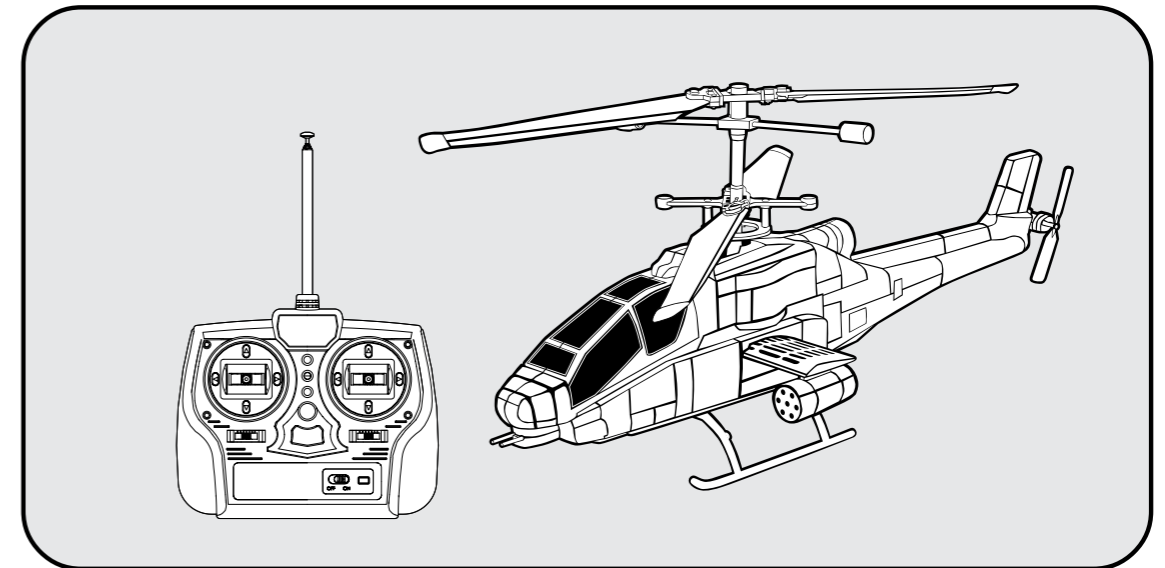




CHOKING HAZARD  
Small parts.  
Not for children  
under 3 years.

# AH-78 ARROWHEAD RADIO CONTROL ATTACK CHOPPER



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## OWNER'S MANUAL

Keep these instructions for future reference as they  
contain important information.

# Precautions

## Safety First

### CAUTION: TO AVOID BATTERY LEAKAGE OF AA BATTERIES FOR TRANSMITTER

- Use AA batteries for transmitter.
- Make sure the batteries are inserted with correct polarity and follow the battery manufacturer's instructions.
- After use, remove the batteries from the transmitter to store.
- Do not attempt to short-circuit, charge, disassemble or heat batteries. Do not dispose of batteries in fire or get them wet.
- If battery fluid contacts your eyes, skin or clothes, immediately wash them with water and consult a doctor.
- Do not mix new and old batteries together in the transmitter.

## Precautions Before Flight

Depending on flight conditions or due to improper control, flying a helicopter can be hazardous, resulting in unforeseen accidents such as bodily injury and property damage. The helicopter operator shall be held responsible for such an accident.

## WARNINGS DURING PLAYING

- After use, store the helicopter in a place out of the reach of children 3 years old or younger.
- To avoid hazards from improper use, this helicopter is not intended for children under 14 years old. Adult supervision is required.
- Make sure you have plenty of open space in all directions. Fly the helicopter in a safe area away from people, pets, etc.
- Do not fly the helicopter toward a person; otherwise, an injury may occur.
- Do not store the helicopter near a heater or any place where the temperature rises (e.g., a closed up car in summer).
- Do not fly the helicopter on windy days or in bad weather conditions.
- Fly the helicopter away from roads, railways and power lines. Avoid crowded and narrow areas.

- If the helicopter gets stuck in a tree, building or power line, do not climb to retrieve it. Contact the owner or the power company in such a case.
- Do not bring your face or hands near the rotor. For safety, you are recommended to wear goggles.
- Do not use the helicopter if it is irreparably damaged.
- When the helicopter is in flight, adult supervision is required.
- Do not touch charging terminals (i.e., the metal part) on the helicopter body or the charger.
- The helicopter is intended for outdoor use only.
- Do not point the transmitter antenna toward a person or animal's head, otherwise, an unforeseen accident may occur. Also, do not bend the antenna.
- Never attempt to disassemble or modify the helicopter.
- Do not bend or pull the components with a strong force.
- Do not operate the helicopter with the main rotor locked.
- Do not drop or smash the batteries, transmitter or charger. Otherwise, the charging port, charger, batteries or transmitter may be damaged.
- When charging is complete, remove the charger connector from the charging port on the helicopter, then unplug the charger from the wall outlet.
- Check if a nearby transmitter is producing interference or signals with the same frequency. In such a case, move to another place or wait until the other user has finished operating his/her vehicle.

