

# RADIO CONTROLLED BIPLANE

## Model 94840

### ASSEMBLY & OPERATING INSTRUCTIONS



**Important: If damage is caused due to a crash; your warranty is void.**

Due to continuing improvement, actual product may differ slightly from product described herein.



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**For technical questions and replacement parts please call 1-800-444-3353.**

THANK YOU for choosing a **HARBOR FREIGHT TOOLS** product. For future reference, please complete the owner's record below:

**Model** \_\_\_\_\_ **Serial No.** \_\_\_\_\_ **Purchase Date** \_\_\_\_\_

SAVE THE RECEIPT, WARRANTY AND THESE INSTRUCTIONS. It is important that you read the entire manual to become familiar with the unit BEFORE you begin assembly.

### Specifications

Material:	Styrofoam wings, plastic frame, propellers and stand
Motors included:	Dual, rear mounted DC
Propellers:	2 rear facing; 2-1/2" Long
Wing Span:	Central: 15-3/8" W; Front: 6-1/2" W
Wing Width:	Central: 2-3/4"; Front: 1-5/8"
Power:	4 wrapped cells, 2 Ni-Mh battery packs
Charge Time:	3-5 minutes
Fly Time:	2-4 minutes
Overall Dimensions:	12-1/2" L X 15-1/2" W X 6-1/2" H
Frequency:	27 MHZ
Transmitter/Charger:	2-Channel PCM
Batteries Required:	(8) "AA" (not included)
Overall Length:	12-1/2"
Weight:	2.9 Ounces



*READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT!*

### Safety Warnings and Precautions

**WARNING:** When using product, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

#### **Read all instructions before using this product!**

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Keep work area well lit. Keep work area uncluttered and free of debris. Cluttered areas invite injury.
3. **Check for damaged parts.** Before using any product, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for any broken or damaged parts and any other conditions that may affect its operation. Replace or repair damaged or worn parts immediately.
4. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
5. **Always check hardware and assembled parts after assembling.** All connections should be tight and hardware tightened.
6. **Do not let children use the Biplane without adult supervision.** Failure to do so could result in personal injury and/or property damage.

7. **Store idle equipment.** When not in use always lock up the Biplane and keep it out of the reach of children.
8. **Dress properly.** Wear restrictive hair covering to contain long hair.
9. **Use eye protection.** Always wear ANSI-approved impact safety goggles when using and assembling this product.
10. **Maintain products with care.** Keep the Biplane in a dry location. Do not expose it to prolonged moisture.
11. **Use the right Biplane for the job.** Do not attempt to force a small Biplane to do the work of a larger Biplane. There are certain applications for which this Biplane was designed. Do not modify this Biplane and do not use this Biplane for a purpose for which it was not intended.
12. **Do not use or assemble the Biplane if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not assemble or use the Biplane.
13. **Do not pick up the Biplane while it is in motion.**
14. **Use only batteries of the type recommended.**
15. **Do not mix old and new batteries and remove batteries if the Biplane is not used for a long period of time.**
16. **NiCad batteries must be disposed of properly.** Do not incinerate. Batteries may burst, causing personal injury and/or property damage. Contact your local hazardous waste disposal authority for proper disposal.
17. **Do not recharge non-rechargeable batteries.**
18. **Make certain to use the Biplane in a large area free from interference from trees, electrical power lines and other obstacles.**
19. **Never fly near buildings, cars, busy streets or at other people or animals.**
20. **Do not fly the Biplane if wind speeds are above 10 MPH.**
21. **Do not allow children to use glue without adult supervision.** Make certain that all glue is stored out of reach of children and animals.
22. **If two airplanes with the same frequency are used (both with the same numbers on the transmitter and/or receiver) they must be at least 1,640 feet away from one another.**
23. **Before flying, perform a distance check to be certain that you can maintain radio control at least 25 feet from the transmitter to the Biplane with the antenna collapsed.**
24. **Do not trim the Biplane's antenna.** Trimming the antenna will affect radio range.

**Warning: People with pacemakers should consult their physician(s) before using this product.** Electromagnetic fields in close proximity to a heart pacemaker could cause interference to/or failure of the pacemaker.

