

Heli-Max®

NOVUS™ FP N200



Novus 200 FP 2.4GHz RTF Instruction Manual

Specifications

Length: 16.54 in [420 mm]

Width: 3.54 in [90 mm]

Height: 5.9 in [150 mm]

Rotor Span: 15.28 in [388 mm]

Weight: 5.82 oz. [165 g]

(with supplied flight battery)

- Only use the included charger with the included battery or replacement part (GPMP0411).
- 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 150° F [65° 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.

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Thank you for purchasing the Heli-Max Novus 200 FP 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 Novus Helicopter visit the Heli-Max web site at:

www.helimax-rc.com

Open the “Helicopters” link, and then select the Novus 200 FP. 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.

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 Novus 200 FP, 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 Novus 200 FP 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 Novus 200 FP, 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.

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ADDITIONAL ITEMS REQUIRED

- ❑ (8) AA Alkaline cells (FUGP7308)

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KIT INSPECTION

Before starting assembly, take an inventory of the Novus 200 FP 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

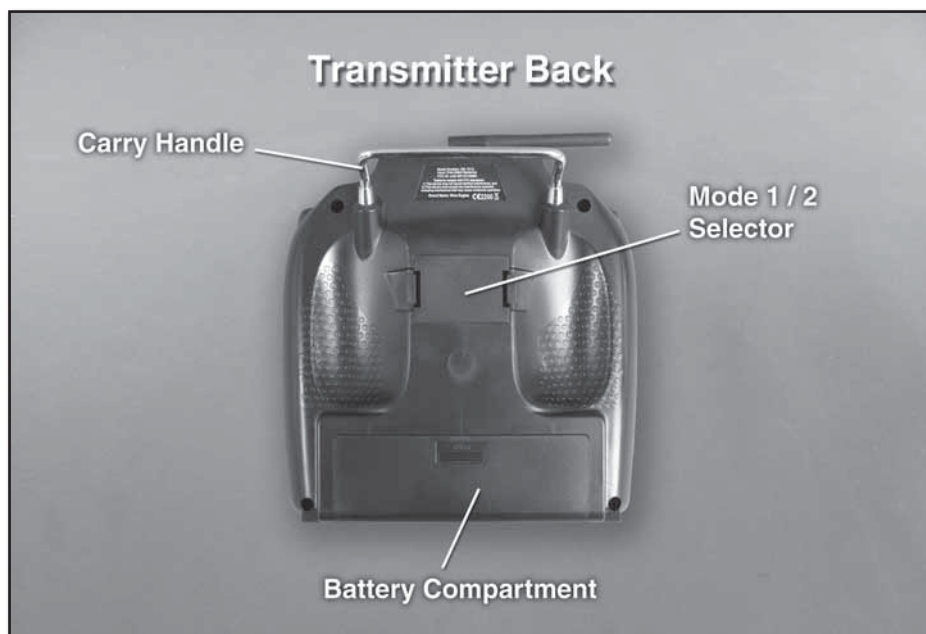
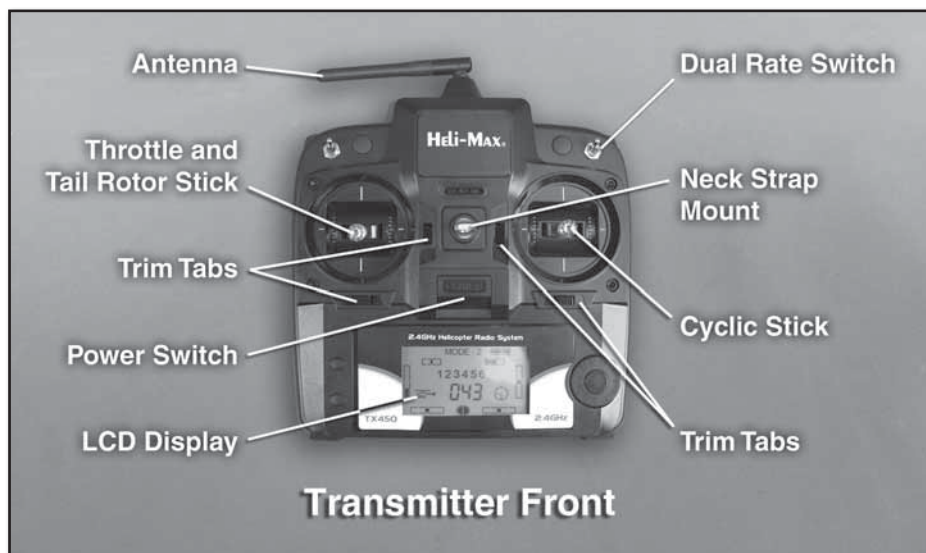
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KIT CONTENTS