## Precautions

### Handling of Li-Po Batteries and Charger

This product contains a high-performance Lithium Polymer battery. The battery features large capacity and high voltage and has a lightweight design, which is best suited for use in RC helicopters. Because of the extremely large energy content, be sure to handle the battery with care.

### CAUTION: TO AVOID BATTERY LEAKAGE OF BUILT-IN LI-PO RECHARGEABLE BATTERIES

- Charge batteries following the battery and charger manufacturer's instructions.
- Charge batteries with the included charger BEFORE the first use.

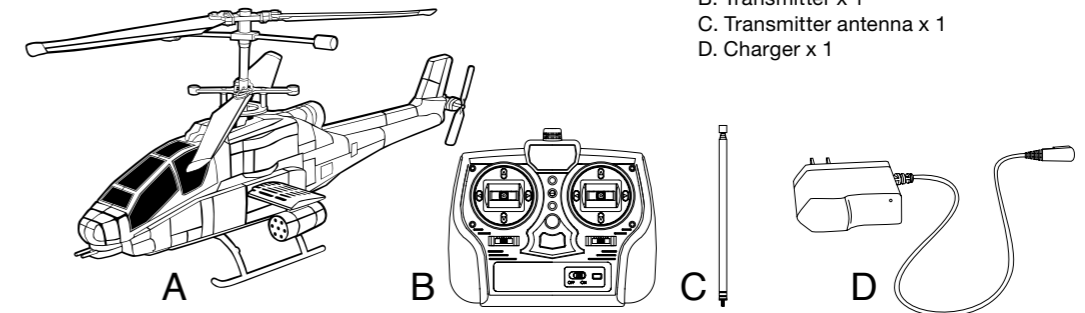
- Do not charge batteries with a charger other than the one included.
- Do not charge batteries, other than the built-in Li-Po battery, with the included charger or use the charger as the power source for other equipment.
- Do not charge batteries within the reach of small children.
- Do not drop or smash the batteries or the charger during charging.
- Do not recharge a Li-Po battery that is already fully charged or the battery may be damaged. Li-Po batteries have a low natural discharge rate and do not require recharging in the first one or two hours after a charge.
- When charge is complete, unplug the charger from the wall outlet.
- After use, be sure to turn the switch off. Failure to do so may adversely affect the batteries, resulting in a disabled charge.
- Do not short-circuit battery terminals, or the battery may swell and get hot, leading to fire.
- Do not heat, disassemble or modify batteries. Do not dispose of batteries in fire or allow them to get wet.
- Do not use, store or charge batteries in a place near a heater, or in high temperature or humid conditions.

## Battery Disposal Instructions

The built-in Li-Po battery, when used under normal conditions, is capable of approximately 200 charge/discharge cycles.

## THIS PRODUCT USES A LITHIUM POLYMER BATTERY AND MUST BE RECYCLED OR DISPOSED OF PROPERLY.

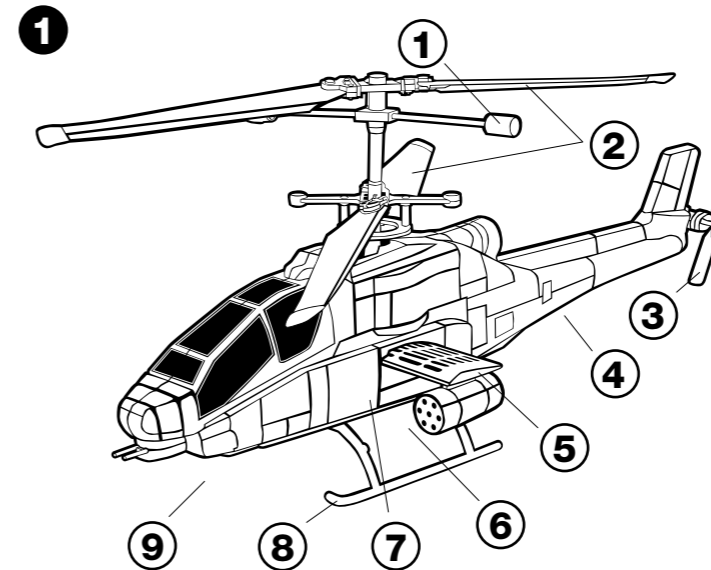
Contact your local area office of solid waste management or other appropriate local agency for information. Do not attempt to disassemble the battery before disposal.



