

Eagle Eye

Operating Manual

R/C
Helicopter



ART-TECH™
www.art-tech.cn

CATALOG

★SPECIFICATIONS	03
★FUNCTION OF THE CAMERA SYSTEM	03
★CAUTION	04
★TIPS FOR SAFETY	04
★CHARGE MODE AND WARNING	06
★SAFETY INSTRUCTION OF LI-POLY BATTERIES	07
★PARTS LIST	08
★FUNCTIONS FOR CONTROL SET	09
★DUAL ROTOR BLADES' SPEED ADJUSTMENT VIA PCB CONTROL	09
★PICTURE OF CONTROL SET CONNECTION	09
★SWASHPLATE ADJUSTMENT	10
★MAIN ROTOR BLADE ADJUSTMENT	10
★NORMAL FLIGHT	11
★INSTALLATION	12
★ALL SPARE PARTS AND EQUIPMENT	15
★PARTS REPLACING	16
★SPARE PARTS LIST	17

Thank you for choosing the Eagle Eye model helicopter from Art-Tech. This helicopter is powered by two electric motors and is our latest product. Eagle Eye is equipped with adjustable collective pitch, which makes it suitable for outdoor flying.

SPECIFICATIONS

- ★ Rotor diameter: 450 mm
- ★ Length: 450 mm
- ★ Height: 250 mm
- ★ Weight: 350 g
- Configuration
- ★ 4CH FM proportional
- ★ Powerful 370 carbon brush motor
- ★ Li-poly battery: 7.4V1000mAh
- ★ 2 PCS 9g servo
- ★ 4 PCS propellers
- ★ 1 Set camera system
- ★ Complete radio control set (TX & RX)

RTF (Advanced)

W/:

- ★ kit
- ★ Servo×2
- ★ Propeller×4
- ★ Brushed motor×2
- ★ Camera system×1
- ★ Li-poly battery and balance charger
- ★ Complete radio control set (TX & RX)

100% Complete, everything for flight included. Please read this manual thoroughly before flying.

Warning:

Small parts, not for children under 14 years old. Adult supervision is highly recommended. Never touch blades when they are spinning.

- ★ Optimal model for the beginner
- ★ Flying condition: outdoor & indoor
- ★ Coaxial counter-rotating structure
- ★ Easy control and stable flight
- ★ 4 CH Transmitter
- ★ Balance charger
- ★ Camera with wireless synchro transmission function
- ★ Flying time: 6~10 mins

RTF (Standard)

W/:

- ★ kit
- ★ Servo×2
- ★ Propeller×4
- ★ Brushed motor×2
- ★ Li-poly battery and common charger
- ★ Complete radio control set (TX & RX)

※This picture only for reference.



FUNCTION OF THE CAMERA SYSTEM

1. Powered from helicopter's battery, camera works automatically at the time of helicopter' flight, Coinstantaneous video can be watched on the computer connected with camera's receiver.
2. Please refer to the operating manual of camera system for detail.

PRODUCT CHARACTER	
Accomplishment	100%
Difficulty of assembly	☆☆☆☆☆
Difficulty of maintaining	★★★★☆
Difficulty of control	★★★★☆
Anti-shatter	★★★★☆



※Specifications may change without notice, please refer to the real one for configuration. 2007.06



CAUTION

R/C modeling is a hobby with high technology and should not be considered as a children's . There is risk involved during the operation of this product and the user should take all precautions seriously or serious body injury may occur.

Improper disassembly, improper adjustments or setup may lead to unsatisfactory or unsafe operation. If you have any questions regarding the use, maintenance, or safe operation of this model, please contact your local retailer.



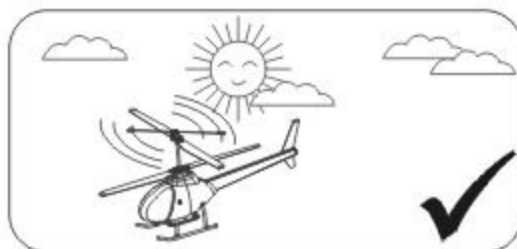
NOTE

As with any R/C product there are risks involved when flying this model. A beginner should seek the help of a skilled R/C pilot to ensure that the model is airworthy and capable of safe operation. Any damage, neglect, or unfamiliar use of this product can cause unexpected accidents or injury. Be sure to read this manual and follow all of the safety notes. Remember this is not a toy and children should be supervised prior to starting or flying this helicopter.

TIPS FOR SAFETY

1. Locate an appropriate place to fly your helicopter:

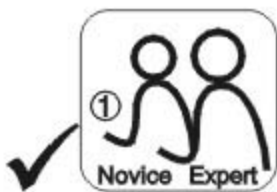
R/C helicopters are capable of flying at high speeds, thus posing a certain degree of potential danger to both the flyer and bystanders. Try to choose an appropriate flying site where the surface is flat, smooth, and clear of obstacles. A good choice would be an empty parking lot free from parked cars and pedestrians, an empty gymnasium or warehouse without obstructions. Do not fly near buildings, trees or high voltage lines to ensure the safety of yourself and others and your model. Do not fly your helicopter during inclement weather such as rain, snow, high winds or darkness.



