

# Heli-Max™



# NOVUS™

## AH-1J SEACOBRA

### *INSTRUCTION MANUAL*

#### *Specifications*

**Length:** 9.0 in [229mm]  
**Width:** 2.7 in [68mm]  
**Height:** 3.3 in [84mm]  
**Rotor Span:** 7.9 in [200mm]

**Flying Weight:** 2 oz [57.2g] with  
supplied flight battery

- Only use the included charger with the included battery or replacement part (GPMP0409).
- 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 the battery. 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 AH-1J SeaCobra 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 AH-1J SeaCobra link. 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 AH-1J SeaCobra, 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.

1. Your Novus AH-1J SeaCobra 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 AH-1J SeaCobra, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.

2. You must assemble the model **according to the instructions**. 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.

3. You must correctly install all R/C and other components so that the model operates correctly on the ground and in the air.

4. 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.

5. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you're not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

We, as the manufacturer, provide you with a top quality, thoroughly tested helicopter and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

**Remember: Take your time and follow the instructions to build a safe and enjoyable model.**

Heli-Max™ **ADDITIONAL ITEMS REQUIRED**

- ❑ (8) AA Alkaline cells (SANP3500 AA 4-pack x2)

Heli-Max™ **KIT INSPECTION**

Before starting assembly, take an inventory of the Novus AH-1J SeaCobra 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

Telephone: (217) 398-8970, ext. 5

Fax: (217) 398-7721

E-mail: [helihotline@hobbico.com](mailto:helihotline@hobbico.com)

Heli-Max™ **KIT CONTENTS**



**INSTALL THE TRANSMITTER BATTERIES**

❑ Remove the battery cover from the back of the transmitter, remove the battery box and install **eight (8) “AA” batteries** into the battery box. Double-check the polarity of each battery before placing the battery box back into the transmitter and replacing the battery cover.

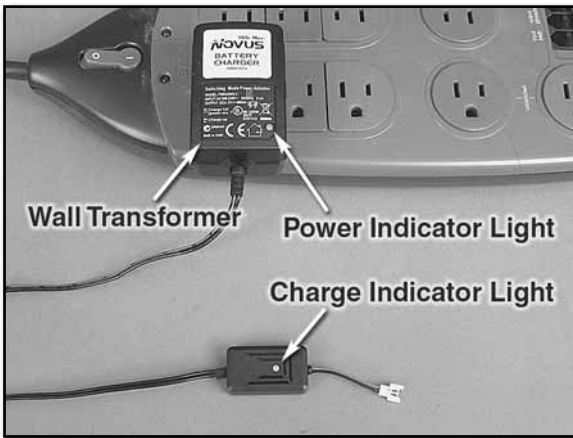


❑ Turn on the transmitter using the power switch as shown above and verify that the indicator illuminates. Turn the transmitter off for now. If the indicator did not illuminate, remove the battery box from the transmitter and verify that the batteries were installed correctly.

## 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 wall transformer will be green and the **charge indicator light** will be solid red.

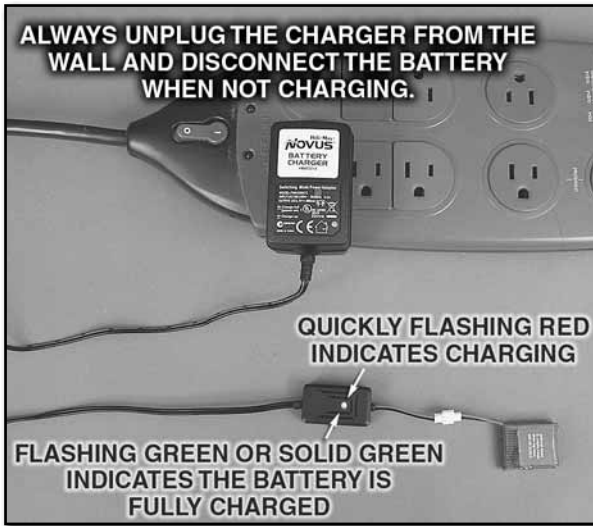
### Charge Indicator Light

<b>Fast Flashing Red</b>	The battery is being charged.	* Once the battery has been disconnected from the charger contact technical support for further assistance.
<b>Green (Solid or Flashing)</b>	The battery is fully charged.	
<b>*Slow Flashing Red</b>	A time-out has occurred.	
<b>*Solid Red with Battery Connected</b>	The battery voltage is too low or the charger is not powered.	
<b>Solid Red without Battery Connected</b>	The charger is ready.	



