



HT Super Elicopter SYSTEM



2.4
GHz
AIRCRAFT

NO. 9958
Product Instructions
Patent number:
201020533924.5

Product Introduction

9958 is the lastest 2.4GHz Crossbar mini type Helicopter, and it has excellent control functions and an advanced balanced operating system. It features insimple operation and steady fly, so it is the best choice for beginner. "Leap" is with small volume and light weight, and can fly in the small range, which make the operators enjoy the mystery and fun in the fly.

Attentions for controlling the RC helicopter

1. ensure safe and accurate operation and control, and children under 14 years are not suitable for controlling the helicopter.
2. if you don't have rich control experience on R/C helicopter, we suggest you shall learn to control it under the guide of a R/C helicopter controller with rich experience. manufacturer and distributors will not bear any responsibility on product use.
3. debug and fly all shall be proceeded strictly according to instruction, human bodies and pets shall be kept away from the moving part of the helicopter.
4. ensure this R/C helicopter shall fly indoors or windless outdoors, and the moving part shall not approach human body or other objects.
5. when stop flying, you shall pull out the battery plug of the helicopter, and then close the power switch of remote controller.
6. keep away from other electrical equipment, magnetic object or wireless equipment,etc in order to avoid the mutual disturbance and influence, which is likely to lead to accidents.
7. ensure the batteries shall be installed correctly, when the indicators on the remote controller shows red and flashes (meanwhile, remote controller will let out the sound of "di, di, ..."), this means the batteries of remote controller lack power, and you must stop fly, close the power switch of remote controller, pull out the battery plug from helicopter body, and then replace the batteries of remote controller.
8. this helicopter is equipped with polymer lithium battery, and you shall obey strictly the operational rules concerning polymer lithium battery, otherwise it may cause accidents, such as burn, explosion, etc
9. only use the charger offered in this product to charge the battery, and charging time shall be about 30 minutes.
10. forbid to use wet hand or wet object to touch the battery and the charger in order to avoid accident.

Product Allocation



Remote controller X 1



Helicopter X 1



Instruction X 1



USB Power Charger X 1



Charging Battery X 1



Airscrew X 1 (Set)

Product Instructions

To ensure safety, please read Instruction carefully before fly it, if you don't have the experience in flying R/C helicopter, "HELICOPTER" is your best choice.

Directory

Product Introduction	1
Attentions for controlling the RC helicopter.....	1
Product Allocation.....	1
Safety Guide of Lithium Battery.....	2
Introduction of Remote-Controller Functional (Left-handed mode)	3
Introduction of Code between Remote Controller and RC Helicopter.....	3
Installation of Remote-control Battery.....	4
Flying Operational Steps.....	4
Instructions of Charging Lithium Battery.....	5
Junior or Senior Control	
Operating method when turning on or turning off the helicopter. Mode switch of the transmitter between Junior and Senior Control	6
Attentions.....	7
To Consumers.....	7
Introduction of Fine -tuning	
Readjustment (Left-handed Mode).....	8
Operational scheme diagram of operating helicopter (Left-handed Mode).....	9
Flying Field.....	10
Flying Training	10
Exercises.....	11
Explosion Diagram.....	12
Spare Parts List.....	13

Safety Guide of Lithium Battery



FIRE ALARM:

in the non-allowed situation, charging the lithium battery may cause the fire, personal injury and property loss. users shall be aware of the risk existed in the product. the producer, sellers and retailers don't afford any responsibilities aroused from the possible accidents. please read carefully and completely safety guide and instructions for power charging before using this product.



WARN:

please keep the battery out of the touch of children and pets. the users under the age of 18 shall use it under adult's custody. children under 14 years are not suitable for operating and controlling it.

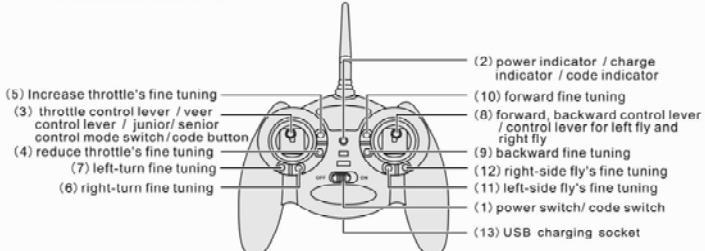
Warranty of Lithium Battery Use

Warranty of product is only confined on raw material and workshop, and we don't warrant the products. In any events, our company's compensation will not exceed the value of retail price.

