

# Heli-Max™



## INSTRUCTION MANUAL



**Mail Rotor Diameter:** 350mm (13-3/4")  
**Fuselage Length:** 340mm (13-3/8")  
**Weight:** 184g (5.6 oz)  
(without training gear)  
**Battery:** 600mAh 7.4V  
Lithium Polymer  
**Transmitter:** 4 channel FM

## WARRANTY

**Heli-Max™** guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. **In no case shall Heli-Max's liability exceed the original cost of the purchased kit.** Further, Heli-Max reserves the right to change or modify this warranty without notice.

In that Heli-Max has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

**If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.**

To make a warranty claim, send the defective part or item to Hobby Services at this address.

**Hobby Services**  
**3002 N. Apollo Dr. Suite 1**  
**Champaign IL 61822**  
**USA**

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

**WARNING:** The RotoFly charger is designed to charge only the LiPo (lithium polymer) battery supplied with the RotoFly. Do not attempt to charge any other batteries with this charger, as doing so may result in damage to the battery or charger, and may cause a fire.

**READ THROUGH THIS INSTRUCTION MANUAL FIRST. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.**

# Heli-Max™

Champaign, Illinois  
(217) 398-8970

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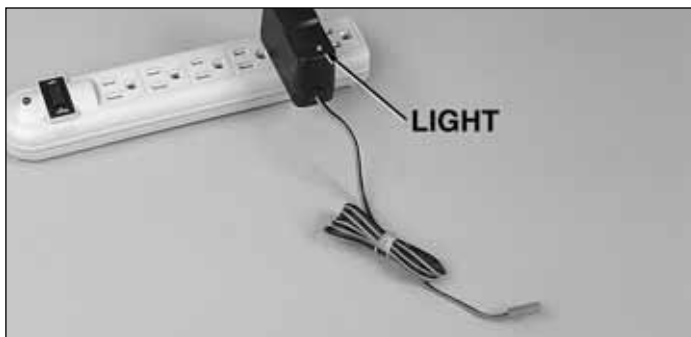
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# INTRODUCTION

The RotoFly is an outstanding ready-to-fly electric helicopter for indoor flying and outdoor flying on calm days. Although it is not difficult to operate this model helicopter, we recommend that you read this instruction book thoroughly and carefully. You may also want to ask for assistance from your local model flying club and/or hobby shop.

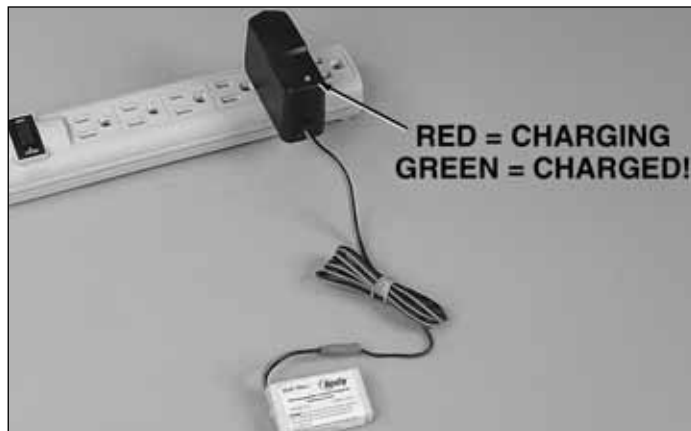
# CHARGE THE BATTERY

**WARNING:** The RotoFly charger is designed to charge only the LiPo battery supplied with the RotoFly. Do not attempt to charge any other batteries with this charger, as doing so may result in damage to the battery or charger, and may result in a fire. DO NOT charge the battery while it is mounted in the helicopter.



❑ 1. Plug the battery charger into an AC outlet. The light on the

charger should be green. **Note:** The charger and the training gear are shipped in the back side of the foam packing.



❑ 2. Plug the battery into the charger. The light on the charger will turn red. **WARNING:** Do not leave the battery unattended while it is charging. If the battery becomes hot disconnect it immediately.

❑ 3. When the light on the charger has turned green again the battery is ready to use. The first charge should take about an hour. Subsequent charges may take as long as two hours, depending on much the battery was used since its last charge.

