

Heli-Max®

AXE™ CX Nano

INSTRUCTION MANUAL



Specifications

Length: 6.29 in [160 mm]

Width: 1.77 in [45 mm]

Height: 4.72 in [120 mm]

Rotor Span: 7.87 in [200 mm]

Weight: 1.37 oz [39 g]

(with supplied flight battery)

- Only use the included charger with the included battery or replacement part (GPMP0412).
- Do not attempt to use this charger with NiCd or NiMH battery packs.
- Never charge in excess of 4.20V per cell.
- If the battery should become damaged, discard it. Do not attempt to use a damaged battery.
- Do not leave the charger unattended while charging. Disconnect the battery and remove input power from the charger immediately if either becomes hot! However, it is normal for the charger to get warm.
- Disconnect the battery from the charger and carefully move the battery to a fireproof location if the battery begins to swell or smoke!
- Never charge at currents greater than 1C.
- Always charge in a fireproof location.
- Never trickle charge.
- Never allow the battery temperature to exceed 140° F [60° C].
- Never disassemble or modify pack wiring in any way or puncture cells.
- Never discharge below 2.75V per cell.
- Do not allow water, moisture or foreign objects into the charger.
- Do not block the air intake holes, which could cause the charger to overheat.
- Do not place the charger or any battery on a flammable surface or near a combustible material while in use.
- Do not charge on a carpet, cluttered workbench, paper, plastic, vinyl, leather, wood, or inside an R/C model.
- Never charge inside a full-sized vehicle.
- Always disconnect the battery from the charger and the power supply from the charger when not in use.
- Do not attempt to charge a battery if it is swollen or hot.
- ALWAYS KEEP OUT OF REACH OF CHILDREN.

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.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.



TABLE OF CONTENTS

IMPORTANT PRECAUTIONS	2
WARRANTY	3
INTRODUCTION	4
SAFETY PRECAUTIONS.	4
ADDITIONAL ITEMS REQUIRED	5
KIT INSPECTION.	5
KIT CONTENTS	6
TRANSMITTER FEATURES	6
INSTALL THE TRANSMITTER BATTERIES	7
CHARGING THE FLIGHT BATTERY.	8
LITHIUM BATTERY HANDLING & USAGE	10
ELECTRIC MOTOR WARNING	10
TURNING THE MODEL ON	11
TRANSMITTER CONTROLS.	12
FLYING.	16
MAINTENANCE & REPAIRS.	18
ORDERING REPLACEMENT PARTS	21
EXPLODED VIEW & PARTS LIST.	22



INTRODUCTION

Thank you for purchasing the Heli-Max AXE CXn Helicopter. We are certain you will get many hours of enjoyment out of this model. If you should have any questions or concerns please feel free to contact us at helihotline@hobbico.com. For the latest technical updates or manual corrections to the AXE CXn Helicopter visit the Heli-Max web site at:

www.helimax-rc.com

Open the “Helicopters” link, and then select the AXE CXn. If there is new technical information or changes to this model a “tech notice” box will appear in the upper left corner of the page.



SAFETY PRECAUTIONS

Failure to follow these safety precautions may result in severe injury to yourself and others.

Keep your face and body as well as all spectators away from the plane of rotation of the rotors whenever the battery is connected.

Keep these items away from the rotors: loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets into the rotors.

The spinning blades of a model helicopter can cause serious injury. When choosing a flying site for your AXE CXn, stay clear of buildings, trees and power lines. AVOID flying in or near crowded areas. DO NOT fly close to people, children or pets. Maintain a safe pilot-to-helicopter distance while flying.

Your AXE CXn should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size helicopter. Because of its performance capabilities, the AXE CXn, if not operated correctly, could possibly cause injury to yourself or spectators and damage to property.

Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.

You must check the operation of the model before **every** flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check linkages or other connectors often and replace them if they show any signs of wear or fatigue.



- ❑ (4) AA Alkaline cells (FUGP7300)



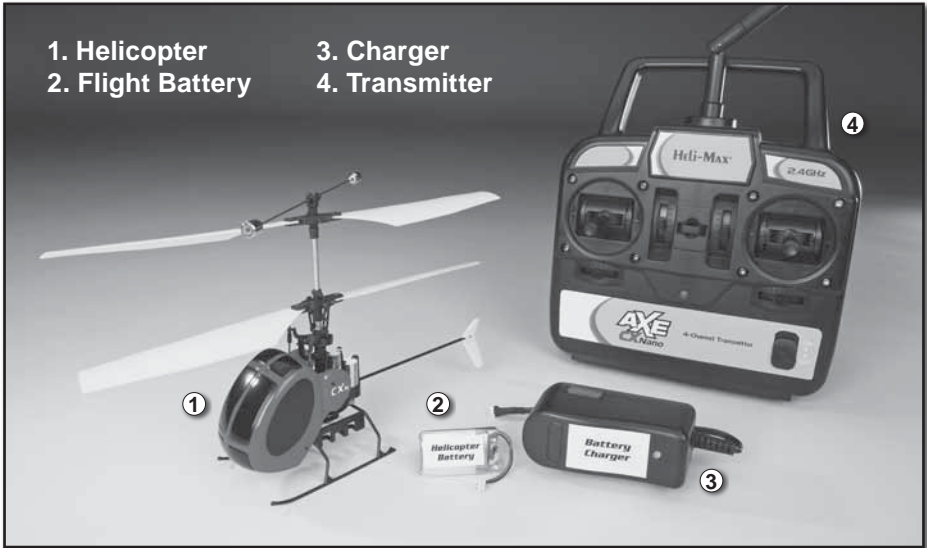
Before starting assembly, take an inventory of the AXE CXn to make sure it is complete, and inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, contact Product Support. When reporting defective or missing parts, use the part names exactly as they are written in the **Kit Contents** list.

Heli-Max Product Support
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822

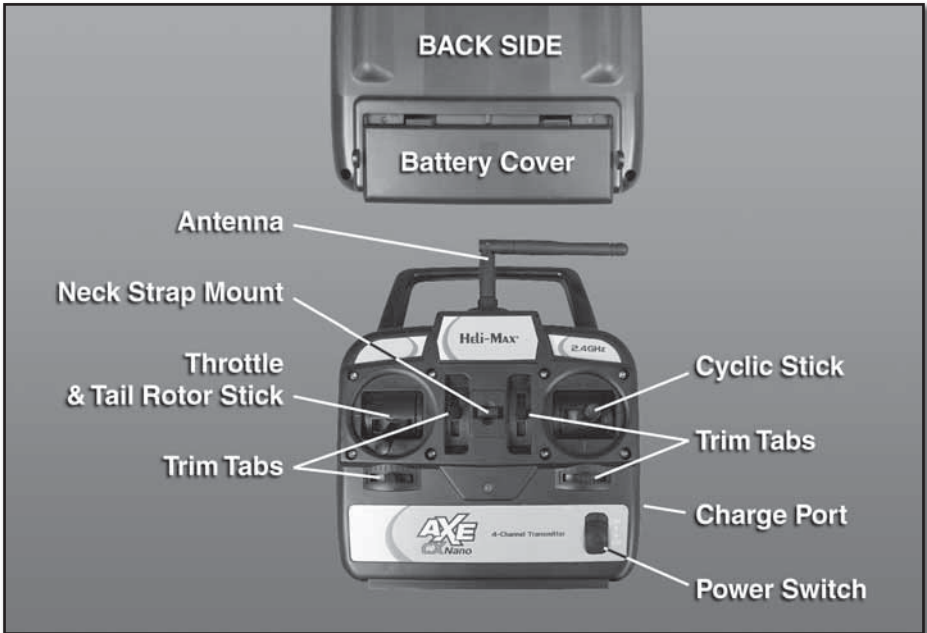
Ph: (217) 398-8970, ext. 5
Fax: (217) 398-7721
E-mail: helihotline@hobbico.com