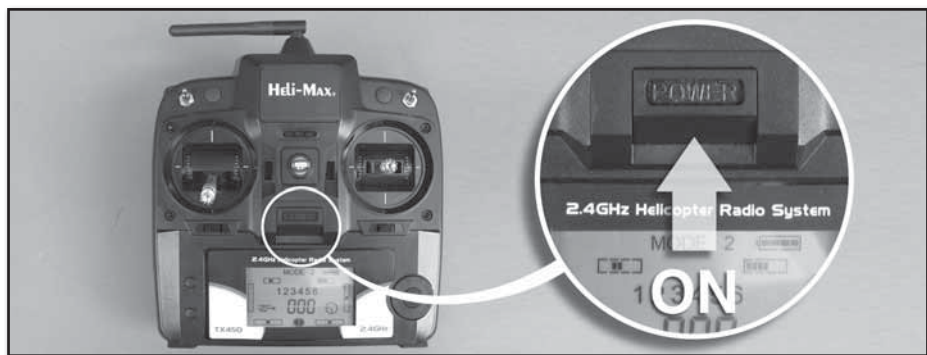
- 1. Helicopter
- 2. Charger

- 3. Flight Battery
- 4. Transmitter



INSTALL THE TRANSMITTER BATTERIES

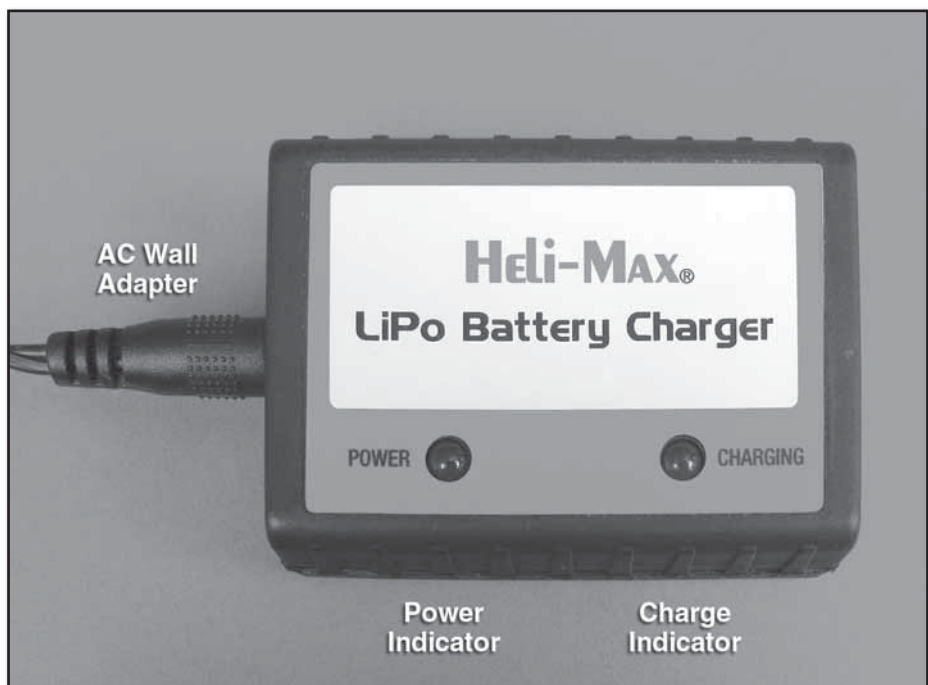
❑ To open the battery compartment push inward and pull downward on the battery cover. Carefully remove the battery holder and install eight AA batteries. Double check the polarity of each battery and ensure that the battery holder is connected to the transmitter. Place the battery holder into the transmitter and slide the battery cover back into place.



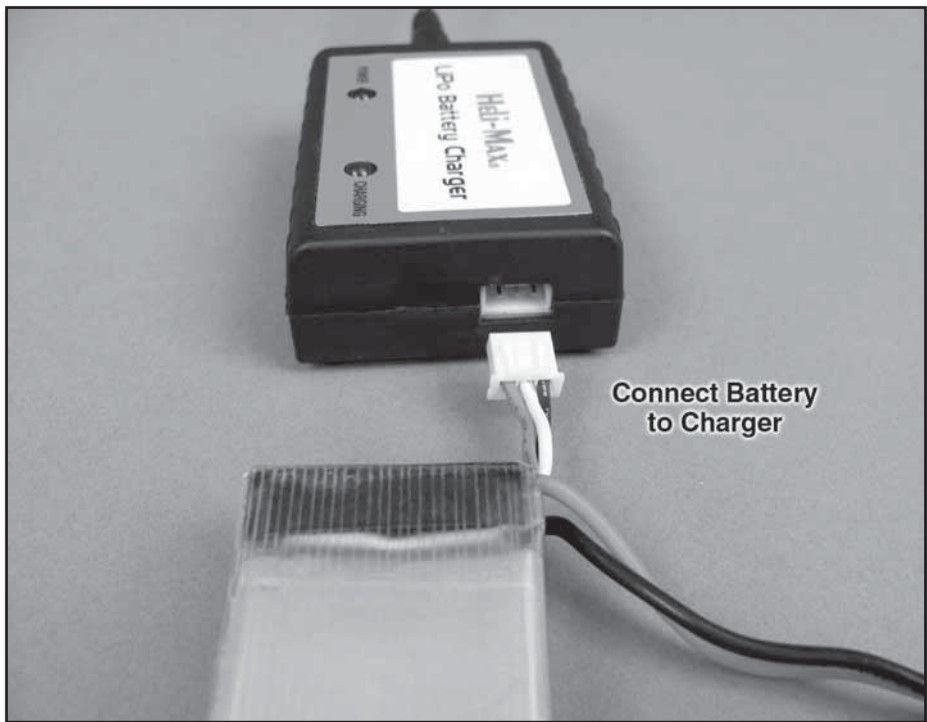
❑ Turn on the transmitter and verify that the LCD initializes. Turn the transmitter off for now. If the LCD did not initialize, remove the battery box from the transmitter and verify that the batteries were installed correctly