**WARNING!! Do not leave the battery connected** to the charger if the charge indicator is solid red. This may over-discharge the battery, possibly causing damage to the battery or the charger. Once the battery has been disconnected from the charger, contact technical support immediately for further assistance.





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

## ***Lithium Battery Handling and 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!

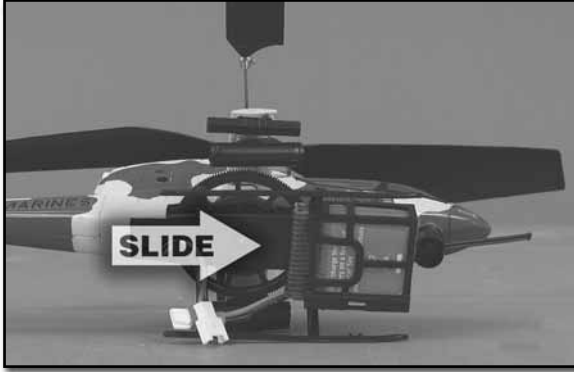
**Land your model immediately when the battery begins to lose power. Recharge the battery before attempting another flight.** A dangerous situation can occur when attempting to recharge an over-discharged battery!

- 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 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.

## ***Install the Battery***



- Slide the battery into the Novus AH-1J SeaCobra as shown.

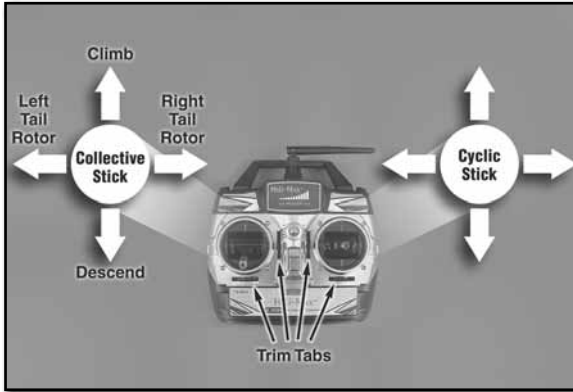


❑ The Novus Helicopter uses a 2.4GHz system that requires a binding process when the unit is powered up. This process involves connecting the flight battery to the ESC with the transmitter turned off. Ensure that the throttle stick is at its lowest position and turn the transmitter on. You will notice that the transmitter logo begins to flash, indicating that the binding process is taking place.

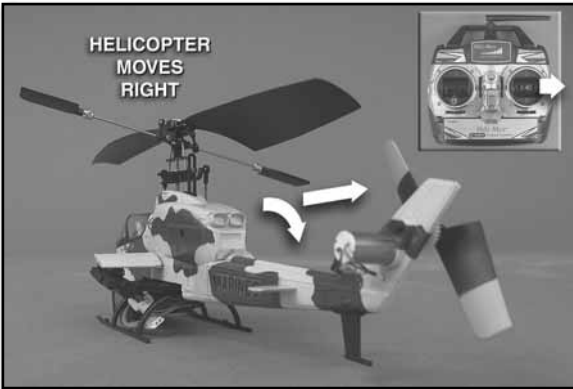


❑ Once the logo quits flashing you should see the servos move, signifying that the receiver is now bound to the transmitter. The helicopter must be left still for 5 seconds so the gyro can perform the initialization process. The Novus Helicopter is now ready for flight. Always step 15 feet [4.5m] away from the Novus Helicopter before operating the throttle. Do not hold the model while operating the throttle.