## I. CONTENTS & FEATURES

### This kit includes:

- A. Arrowhead x 1
- B. Transmitter x 1
- C. Transmitter antenna x 1
- D. Charger x 1



### 1 Arrowhead

- ① Stabilizer
- ② Main rotor
- ③ Tail rotor
- ④ LED lamp (on bottom)
- ⑤ Wings (see instructions below)
- ⑥ Antenna
- \* Do not cut the antenna wire.
- ⑦ 7.4V Li-Po battery embedded
- ⑧ Skid
- ⑨ Charging port / Power switch (at the bottom)

### Wing Installation:

Your Arrowhead Attack Chopper includes optional wings that may be attached for added realism. To attach wings, simply install the wing panel containing the tab into the side of the helicopter body. The second wing panel will slide into the opposite side of the body and will be secured by the tab.

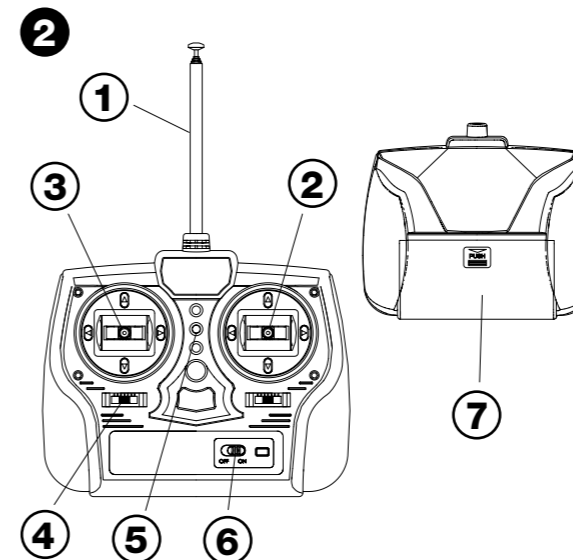
### 2 Transmitter

#### Front

- ① Antenna
- ② Elevator stick
- ③ Throttle stick (up/down), Rudder stick (left/right)
- ④ Rudder trim
- ⑤ Power indicator
- ⑥ Power switch

#### Rear

- ⑦ Battery door



### FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## II. INSTALLATION

### 1 Transmitter Antenna Installation/Removal

#### ① Antenna Installation

Turn the antenna clockwise to screw it into the transmitter body. Securely screw it in place, or a malfunction may result from having a loose antenna connection.

#### ② Antenna Removal

Turn the antenna counterclockwise to remove it. When housing the antenna, retract it from the root rib to avoid bending the antenna rod.

### 2 Transmitter Battery Installation

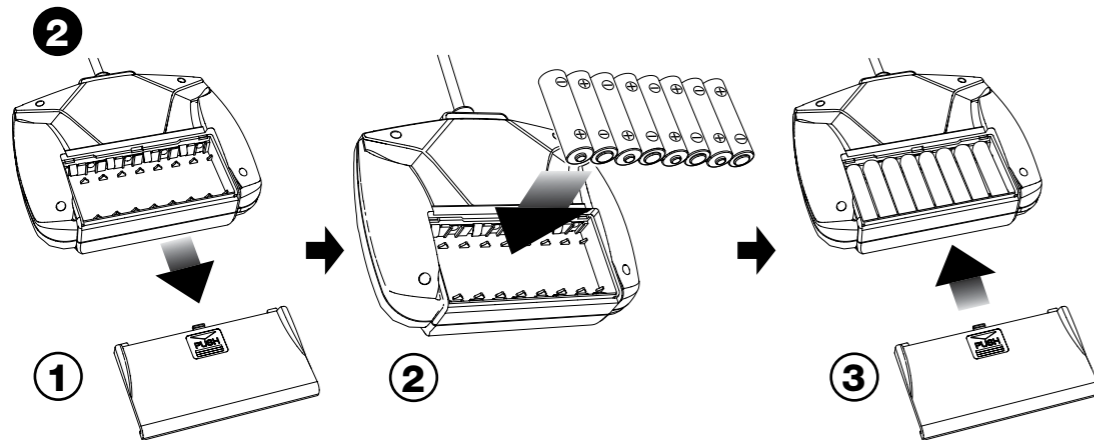
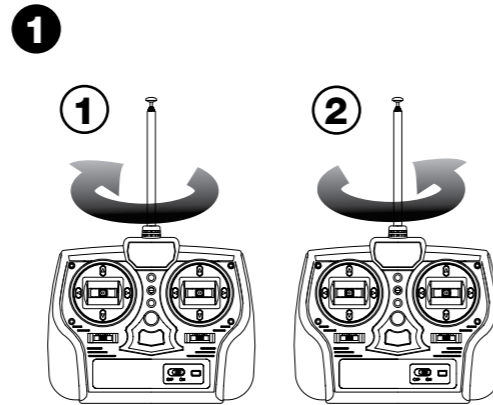
Use eight AA batteries for the transmitter.