# PREPARE THE TRANSMITTER



❑ 1. Install the transmitter antenna by inserting it into the hole in the top of the transmitter and screwing it into place, using a clockwise rotation.

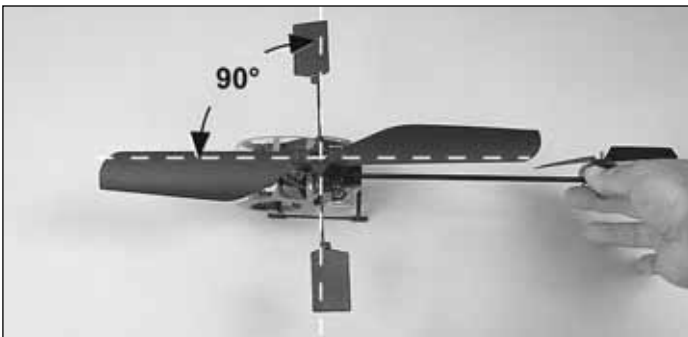


❑ 2. Remove the battery cover from the back of the transmitter. Install eight “AA” batteries (not included) in the transmitter. Double-check the direction of each battery before replacing the battery cover.



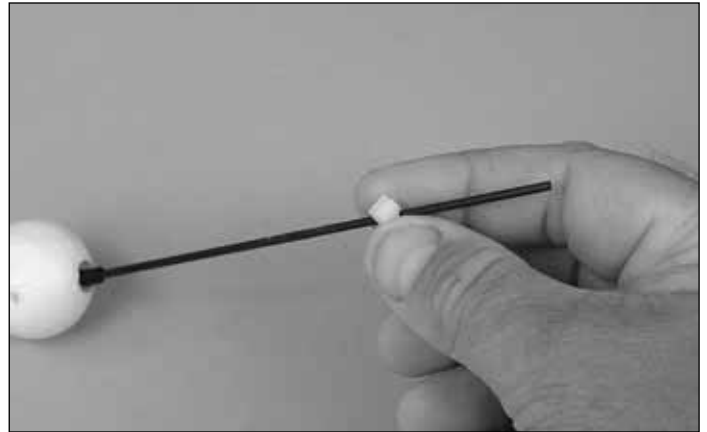
❑ 3. Turn on the transmitter and check the LEDs on the front. The green and red lights should be on. If the green light is off and the red light is blinking, new “AA” batteries need to be installed.

## PREPARE THE HELICOPTER FOR FLIGHT

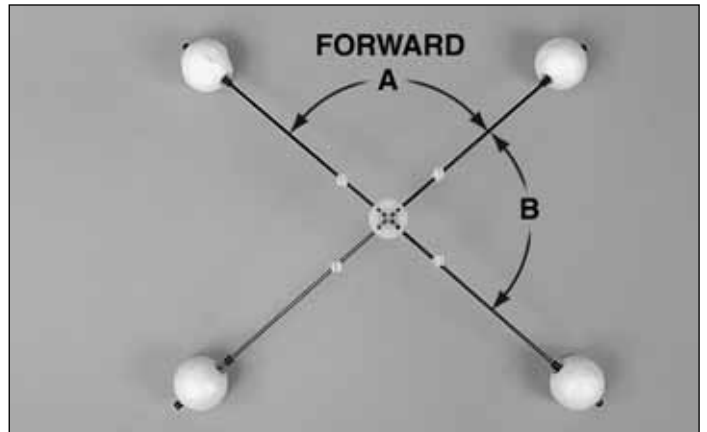


❑ 1. Rotate the main blades so that they are pointing away from each other and perpendicular to the flybar. **Note:**