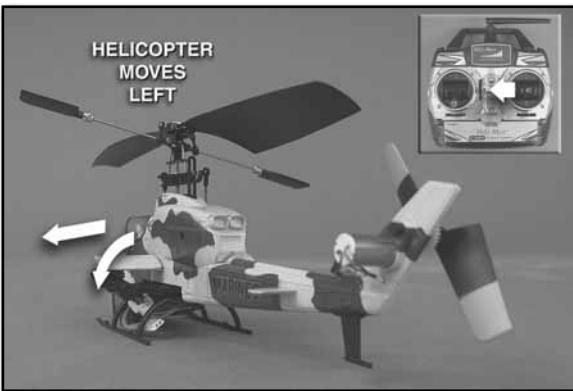
A safe start is built into the Novus Helicopter that prevents the motor from activating unless the collective stick has been lowered to the lowest position. If the motor won't run and turn the main blades, please make sure the collective stick is all the way down and leave it there for a couple of seconds.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

**TRANSMITTER CONTROLS**

All controls described as follows are with the tail pointing directly towards you. This is the best way to start out since it keeps the control inputs oriented the same. 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 it will start moving that direction.



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

HELICOPTER  
MOVES  
BACKWARDS



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

HELICOPTER  
MOVES  
FORWARD

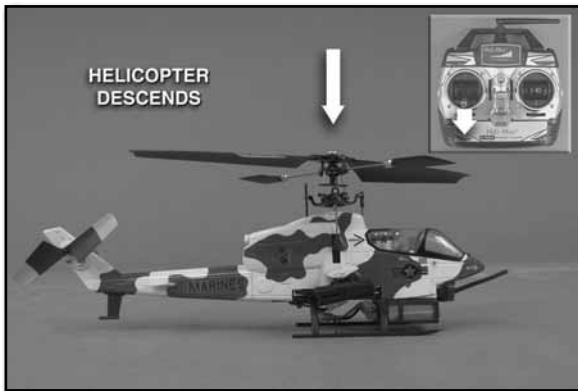


Moving the cyclic stick forward (away from you) will cause the helicopter to tilt forward and start moving that direction.

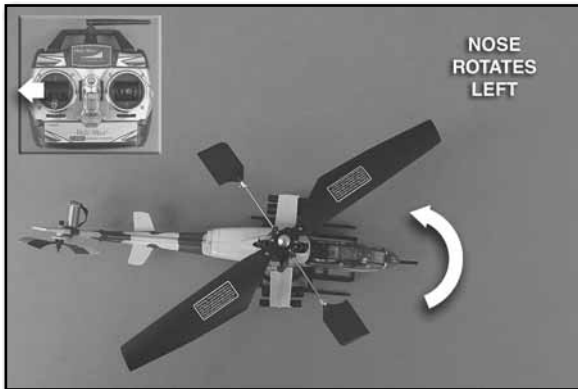
HELICOPTER  
CLIMBS



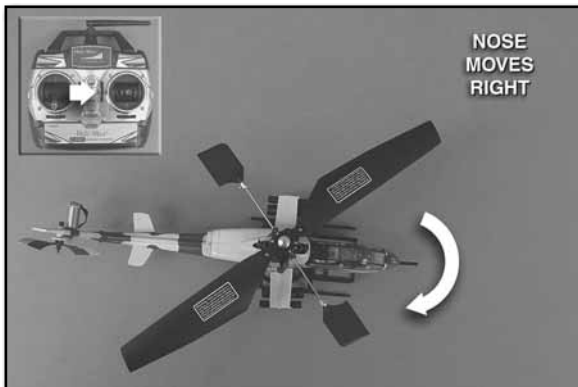
Moving the collective stick up (away from you) will cause the helicopter to climb higher.



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 Novus AH-1J SeaCobra is an extremely lightweight helicopter. Taking that into consideration, you should only fly the helicopter indoors or in calm winds less than 1mph.