#### ① Slide open the BATTERY DOOR in the direction shown.

#### ② Insert AA BATTERIES with the polarity (+/-) as shown.

#### ③ Replace BATTERY DOOR.

\* When the capacity of the batteries becomes low, the Power LED lamp changes from steady to blinking. You need to replace the batteries, or a malfunction may occur due to reduced operating range.



## III. BUILT-IN BATTERY CHARGING INSTRUCTIONS

### Adult Supervision Required

A rechargeable battery is built into the helicopter body. Be sure to charge the battery before you use it. The built-in Li-Po battery, if not handled properly, may explode, cause burns or catch fire, resulting in a serious accident.

#### ① Set the power switch of the helicopter to "OFF", connect the charger connector to the charging port on the helicopter, then plug the charger into a standard wall outlet.

##### ①-1 Charging port.

#### ② LED lamp on charger will light to show the charger is operating.

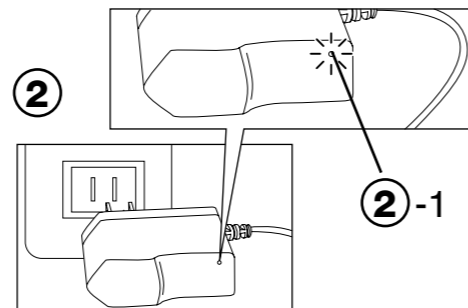
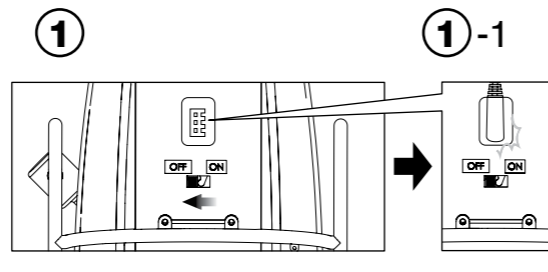
##### ②-1 LED lamp

#### ③ When charging is complete, the LED lamp goes off. Remove the charger connector from the charging port on the helicopter, then unplug the charger from the wall outlet.

\* Battery charging time varies with battery level. As a guide, it takes approximately 1 hour when the battery is near empty, or 30 minutes if it is half-empty.

### Important:

To prevent overcharge of batteries, do not repeak a Li-Po battery that has peaked. The battery, if not used to fly the helicopter, does not require charging in the first one or two hours after a charge.



## IV. HOW TO FLY

### 1 Preparation for Flight

#### ① Turn on the switch on the transmitter. Then, the LED lamp will start blinking.

##### ①-1 LED lamp (blinking)

#### ② Completely extend the transmitter antenna.

#### ③ Turn on the switch on the helicopter body, then the LED lamp will start blinking. When the LED lamp changes to steady, the helicopter is ready for flight.