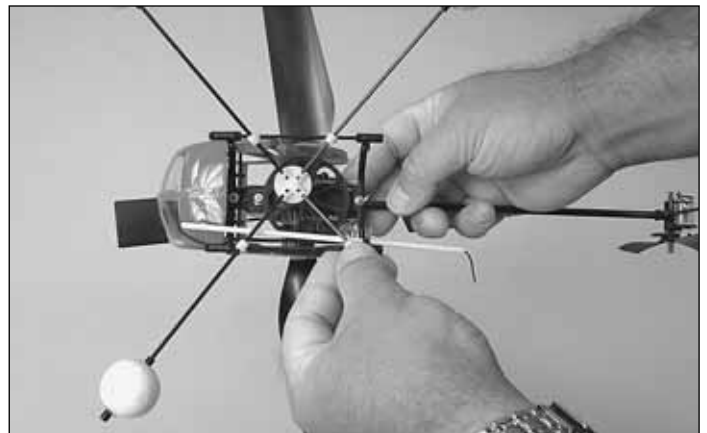
Later, when you first fly your helicopter, if it has any vibrations or shakes this is the first thing to check.



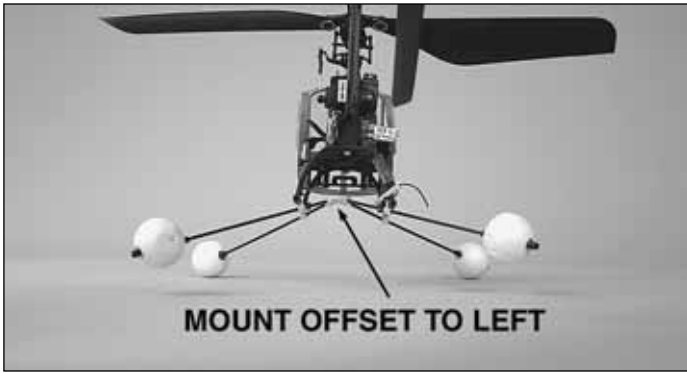
❑ 2. Slide a skid mount onto each training gear leg.



❑ 3. Install the gear legs in the center mount. Note that angle A is larger than angle B. The larger angle A faces forward.



❑ 4. Snap the training gear onto the landing gear skids.



❑ 5. Position the training gear so that the center mount is offset to the left of helicopter center. This makes the helicopter lean to the right and helps the helicopter lift off straight.

## INSTALL THE HELICOPTER BATTERY



❑ 1. Remove the canopy by pulling one side off the horizontal mount, then the other. **Note:** Be careful to not widen the canopy too much, as it will separate the seam on the bottom of the canopy.



❑ 2. Slide the **charged** battery into the battery mount. Secure the battery with a rubber band across the top. **DO NOT** connect the battery at this time.

❑ 3. Install the canopy by sliding it on to the horizontal mount.

## FIND A SUITABLE FLYING SITE

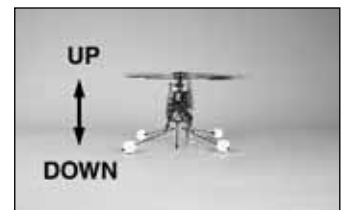
It is best to fly on calm days with no wind. Find an area that is clear of trees, power lines and other structures. A park or schoolyard is good; a flying field for R/C helicopters is best. It is best to find an area with a flat, smooth surface so the helicopter's training gear can slide. If you choose to fly indoors, find a spacious area free of obstacles with a flat, smooth floor. Make sure the area is at least ten feet square or larger.

Most importantly, avoid groups of people, especially children. The moving blades can be dangerous and cause injury or damage.

Got your site selected? Great! Now let's learn how to fly.

## DESCRIPTION OF CONTROLS

Piloting begins with learning a little about how your RotoFly helicopter works. You control the helicopter with your transmitter, by sending commands to equipment that rides inside the model. The control sticks are used to maneuver the helicopter in flight. Here's how the transmitter sticks control your helicopter.



### THROTTLE

The up and down movement of the left stick controls the throttle. This determines the RPM of the main rotor blades, which ultimately controls the up and down movement of the helicopter. Moving the throttle stick up makes the helicopter ascend. Moving the throttle stick down makes the helicopter descend.



### TAIL ROTOR

The side-to-side movement of the left stick controls the tail rotor. This determines the rotation direction of the helicopter. Moving the stick left makes the nose of the helicopter rotate to the left. Moving the stick right makes the nose of the helicopter rotate to the right.