TIPS FOR SAFETY

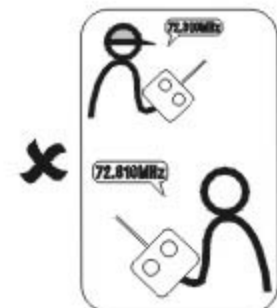
2. Obtain the assistance of an experienced pilot.

Prior to turning on your model and transmitter, to make sure that no one else is operating on the same frequency as your model. Frequency interference can cause your model to become uncontrollable as well as other models if they are on the same frequency. The help of an experienced pilot will ensure that you will have a well trimmed, correctly functioning helicopter for the first flight. Included with this helicopter it is a model flight simulator better known as FMS. It is strongly advised that you first practise on the simulator prior to making a flight with your new helicopter. Practice on the simulator will go along way in preventing a crash at beginning.



3. Same frequency around is forbidden.

Please check that no one else is using the same Transmitter channel at the same time, This will lead to a loss of control of the helicopter and a crash.



4. Always be aware of the rotating blades.

During the operation of your new Eagle Eye helicopter the rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious body injury and damage to you and to others. Be conscious of your actions and be careful to keep your hands, face, eyes, and loose clothing away from the blades and gears. Always fly your model a safe distance from yourself and others as well as nearby objects. Never take your eyes off the model or leave it unattended while it is turned on. Always turn off your model, then your transmitter after each flight.



5. Keep your Eagle Eye helicopter away from heat and humidity.

Your new Eagle Eye helicopter is a hi-tech electronic device; never subject your model to temperature extremes, do not leave your model in an automobile for extended times because high temperatures can damage the delicate electronic and plastic parts.



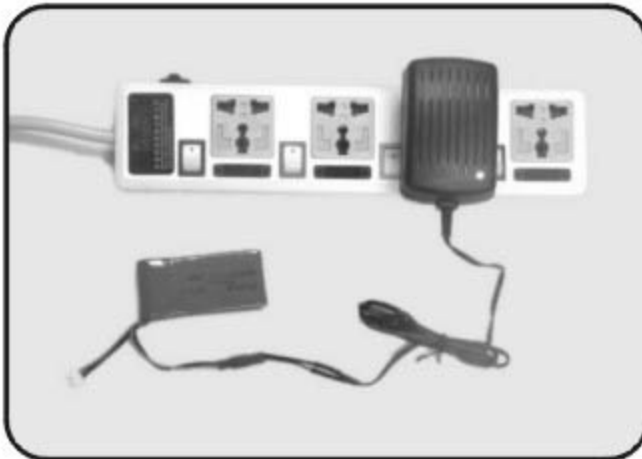
CHARGE MODE AND WARNING

Charge the Lithium polymer battery with the supplied wall charger. Observe the polarity of the battery and the charger and ensure that the connection is correct, do not force the connector or damage may occur. The Lithium charger is capable of charging the lithium Polymer battery at 1 C or 1 Amp. Please charge your battery prior to the first use so that you start with a freshly charged battery. To ensure safe operation do not charge the battery for extended periods of time. Never leave the charger unattended and never leave the charger on overnight. Adult supervision is required during the charging of lithium batteries. The supplied 7.4V 1000mAH Li-Poly battery should be charged with the Li-Poly battery charger only. Charging the battery with a charger not designed specifically for lithium batteries can cause fire or and explosion of the battery. Please observe all safety instructions, if the battery ever becomes puffy or is damaged dispose of the battery in a safe container outdoors away from flammable materials.

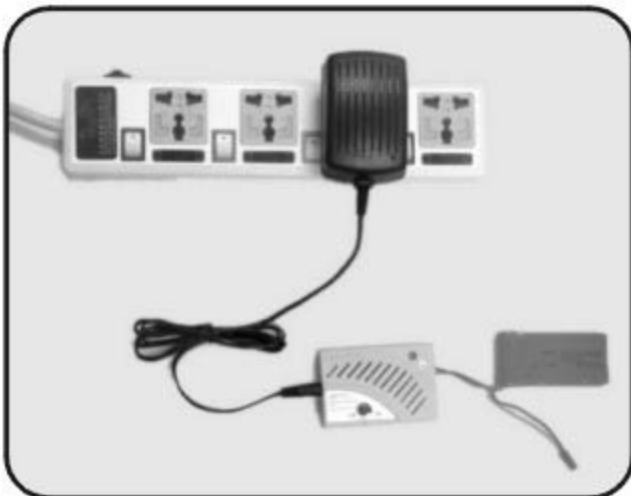


1. Do not put the battery on or near anything that can catch fire when charging.
2. Always charge the battery on none flammable base, i.e. A metal tray.