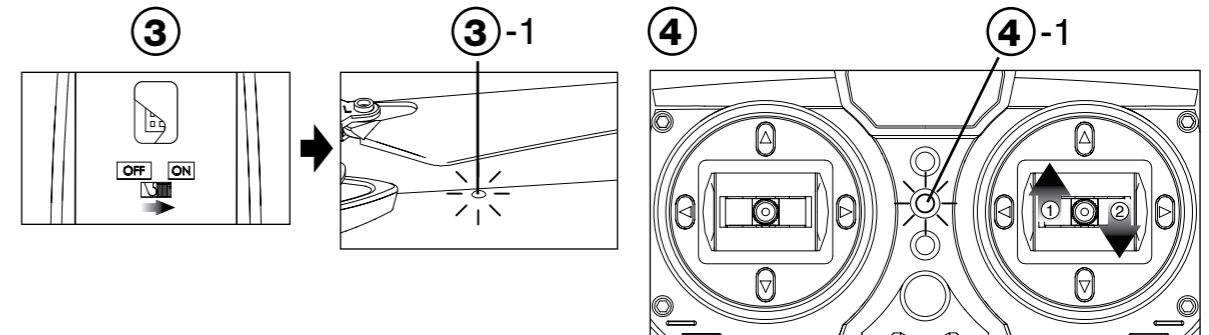
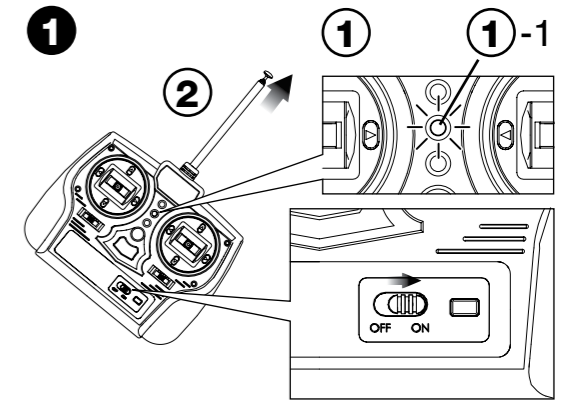
##### ③-1 LED lamp

#### ④ Move the throttle stick to the top position, then to the bottom. The transmitter is ready to operate when the LED indicator changes from blinking to steady.

##### ④-1 LED lamp (not blinking)

#### ⑤ Stay at least 10-15 ft (4-5 m) away from the helicopter before flying it.

#### ⑥ Only operate the helicopter in environments free from obstructions.



**Note:** Flying an RC helicopter is an exciting and challenging experience, and requires some practice. Be sure to use gentle controls on the radio so that you can get used to the way the helicopter responds. Take your time, and make sure you fly in an area with plenty of space. In the beginning, it is important that you focus on making small movements on the control sticks of the transmitter. As you get more comfortable with the way your helicopter flies, you will be able to use the full range of controls. If you have never flown an RC helicopter before, we recommend that you have an experienced RC pilot present during your first few flights.

## IV. HOW TO FLY

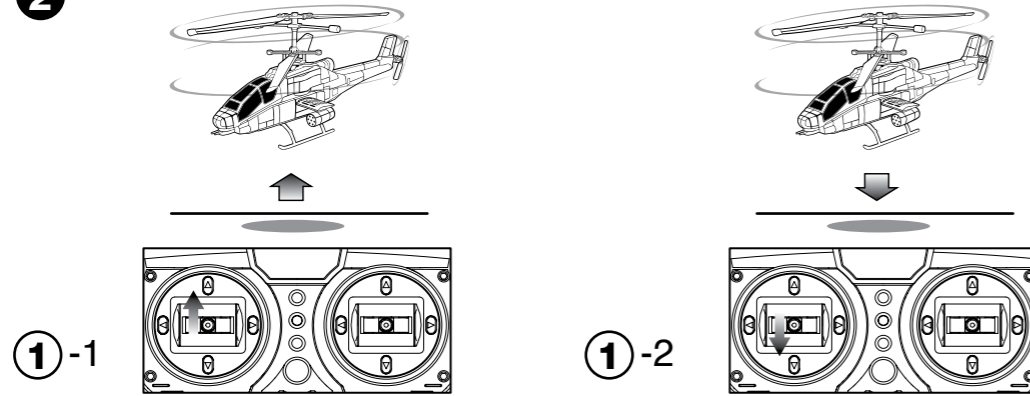
### 2 Transmitter Functions

#### ① Throttle stick (left) (Up/Down)

Moving the throttle stick toward the top of the transmitter allows the helicopter to ascend, and moving the stick back makes the helicopter descend.

- ①-1 Up
- ①-2 Down

2



#### ② Rudder stick (left) (Left / Right)

Moving the rudder stick left allows the helicopter to turn left, and moving the stick right makes the helicopter turn right.