### ROLL CYCLIC

The side-to-side movement of the right stick controls the roll cyclic of the helicopter. This tilts the helicopter to the left or right. Moving the stick left tilts the helicopter to the left. Moving the stick right tilts the helicopter to the right.



### PITCH CYCLIC

The forward and back movement of the right stick controls the pitch cyclic of the helicopter. This tilts the helicopter forward or backwards. Moving the stick forward tilts the helicopter forward. Moving the stick back tilts the helicopter backward.

## PREFLIGHT



❑ 1. Make sure no one is operating any type of R/C equipment on the same frequency as your RotoFly helicopter. The frequency is identified on the back of your transmitter. When you know it's safe, switch the radio transmitter on and fully extend the antenna.



❑ 2. Confirm that the left stick is all the way down to make sure the rotor blades do not rotate when the RotoFly's power is turned on. Plug the battery pack into the electronic speed control located on the helicopter.



❑ 3. Once the plugs are connected, wait ten seconds for the control board and gyro to initialize. DO NOT move the helicopter during this process. During this time, a green light will blink on the control board. When the green light stops blinking and glows solid, your RotoFly is ready for flight. **Note:** If the light does not stop blinking, check that the throttle stick and the throttle trim are both down.

❑ 4. When you are ready to turn off the RotoFly, ALWAYS unplug the helicopter battery before turning off the transmitter.



## MOVING THE ROTOFLY

1. Draw a three foot diameter circle using chalk. This will be your practice area. Place the RotoFly in the middle of the circle facing away from you. Be sure to stand about six feet back from the tail of the helicopter.

2. Advance the throttle gradually until the helicopter begins to get light. At this point, the helicopter should start to move without actually lifting off the ground. Since you are just learning to fly, you don't want the helicopter to take off from the ground, so don't advance the throttle stick any more than necessary. The helicopter may have a tendency to rotate to the right. This is normal and is caused by the torque of main blade. Try to counter the right rotation by holding the rudder stick slightly left. Remember to use very gradual stick movements. The RotoFly is very sensitive to your input and only small stick movements are required for flight.

3. Observe the movement and attitude of the helicopter and try to keep it within your practice circle. If the helicopter moves out of the circle, pull the throttle stick down and wait for the blades to stop spinning. Pick up the helicopter and place it back into the center of the circle and try again.

4. If the helicopter consistently moves in one direction, you can use the transmitter trims to correct the movement. For example, if the RotoFly consistently moves forward when it gets light, try adjusting the trim tab on the right stick down slightly. This will counter the forward movement. Remember, just like the sticks, the trim tabs only require slight movement. Adjust the trim tabs one click at a time.

5. Work on keeping the helicopter within the practice circle while keeping it light. Try to give small inputs in order to keep it in one place. This requires you to counter the movement of the helicopter. The sooner you notice a movement and respond to it, the smaller the corrective action needed. These are the basics of learning to hover. This process will take some practice.



## HOVERING THE ROTOFLY

Once you can confidently keep the helicopter in the practice area, it's time to hover with the helicopter lifted off the ground.

1. Advance the throttle until the helicopter gets light. Then, advance the throttle a little more until your RotoFly is off the ground, keeping it no more than one foot in altitude.

2. Using the same flying skills previously learned, try to keep it within your practice area. If the helicopter gets away, land it immediately by reducing the throttle stick. Place it back in the center of the circle and try again. Learning to hover takes a great deal of time and practice.

3. Keep working on steps 1 and 2 until you can confidently hold the RotoFly in the circle. Flying a remote control helicopter is rewarding and can be difficult. The importance of being able to safely and consistently hover cannot be over-stated.

4. When you can maintain a constant one foot altitude, you can start rotating the tail to either side. Try to rotate the helicopter so you are now looking at the side of the helicopter instead of the tail. Try to maintain a hover. Your goal is to hover from every angle.

5. Now that you mastered the side angles continue to rotate your helicopter so it is facing you. Although the controls are the same, your input will **appear** opposite to the movements of the helicopter. This is called "control reversal". When you push the tail rotor stick to the left, it will cause left rotation but the helicopter will rotate to your right. So when your helicopter is facing you, you must learn to reverse the way you control it. Most pilots find it a little confusing at first, but with practice it becomes second nature.