1. Don't charge for long time under no attention, in order to avoid accident for the reason of overcharge.
2. Please only use the charger offered in this product to charge the battery.
3. Forbid to desintegrate and dismantle the battery.
4. Prohibit to use and place the battery beside the high-temperature source and easy-burning objects.
5. During charging the battery, forbid to cover the charger and battery, and maintain ventilation and ensure the charge under the safety and firefighting situation.
6. If battery has one of following phenomenon of special odor, overheating, color changing, distorting or any abnormal phenomenon during application, storage, and power charge, please immediately move the battery out of the machine or the charger to outdoor safe place (don't litter about the battery with abnormal phenomenon, we shall adopt safe measures to deal with it), in order to arouse burn and explosion of battery.
7. Forbid to store or transport the battery with metal.
8. Forbid to put battery into the fire or heat it.
9. Forbid to use metal to connect the anode and cathode of battery.
10. Forbid to overturn the anode and cathode of battery.
11. If any leakage arouses from the battery, and electrolyte comes into the eyes, please don't rub your eyes, use clean water to rinse the eyes, and then immediately go to hospital for medical treatment, otherwise it will hurt your eyes.
12. If you don't use battery, you shall store it in a shady, cool and dry environment.

Introduction of Remote-controller Functional (Left hand model)

NOTES: owing to the multifunctions of one button (control lever), when introduce one function amomly, you can use the label  to mark the function. for example : (3) [throttle control lever / veer control lever / switch button for junior or senior control mode /code button] : it shows that the function of the control lever is a veer control lever



Introduction of Code between Remote Controller and RC Helicopter

before the products exit from factory, we have matched the codes between remote controller and helicopter, if necessary, we can repeat code match. the way whether the codes of remote controller and helicopter match well is: remote controller and helicopter have been put the batteries correctly and been opened remote controller's power switch. (1) if the red indicator on helicopter's electrical circuit flashes quickly for 5 seconds and then keeps straight on, the remote controller has matched the code well with helicopter ;(2) if the red indicator on helicopter's circuit flashes quickly for 5 seconds and then flashes slowly, the remote controller hasn't matched the code with helicopter, and then you need to match the codes as follows:

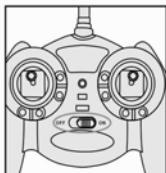
1. install the batteries into the remote controller and switch to "off";
2. install the polymer lithium battery in the helicopter and connect them correctly, then the red indicator in circuit of helicopter flashes for 5 seconds, in this 5 seconds, press the (3) control lever [throttle control lever / veer control lever / junior/senior control mode switch /code button] on the remote controller , meanwhile, shift the (1) [power switch/ code switch] on the remote controller to the state of "on", then loose the button, the indicator on the remote controller flashes red and green alternatively, and let out a sound of "di, di, di ..."
3. after finishing code match, the red indicator on the helicopter keeps straight on, the sound of "di, di, di ..." disappears, which means the code match is finished. [code-check completes. it will be better when rebooting the transmitter power]
4. shift the (3) control lever [throttle control lever/ veer control lever / switch button of junior or senior control mode /code button] to the bottom, and then other control levers keep natural state. after this, you can do the remote control to helicopter.

— 3 —

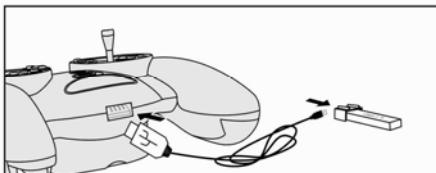
Instructions of Charging Lithium Battery

● Use remote controller to charge battery

1. Press remote controller (1) [Power Switch / Code Switch] to "ON", and the power indicator is on ; (Shown on Graph 4)
2. Insert the USB Port of the USB Charging wire into the USB Charging port of the transmitter (13) and then correctly connect another end of the USB charging wire with the battery.
3. In 5 seconds, (2) [Power Indicator / Charge Indicator / Code Indicator] becomes a flash green light. After finishing charging, the indicator will keep straight green light (Shown on Graph 5)



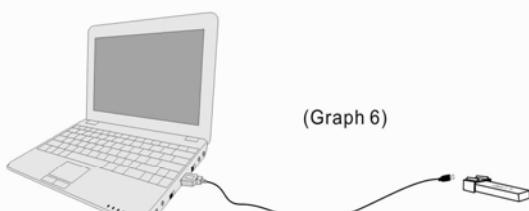
(Graph 4)