Until you become accustomed to the Novus AH-1J SeaCobra helicopter we highly recommend flying it in a large area of at least 35 feet [10.5m] square with no obstacles.

The Novus AH-1J SeaCobra is extremely lightweight and does not fly well in ground effect (air disturbance when the model is hovered below 1 foot [30cm]). The model should be flown at a minimum altitude of 1foot [30cm] to avoid the ground effect.

### ***Crashing***

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 and observe the model. If you feel it needs trimming, do so before lift off. 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 perfectly normal and something you get the feel for with time. It's normal to drift around a little in a hover until you get used 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 it in one spot. This can take 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 get 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. Once you get that down you can try 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 you improve you'll remain nose-in for longer periods of time.

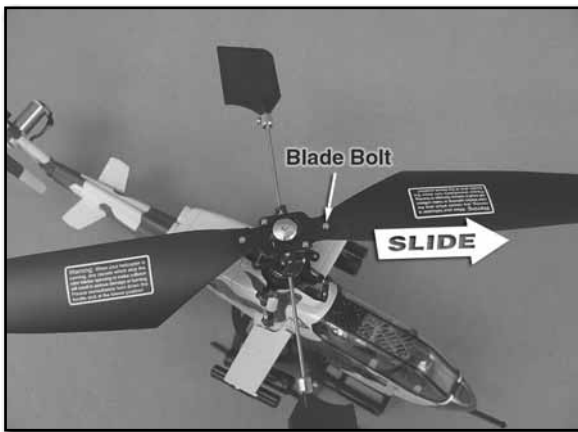
**GOOD LUCK AND GREAT FLYING!**



The Heli-Max™ Novus AH-1J SeaCobra is a very small helicopter. Working on this small model will require very 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 performing these steps.

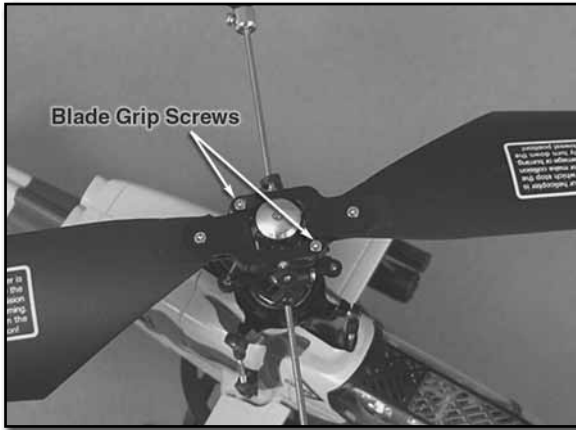
### **MAIN ROTOR BLADE REPLACEMENT**



□ 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.

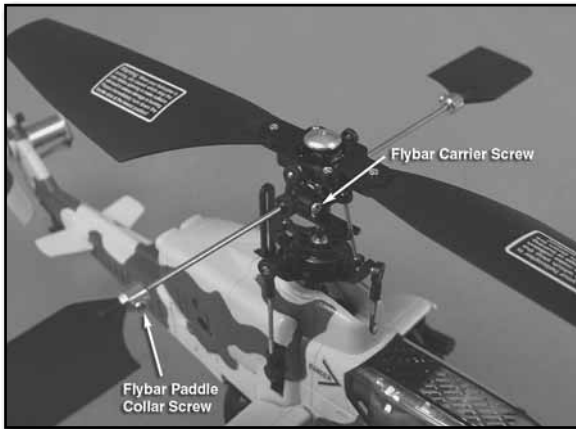


## MAIN ROTOR GRIP REPLACEMENT



- ❑ Remove both blade bolts and main rotor blades. Remove the flybar linkage from the blade grips. Remove the two blade grip screws and the blade grips can be easily removed. Reinstall the parts in the reverse order listed above.