6. The next step is to hover your RotoFly while rotating it a full 360 degrees. Remember to keep it within the practice circle. Keep practicing until you are confident with your hovering skills.



## FORWARD FLIGHT

Now that you can hover your helicopter from every angle, it's time to start moving it forward.

1. While hovering one foot off the ground, push the right stick forward just slightly until your RotoFly begins moving forward.

2. As long as the helicopter is tilted forward, it will continue to move forward. To stop the forward motion, pull back slightly on the right stick until the helicopter is level.

3. Reduce the throttle stick and land the helicopter.

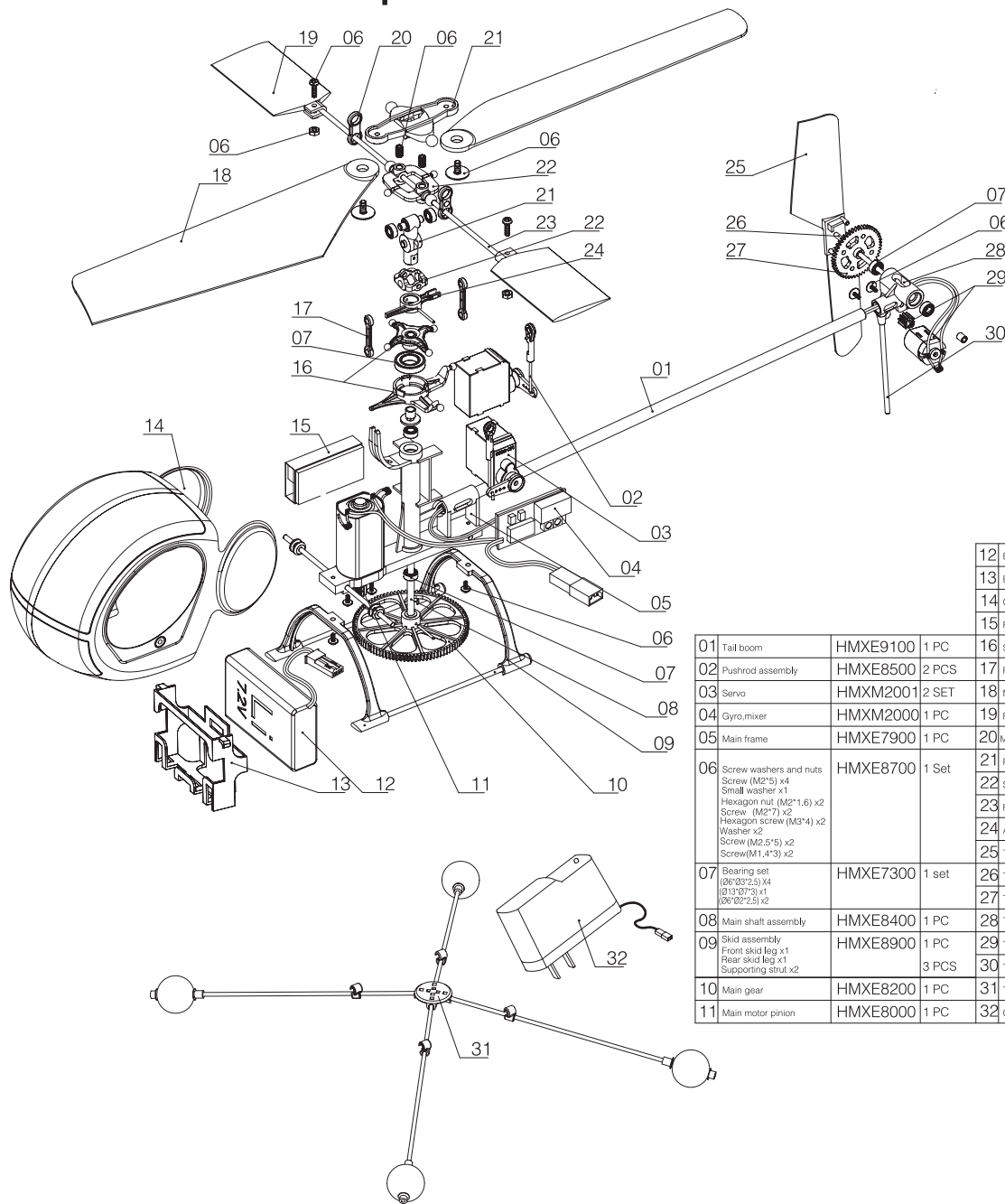
4. Practice this several times and then try to move the RotoFly to the left and right using the same principle. Remember to use very gradual stick movements. The RotoFly is very sensitive to your input and only small stick movements are required for flight.

