

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

20J

REMOTE CONTROL HELICOPTER



57293

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com



When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

Important Safety Information

- 1. Do not allow children younger than age 8 to use this Helicopter.** Children should not operate without adult supervision.
- 2. Keep out of reach of children younger than 8.** Contains small parts that may present a choking hazard.
3. Only fly outdoors during daylight hours in an area with no obstructions, power lines, vehicles, animals or people nearby.
- 4. Do not fly in temperatures above 113° F or below 50° F. Do not fly in wet or windy conditions.**
- 5. Keep spectators and pets away.** Spectators should only watch from a safe distance.
- 6. Position remote control batteries in proper polarity.** Do not install batteries of different types, charge levels, or capacities together in remote control.
- 7. Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel-cadmium) batteries. Do not use swollen or leaking batteries.**
- 8. Do not open the Helicopter's housing or modify its design.** Doing so may cause damage and/or make it dangerous.
- 9. Do not use if parts are loose or damaged.** If the toy has been damaged, immediately stop using it.
10. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
11. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
12. Maintain product labels and nameplates. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

Lithium Battery Charging Safety

1. Do not leave Helicopter unattended while charging.
2. Battery charging should be done by adults only.
3. Use the supplied charger only.
4. Charge on non-flammable surface and keep away from flammable items.
5. Disconnect AC wall chargers from outlets while not in use.
6. If battery-powered device has been damaged, immediately stop use, unplug, and safely move away from flammable materials.
7. Follow instructions for charging battery. DO NOT charge longer than recommended.
8. Allow a clearance of at least 4" on all sides during charging.

Personal Safety

1. **Operator and spectators must wear ANSI-approved safety goggles during use.**
2. Do not wear loose clothing or jewelry. Keep hair and clothing, and away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
3. Do not use the Helicopter while tired or under the influence of drugs, alcohol, or medications. A moment of interruption can result in serious personal injury.

Specifications

Remote Control Battery Type	6-AA (sold separately)
Helicopter Battery Type	3.7V / 120 mAh rechargeable Lithium-ion
Battery Charging Time	Approximately 30 minutes
Flying Time	Approximately 6 minutes
Cool Down Time Between Charges	30 minutes
Range	25 feet

Set Up



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use

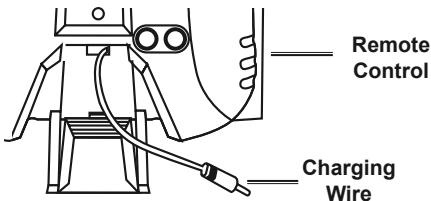
⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Switch the Helicopter and Remote Control OFF before performing any procedure in this section.

Charging Helicopter

CAUTION! Do not leave Helicopter unattended while charging. Battery charging should be done by adults only. **DO NOT charge longer than 100 minutes.**

1. Make sure the Remote is turned off. Open compartment at the bottom of the Remote and pull out charging wire.



2. Make sure the Helicopter is turned off. Locate charging compartment underneath Helicopter and insert charging wire into the socket.

3. Turn the Remote ON. The Charging Light on the Remote will turn green. Once charging is complete the light will turn off.



LED Charging Light

4. When charging is complete, disconnect Remote from Helicopter and place charging wire back into its compartment.

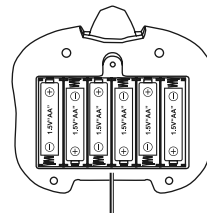
CAUTION! Allow Battery to cool down for 9-12 minutes between charges.

Remote Control

CAUTION! Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel-cadmium) batteries. Position batteries in proper polarity. Do not use swollen or leaking batteries.

