry, thus it is imperative to follow its usage instructions. Manufacturer and dealer assume no liability for accidental damages caused by improper usage.
Do not use charger other than the factory supplied unit to avoid potential fire and explosion.
Do not crush, disassemble, burn, and reverse polarity. Avoid metallic materials to come into contact with battery's polarity and cause it short and never puncture batteries to avoid fire hazards. Battery charging must be done under supervision at all times, and at location out of reach by children.
Please stop the use or charge of the battery should there be an unusual increase in battery temperature after use. Continue use of this battery may cause it to expand, deform, explode, or even result in fire hazards.
Please dispose depleted batteries according to local laws and ordinances. Do not dispose improperly.

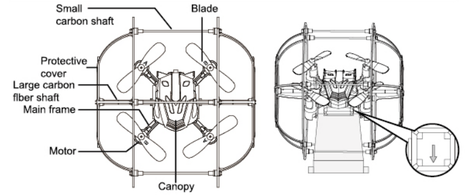


The statements should be displayed in the user manual:
changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

3.STANDARD EQUIPMENT

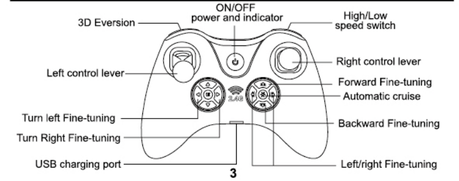


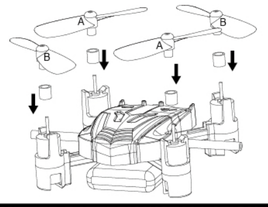
4.NOMENCLATURE AND SKETCHES OF TAKE OFF



Remark:when the quad-copter take off,the nose of the quad-copter should be aimed at the patterm of forward arrow that in parking apron,then ➡ put the quad-copter on the parking apron and binding of radio transmitter and recriver,as seen above.(The more information for the binding of radio transmitter and receiver please reference P5)

5.REMOTR CONTROL FUNCTION AND BLADE POSITION AND ASSEMBLY DIAGRAM



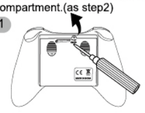


6.TRANSMITTER BATTERY INSTALLATION

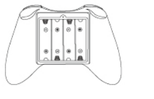
⃠PORBIDDEN **Do not disassemble**

1. Use the screwdriver to unscrew the battery compartment in anticlockwise direction. (as step 1)
2. Load 4 PCS of AA batteries into the transmitter as per the correct polarity shown in battery compartment.(as step2)

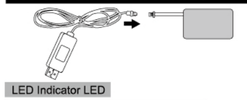
Step 1



Step 2



7.CHARGING BATTERIES



With the distribution of special USB charging cable, charging cable into the charging port for charging Battery

⚠WARNING

For safety concerns, battery chargingmust be done under supervision at the times.

LED Indicator LED

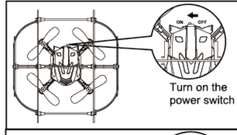
Red light on ☼	Red light off ☼
Charge Completion	Charging

8. BATTERY AND CHARGER SPECIFICATION

Battery usage and charge duration reference

Battery type	Battery Specification	Usage Duration	Charge Time	Flying Distance
Li-po battery	3.7V 200mAh	Helicopter Flight Time: Approx. more than four minutes	Approx. 50 Minutes	outdoor:50M Indoor: 25M

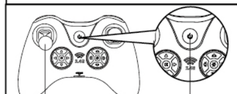
9.BINDING OF RADIO TRANSMITTER AND RECEIVER



Turn on the power switch

Step 1

Turn on the power switch on the aircraft,and place it on the parking apron.When the indicator light is flashing,please do not moved the quadcopter so that the gryo will read midpoint.

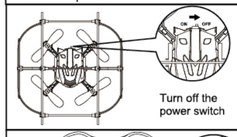


Push the throttle stick to the lowest position

ON/OFF

Step 2

Open the remote control power switch,push the throttle stick from the lowest to the highest, and then pulled a minimum of code to complete. (After finish,the indicator light of the quad-copter is on)



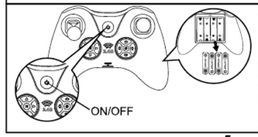
Turn off the power switch

Step 3

After the flight, please turn off the power switch, so as to avoid excessive battery discharge.

⚠WARNING

Waming: If left connected in the flight vehicle for long duration, the battery may be damaged due to over-discharge, or even become fire hazards.



ON/OFF

Step 4

Turn off the transmitter. If transmitter is not to be used for a long duration, please remove the battery for storage.

⚠WARNING

Waming: If the AA batteries are left in the transmitter, potential leakage could occur which may damage the transmitter, and create fire hazards.