CHARGING THE FLIGHT BATTERY

WARNING!! The charger supplied with the Heli-Max Novus 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 wall transformer into an AC outlet. The *power indicator light* on the charger will illuminate red and a continuous tone will be emitted indicating that the charger is ready for use.



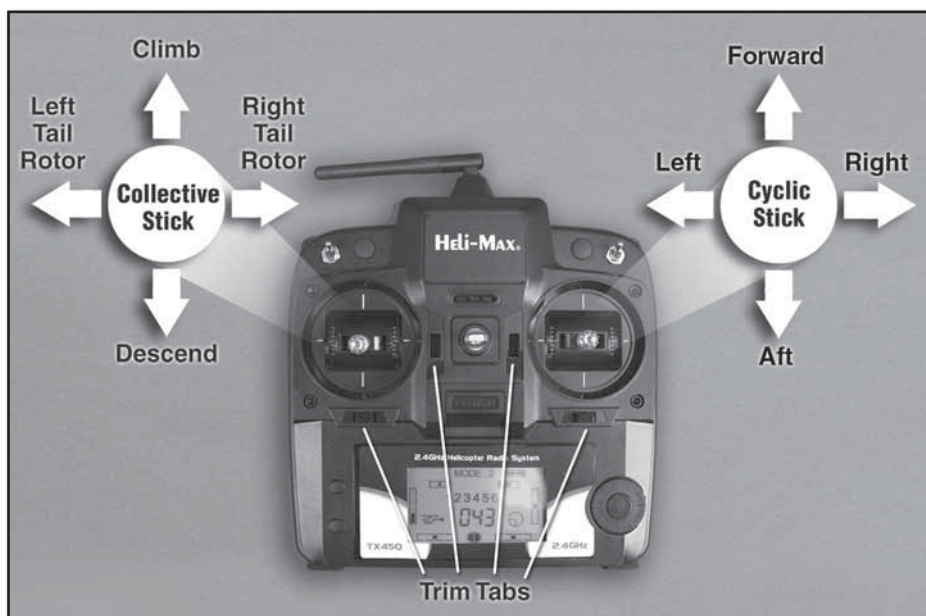
❑ Plug the battery into the charger. The “charging” indicator light will start flashing green and a short tone will be emitted indicating that the battery is being charged. Once the battery is completely charged, the charge indicator light will turn solid green and a short tone will be emitted. Disconnect the battery from the charger. Under normal operating conditions, the battery may take up to ninety minutes to recharge.

Charger Indications	Power Indicator	Charging Indicator	
Ready to charge battery.	Solid	Off	* Once the battery has been disconnected from the charger contact technical support for further assistance.
Charging	Solid	Flashing	
Battery is fully charged.	Solid	Solid	
Charger is not powered.	Off	Off	
Charger error*	Flashing	All indications	

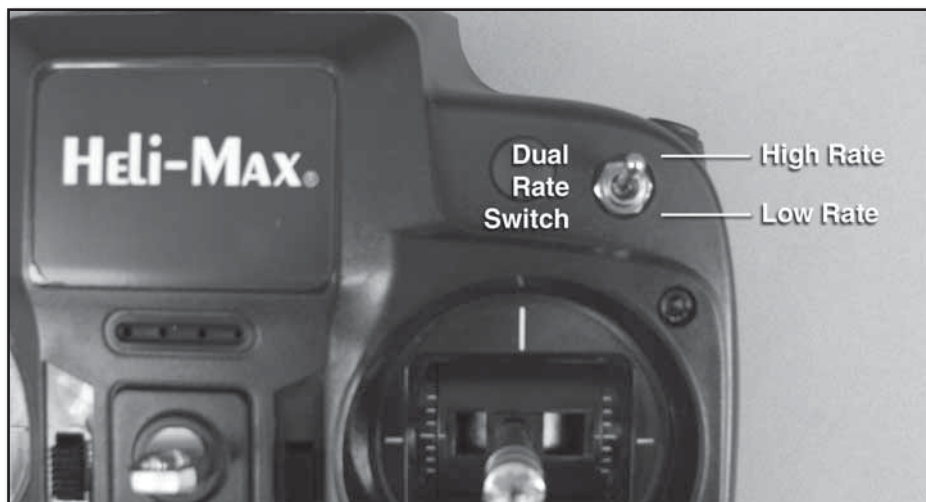


WARNING! Read this entire page. Failure to follow all instructions could cause permanent damage to the battery and its surroundings, and may cause bodily harm!