1. Remove Battery Cover on back of Remote Control.
2. Insert six AA batteries (sold separately).

3. Replace Battery Cover.



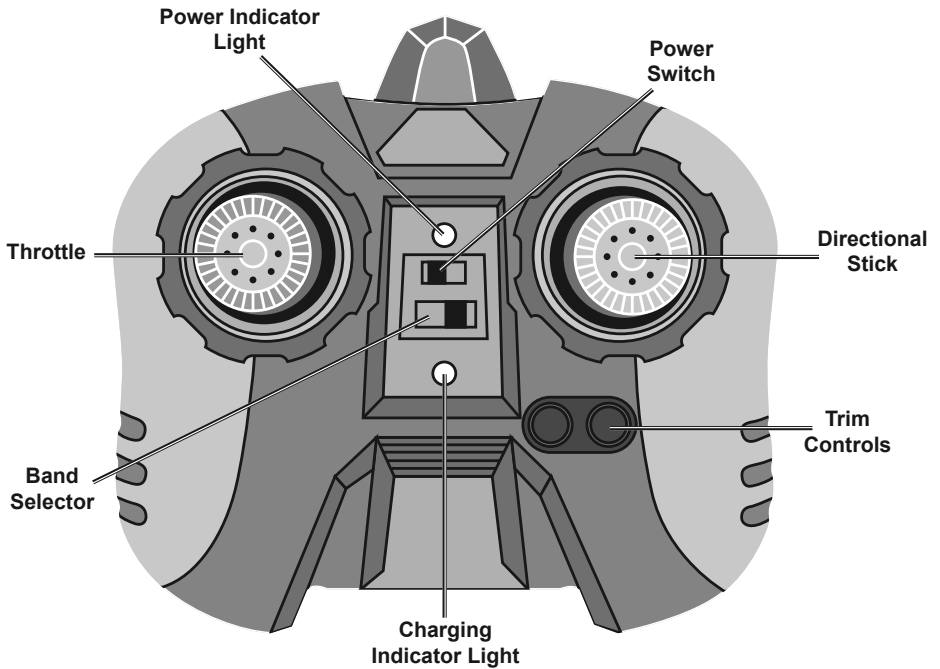
Battery Compartment

Components and Controls



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use.





FUNCTIONS	
UP	Throttle Joystick Up
DOWN	Throttle Joystick Down
FORWARD	Directional Joystick Up
BACKWARD	Directional Joystick Down
LEFT	Directional Joystick Left
RIGHT	Directional Joystick Right

Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use of this product.

⚠WARNING

TO PREVENT SERIOUS INJURY:

Operator and spectators must wear ANSI-approved safety goggles during use. Keep Helicopter within 25 feet of Remote Control. If Helicopter goes out of range, it will stop working and fall.

WARNING! To prevent serious injury, avoid sudden movements of controls while flying.

CAUTION! Only fly outdoors during daylight hours in an area with no obstructions, power lines, vehicles, animals or people nearby.

1. To pair the Helicopter to the Remote Control, turn Helicopter Power Switch ON and place on a level surface.
2. Turn Remote Control ON, Power Indicator Light will blink.
3. Select any setting on the Remote's Band Selector.
4. Point Remote Control at the Helicopter and push Throttle all the way up, then all the way down. When Power Light stops blinking, Remote Control is transmitting.

CAUTION! If Remote Control's Indicator Light does not stop flashing, replace its batteries.

5. Position Helicopter with its tail toward you, then stand 10 feet away.

CAUTION! If the Remote Control's Indicator Light flashes during flight, land the helicopter safely, and replace the batteries before further use.

6. When finished, turn Remote Control OFF, then turn Helicopter OFF.
7. Clean and store according to **"Inspection and Maintenance"** on page 10.

Checking Trim

1. Using a light touch, slowly push Throttle up until Helicopter is barely hovering. Helicopter should stay in one place without excessive rotation.
 - a. If Helicopter rotates to left, tap the Right Trim Control repeatedly until Helicopter stops rotating.
 - b. If Helicopter rotates to right, tap Left Trim Control repeatedly until Helicopter stops rotating.

Practicing

NOTICE: To avoid damage to the Helicopter, keep Helicopter between 1-3 feet off the ground while practicing. Master each step before going on to the next one.

1. **Taking Off:** Slowly raise the Throttle until Helicopter rises off the ground.
2. **Hovering:** Practice keeping the Helicopter as motionless as possible in the following 4 positions:
 - a. Tail facing you.
 - b. Left side facing you.
 - c. Nose facing you.
 - d. Right side facing you.
3. **Landing:** Slowly lower Throttle until Helicopter almost touches the ground. Ease off Throttle slightly to avoid bouncing, then lower all the way.
4. **Forward/Backward:** Practice moving forward and backward in the following 4 positions:
 - a. Tail facing you.
 - b. Left side facing you.
 - c. Nose facing you.
 - d. Right side facing you.
5. **Left/Right:** Practice moving to the left and right in the following 4 positions:
 - a. Tail facing you.
 - b. Left side facing you.
 - c. Nose facing you.
 - d. Right side facing you.

6. **Box:** Practice flying a box pattern, stopping and turning at each corner.