10.FLIGHT ADJUSTMENT AND SETTING

Ger familiar with all kinds of direction control and keep repeating until you can play it as you perform your wishes.
1.Place the flight vehicle a clear open field and the tail of helicopter point to yourself.
2.Practice to operate the throttle stick (as below illustration) and repeat practicing "Throttle high/low", "Aileron left/right", "Rudder left/right", "Elevator up/down" and "3D Flips"
3.The simulation flight practice is very important, please keep practicing until the fingers move naturally when you hear operation orders being call out.

Mode	Illustration	Mode	Illustration
Direction	Move left / Move right	Throttle	Ascent / Descent
Direction	Fly forward / Fly backward	Diversion	Turn left / Turn right
3D FLIPS	Forward flip	3D FLIPS	Backward flip
Mode	Left side flip		
One click to automatic cruise	Press the automatic cruise buttons,the aircraft will do automatic cruise according to trajectory.		
The level of correction	After fine-tuning the quad-copter still take deviated from it normal fight patch during its flight.You have to take conecting action.Put the quad-copter on the parking apron,then turn two levers in lower right corner at the same time,after the indicator light flashed,it is finished the correcting action.		

FLIGHT ADJUSTMENT AND NOTICE FOR BEGINNERS

⚠CAUTION When arriving at the flying field

- Check if the screws are firmly tightened.
- Check if the transmitter and receivers are fully charged.
- Make sure that no people or obstructions in the vicinity.
- You must first practicehovering for flying safety, this is a basic flight action. (flight vehicle means keeping the helicopter in mid air in a fixed position)
- Please stand approximately 2m diagonally behind the helicopter.
- It means that the battery of quadcopter be in Low battery condition when the four lights flashed at the bottom of airframe.

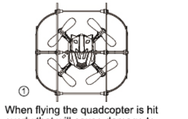
11.TROUBLE SOLVING DURING FLIGHT

	Situatin	Cause	Way to deal
1	Receiver status LED blinks continuously for more than 4 seconds after helicopter battery inserted. No response to control input.	Unable to bind to transmitter	Repeat the power up initializing process.(Refer to P.5: Binding of radio transmitter and receiver)
2	No response after battery is connected to helicopter.	1.Check power to transmitter and receiver. 2.Check tramsmitter and receiver voltage. 3.Poor contact on battery terminals.	1.Turn on transmutter and ensure flight vehicle battery is inserted properly. 2.Use fully charged batteries. 3.Re-seat the battery and ensure good contact between battery contacts.
3	Motor does not respond to throttle stick, receiver LED flashes.	Helicopter battery depleted.	Fully charge the battery, or replace with a fully charged battery.
4	The main blade do not turn	The main blade and motor are assembled cohesively.	Pull the main blade up to keep in an appropriate state with motor.
5	Main rotor spins but unable to takeoff.	1.Deformed main blades. 2.Helicopter battery depleted.	1.Replace main blades. 2.Charge or replace with afully charged battery.
6	The quadcopter was violently shaking or lurched sideways	The main blade is be out of shape	Change the transformative main blade
7	Tail still off trim after adjustment, or inconsistent speed during left/right pirouette.	1.Damaged tail rotors. 2.Damaged tall drive motor.	Replacement of the main wing. Replace the main motor.
8	Helicopter still wonders forward after trim adjustment during hover.	1.Elevator servo not level during power up. 2.Elevator pushrod too long or too short.	After turn on the quadcopter then fine-turning to return-to-zero.

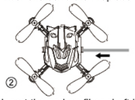
⚠WARNING:

When the quadcopter is in the level of correction's condition and the indicator light is flashed slowly,please do not push the rocker ceaselessly in order not to affect the function for the level of conerction,which and it will result in the quadcopter become unstable or other exceptions,if other exceptions accurs, please turn off the switch and then restart the quadcopter and transmitter.

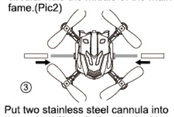
CARBON FIBER SHAFT INSTALLATION AND REMOUAL



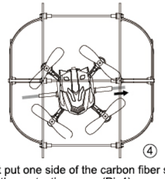
① When flying the quadcopter is hit overly that will cause damage to the middle carbon fiber shaft, please take out the broken carbon fiber shaft and then replace it.(Pic1)



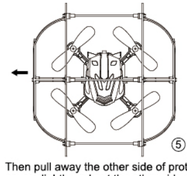
② Insert the carbon fiber shaft into a circular hole the middle of the main fame.(Pic2)



③ Put two stainless steel cannula into the carbon fiber shaft on buth sides of airframe.(Pic3)



④ First put one side of the carbon fiber shaft into the protective cover.(Pic4)



⑤ Then pull away the other side of protective cover slightly,and put the other side of the carbon fiber shaft into the protective cover, at last.press the both sides of the protective cover.(Pic5)

Electric Toy Caution: Suitable for children over 12 years. Like any electrical product, care should be taken during handling and use to prevent electric shock.

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