(Graph 5)

● Charge by USB

1. Turn on computer power switch, plug the USB charger offered by the product correctly into the USB jack of computer.
2. Correctly connect the charging fillister of the battery with the USB Charger, the indicator of the USB charger will be ON.
3. When the indicator of USB charger is OFF, the power charge is finished (Shown on Graph 6)



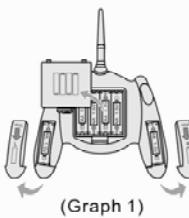
(Graph 6)

Remarks:

If polymer lithium battery is still with power, you can't conduct power charge until the helicopter use out of the power by its fly.

Installation of Remote-control Battery

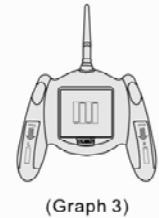
1. Take out of the battery cover from battery box on the back of remote controller. (Shown on Graph 1).
2. Install 6 No. AA batteries into the battery box correctly according to right directions (Shown on Graph 2)
3. Restore the battery cover to its original place .(Shown on Graph 3)



(Graph 1)



(Graph 2)



(Graph 3)

Flying Operational Steps

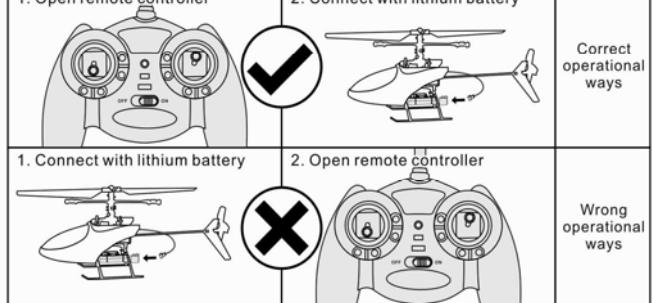
1. Take out of the battery cover from remote controller, and install 6 No.AA batteries into the battery box correctly (Refer to Battery Installation of Remote Controller). Press (1) [Power Switch/ Code Switch] to "ON", the red light of (2) [Power Indicator / Charge Indicator / Code Indicator] is ON.
2. Under the state to keep helicopter flying steadily, connect lithium battery correctly (pay attention to the corresponding connection of anode and cathode, red electrical wire is connected with anode, black electrical wire is connected with cathode), the indicator on the circuit board of helicopter flashes for 5 seconds and then keep straight ON, which mean you can conduct remote control on helicopter.
3. Before you can control the helicopter's fly freely, you shall at first conduct fine tuning on helicopter (for ways of fine tuning, please refer to Introduction of Fine Tuning).
4. According to the proficiency that you control helicopter, select the suitable control mode for fly (refer to Junior/ Senior Control Mode of Remote Controller).
5. After finishing the fly, you shall make helicopter land steadily, at first you take out of polymer lithium batteries, then press and shift (1) [Power Switch / Code Switch] on the remote controller to "OFF", which avoid accident happening

Attenions:

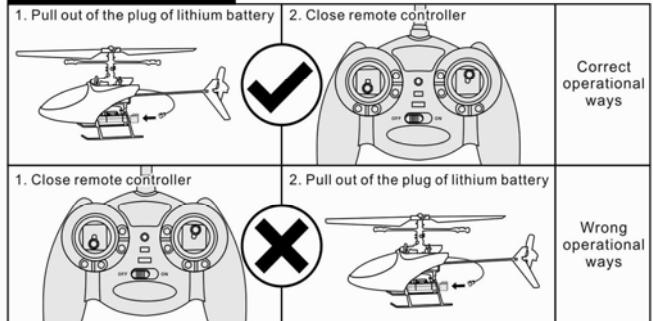
- * Shift Power Switch of remote controller to "ON", throttle control lever shall be on the bottom, and other control lever shall keep natural state.
- * At the beginning of fly, throttle shan't be pushed too quickly.
- * if the throttle has been pushed to the maximum, and helicopter still has an obvious falling state, this means polymer lithium battery lacks of power, which means it needs power charge.

— 4 —

Instructions of Charging Lithium Battery



● Close helicopter



Junior or Senior Control Mode Switch of Remote Controller

Junior Control Mode : under this mode, the flying speed and reaction is comparatively slow. We suggest the beginner should make trial flies in this mode.