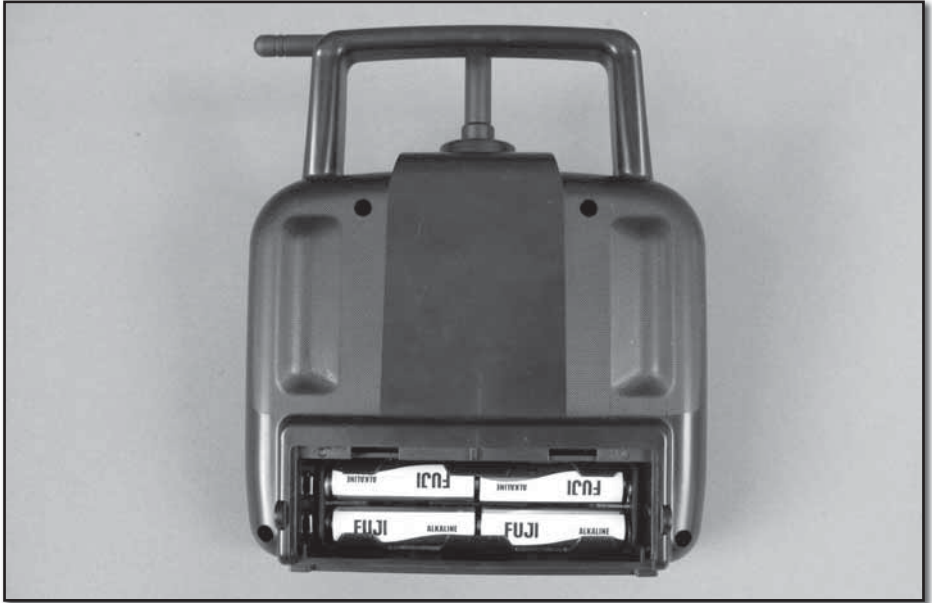
KIT CONTENTS

- 1. Helicopter
- 2. Flight Battery
- 3. Charger
- 4. Transmitter

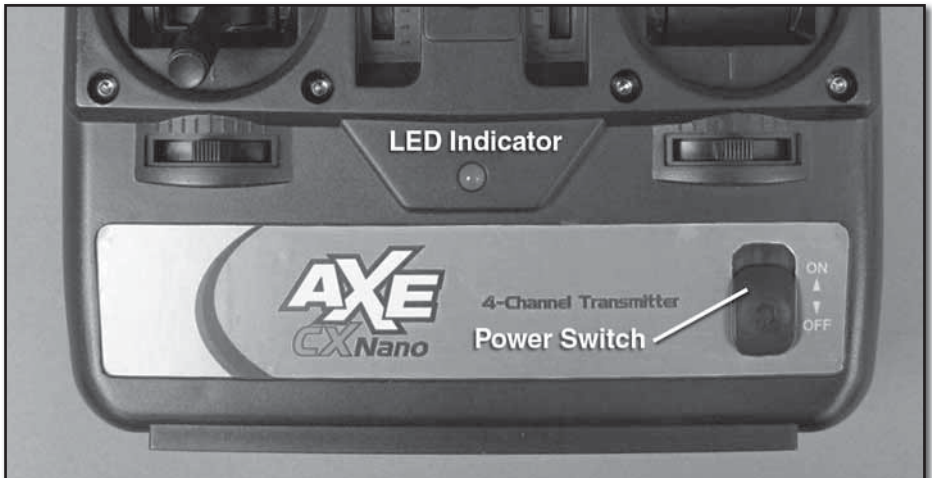


TRANSMITTER FEATURES



INSTALL THE TRANSMITTER BATTERIES

❑ Open the battery cover on the back of the transmitter, and install **four** AA batteries. Double check the polarity of each battery before replacing the battery cover.

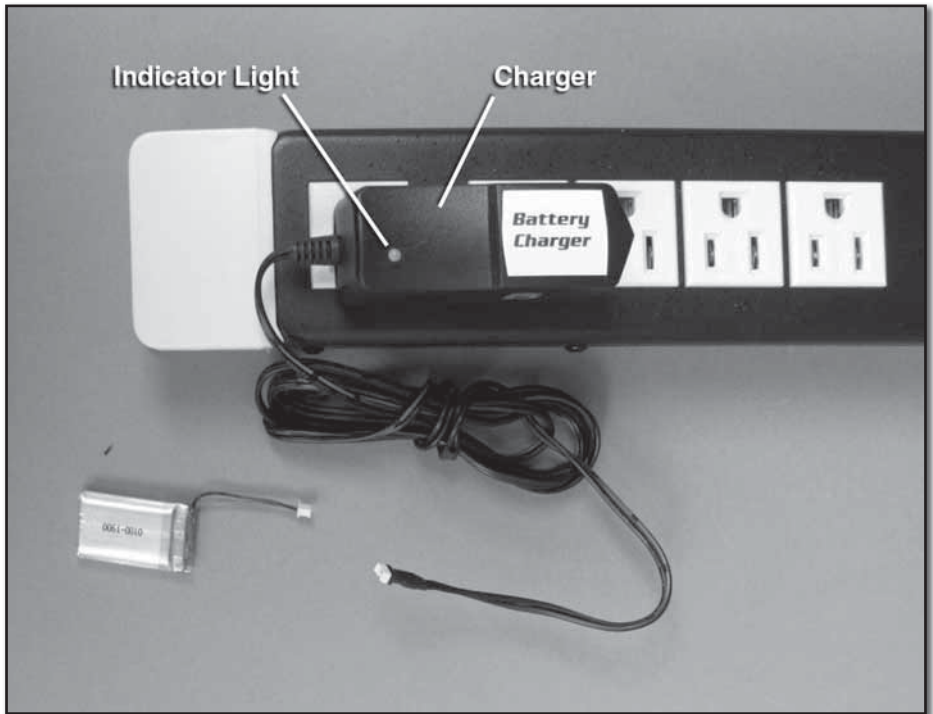


❑ Turn on the transmitter and verify that the LED indicator glows solid red. Turn the transmitter off for now. If the LED indicator did not come on, remove the battery box from the transmitter and verify that the batteries were installed correctly.