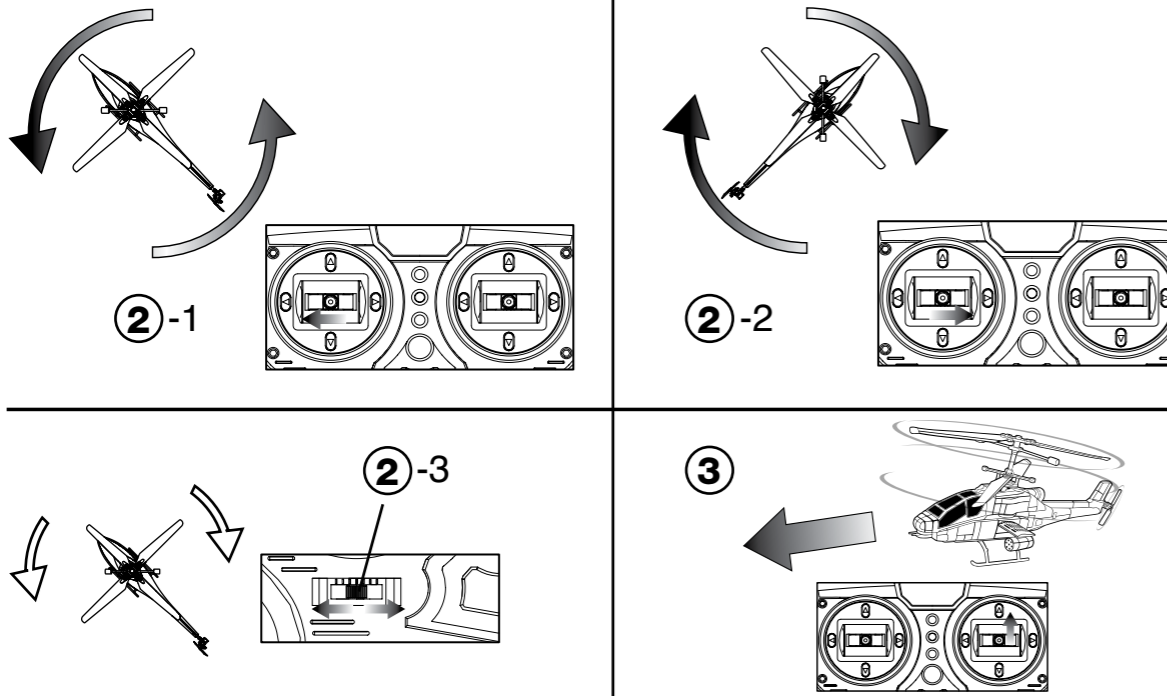
- ②-1 Left turn
- ②-2 Right turn
- ②-3 Rudder trim

\* If the helicopter rotates nose left or right by itself, without commanded input from the stick, it needs to be trimmed to stop the rotation.

\* Move the rudder trim left if the nose of the helicopter rotates to the right, and move the rudder trim right if the nose of the helicopter rotates to the left.

#### ③ Elevator stick (right)

Moving the elevator stick toward the top of the transmitter allows the helicopter to fly forward.



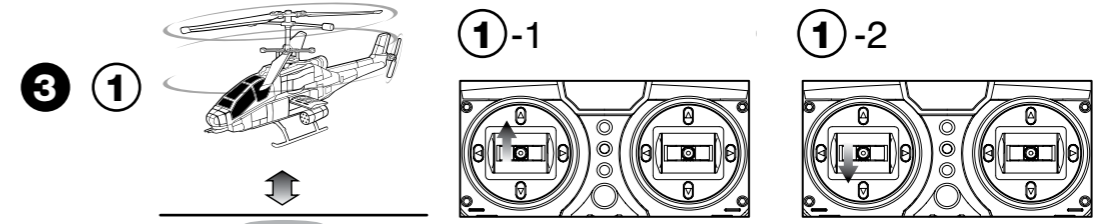
### 3 Fly the Helicopter

① Slowly move the throttle stick (left) up to make the helicopter take off. When the helicopter is slightly floating, slowly move the stick back to make it land. Gradually increase the height as you get accustomed to the controls, and adjust the stick up and down to get the feeling of hovering.

\* To move the helicopter down, move the throttle stick back more slowly than when moving the helicopter up.  
\* The throttle stick should be moved in small increments of a few millimeters. For this operation, proper training is required.

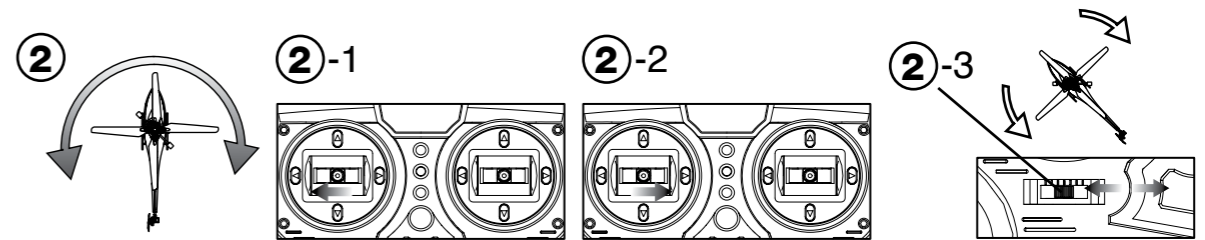
As a feature of a contra-rotating rotor helicopter, hovering can be achieved rather easily.