1. Charge the battery with common charger.



2. Charge the battery with balanced charger.





SAFETY INSTRUCTIONS FOR LI-POLY BATTERIES

01. **Do not** disassemble or reconstruct the battery.
02. **Do not** short-circuit the battery.
03. **Do not** use or leave the battery nearby the fire, stove or heated place.
04. **Do not** immerse the battery in water or sea water, do not get it wet.
05. **Do not** charge the battery nearby the fire or under the blazing sunlight.
06. **Do not** drive a nail into the battery, strike it by hammer or tread on it.
07. **Do not** impact or through the battery.
08. **Do not** use the battery with conspicuous damage or deformation.
09. **Do not** make the direct soldering on the battery.
10. **Do not** reverse charge or over discharge the battery.
11. **Do not** reverse charge or reverse connect.
12. **Do not** connect the battery to the ordinary charger socket or car cigarette jack.
13. **Do not** use the battery for unspecified equipment.
14. **Do not** touch the leaking battery directly, please wash your skin or clothes with water if they are bedewed by liquid leaking from the battery.
15. **Do not** mix the LI-Poly battery with other un-chargeable battery .
16. **Do not** continue charging the battery over the prescribed time.
17. **Do not** put the battery into the microwave oven or high-pressure container.
18. **Do not** use the abnormal battery.
19. **Do not** use or keep the battery under the sunlight.
20. **Do not** use the battery nearby the place where generates static electricity (over 64V).
21. **Do not** charge the battery when the environmental temperature is under 0°C or over 45°C.
22. If you find the battery leaking, smelling or abnormal, stop using it .
23. Keep the battery away from the children.
24. Use the specified charger and observe charging requirement (under 1A).
25. When using by minors, parents should show them the correct way to charge.



CAUTION

1. Never charge the battery at more than 1 amp.
2. Never discharge the battery at more than 5c and never take the voltage lower than 6v as this will damage the battery.
3. For full flight time to be achieved please cycle the cells through three flights.
4. **Never** charge the battery on a carpet floor, this can cause a fire!

PARTS LIST

The Eagle Eye includes the following parts, please check to make sure that all of the parts are included in your kit. Should anything be missing please contact your local dealer.



Airframe



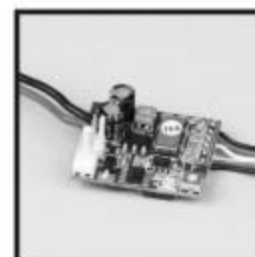
Servo



Receiver



Motor



PCB (Control)