CHARGING THE FLIGHT BATTERY

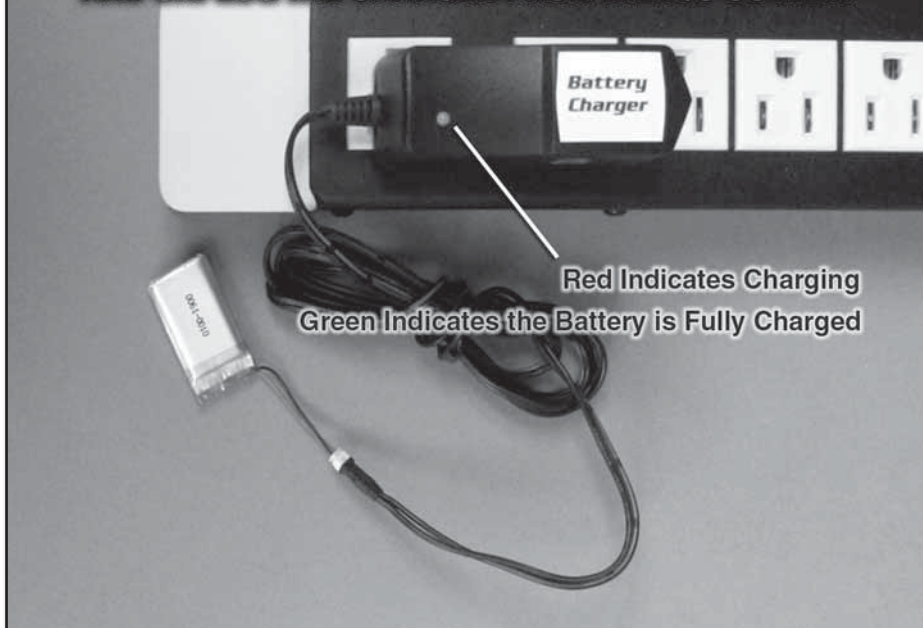


WARNING!! The charger supplied with the Heli-Max AXE CXn Helicopter contains protective circuitry. If you experience any difficulties while charging the battery, please disconnect the battery from the charger and unplug the charger from the power source. Allow the battery and charger to rest for two hours as this will allow the charge protection circuit to reset. If this issue re-occurs during normal use, please contact technical support for further assistance.



☐ Plug the charger into an AC outlet. The **indicator light** on the wall transformer will flash red during initialization and then turn solid green once initialization has been completed.

**ALWAYS DISCONNECT THE BATTERY WHEN NOT CHARGING
AND UNPLUG THE CHARGER FROM THE A/C OUTLET!**



❑ Plug the battery into the charger. The charge indicator light will turn red; this indicates that the battery is being charged. Once the battery is completely charged, the charge indicator light will turn solid green. Disconnect the battery from the charger. Under normal operating conditions, the battery may take up to one hour to recharge.

Charge Indicator Light	
Solid Red	The battery is being charged.
Solid Green (with battery connected)	The battery is fully charged.
Solid Green (without battery connected)	The charger is ready.

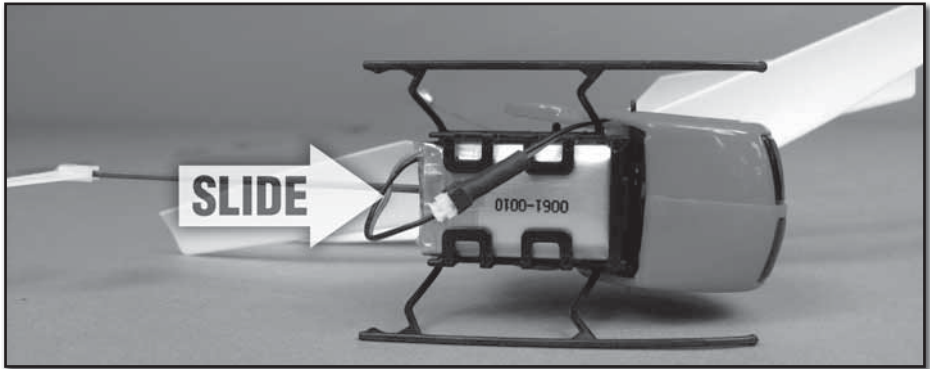
LITHIUM BATTERY HANDLING & USAGE

WARNING! Read the entire instruction sheet included with this battery. Failure to follow all instructions could cause permanent damage to the battery and its surroundings, and may cause bodily harm!

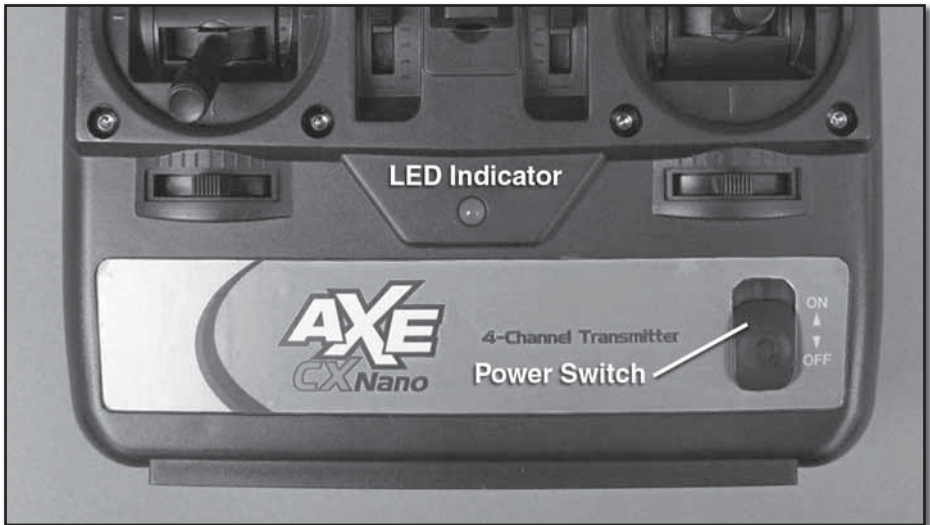
- **Land your model immediately when the battery begins to lose power. Recharge the battery before attempting another flight.** A dangerous situation can occur when attempting to recharge an over-discharged battery!
- ALWAYS charge the battery inside a fireproof container placed in a fireproof location clear of combustible materials. Failure to do so can result in property damage and/or bodily harm!
- ALWAYS keep charging batteries within eyesight. Leaving the battery unattended is dangerous!
- ALWAYS keep a supply of sand accessible when charging. Dumping sand on the battery will extinguish the LiPo chemical fire.
- NEVER use anything EXCEPT a LiPo approved charger.
- NEVER charge over 4.20V per cell.
- NEVER charge at currents greater than 1C.
- NEVER charge through the “To ESC” or “DISCHARGE” lead.
- NEVER trickle charge, or allow the battery to discharge below 2.75V per cell.
- NEVER allow the battery temperature to exceed 140° F [60° C].
- NEVER disassemble or modify the pack wiring in any way or puncture cells.
- ALWAYS KEEP OUT OF REACH OF CHILDREN.

ELECTRIC MOTOR WARNING

Electric powered models are very dangerous. Do not work on the model while the flight battery is plugged in as interference may cause the main rotor blades to spin, possibly causing injury to yourself.