- ①-1 Up
- ①-2 Down



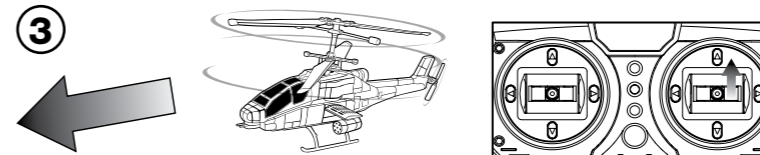
② When the helicopter reaches hovering, make it rotate at its position. Move the rudder stick (left) of the transmitter left or right to change the direction of the helicopter. If the helicopter rotates by itself, adjust the rudder trim to stop the rotating.

- ②-1 Left turn
- ②-2 Right turn
- ②-3 Rudder trim



③ When you get accustomed to the control of hovering and rotating, move the forward stick (right) on the transmitter up to fly the helicopter forward. The helicopter will keep flying forward while the stick is moved up and held in position. To stop it, move the stick back. The helicopter cannot smoothly fly forward while it is rotating. Stop the rotating before flying the helicopter forward.

If you are comfortable with steps 1 to 3, try to conduct two operations at the same time. After that, you can freely fly the helicopter by conducting any combination of operations.

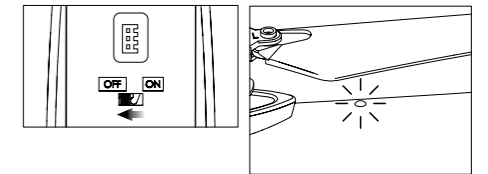


#### Important:

If the helicopter crashes, immediately move the throttle stick (left) back, otherwise damage may result from idling the main motor.

④ After use, turn off the switch on the helicopter, then turn off the transmitter. Be sure to retract the transmitter antenna.

4



#### Important:

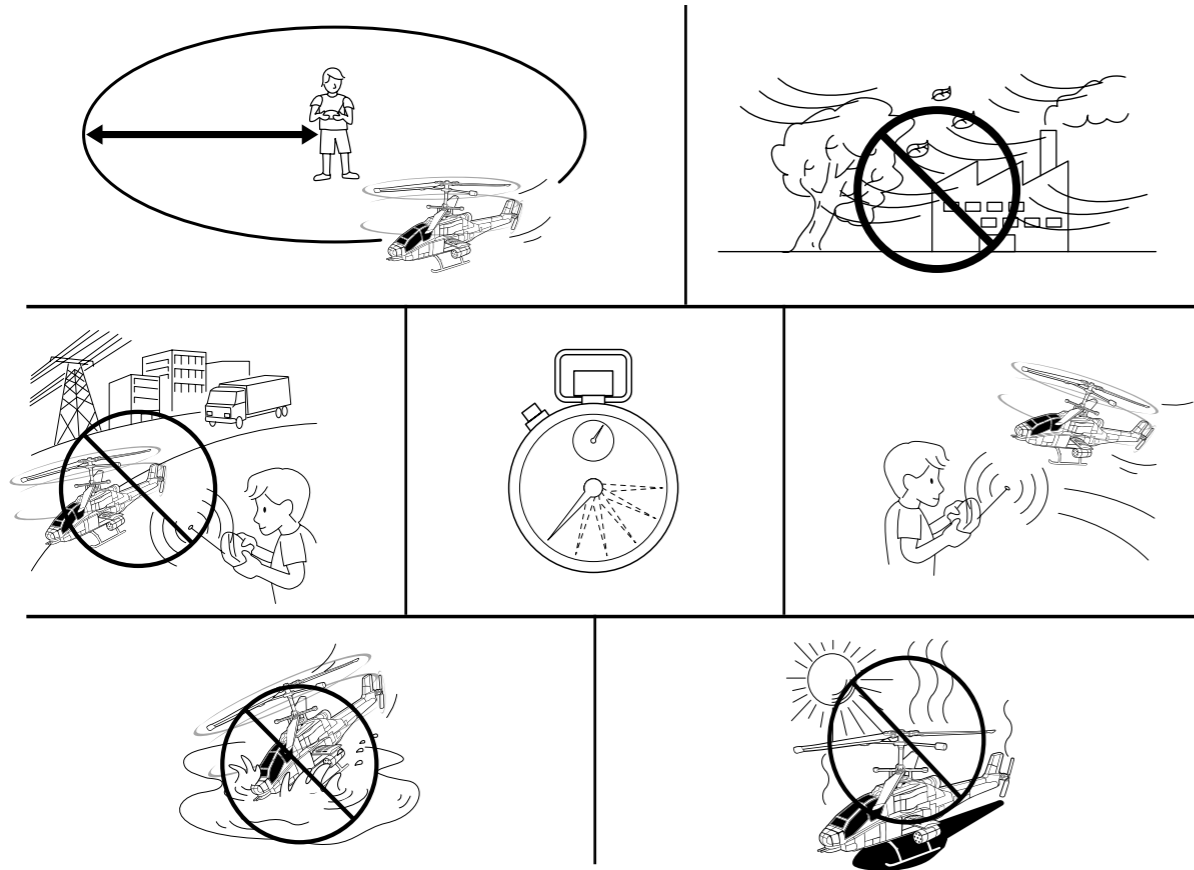
This helicopter is equipped with a feature for monitoring the charge level of the built-in battery. The LED lamp blinks if the charge level becomes low. Turn off the switch when the LED lamp starts blinking. Failure to do so may adversely affect batteries, resulting in permanent damage.