5. Next, you can practice turning the helicopter during forward flight. This requires you to give left or right tail rotor input in order to turn the helicopter. It's a good idea to practice flying in circles. Once you can successfully fly circles in both directions, practice figure eights.


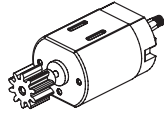
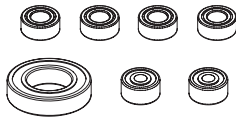
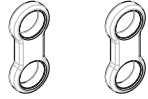

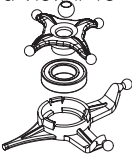
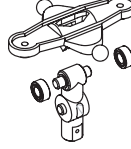
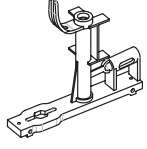

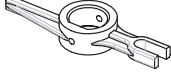

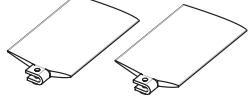
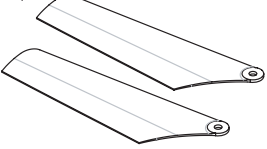
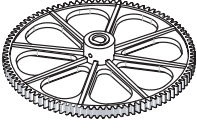


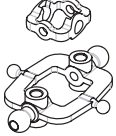
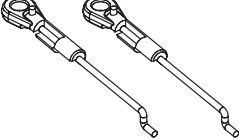

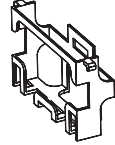
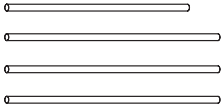
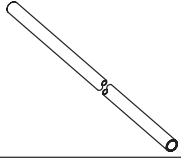
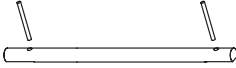
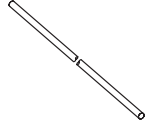

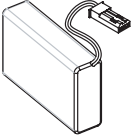

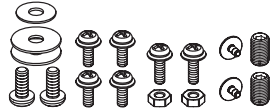
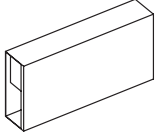
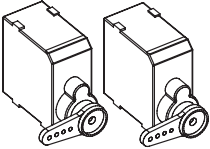
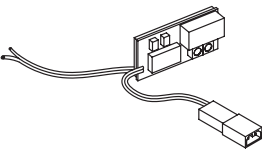
6. Your RotoFly battery pack should give you about ten minutes of flight time per battery charge. As your battery pack becomes depleted, you will notice an increase in the throttle stick position to hover. At this point, you should land your RotoFly and give the battery ten minutes to cool down before recharging.