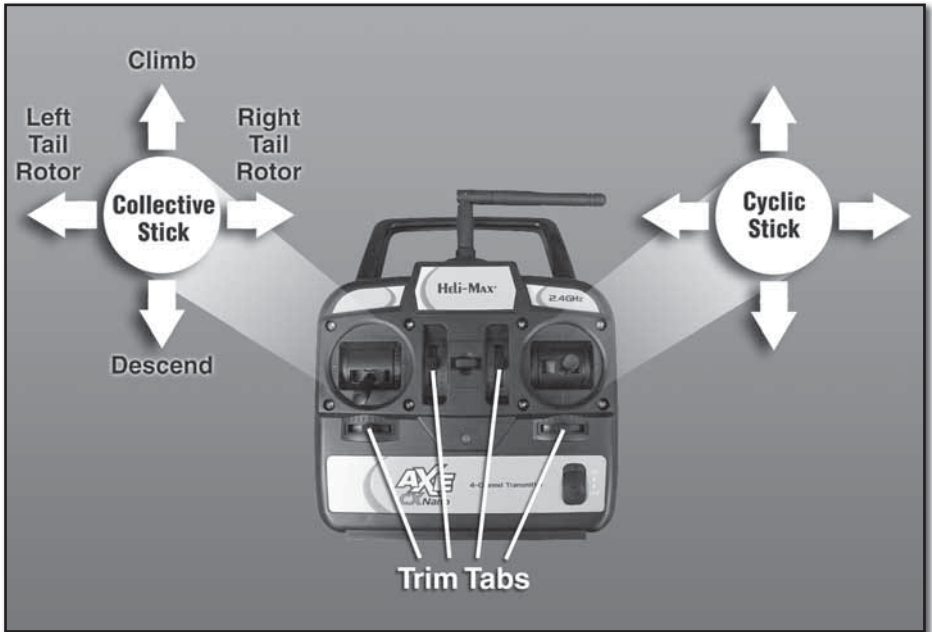
TURNING THE MODEL ON

- ❑ Place the helicopter on its side and slide the battery into the battery compartment. Connect the flight battery and place the helicopter onto a flat surface.

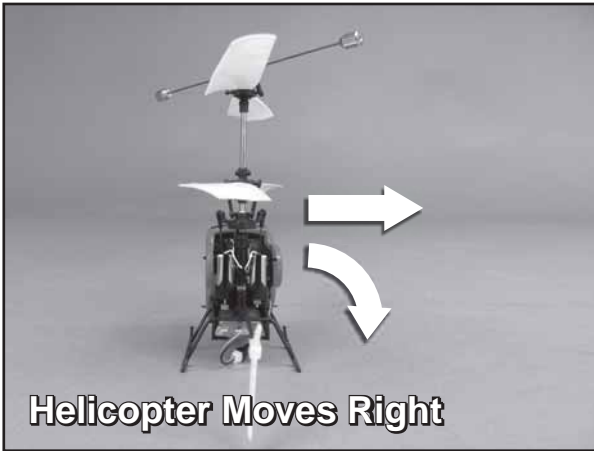


- ❑ Turn the transmitter on and allow the helicopter to remain still for 10 seconds. Always step 15 feet [4.5m] away from the AXE CXn Helicopter before operating the throttle.

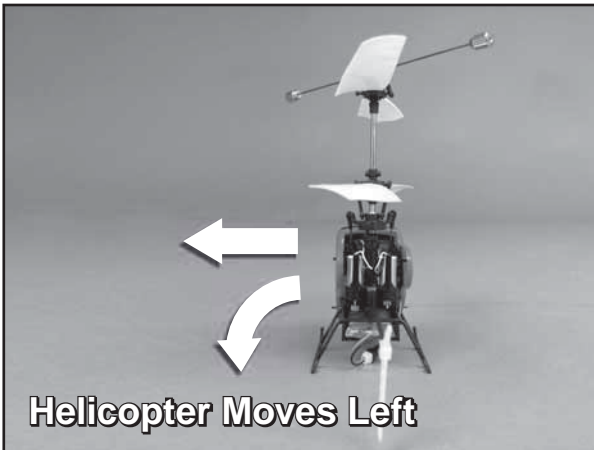
Your AXE CXn helicopter has a safe start feature built in that prevents the motor from activating unless the collective stick has been lowered to the lowest position. If the motor won't run and turn the main blades, please make sure the collective stick is all the way down and leave it there for a couple of seconds. Then try moving the stick up slowly.



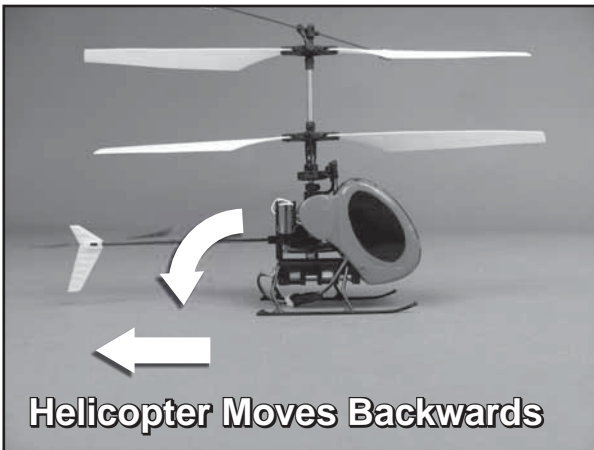
All controls are described with the tail pointing directly toward you. This is the best way to fly in the beginning since it keeps the control inputs oriented the same direction. Once you start getting comfortable you can work on side hovering and nose-in.



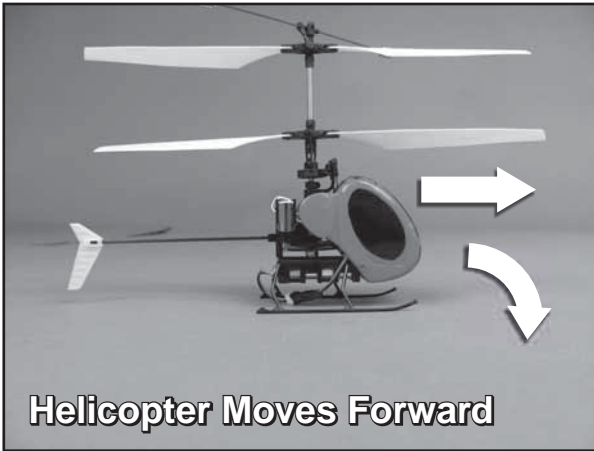
Moving the **cyclic stick right** will cause the helicopter to tilt right and start moving that direction.



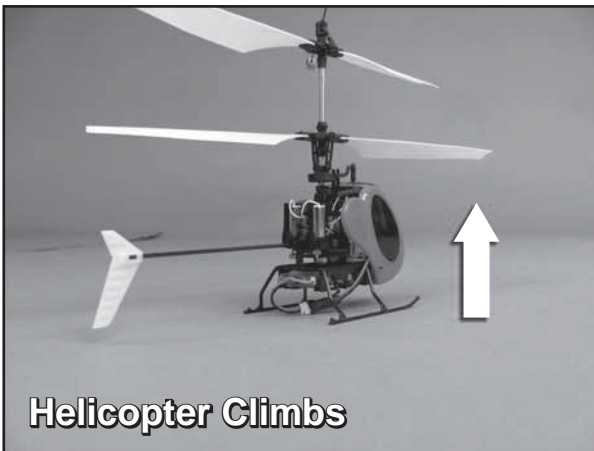
Moving the **cyclic stick left** will cause the helicopter to tilt left and start moving that direction.