Transmitter



Battery



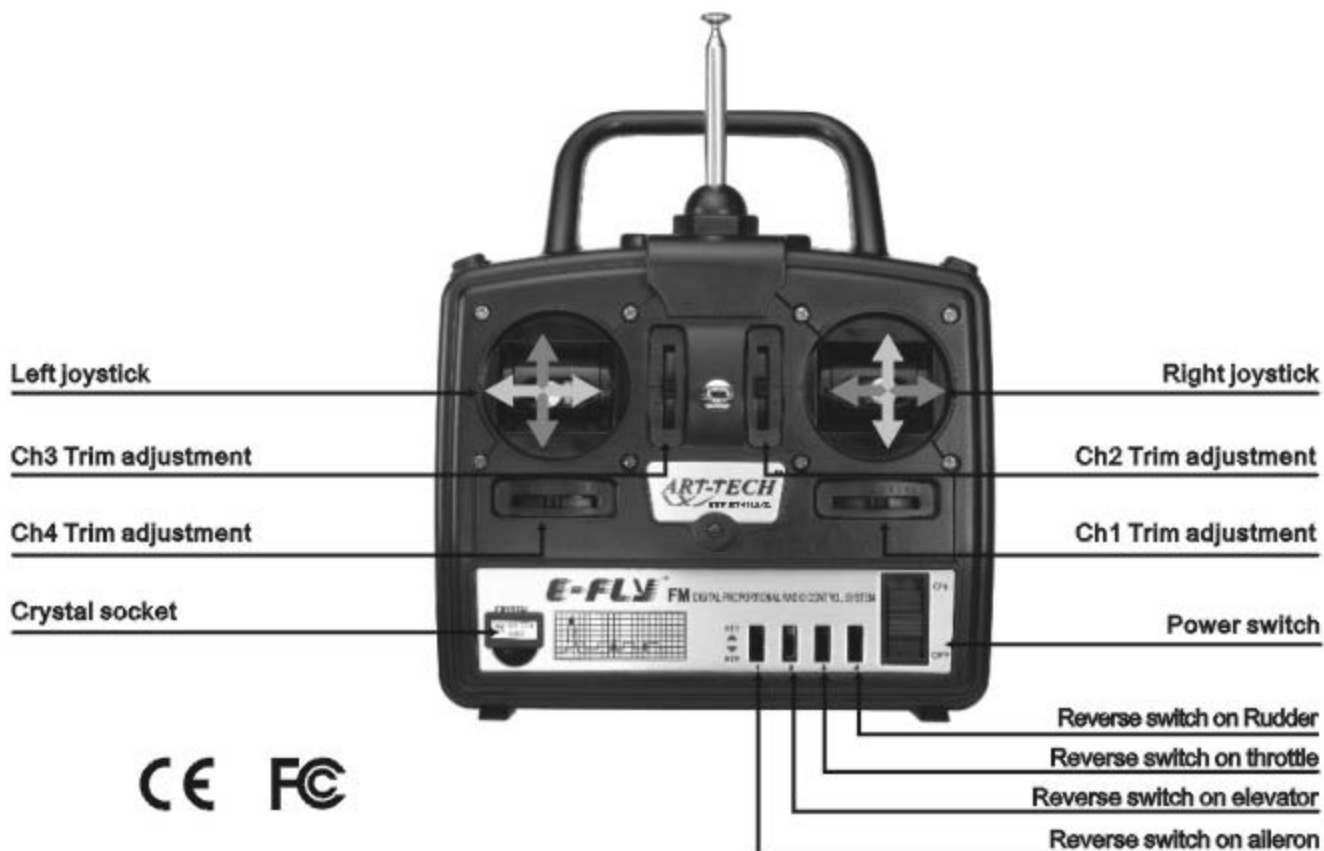
Charger



Balanced Charger

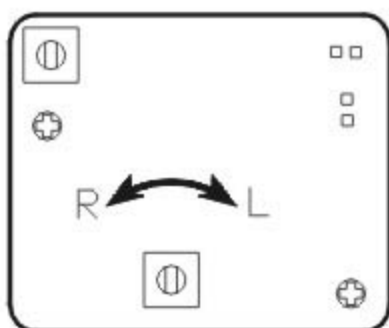
※This picture only for reference.

FUNCTIONS FOR CONTROL SET



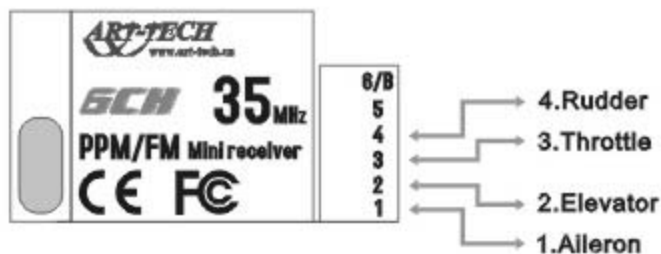
Mode II above

DUAL ROTOR BLADES' SPEED ADJUSTMENT VIA PCB CONTROL



1. Function of button: adjust upper and lower rotor blades' different speed;
2. (1) Turning the button clockwise, upper rotor blade runs faster and helicopter turns left.
(2) Turning the button anti-clockwise, lower rotor blade runs faster and helicopter turns right.
3. PCB control is well adjusted when ex-work.

PICTURE OF CONTROL SET CONNECTION



SWASHPLATE ADJUSTMENT

1. Swashplate check. Pull down the throttle stick and throttle trim to the lowest position, and put the elevator trim and aileron trim in the neutral position, check whether the swashplate is in a horizontal level.
2. Swashplate adjustment. If the swashplate is not in a horizontal level, adjust via the following two steps: servo and servo bellcrank adjustment. Re-connect the battery cable to the motor again and adjust the servo reposition. After the reposition is ready, adjust the angle between the servo bellcrank and long ball linkage rod at 90 degrees. Long ball linkage rod adjustment. Adjust the ball linkage rod 1 to parallel to swashplate bottom level.



MAIN ROTOR BLADE ADJUSTMENT

1. Main rotor blade inspection.
 - (1) Inspect whether the fixing screw of the main rotor blades are too tight or loose. Extreme tightness or loosening of the blades will result in instable flight.
 - (2) Inspect the blade tracking problem. Blade tracking will lead to instable flight.
2. Main rotor blade adjustment.
 - (1) Keep the fixing screw of the main rotor blades not too tight or too loose.
 - (2) Lengthen or shorten the short ball linkage if the blade tracking is existed.