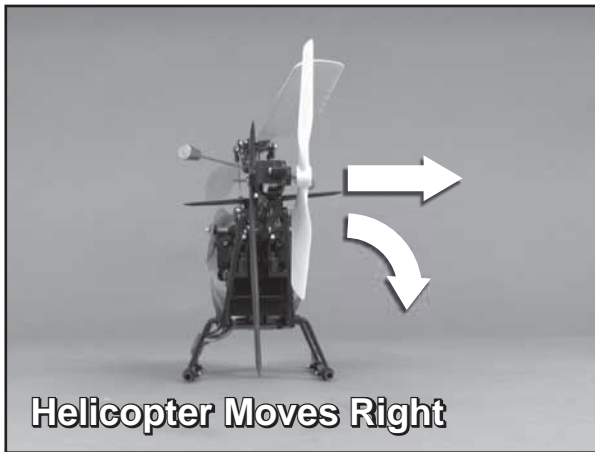
- **Land your model immediately when the battery begins to lose power. Recharge the battery before attempting another flight.**
A dangerous situation can occur when attempting to recharge an over-discharged battery!
- ALWAYS charge the battery inside a fireproof container placed in a fireproof location 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.



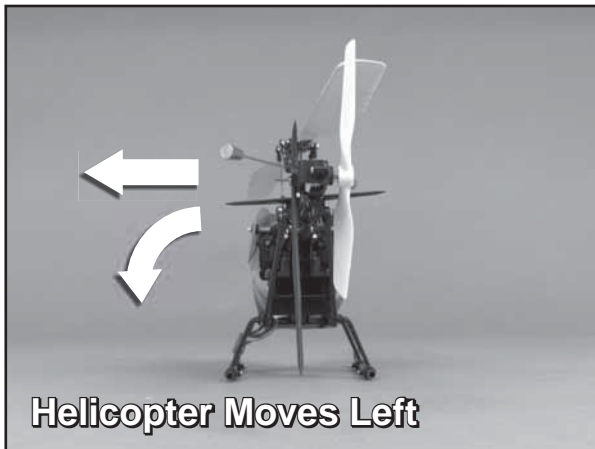
All controls are described with the tail pointing directly toward you. This is the best way to fly in the beginning since it keeps the control inputs oriented the same direction. Once you start getting comfortable you can work on side hovering and nose-in.



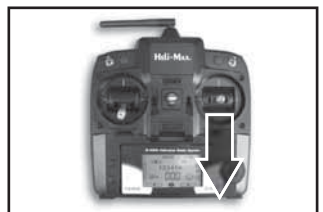
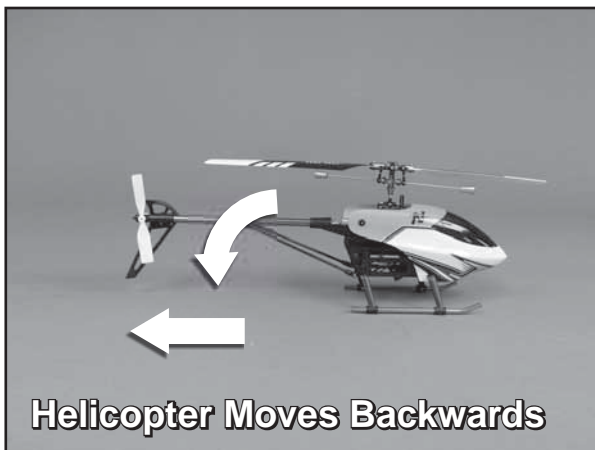
The dual rate switch provides dual control rates for the cyclic and tail rotor controls. Please use the low rate until you become accustomed to your Novus.



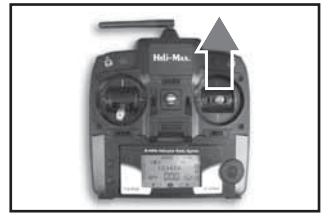
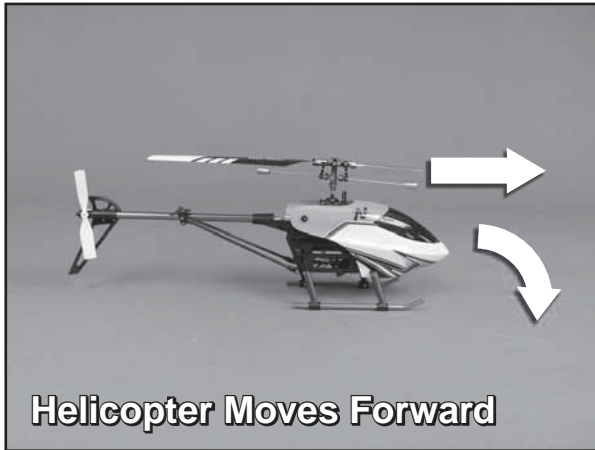
Moving the **cyclic stick right** will cause the helicopter to tilt right and start moving that direction.