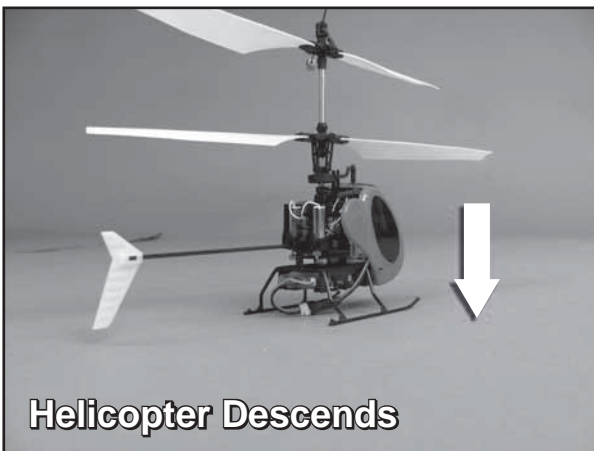
Moving the **cyclic stick backwards** (towards you) will cause the helicopter to tilt backwards and start moving that direction.



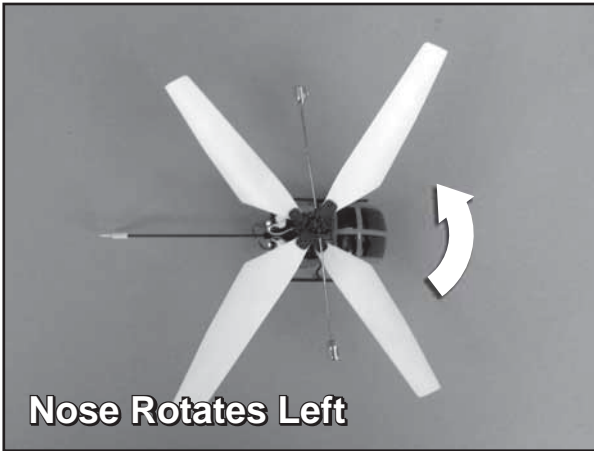
Moving the **cyclic stick forward** (away from you) will cause the helicopter to tilt forward and start moving that direction.



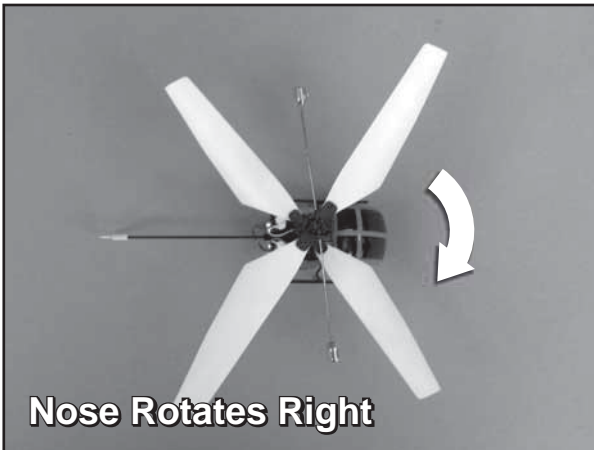
Moving the **collective stick up** (away from you) will cause the helicopter to climb higher.



Moving the **collective stick down** (towards you) will cause the helicopter to descend.



Moving the **tail rotor stick** towards the **left** will cause the helicopter nose to rotate left (counterclockwise).



Moving the **tail rotor stick** towards the **right** will cause the helicopter nose to rotate right (clockwise).



The Heli-Max AXE CXn is a lightweight helicopter. Taking that into consideration, you should only fly indoors or in calm winds less than 1mph. The AXE CXn should be flown in a large area of at least 50 feet [15.25m] square with no obstacles.

The AXE CXn is lightweight and due to this it does not fly well in ground effect (air disturbance when the model helicopter is hovered below 1 foot [30cm]). The model should be flown at a minimum altitude of 1 foot [30cm] to avoid the instabilities cause by ground effect.

Crashing

If you have operated radio control models in the past then you probably already realize that it is not a matter of “if” you are going to crash, it is a matter of “when” you are going to crash. Once you realize the model is going to collide with something or crash into the ground, you should always bring the throttle stick all the way down to stop the main rotor blades from rotating. If you can remember to do this, chances are you will not damage the helicopter in the crash. The main rotor blades carry a lot of RPM and inertia during flight. Cutting the power to the main rotor blades will prevent most of the crash damage.

Takeoff

Slowly add power, observe the model and make all of the necessary corrections to keep the model level. If you feel a trim adjustment is needed, lower the throttle to idle and make trim adjustments before lifting off for the first time. You will find that model helicopters never allow you to return the sticks to center. You just need to position the stick as needed to maintain a steady hover.

You will notice the cyclic controls lag behind your inputs. This is normal and something you get the feel for with time. It's normal to drift around in a hover until you become accustomed to flying the model. The cyclic controls are fairly sensitive so only small movements are necessary.

Hovering

Once the helicopter is up in the air, simply try to hold the helicopter in one spot. If this is your first model helicopter, it will require some practice. Wind or air currents have a big effect on the stability of the helicopter as well. Be patient and slowly work forward, as trying to rush the learning process can be costly.

Landing

Level the helicopter into a steady hover and slowly decrease power until the helicopter settles onto the ground.

Basic Maneuvers

Once you become comfortable with hovering at different orientations and landing, it's time to move on to more advanced maneuvers.

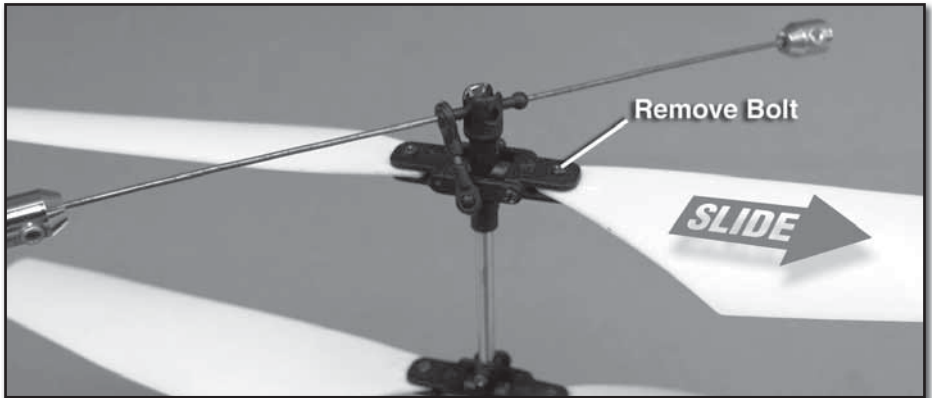
Slow Pirouettes – Add a small amount of tail rotor (left or right) and try rotating the helicopter slightly sideways and see if you can hold it there. If you feel uncomfortable, then bring the tail back toward you. Once you start getting comfortable, try moving the helicopter to the side. Then turn back and fly back to the other side in straight lines. Then work into rotating the helicopter around 360°, which is called a pirouette. The helicopter can drift during these so make sure you have plenty of room when you first start practicing.