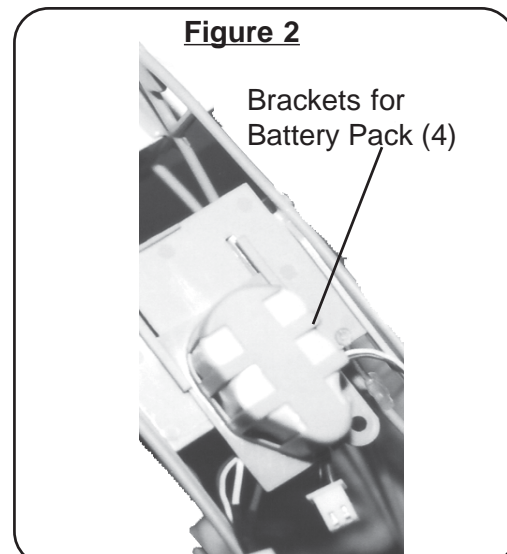
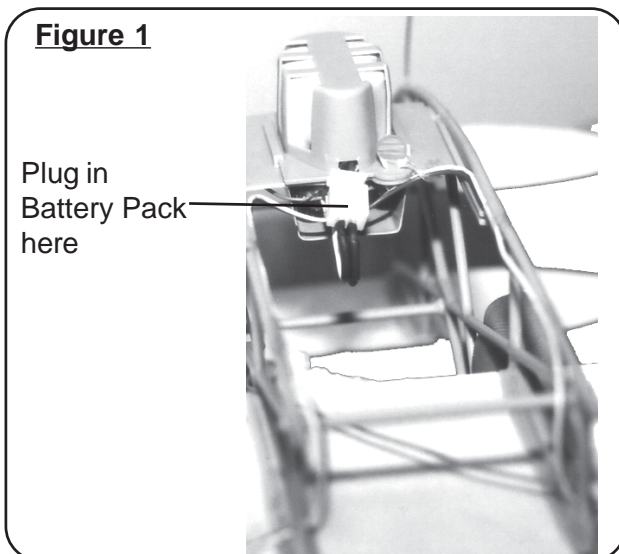
**WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

### Assembly

Your Biplane will require some assembly. It is important that you read the entire manual to become familiar with the product BEFORE you assemble and use the Biplane. Be sure that you have all parts described in the Parts List located on page 7 of this manual.

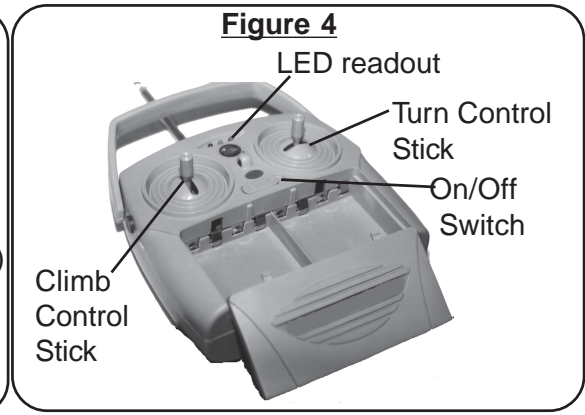
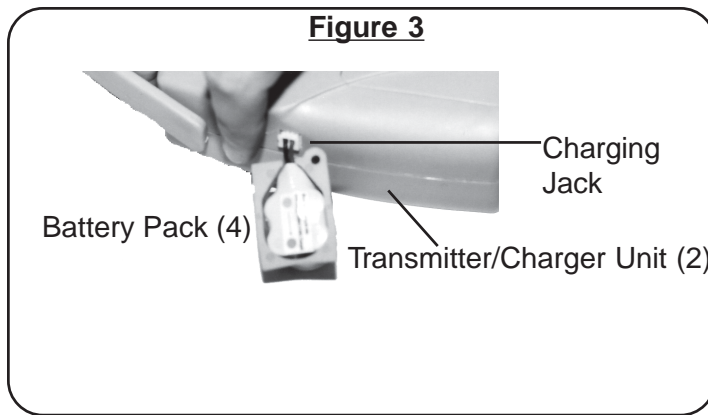
#### Attaching the Battery Pack

1. **Turn off the power before connecting the Battery Pack to the Biplane.**
2. Plug the Battery Pack (4) into the outlet located on the Biplane as seen in Figure 1.
3. Please note: The Battery Pack is installed from the rear by sliding it forward until it rests against the lip/stop on the airframe, as seen in Figure 2. Once installed, the Battery Pack should be locked into place by inserting the the rubber pin through the holes in the battery tray and airframe.



#### Charging the Battery Pack

1. The Battery Pack (4) is charged from the Transmitter/Charger Unit (2). Plug the Battery Pack (4) into the Charging jack, located at the side of the Transmitter/Charger Unit (2)-see Figure 3.
2. Hold down the red button until the battery indicator turns orange.
3. A charge time of three to five minutes is usually sufficient.
4. During charging the Battery Pack will get warm. Make certain it does not get overly hot.
5. The Battery Pack must have three to four initial charges of a longer duration before they obtain a full run time of 4 to 6 minutes.