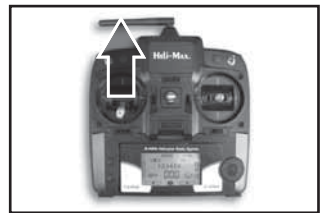
Moving the **cyclic stick left** will cause the helicopter to tilt left and start moving that direction.



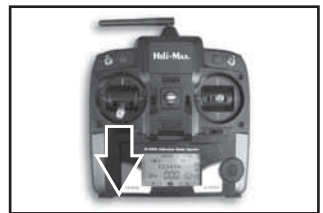
Moving the **cyclic stick backwards** (towards you) will cause the helicopter to tilt backwards and start moving that direction.



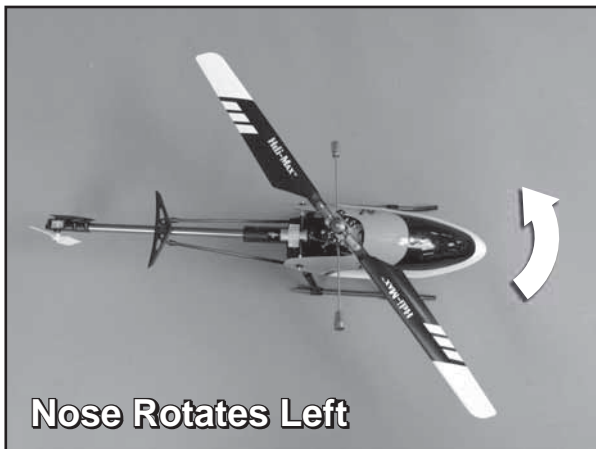
Moving the **cyclic stick forward** (away from you) will cause the helicopter to tilt forward and start moving that direction.



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



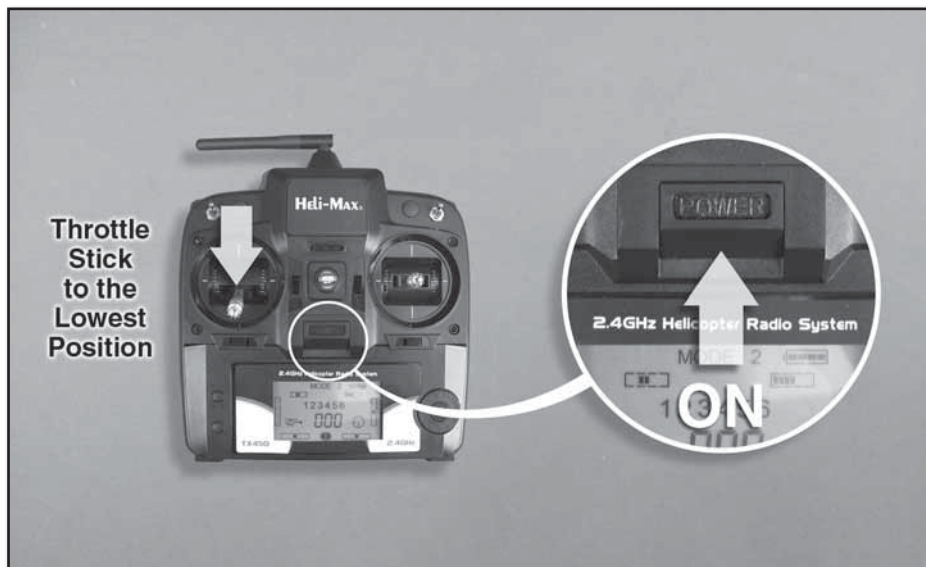
Moving the **collective stick down** (towards you) will cause the helicopter to descend.



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



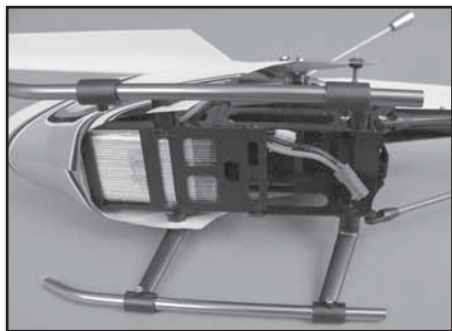
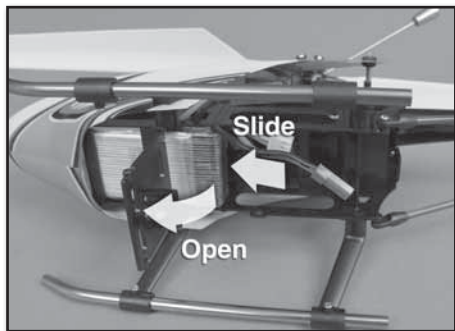
Moving the **tail rotor stick** towards the **right** will cause the helicopter nose to rotate right (clockwise).