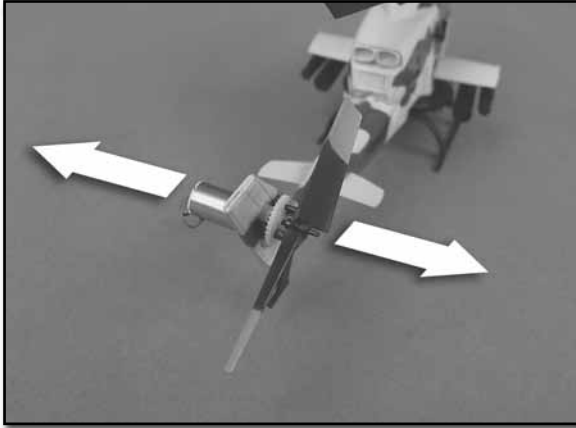
## REPLACING THE FLYBAR



- ❑ Loosen the screws on both flybar paddle collars. Rotate the paddles counter clockwise to remove the paddle and the collar from the flybar. Loosen the screws on the flybar carrier (both sides). At this point the flybar can be slid out of the flybar carrier. Slide the new flybar into the flybar carrier and ensure that the new flybar is centered. Tighten the flybar carrier

screws and reinstall the paddles. Ensure that the paddles are equal distances out on the flybar and tighten the flybar paddle collar screws.

## REPLACING THE TAIL SHAFT AND TAIL ROTOR



□ Use a flat blade screw driver to carefully pry the tail rotor from the tail rotor shaft. Slide the tail drive gear off of the shaft. Slide the tail rotor shaft out the opposite side of the tail rotor case. Slide the new tail rotor shaft into the tail rotor housing. Slide the tail drive gear onto the shaft (the step faces inward) and press the tail rotor onto the shaft, ensuring that the two

protrusions on the tail rotor line up properly with the tail drive gear.