NORMAL FLIGHT





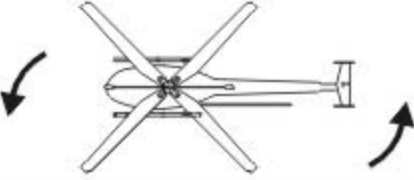

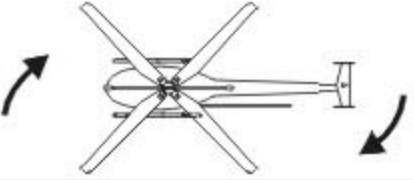





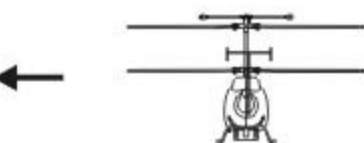



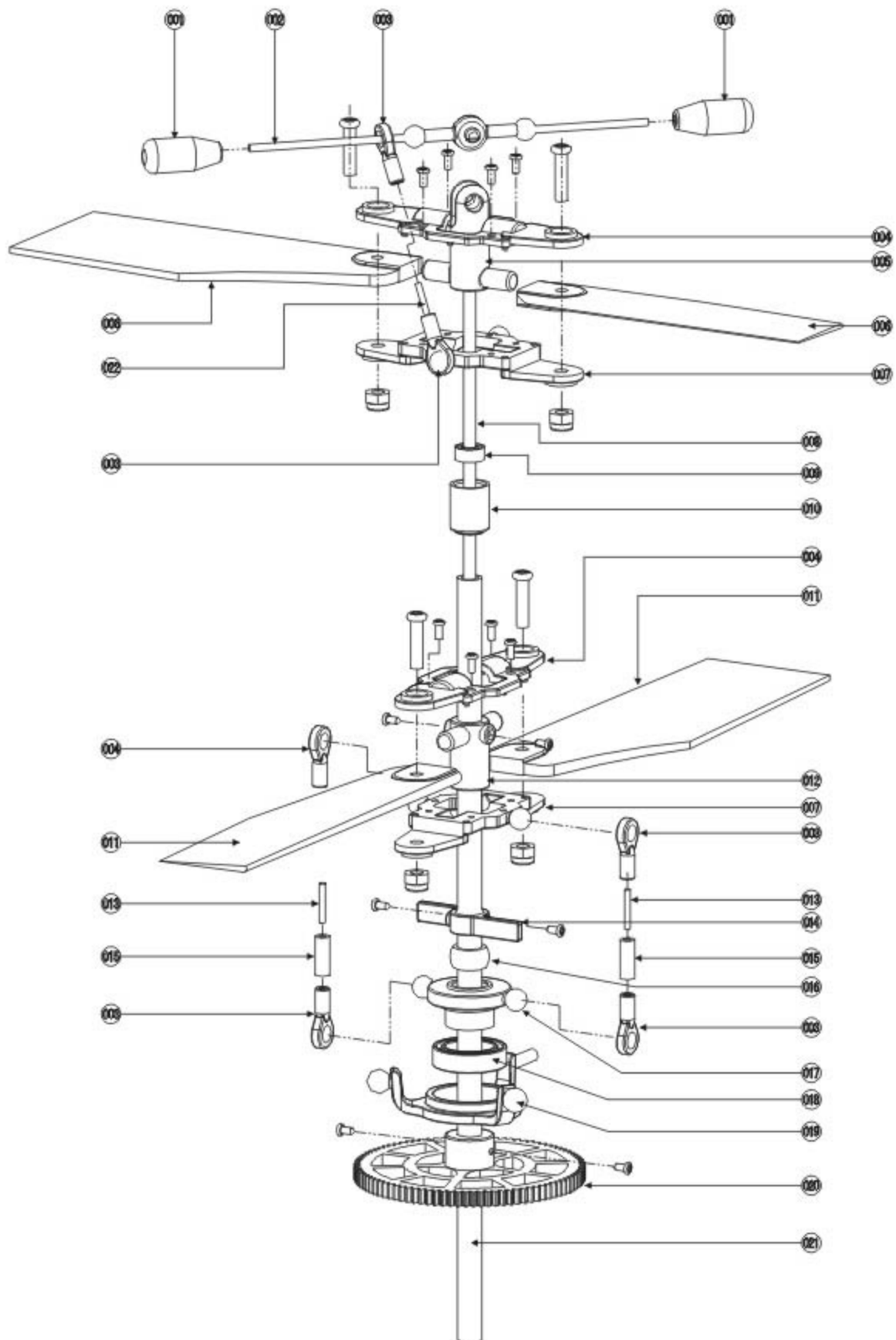
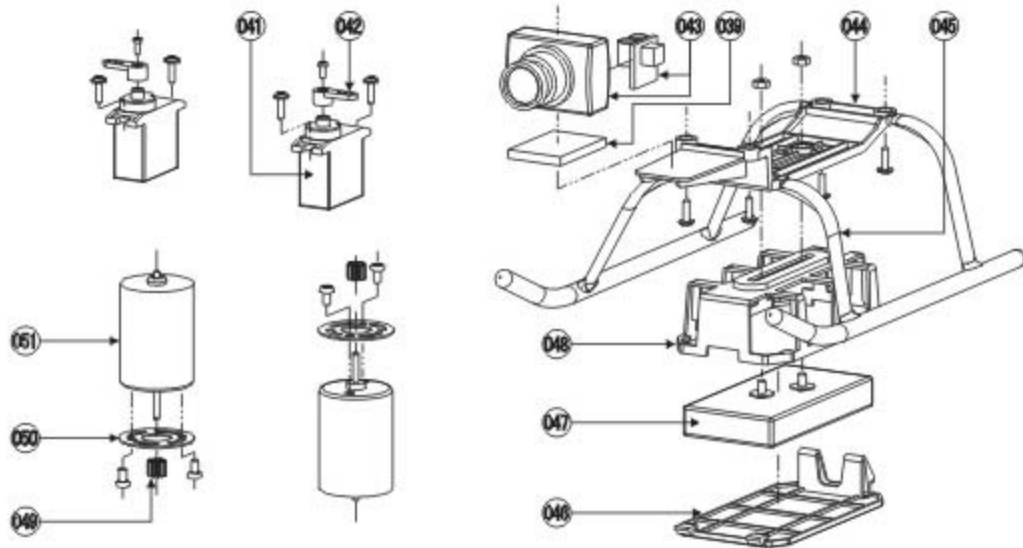
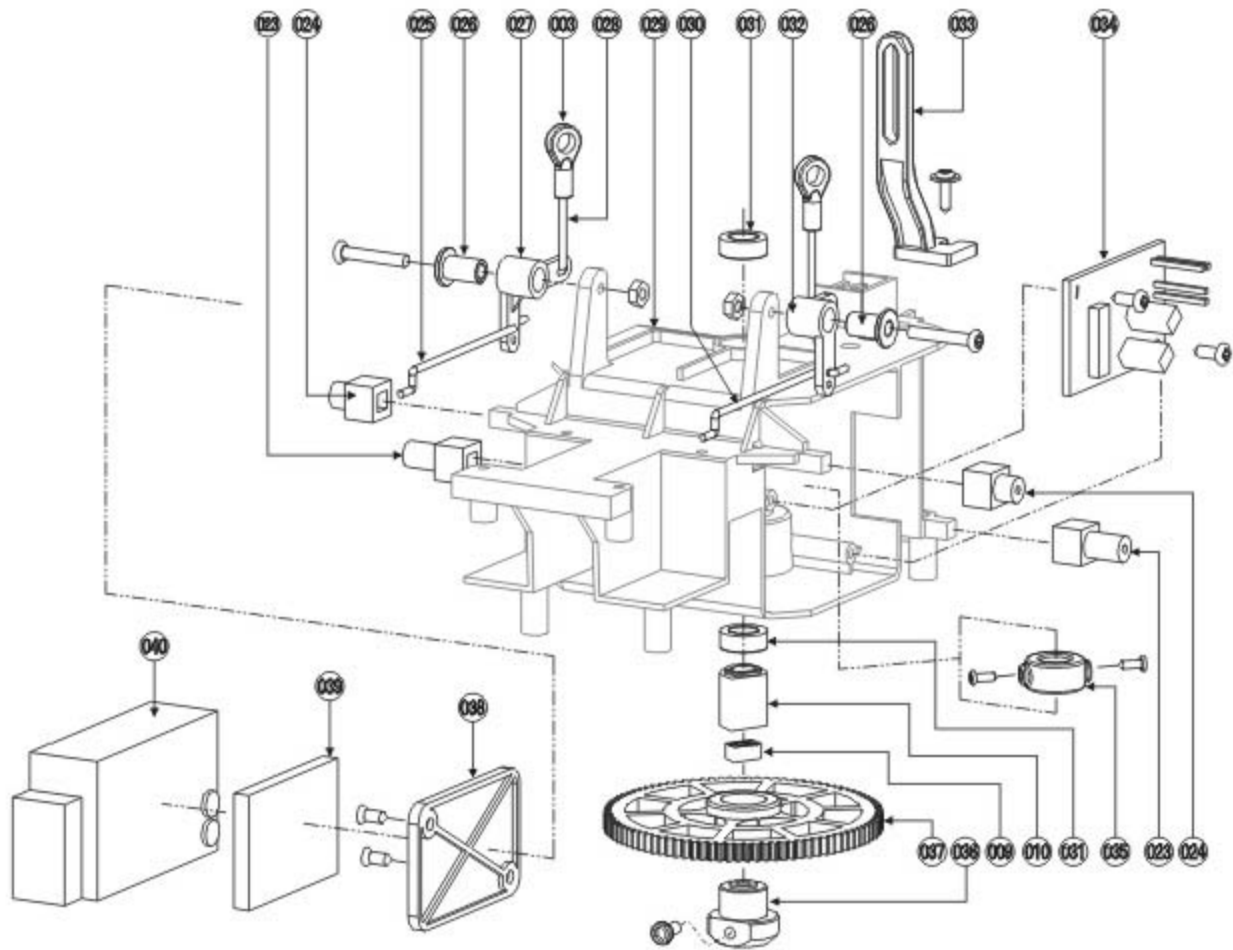
Ascending			Throttle pushing up
Descending			Throttle pulling down
Head turning left			Rudder stick moving left
Head turning right			Rudder stick moving right
Head forward			Elevator stick pushing up
Head backward			Elevator stick pushing down
Helicopter moving left			Aileron stick moving left
Helicopter moving right			Aileron stick moving right