TURNING THE MODEL ON

- ☐ Move the throttle stick to the lowest position and then turn the transmitter on. Allow 30 seconds for the transmitter to initialize.



Electric motors 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.



- ☐ Slide the flight battery into the battery compartment and close the battery door.



❑ Verify that the throttle is in its lowest position on the transmitter. With the helicopter on its side, connect the battery to the helicopter. Allow the helicopter to remain still for 10 seconds during initialization. After 10 seconds you can place the helicopter on its skids for takeoff.

*** Your Novus 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.**



The Heli-Max Novus 200FP is a lightweight helicopter. Taking that into consideration, you should only fly indoors or in calm winds less than 5mph. The Novus should be flown in a large area of at least 75 feet [15.25m] square with no obstacles.

The Novus 200 FP 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 caused 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.

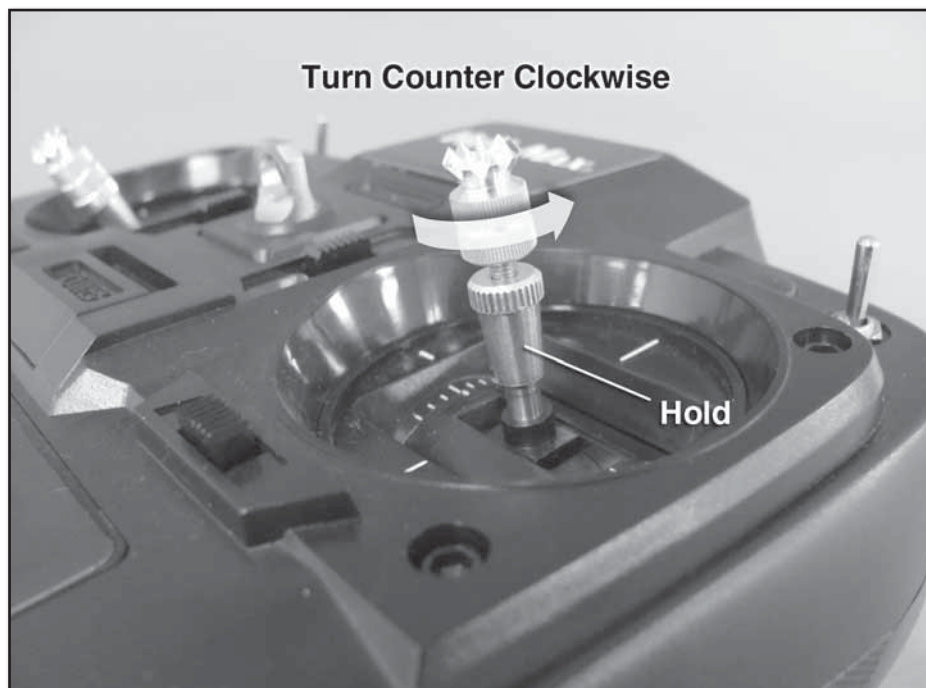
Nose-in Hovering – After pirouettes it's time to move on to nose-in hovering. Take off and climb to 10 feet [3m]. Practice half pirouettes from tail in to nose-in hovering and try to lengthen the delay in between. This will give you a little practice nose-in and still give you a chance to get out of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

Forward Flight – Now it's time to work into basic forward flight. Just take the basic hovering maneuvers listed above and slowly fly out farther and faster and always bring the helicopter back after one pass. Practice controlled slow flight in close as well. The more time you spend practicing here the easier things will be later on.

GOOD LUCK AND GREAT FLYING!

Transmitter Specifications:

- 2.4GHz FHSS
- 100mW Output Power
- 230mAh Current Drain
- Requires (8) AA Alkaline Batteries (Rechargeable AA cells can be used)
- 4 Channel Encoder
- Automatic Linking

Stick Length Adjustment

To adjust the stick length hold onto the lower portion of the stick and turn the upper portion counterclockwise to unlock and separate the upper stick end from the lower stick end. Rotate the upper stick end to adjust the length. Once you have the desired stick length set, hold onto the upper stick end to prevent it from rotating and tighten the lower stick against the upper stick end to lock it into position. Repeat for the other stick assembly if necessary.