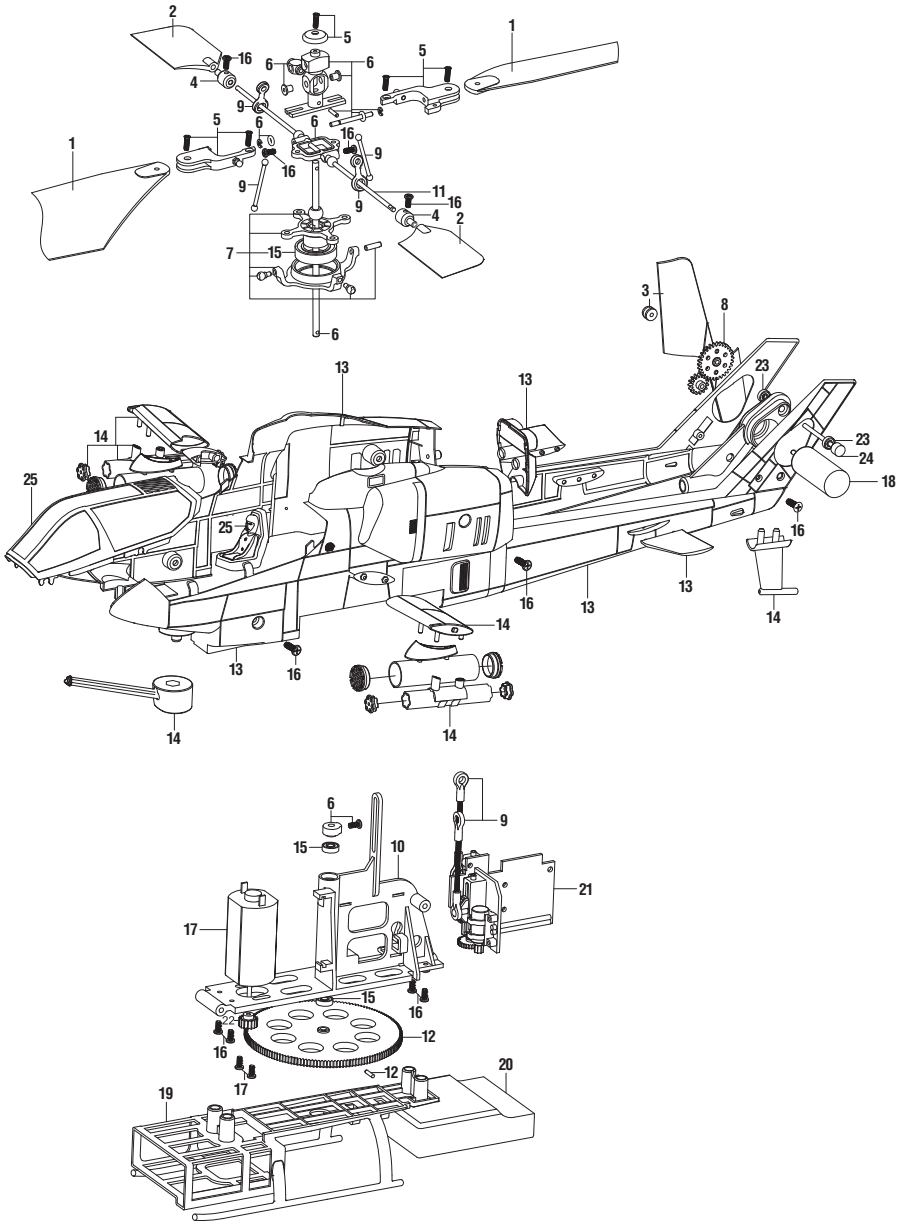
Notes: \_\_\_\_\_



Replacement parts for the Heli-Max Novus AH-1J SeaCobra are available using the order numbers in the **Replacement Parts List** below. The fastest, most economical service can be provided by your hobby dealer.

### ***Novus AH-1J SeaCobra Replacement Parts List***

<b>#</b>	<b>Stock #</b>	<b>Description</b>
1	HMXE8330	Main Rotor Blades
2	HMXE8331	Flybar Paddles
3	HMXE8441	Tail Rotor Blade
4	HMXE8332	Flybar Paddle Mounts (2)
5	HMXE8566	Blade Grips (2)
6	HMXE8567	CNC Rotor Head w/Main Shaft Assembly
7	HMXE8568	CNC Swashplate Assembly
8	HMXE8442	Tail Rotor Gear and Shaft Kit
9	HMXE8569	Complete Linkage Set
10	HMXE7923	Main Frame
11	HMXE8570	Flybar
12	HMXE8036	Main Drive Gear
13	HMXE7408	Replacement Fuselage
14	HMXE7409	Machine Gun Pods
15	HMXE8832	Ball Bearing Set
16	HMXE7333	Complete Screw Set
17	HMXG8019	Main Motor w/20T Pinion
18	HMXG8020	Tail Motor w/Pinion
19	HMXE7924	Landing Gear/ Battery Mount
20	GPMP0409	LiPo 400 mAh 1S Battery Novus SeaCobra
21	HMXM2026	4 in 1 E-Board/ Receiver
22	HMXE8037	Main Motor Pinion Gear
23	HMXE8833	Tail Rotor Shaft Bearings (2)
24	HMXE8443	Tail Rotor Shafts (4)
25	HMXE7416	Canopy/Ejection Seat
26	HMXE8571	Drive Gear Pins (2) Main Shaft Collars (2)



## Other fine products



### **Heli-Max Kinetic™ 50 ARF**

HMXE0250



### **Heli-Max Novus CX**

HMXE0803



### **Heli-Max Axe™ CX Micro Coaxial RTF**

HMXE09\*\*

available from **Heli-Max™**

**Heli-Max  
Novus CP**

HMXE0804



**Heli-Max Axe  
400 3D RTF**

HMXE0800



**Heli-Max Axe  
400 3D RxR**

HMXE0801



The logo features the word "MOVUS" in a large, bold, sans-serif font. A white swoosh underline starts under the 'M' and curves over the 'O'. Below "MOVUS" is the text "AH-1J SEACOBRA" in a smaller, bold, sans-serif font.

**MOVUS**  
**AH-1J SEACOBRA**