Senior Control Mode: under this mode, the flying speed and reaction is very quick , you shall pay attention to safety and avoid danger happening. This mode is suitable for mature controller to control the fly.

Under the state that remote controller and R/C helicopter are normal ON switch with Power, straightly press (3) control lever[Throttle Control Lever / Veer Control Lever / Switch Button of Junior or Senior Control Mode /Code button] , remote controller let out a sound of "Di" at the same time, which means completing the switch of Junior or Senior Control Mode.

— 5 —

— 6 —

Attentions

1. Helicopter uses one 3.7 V lithium battery, and remote controller uses 6X1.5V No. "AA" alkaline batteries.
2. Please make sure the polarity when you install or replace batteries.
3. Don't charge non-chargable battery.
4. Don't mix the new or old batteries, or batteries in different types
5. Take out of the used batteries.
6. Terminal post shall not be short-circuit.
7. Please charge the batteries according to correct ways.
8. Chargeable batteries shall be charged under the custody of adult.
9. Take out and install the batteries according to correct ways.
10. Termly check whether the electrical wires, plugs, shells and other parts are damaged or not. If damaged, you shall stop using them until you repair them well.
11. Please stop flying if the power of batteries is insufficient.
12. Please pull out lithium batteries immediately if the fly is completed.
13. When helicopter bumps against any objects and falls down, you must loose the throttle to avoid the damage. (After helicopter bumping, you shall check whether there are damaged phenomenon on spare parts of helicopter. If it has, please replace it immediately, spare parts can be purchased at the distributor's)
14. If you don't play this product for long time, please ensure the lithium battery of the helicopter to have 50% power, and also take out of the batteries in the remote controller.

To Consumers

1. When you play R/C helicopter indoors, please pay attention not to cause any damages to furniture and glass.
2. Please don't play R/C helicopter on the road to avoid danger. Please play it in a wide and safe place.
3. If you hear a thunder while you play R/C helicopter, you shall stop playing immediately.
4. Don't play on the plashes or sands to avoid accident on electrical circuit.
5. Don't overlap the aerial, if the aerial is broken, its sharp end may cause some damages.
6. Don't drag the electrical wire of R/C helicopter, because the broken wire will make it lose its functions.
7. When air screw rotates, don't approach it by hand to avoid the hurt, don't roll your hair or clothing in it.
8. Don't fly R/C helicopter towards any people.
9. Don't discard and bump R/C helicopter chaotically.
10. When placing R/C helicopter, please keep away from fire and high-temperature place.
11. This product adopts complex electrical circuit and a lot of fittings and parts, please don't conduct any dismantles and refittings on electrical circuit.
12. When helicopter or remote controller lack of power, the speed of R/C helicopter will be slowed obviously and have some uncontrolled phenomenon. Please replace the new battery or charge the battery.
13. Operating the following methods can make the batteries more reliable.
 - * Please take out of the batteries if you don't play it for long time.
 - * You shall replace all the old batteries with the new ones, if you mix the old and new batteries, the batteries will lack power and be powerless soon.

— 7 —

Introduction of Fine-tuning Readjustment (Left-handed Mode)

● Fine Tuning of Throttle

If your rotary wing can rotate without any power, or it doesn't rotate if you increase power, you need to test and debug your throttle fine-tuning system. If rotary wing rotates without any throttle operation, press the button of Throttle-Decrease Fine Tuning till the rotary wing stops. If the rotary wing doesn't rotate, and even when you increase the throttle, it still doesn't rotate, then you press the button of Throttle-Increase Fine Tuning till rotary wing begins to rotate.



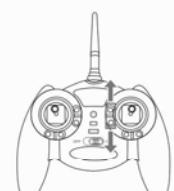
● Steer Fine Tuning

During flying course, if you don't control Steer Control Lever, but your helicopter's head still turn round, you need to test and debug the button of Steer Fine Tuning. If the head turn to the left side, you shall press Left-turn Fine Tuning Button until it no longer turns left. If the head turns to the right, you shall press Right-turn Fine Tuning Button till it no longer turns right.



● Fine Tuning of Forward and Backward

During flying course, if you don't conduct any operations on Forward Control Lever or Backward Control Lever, and your helicopter still can go forwards or backwards, you need to test and debug Forward Fine-Tuning Button or Backward Fine-Tuning Button. If it moves forwards, press Backward Fine-Tuning Button till it stops, if it moves backwards, press Forward Fine-Tuning Button till it stops.