Nose-in Hovering – After pirouettes it's time to move on to nose-in hovering. Take off and climb to 10 feet [3m]. Practice half pirouettes from tail in to nose-in hovering and try to lengthen the delay in between. This will give you a little practice nose-in and still give you a chance to get out of trouble. As your skills improve you'll remain nose-in for longer periods of time.

GOOD LUCK AND GREAT FLYING!

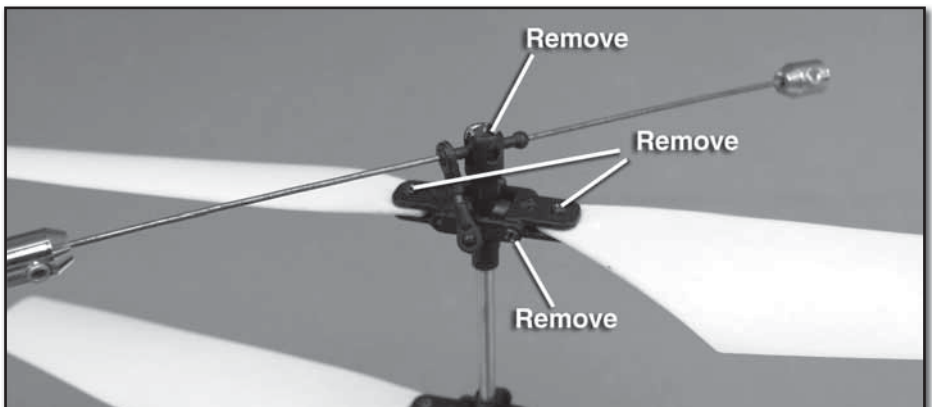
The Heli-Max® AXE CXn is an extremely small helicopter. Working on a model this size will require small tools. The DTXR0170 DuraTrax® Precision Phillips Screwdriver 00x75mm is recommended. On occasion it will be necessary to replace damaged parts after a crash. Please use this section as a guide to perform repairs.

Main Rotor Blade Replacement



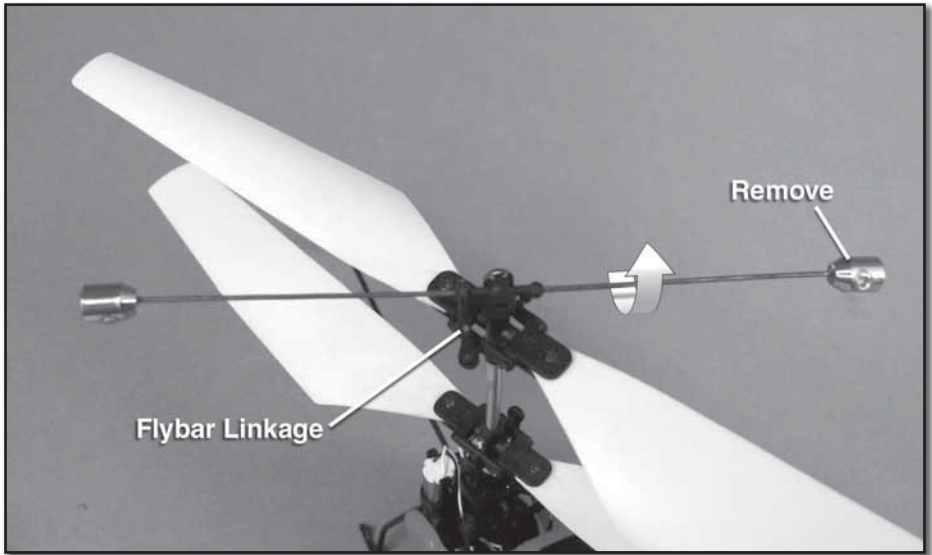
Remove the blade bolt using a #00 phillips screwdriver. After the blade bolt has been removed, slide the rotor blade out of the blade grip. Reinstall the new blade, ensuring that the holes within the blade and blade grip are aligned properly. Reinstall the blade bolt.

Main Rotor Grip Replacement



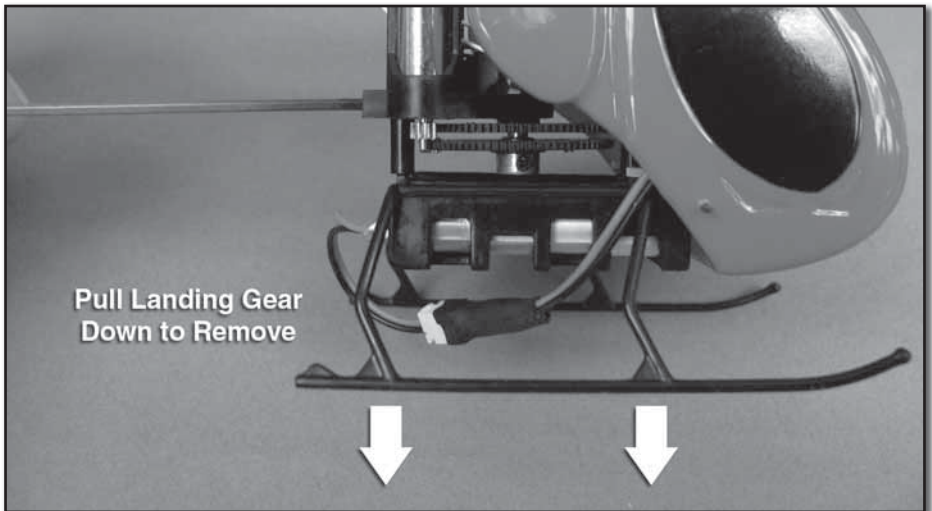
Remove both blade bolts and main rotor blades. Remove the two grip bolts and remove the blade grips. Place the new grips onto the pins. Install the grip bolts and install the blades.

Replacing the Flybar



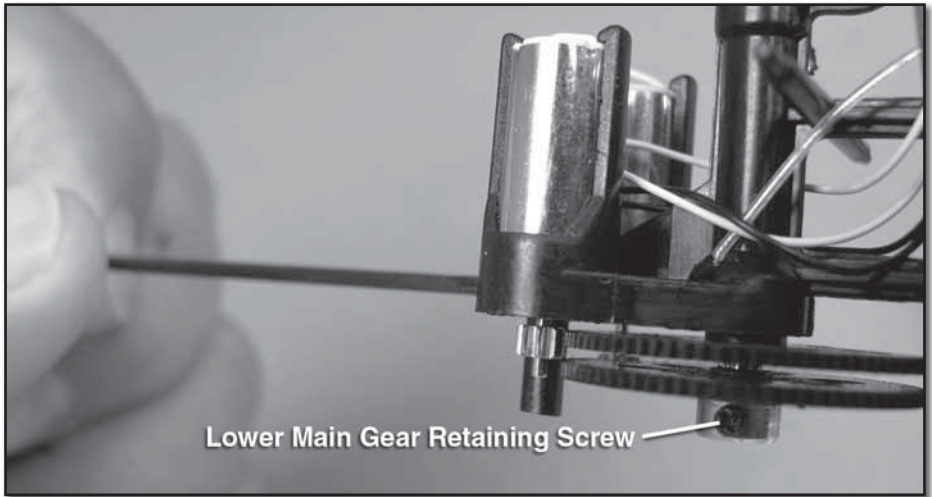
Remove the flybar linkage from the blade grip. Press outward on one side of the head block and simply rotate the flybar carrier from the head block. Once the flybar carrier has been removed, remove the flybar weight bolts and remove the flybar weights. Remove the flybar linkage from the old flybar and install the linkage onto the new flybar. Install the flybar weights onto the new flybar and slide the flybar pivot back onto the head block. Reinstall the flybar linkage.