Replacement parts for the Heli-Max Novus 200 FP 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:

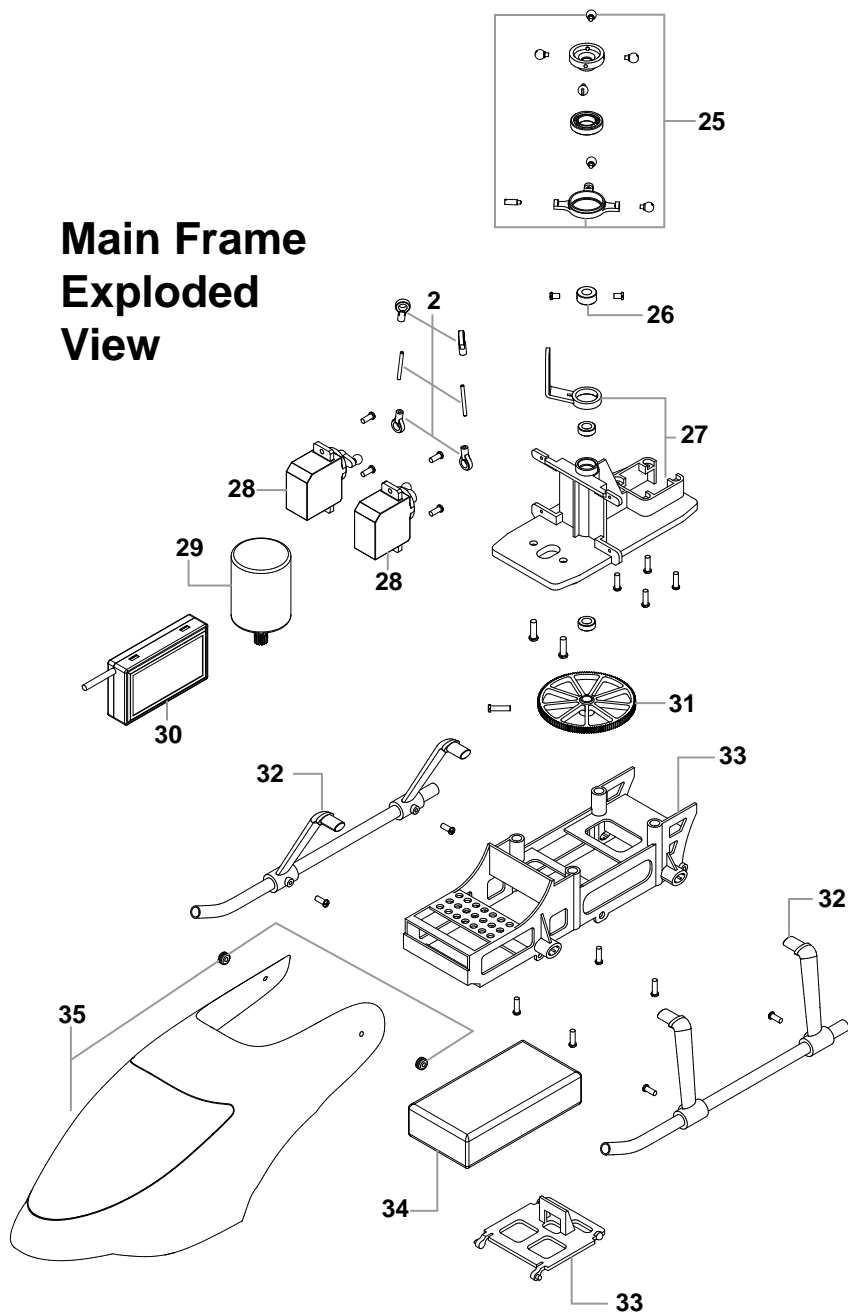
Hobby Services

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

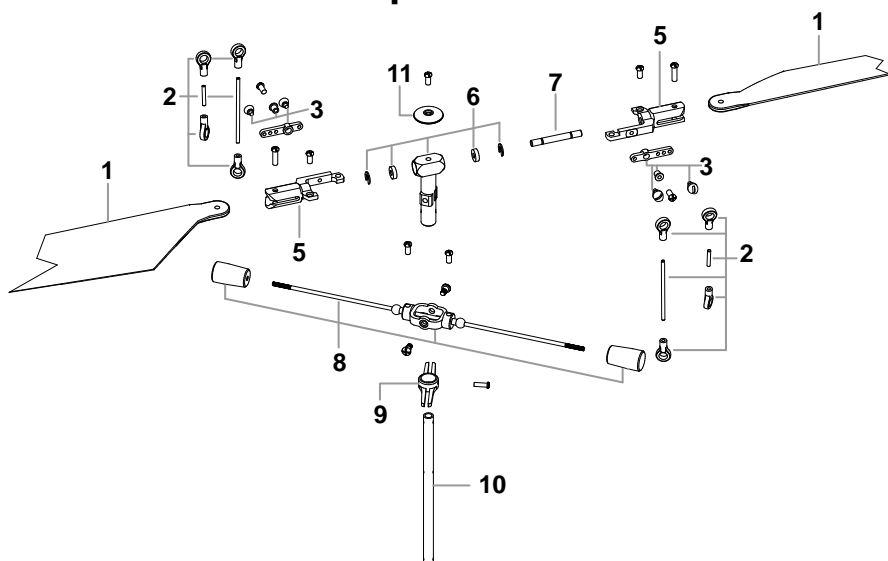
Be certain to specify the order number exactly as listed in the **Replacement Parts List**. Payment by credit card or personal check only; no C.O.D.