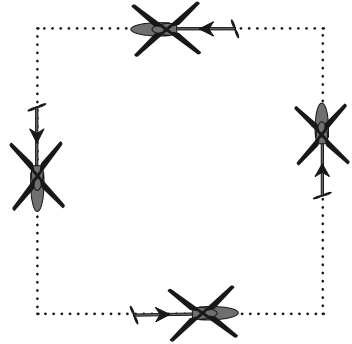


Figure A

7. **Circle:** Practice flying in a circle with the Helicopter in the following 4 positions:
 - a. Tail facing you.
 - b. Left side facing you.
 - c. Nose facing you.
 - d. Right side facing you.

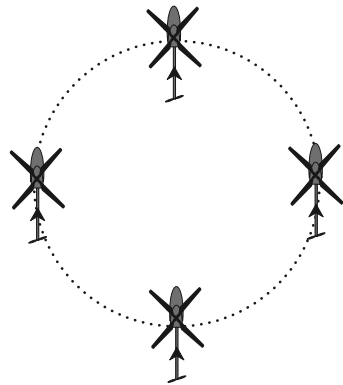


Figure B: Tail Facing You

Inspection and Maintenance



Procedures not specifically explained in this manual must be performed only by a qualified technician.

! WARNING

TO PREVENT SERIOUS INJURY FROM ELECTRICAL SHOCK:

Make sure that the Helicopter is OFF before performing any procedure in this section.

Inspection

- BEFORE EACH USE**, inspect the general condition of the Helicopter. Check for:
 - stripped gears,
 - bent main shaft,
 - cracked or broken rotors, and
 - any other condition that may affect its safe operation.

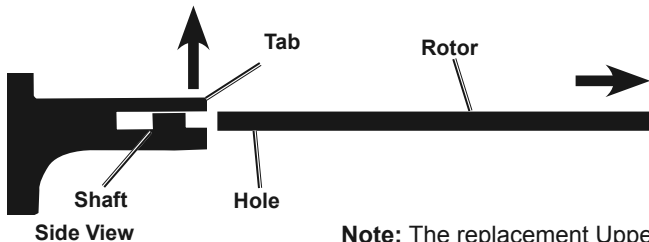
Cleaning and Storage

- AFTER USE**, use a mild detergent on a clean cloth to remove any dirt from the Helicopter.
- Remove batteries from Remote Control, then store the Helicopter, and accessories in a dry area away from direct sunlight and out of the reach of children.
- Li-Ion BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY. Do not short, incinerate or open battery.

Replacing Rotors

Main

- Remove Screw holding the Rotor in place.
- Gently lift up Tab holding Rotor onto Shaft. Lift Rotor off Shaft and remove. See below.

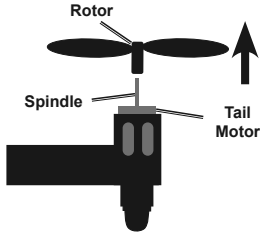


- Replace Rotor and Screw, tighten screws enough so that Rotor can move freely.

Note: The replacement Upper Rotor is marked as 'A1.' The replacement Lower Rotor is marked as 'B2.'

Tail

1. Gently pull up on Rotor until it comes off its Spindle.
2. Replace Rotor, making sure that Tail Motor is firmly seated in place.



Troubleshooting

Problem	Possible Causes	Likely Solutions
Helicopter won't work or moves slowly.	<ol style="list-style-type: none"> 1. Helicopter battery needs to be charged. 2. Remote Control needs new batteries. 3. Remote Control antenna not fully extended. 4. Radio Interference. 	<ol style="list-style-type: none"> 1. Charge Helicopter battery. 2. Replace Remote Control batteries. 3. Extend Remote Control antenna fully. 4. Move to another location.
Helicopter rotates left or right.	<ol style="list-style-type: none"> 1. Trim needs adjustment. 2. Potentiometer needs adjustment 	<ol style="list-style-type: none"> 1. Adjust Trim Controller in opposite direction of spin. 2. Have qualified technician adjust potentiometer.
Cannot control Helicopter.	<ol style="list-style-type: none"> 1. Wind too strong. 2. Helicopter out of range. 3. Main Rotors installed incorrectly. 	<ol style="list-style-type: none"> 1. Wait for wind to stop. 2. Only operate within range. 3. Install MainRotors correctly.



Follow all safety precautions whenever diagnosing or servicing the Helicopter.
Turn off Switches on Helicopter and Remote Control before service.

Parts List

Part	Description	Qty
1	Helicopter	1
2	Remote Control	1
3	Upper Rotor	1
4	Lower Rotor	1
5	Tail Rotor	1

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST IN THIS DOCUMENT AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Record Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 792363572934 when ordering parts.