Replacing the Landing Gear



Remove the flight battery and simply pull down on the landing skid. Press the new landing skid into place.

Replacing the Main Gear



Lower Main Gear Retaining Screw

The AXE CXn uses an inner solid main shaft and a hollow outer main shaft. To access the main rotor gears it will be necessary to remove the landing gear first. Remove the lower main gear retaining screw. The lower gear will simply drop down off the main shaft. If you need to replace the upper main gear, slide it down off the main shaft and reinstall the new gear, ensuring that the flat spot molded inside the gear aligns with the main shaft. Reinstall the lower gear, ensuring that the screw aligns with the flat spot machined on the inner main shaft.

Replacing the Main Shaft

The AXE CXn uses an inner solid main shaft and a hollow outer main shaft. Remove the lower main gear retaining screw. When performing the following step please be careful not to lose any small bearings or bearing blocks. Slide the inner shaft and upper rotor head from the outer main shaft by pulling upwards. If you need to remove the lower shaft, disconnect the servo linkages from the swashplate and pull upwards. Transfer necessary parts from the old shaft to the new shaft and install in the reverse order listed above.

Replacement parts for the Heli-Max AXE CXn are available using the order numbers in the **Replacement Parts List** that follows. The fastest, most economical service can be provided by your hobby dealer.

To locate a hobby dealer, visit the Hobbico web site at **www.hobbico.com**. Choose “Where to Buy” at the bottom of the menu on the left side of the page. Follow the instructions provided on the page to locate a U.S., Canadian or International dealer.

Parts may also be ordered directly from Hobby Services by calling (217) 398-0007, or via facsimile at (217) 398-7721, but full retail prices and shipping and handling charges will apply. Illinois and Nevada residents will also be charged sales tax. If ordering via fax, include a Visa® or MasterCard® number and expiration date for payment.

Mail parts orders and payments by personal check to:

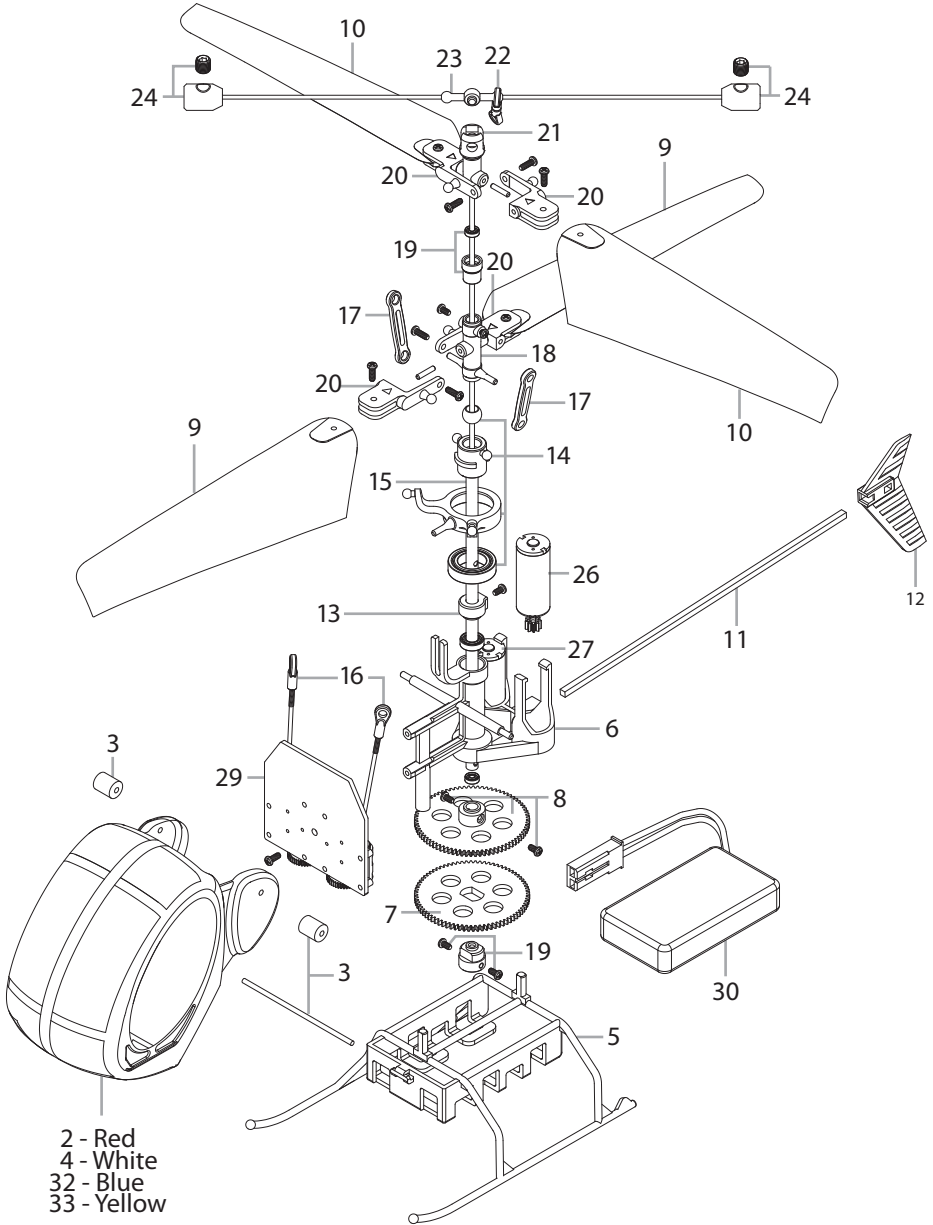
Hobby Services

3002 N. Apollo Drive, Suite 1
Champaign, IL 61822

Be certain to specify the order number exactly as listed in the **Replacement Parts List**. Payment by credit card or personal check only; no C.O.D.

If additional assistance is required for any reason contact Product Support by e-mail at **helihotline@hobbico.com**, or by telephone at (217) 398-8970.