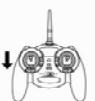
● Fine Tuning of Left-side Fly and Right-side Fly

If you don't conduct any operations on Control Lever of Left-side Fly or Right-side Fly, and your helicopter still can fly to left side or right side, you need to test and debug Left-side Fly or Right-side Fly. If it flies to left side, you shall press Right-side Fly Button till it no longer flies to the left side. If it flies to right side, press Left-side Fly Button till it no longer flies to right side.



— 8 —

Operational scheme diagram of operating helicopter (Left-handed Mode)

Ascending		Push throttle upwards, the speed of rotary speed is quicken, and then helicopter ascends.	
Landing		Push throttle downwards, the speed of rotary speed slows down, and then helicopter descends	
Forward		Push Control Lever upwards, helicopter moves forwards	
Backward		Push Control Lever downwards, helicopter moves backwards.	
Left-side Flying		Push the control lever to the left side, helicopter flies to left side.	
Right-side Flying		Push the control lever to the right side, helicopter flies to right side.	
Turn Left		Push the control lever to the left side, helicopter head flies leftwards	
Turn Right		Push the control lever to the right side, helicopter head flies rightwards.	

Flying Field

Choose a suitable flying field, for example, a big room without any obstacles. If you fly it outdoors, it shall fly in windless weather, and you shall ensure it to fly in the space that hasn't trees, electrical wires, and other obstacles.

Note: "Leap" helicopter is a major in indoor lane model.

Flying Training

● Operational Flow

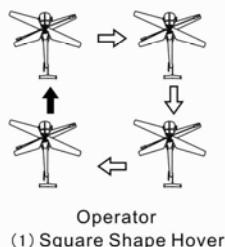
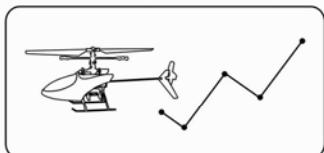
1. Place the helicopter in the middle of the room. Make the helicopter tail part against you and put it on a suitable place which is two meters far. Transmitter and helicopter shall be set and debugged according to the instructions. Open the transmitter, switch on the power, and double check whether the servo system can operate normally.
2. Now you are prepared to learn flying skills. Instructions as follows will help you learn how to fly.
3. For first fly, you don't need to worry whether you can operate the helicopter expertly or not. By more exercises, you can be more confident about your control and flying techniques. When you can freely use it, you may do a further fly. Please make sure you are behind the helicopter tail, and pay attention to flying direction.
4. Slowly push Throttle Control Lever forwards till it flies. Pay attention to the state of helicopter, conduct some adjustment if necessary. Don't fly too high, it generally flies about 0.5 meter high. If there is any unstable vibration or uncontrollable phenomenon, please land it immediately. Practising more exercises will help you improve the technology.
5. Take off. After finishing fine tuning, you can prepare take-off. Push the throttle control lever to the top and make the rotary wing to increase the rotary speed. After the helicopter takes off, throttle push speed shall be slow. Keep a height of 0.5 meter for helicopter, investigate the movement of helicopter, and adjust the corresponding location till it reaches the best fly state.
6. Beginner shall concentrate on two aspects as follows: height control and direction control. At first you shall control Throttle Control Lever. After the helicopter takes off, throttle pushing speed shall be slow. Control well Direction Control Lever, and persistently make the tail against you.
7. The flying height shan't be controlled under 0.3 meter, because it can be influenced by air current which is caused by the rotary wings, and it will create ground effect then affect the normal fly and control
8. Flying technique: After flying, its movements shall be soft. Helicopter tail shall be against you until you can fly it freely and expertly. Once there is an accident, rapidly push Throttle Control Lever to the bottom. Beginner shall practise repeatedly, and ensure the helicopter to fly in the range from 0.5 meter to 1 meter away from ground, which is helpful for you to learn it fast and well.
9. Once you can control your helicopter well after many flying experiences, you can slowly advance the flying height till it flies on the height of your eyes. After you are very familiar with it, you can try flying even higher.