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.

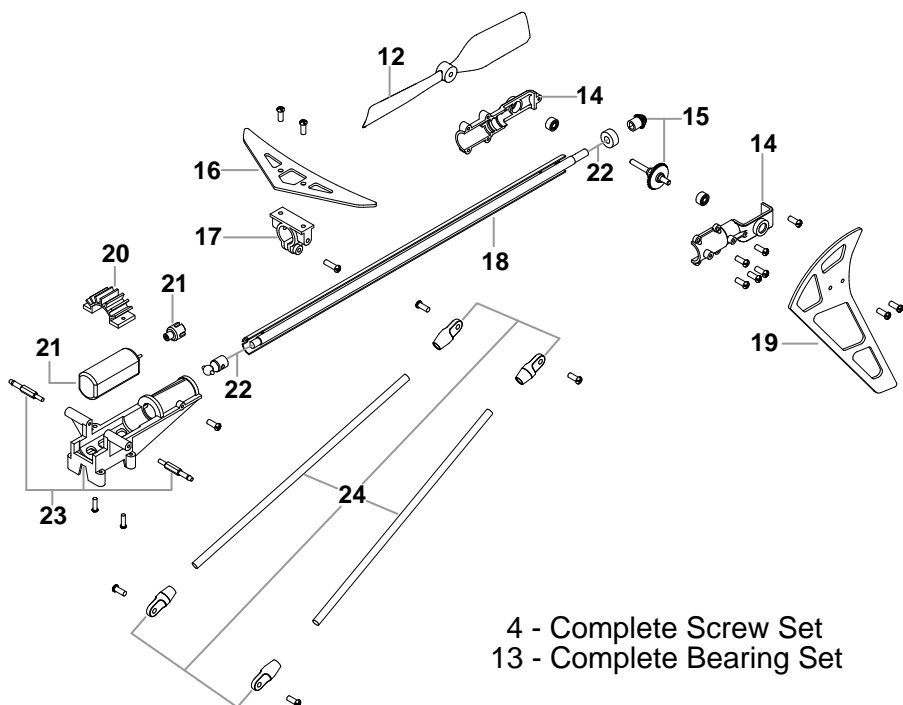
Main Frame Exploded View



Main Rotor Head Exploded View



Tail Boom and Tail Rotor exploded view



4 - Complete Screw Set
13 - Complete Bearing Set

Key No.	Part No.	Part Name
1	HMXE8309	Main Rotor Blades Novus 200 FP
2	HMXE8349	Linkage Set Novus 200 FP
3	HMXE8587	Mixing Arms Novus 200 FP
4	HMXE7338	Screw and Bolt Set Novus 200 FP
5	HMXE8344	CNC Main Blade Grips Novus 200 FP
6	HMXE9010	CNC Head Block Novus 200 FP
7	HMXE8348	Feathering Shaft Novus 200 FP
8	HMXE7815	Flybar with Carrier and Flybar Weights Novus 200 FP
9	HMXE4131	Head Linkage Guide Novus 200 FP
10	HMXE8353	Main Shaft Novus 200 FP
11	HMXE8346	CNC Head Button Novus 200 FP
12	HMXE8462	Tail Rotor Blade Novus 200 FP
13	HMXE8837	Ball Bearing Set Novus 200 FP
14	HMXE8461	Tail Gear Box Novus 200 FP
15	HMXE8464	Tail Bevel Gear with Shaft Novus 200 FP
16	HMXE7521	Horizontal Fin Novus 200 FP
17	HMXE7520	Horizontal Fin Clamp Novus 200 FP
18	HMXE8468	Tail Boom Aluminum Novus 200 FP
19	HMXE7522	Vertical Fin Novus 200 FP
20	HMXE8467	Tail Motor Heatsink Novus 200 FP
21	HMXE9401	Tail Motor with Pinion Gear Novus 200 FP
22	HMXE8465	Tail Drive Shaft Novus 200 FP
23	HMXE8463	Tail Motor Support Novus 200 FP
24	HMXE8466	Tail Boom Supports Novus 200 FP
25	HMXE8588	CNC Swashplate Novus 200 FP
26	HMXE8354	Main Shaft Collars Novus 200 FP
27	HMXE7956	Main Frame Novus 200 FP
28	HMXM2033	Servo Novus 200 FP
29	HMXE8005	Main Motor Novus 200 FP
30	HMXM2032	E-Board with Receiver and Gyro Novus 200 FP
31	HMXE8043	Main Gear Novus 200 FP
32	HMXE7928	Landing Skids Novus 200 FP
33	HMXE7957	Battery Frame Novus 200 FP
34	GPMP0411	7.4 1000mAh LiPo Battery Pack Novus 200 FP
35	HMXE7366	Canopy Novus 200 FP
36	HMXP1006	AC Charger Adapter Novus 200 FP
37	HMXP2018	HMX800 2S Charger Novus 200
38	HMXJ2023	TX450 Transmitter Novus 200 FP