EXPLODED VIEW & PARTS LIST



Item No.	Part Number	Part Description
1	HMXE7337	Replacment Screw Set AXE CXn
2	HMXE7418	Canopy Red AXE CXn
3	HMXE7419	Canopy Mounting Rod w Grommets AXE CXn
4	HMXE7365	Canopy White AXE CXn
5	HMXE7913	Landing Gear Assembly AXE CXn
6	HMXE7914	Main Frame AXE CXn
7	HMXE8041	Upper Rotor Drive Gear AXE CXn
8	HMXE8042	Lower Rotor Drive Gear AXE CXn
9	HMXE8290	Lower Rotor Blades (2) AXE CXn
10	HMXE8291	Upper Rotor Blades (2) AXE CXn
11	HMXE8459	Tail Boom AXE CXn
12	HMXE8460	Vertical Tail Fin AXE CXn
13	HMXE8575	Outer Shaft Locking Collar AXE CXn
14	HMXE8576	Swashplate Assembly AXE CXn
15	HMXE8577	Outer Main Shaft AXE CXn
16	HMXE8578	Servo Linkage Set (2) AXE CXn
17	HMXE8579	Main Blade Control Links (2) AXE CXn
18	HMXE8580	Lower Head Block AXE CXn
19	HMXE8581	Inner Shaft Collar w Bearing AXE CXn
20	HMXE8582	Main Blade Grips (4) AXE CXn
21	HMXE8583	Inner Rotor Shaft Assembly AXE CXn
22	HMXE8584	Flybar Control Link AXE CXn
23	HMXE8585	Flybar Assembly AXE CXn
24	HMXE8586	Flybar Weights (2) AXE CXn
25	HMXE8836	Complete Bearing Set AXE CXn
26	HMXG8025	Upper Rotor Motor Axe CXn
27	HMXG8026	Lower Rotor Motor AXE CXn
28	HMXJ2020	2.4 GHz Transmitter AXE CXn
29	HMXM2031	E-Board AXE CXn
30	GPMP0412	1s 350 mAh LiPo Battery AXE CXn
31	HMXP2020	1s LiPo Battery Charger AC AXE CXn
32	HMXE7363	Canopy Blue AXE CXn
33	HMXE7364	Canopy Yellow AXE CXn

1 Replacement Screw Set

1 Set HMXE7337

2 Canopy Red CXn

1Pc HMXE7418

3 Canopy Rod-Grommets

1 Set HMXE7419

4 Canopy White CXn

1 Pc HMXE7365

5 Axe CXn Landing Gear

1 Pc HMXE7913

6 Main Frame

1 Pc HMXE7914

7 Upper Rotor Gear

1 Set HMXE8041

8 Lower Rotor Gear

1 Set HMXE8042

9 Lower Blades Axe CXn

2 Pcs HMXE8290

10 Upper Blades Axe CXn

2 Pcs HMXE8291

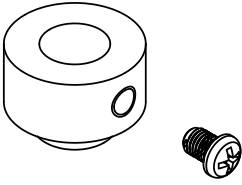
11 Tail Boom Axe CXn

1 Pc HMXE8459

12 Vertical Fin Axe CXn

1 Pc HMXE8460

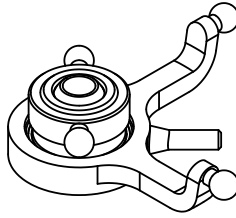
13 Outer Shaft Collar



1 Set

HMXE8575

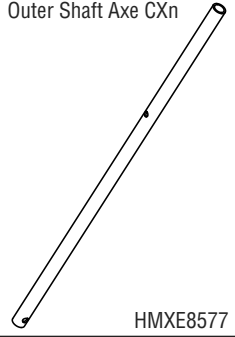
14 Swash Plate Axe CXn



1 Set

HMXE8576

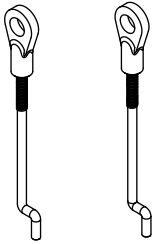
15 Outer Shaft Axe CXn



1 Pc

HMXE8577

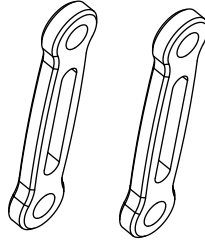
16 Pushrod Axe CXn



1 Set

HMXE8578

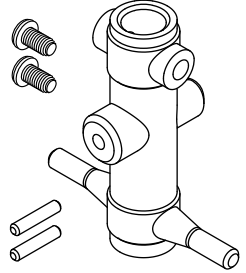
17 Main Blade Links



2 Pcs

HMXE8579

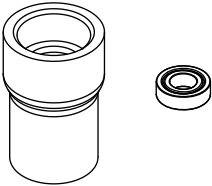
18 Lower Rotor Head



1 Pc

HMXE8580

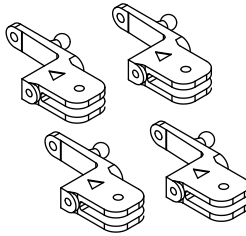
19 Inner Shaft Colar Axe CXn



1 Pc

HMXE8581

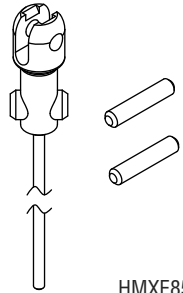
20 Blade Grips Axe CXn



4 Pcs

HMXE8582

21 Inner Shaft Assembly



1 Set

HMXE8583

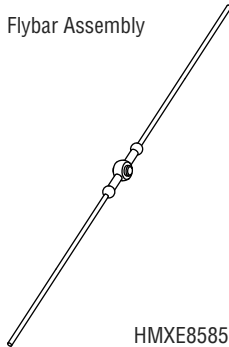
22 Flybar Control Link



1 Set

HMXE8584

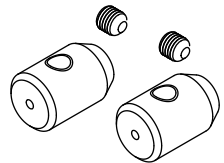
23 Flybar Assembly



1 Set

HMXE8585

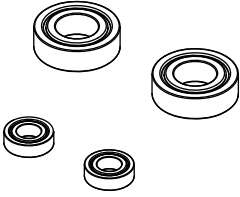
24 Flybar Weights Axe CXn



2 Sets

HMXE8586

25 Bearing Set Axe CXn



1 Set HMXE8836

26 Upper Motor Axe CXn



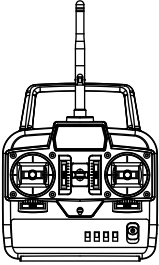
1 Set HMXG8025

27 Lower Motor Axe CXn



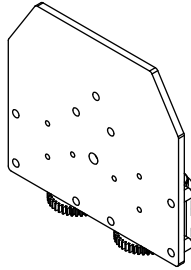
1 Set HMXG8026

28 Transmitter Axe CXn



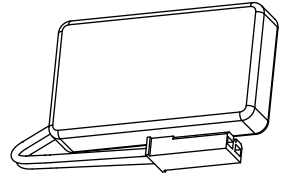
1 Pc HMXJ2020

29 E Board Axe CXn



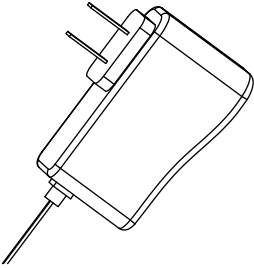
1 Set HMXM2031

30 LiPo Battery Axe CXn



1 Pc GPMP0412

31 LiPo Battery Charger



1 Pc HMXP2020

AXETM
CX Nano