 Chart for R/C mode 2 (left hand throttle)

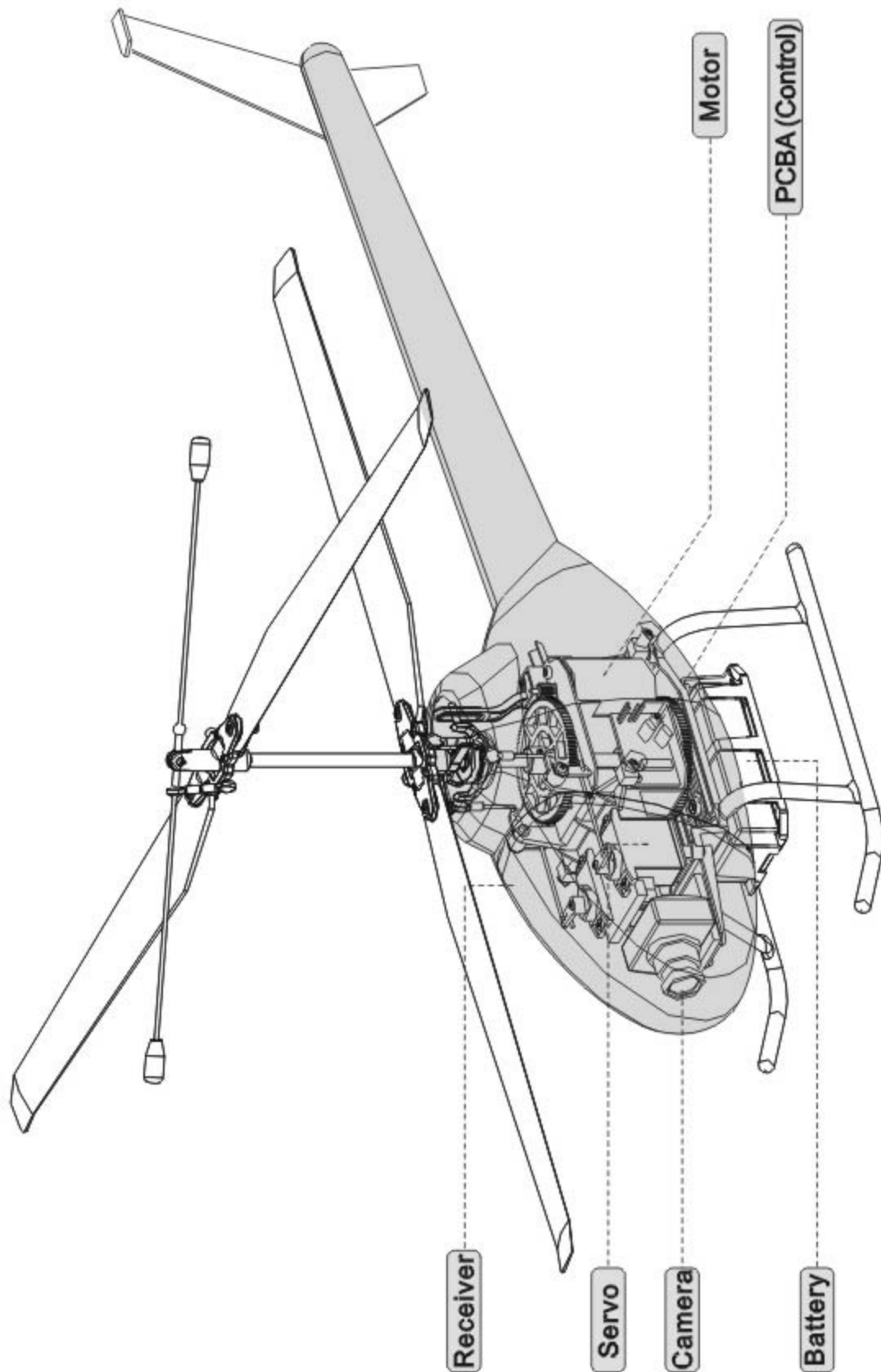
INSTALLATION



INSTALLATION

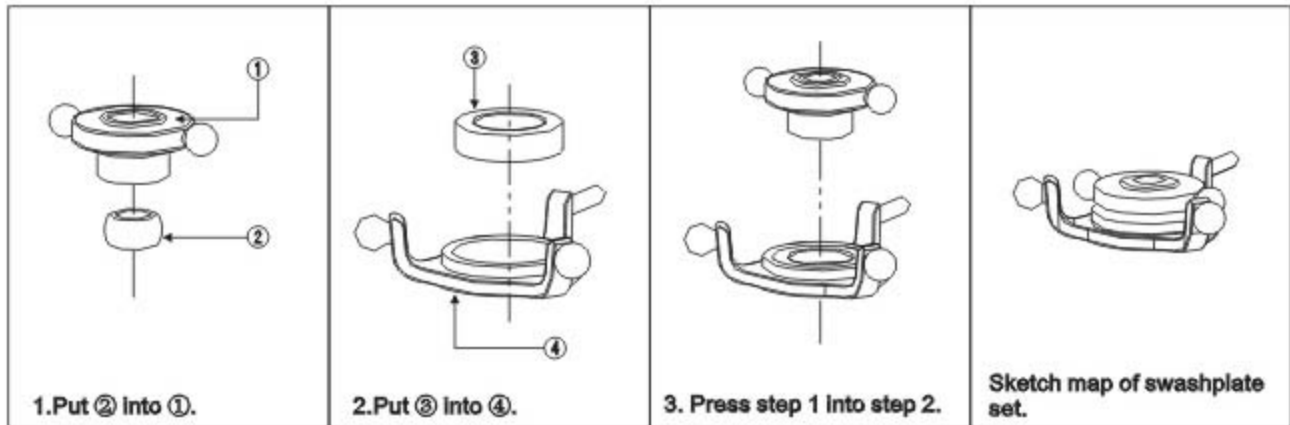


ALL SPARE PARTS AND EQUIPMENT

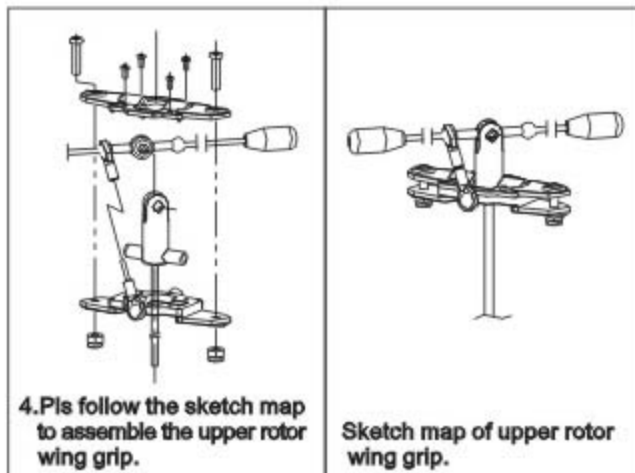


PARTS REPLACING

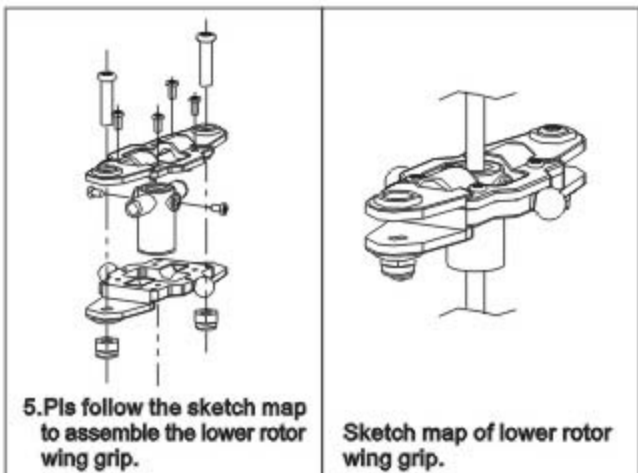
Swashplate assembly



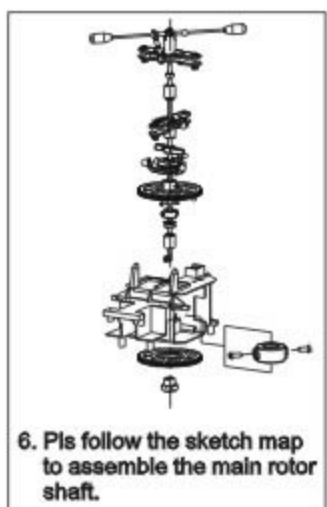
Upper rotor wing grip assembly



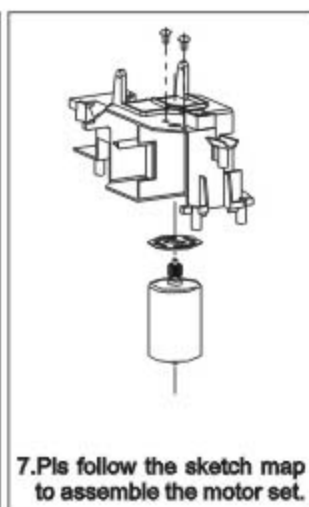
Lower rotor wing grip assembly



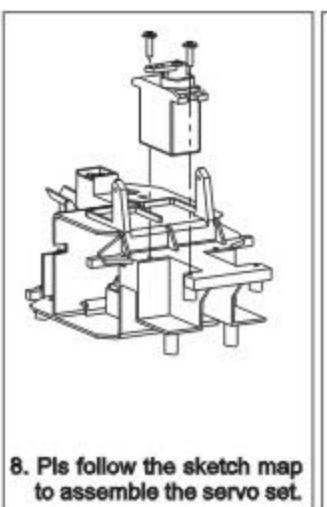
Main rotor shaft installation



Motor installation



Servo installation



Battery installation



SPARE PARTS LIST



Nº:9101
Undercarriage



Nº:9102
Main rotor wing grip



Nº:9103
Main blades



Nº:9104
Stabilizer



Nº:9105
Main gear set



Nº:9106
Swashplate



Nº:9107
Bearing set



Nº:9108
Main shaft



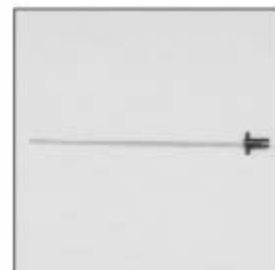
Nº:9109
Plastic parts of shaft



Nº:9110
Frame



Nº:9111
Servo arm set



Nº:9112
Core shaft



Nº:9113
Battery box set



Nº:9114
Screw set



Nº:9115
Eagle Eye body



Nº:9116
Sticker

SPARE PARTS LIST



No:9117
Motor set



No:9118
Balanced charger



No:9119
Battery



No:9120
Charger



No:9121
PCB (Control)



No:300809
Servo



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