— 9 —

— 10 —

Exercises

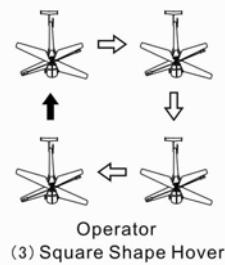
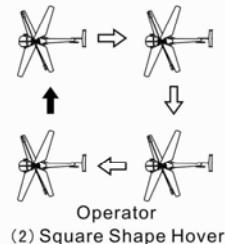
Leapfrog (after taking off, immediately draw back the throttle for landing)



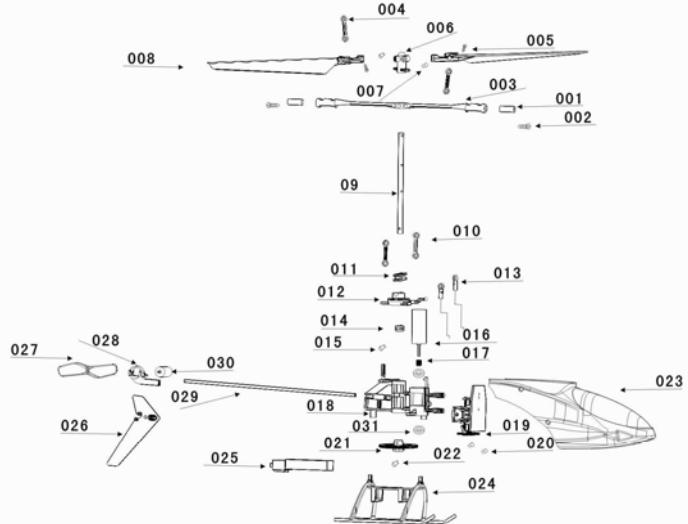
- Prolong the time of Leapfrog in the space
- Tail hovering
- Taste right turn or left turn, forward and backward fly. Left-side fly, and right side fly
- Rotating in 360 degree
- Hovering on left side
- Hovering on right side
- Head hovering
- Quadric Hover Training

- (1) Make the tail part against yourself, conduct a "Box"-style fly on helicopter, including flying forwards, backwards, to the left and to the right, don't conduct any turning.
- (2) Stand beside the helicopter, repeat "Box"-style training mix.
- (3) Repeat "Box"-style training mix while you face the helicopter head.

- Left Hover
- Right Hover
- "8"-shape fly



Exploration diagram



— 11 —

— 12 —

Spare-parts List

Serial No.	Name of spare parts	Quantity	Serial No.	Name of spare parts	Quantity
001	Balance Weight	2	023	Machine Shell	1
002	Screw $\phi 1.2 \times 3.5$ D2 mechanism	2	024	Landing gear	1
003	Balanced Level	1	025	Battery	1
004	Rotor connecting buckle	2	026	Tail vertical propeller	1
005	Screw $\phi 1.2 \times 5$ D2	2	027	Tail propeller	1
006	Upper Rotary-wing head	1	028	Tail electric engine stand	1
007	Screw $\phi 1.2 \times 2$ D2 mechanism	2	029	Carbon-fibre tail pole	1
008	Propeller	2	030	Tail engine	1
009	Steel	1	031	Bearing 6X2	2
010	Crossing plate connecting buckle	2	032		
011	Connecting buckle fixing piece	1	033		
012	Cross plate piece	1	034		
013	Lower Connecting Rod	2	035		
014	Fixing Part of External Axle	1	036		
015	Screw $\phi 1.2 \times D2$ mechanism	1	037		
016	Main engine	1	038		
017	Electrical Motor Gear	1	039		
018	Machine Base	1	040		
019	Receiving Board	1	041		
020	Screw $\phi 1.2 \times 3.5$ D2 5 mechanism	2	042		
021	Main gear	1	043		
022	Screw $\phi 1.2 \times D2$ mechanism	1	044		

— 13 —

TRANS
4CH
ENCY

RC
Telecontrol

Description: Top-level Remote-control Helicopter
Product Type: 9958

Place of Origin: Made in Guangdong, China.

Material: Plastics, electron component, metal

Adaptive Age: At the age of 14 or up.

Implementing Standard: QB/T 2862-2007

Maintainance: Wipe out the surface dirt with dry cloth.

Manufacturer: Chenghai Guangyi Fada Toys
Factory of Shantou City

Address of Factory: Industrial Zone, Pumei,
Guangyi Area, Chenghai District, Shantou City,
Guangdong Province, China.

Caution: The user is cautioned that changes or modifications 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.

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