### Operating the Radio Transmitter

1. The Transmitter uses 8 “AA” batteries (not included). Remove the Battery Compartment Cover (12)-see Figure 4. Insert the batteries into the Battery Compartment making certain to line up the batteries with the polarity indicated in the Battery Compartment. Press the Battery Compartment Cover (12) back into place.
2. The Radio Transmitter (2) transmits a signal to the airplane’s receiver.
3. The Radio Transmitter (2) has a LED display that will light up when the Transmitter is on. The LED readout will indicate the strength of the battery charge:  
**Green** indicates the batteries are at full capacity  
**Yellow** indicates the batteries are at half capacity  
**Red** indicates the batteries need replacing.
4. The Radio Transmitter/Charger is turned ON and OFF with the On/Off Switch located midway between the Control Sticks-see Figure 4.
5. The Radio Transmitter/Charger has two Control Sticks.

The Control Stick located on the left moves vertically and controls the Climb. Push the Climb Control Stick forward to turn on the twin motors and cause the Biplane to climb. Pull back on the Climb Control Stick to slow down the twin motors and cause the Biplane to lower altitude-see Figure 4.

The Control Stick located on the right moves horizontally and controls the direction of the Biplane. Pushing the Turn Control Stick right or left causes the Biplane to turn right or left.

6. Attach the Wind Ribbon to the Radio Transmitter Antenna.

### Installing Propellers

1. Make certain Radio Transmitter is OFF and that the Battery Pack is unplugged.
2. The Biplane comes with spare Propellers. If necessary, remove the Nut holding each Propeller in place. Remove the Propeller. Install new Propeller.

## Operating and Flying the Biplane

### **Preparing for Take-Off**

1. Choose a day when the wind is light. The ribbon attached to the Radio Transmitter antenna should be blowing slightly (not greater than 30 degrees) and not be blowing straight out. Find a wide-open field.
2. **Turn ON the Radio Transmitter.**
3. Face the Biplane into the wind. Move the left hand control stick all the way forward so both motors are running at full power.

**Note: It is recommended that two people work together to hand launch the Biplane. One should control the Remote Control and one will launch the Biplane.**

4. With the Biplane tilted at about 10 degrees, propel and release it into the wind.
5. Let the Biplane climb to and fly at about 50 to 300 feet high. By moving the Climb and Turn control sticks you can change speed and direction.
6. To steer the Biplane, move the right Turn control stick to the left to steer to the left, and right to steer it right. Move the Turn Control Stick slightly to adjust for minor changes in direction and tilt of the Biplane.
7. Note that letting go of the control sticks will automatically bring them to a center position. This will cause the Biplane to resume normal flight.
8. Normal flight time for one full charge is about four to six minutes. When the battery begins to reach the end of its power, the red LED light on the Radio Transmitter will light up, indicating low transmitter power. When this occurs, IMMEDIATELY LAND THE BIPLANE.
9. To bring in the Biplane for landing, glide the Biplane down against the wind. Move the left Climb control stick toward the center to slow the Propellers. Move the right Turn control stick to adjust for direction. Continue to decrease the Propeller speed and direction until you bring them to a stop and land the Biplane.
10. Turn OFF the Radio Transmitter.

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### Inspection, Maintenance and Cleaning

1. All inspections, maintenance, and cleaning should be performed only by an adult.
2. Always make certain the Biplane is unplugged and that the Transmitter is OFF before performing any inspection, adjustments, maintenance or cleaning.
3. Never use solvents or liquid cleaners to clean the Biplane. Use of solvents or liquid cleaners will damage the styrofoam. Use only a dry, soft cloth for cleaning.

4. Before each use check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged housing, damaged wiring, loose wheels and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use the Biplane if it is damaged.**
5. Do not leave the Biplane outside as prolonged exposure to the elements will damage the exterior of the Biplane.

**Parts List**

<b>Part #</b>	<b>Description</b>	<b>Quantity</b>	<b>Part #</b>	<b>Description</b>	<b>Quantity</b>
1	Biplane Body	1	6	Spare Propeller	2
2	Radio Transmitter/ Charger Unit	1	7	Vertical Stabilizer	3
3	Antenna	1	8	Display Stand	1
4	Battery Pack	2	9	Horizontal Stabilizer	1
5	Wind Gauge Flag	1	10	Battery Cover	1

**PLEASE READ THE FOLLOWING CAREFULLY**

*THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR 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.*

Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.



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