## V. FLIGHT LOCATION AND CONDITION

### Flight Location

Check that there are no obstacles around the flight location before flying the helicopter.

- Fly the helicopter in a safe area away from roads, other persons and animals, trees, buildings, overhead power lines and other obstacles.



### Flight Condition

For best performance, fly the helicopter when the air temperature is above 50 degrees Fahrenheit. The Arrowhead is powered by a lithium polymer battery that suffers significantly decreased performance at low temperatures. Avoid locations exposed to wind, otherwise the helicopter may become uncontrollable. Do not fly the helicopter in bad weather (heavy thunderstorms, rain, sleet, snow, etc.).

#### Important:

- Ensure that a nearby transmitter does not produce interference or signals with the same frequency.
- Always supervise the helicopter in flight.
- Adult supervision is required when children 14 and under are flying the helicopter.
- The helicopter is intended for outdoor use.

## VI. MAINTENANCE

### Care and Service

- The life of the helicopter can be extended with daily care. Keep the Arrowhead clean, and check for damage and loose parts after every flying session or after a crash.
- The helicopter body is made of polystyrene foam. If damaged, use clear tape or a suitable adhesive to repair. Foam-safe CA can be purchased from your local hobby shop.
- Never use instant glue, which will make the polystyrene foam dissolve.
- The helicopter may lose balance and not fly correctly if broken. If, after a repair, the helicopter wants to fly backward, try taping a small amount of weight under the nose of the helicopter, or use a small wad of modeling clay. Likewise, if it wants to fly forward and won't stop going forward, tape a very small weight to the tail.

## TROUBLESHOOTING GUIDE

Check the following items if your Arrowhead is not operating properly:

- Make sure the power is on.
- Make sure the main battery and the transmitter battery have sufficient charge.
- Check if the main battery and the transmitter battery are inserted with correct polarity.
- Check if the antenna of the transmitter is broken.
- Check if the distance between the transmitter and the helicopter exceeds 20 meters.
- Check if a nearby transmitter produces interference or signals on the same frequency.

Unlike other radio control helicopters, the AH-78 Arrowhead has a number of replacement parts available in the event of damage. These parts are easily replaced with common household tools, and should be available at any hobby store that carries SPARC!™ products.

### Replacement Parts

SPJ1001 Skid Set	\$3.99
SPJ1004 Transmitter Antenna	\$5.99
SPJ1005 Transmitter Battery Cover	\$3.99
SPJ1302 Rotor Blade Set: Arrowhead	\$7.99
SPJ1303 Body Set: Arrowhead	\$11.99
SPJ1306 Battery Charger: Arrowhead	\$15.99

# WARRANTY

## Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warranties that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

## Limited Warranty

**(a)** This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

**(b) Limitations** HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

**(c) Purchaser Remedy** Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

## Damage Limits

**HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.** Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

## Law

**These Terms are governed by Illinois law (without regard to conflict of law principals).**

## Safety Precautions

This is a sophisticated R/C product and must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

## Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a service technician.

## Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. A Service Repair Request is available at [www.horizonhobby.com](http://www.horizonhobby.com) on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support  
4105 Fieldstone Road  
Champaign, Illinois 61822

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.