**Congratulations! You have done it. Welcome to the world of R/C helicopters.**

### Exploded View



12	Battery (Li-Poly)	HMXP1000	1 SET
13	Battery holder	HMXE7200	1 PC
14	Canopy	HMXE7400	1 SET
15	Receiver	HMXL0001	1 PC
01	Tail boom	HMXE9100	1 PC
02	Pushrod assembly	HMXE8500	2 PCS
03	Servo	HMXM2001	2 SET
04	Gyro/mixer	HMXM2000	1 PC
05	Main frame	HMXE7900	1 PC
06	Screw washers and nuts Screw (M2.5) x4 Small washer x1 Hexagon nut (M2*1.6) x2 Screw (M2*7) x2 Hexagon screw (M3*4) x2 Washer x2 Screw (M2.5*5) x2 Screw (M1.4*3) x2	HMXE8700	1 Set
07	Bearing set (06*03*2.5) x4 (015*07*3) x1 (06*02*2.5) x2	HMXE7300	1 set
08	Main shaft assembly	HMXE8400	1 PC
09	Skid assembly Front skid leg x1 Rear skid leg x1 Supporting strut x2	HMXE8900	3 PCS
10	Main gear	HMXE8200	1 PC
11	Main motor pinion	HMXE8000	1 PC
16	Swashplate assembly	HMXE9000	1 PC
17	Flybar control link	HMXE7600	2 PCS
18	Main rotor blade	HMXE8300	2 PCS
19	Flybar paddles	HMXE7700	2 PCS
20	Main rotor control link	HMXE8100	2 PCS
21	Rotor head assembly	HMXE8600	1 Set
22	Seesaw assembly	HMXE8800	1 Set
23	Flybar	HMXE7800	1 PC
24	Anti-rotation arm	HMXE7100	1 PC
25	Tail rotor blade	HMXE9500	1 PC
26	Tail rotor shaft	HMXE9700	1 PC
27	Tail rotor gear	HMXE9600	1 PC
28	Tail motor mount	HMXE9400	1 PC
29	Tail motor and pinion	HMXE9300	1 PC
30	Tail Skid support	HMXE9200	1 Set
31	Training gear	HMXE9800	1 Set
32	Charger	HMXP1001	1 PC

<p>Tail rotor shaft Part # HMXE9700 Exploded View # 26</p> 	<p>Tail motor &amp; pinion Part # HMXE9300 Exploded View # 29</p> 	<p>Bearing Part # HMXE7300 Exploded View # 07</p> 	<p>Main control link Part # HMXE8100 Exploded View # 20</p> 
<p>Flybar control link Part # HMXE7600 Exploded View # 17</p> 	<p>Swashplate assembly Part # HMXE9000 Exploded View # 16</p> 	<p>Rotor head assembly Part # HMXE8600 Exploded View # 21</p> 	<p>Main frame Part # HMXE7900 Exploded View # 05</p> 
<p>Tail motor mount Part # HMXE9400 Exploded View # 28</p> 	<p>Anti-rotation arm Part # HMXE7100 Exploded View # 24</p> 	<p>Skid assembly Part # HMXE8900 Exploded View # 09</p> 	<p>Flybar paddles Part # HMXE7700 Exploded View # 19</p> 
<p>Main rotor blade Part # HMXE8300 Exploded View # 18</p> 	<p>Main gear Part # HMXE8200 Exploded View # 10</p> 	<p>Tail gear Part # HMXE9600 Exploded View # 27</p> 	<p>Tail rotor blade Part # HMXE9500 Exploded View # 25</p> 
<p>Seesaw assembly Part # HMXE8800 Exploded View # 22</p> 	<p>Pushrod assembly Part # HMXE8500 Exploded View # 02</p> 	<p>Canopy assembly Part # HMXE7400 Exploded View # 14</p> 	<p>Battery box Part # HMXE7200 Exploded View # 13</p> 
<p>Tail skid supports Part # HMXE9200 Exploded View # 30</p> 	<p>Tail boom Part # HMXE9100 Exploded View # 01</p> 	<p>Main shaft assembly Part # HMXE8400 Exploded View # 08</p> 	<p>155mm Flybar Part # HMXE7800 Exploded View # 23</p> 
<p>Main motor &amp; pinion Part # HMXE8000 Exploded View # 11</p> 	<p>Li Battery set Part # HMXP1000 Exploded View # 12</p> 	<p>Training stand Part # HMXE9800 Exploded View # 31</p> 	<p>Screws, washers, nuts Part # HMXE8700 Exploded View # 06</p> 
<p>Receiver Part # HMXL0001 Exploded View # 15</p> 	<p>Servo Part # HMXM2001 Exploded View # 03</p> 	<p>ESC/Gyro Mixer Part # HMXM2000 Exploded View # 04</p> 	<p>Charger Part # HMXP1001 Exploded View # 32</p> 