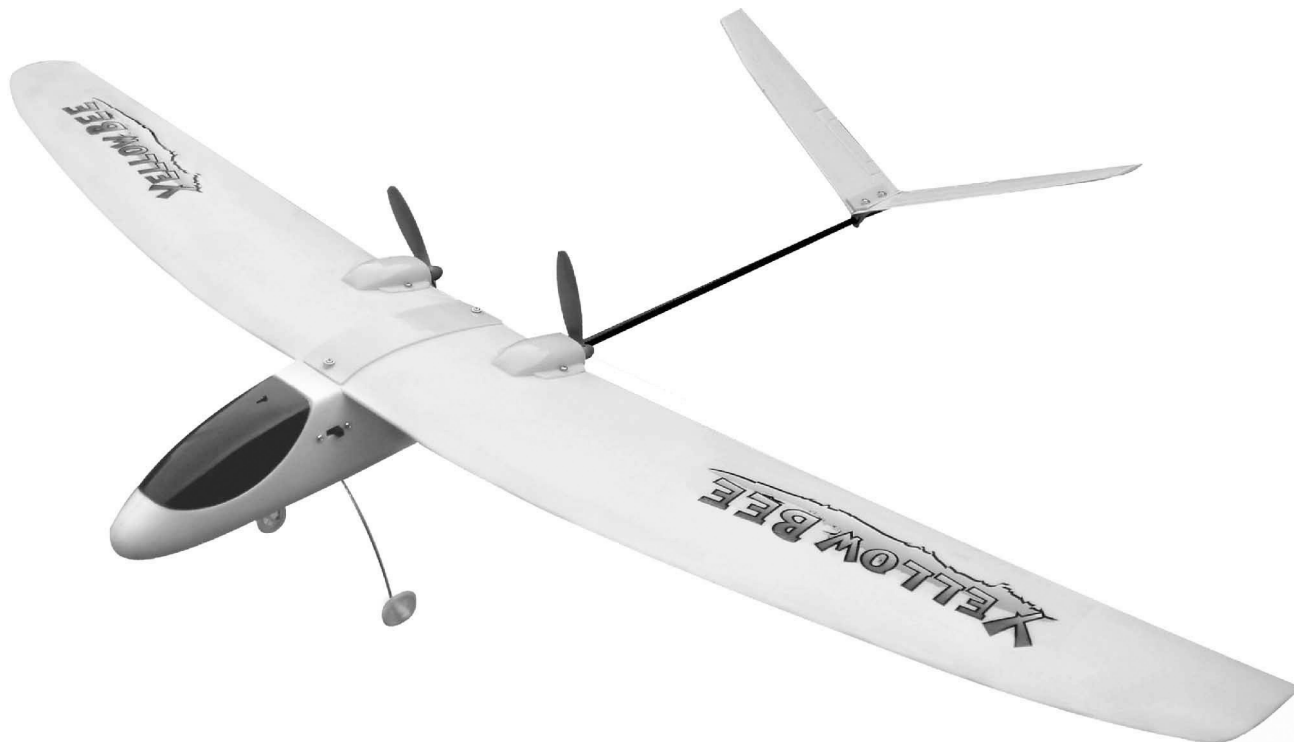


AIRPLANE WITH RADIO CONTROLLER

Model 92304

ASSEMBLY & OPERATING INSTRUCTIONS



IMPORTANT:

If damage is caused due to a crash, your warranty is void.

Visit our website at: <http://www.harborfreight.com>



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

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For technical questions or 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.

Technical Specifications

| | |
|---|--|
| Overall Dimensions: | 23" L x 31-1/4" W x 5" H (Tail/Wing Tips) |
| Flight Time: | Approximately 20 minutes |
| Flight Range: | 1, 640 Feet |
| Wing Dimensions: | Front = 31-1/4" span x 4" Wide |
| Tail Wing: | 12" Span x 2-1/4" Wide |
| Fuselage Dimensions: | 8-1/8" L x 1-1/2" W x 2-1/4" H |
| Landing Gear: | 2-1/2" H x 4-1/4" W |
| Wheels: | 3/4" diameter x 1/8" Wide |
| Propellers: | 4" L x 1/2" W (30 degree pitch); Pusher type with 7/16" L x 7/16" diameter Nose Cone. |
| Power Supply: | Airplane- 4 cell 4.8V Ni-Mh rechargeable batteries Transmitter requires (8) "AA" batteries (not included) |
| Charger: | AC/DC |
| Adapter: | Input: 120 V AC; Output: 6.0V DC |
| Transmitter Frequency: | 27 MHz |
| Weight: | 1.7 Lbs. |
| The "V" shaped elevator acts as both rudder and elevator. | |



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. **Store idle equipment.** When not in use, the Airplane must be stored in a dry location to inhibit damage from moisture and salt air.
2. **Check for damaged parts.** Before using the Airplane, 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. Do not use the Airplane if any part is damaged or broken.
3. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
4. **For ages 16 and over. Do not let children use the Airplane without adult supervision.** Failure to do so could result in personal injury and/or property damage.

5. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
6. **Always check hardware and assembled parts after assembling.** All connections should be tight and hardware tightened.
7. **Dress properly.** Wear restrictive hair covering to contain long hair.
8. **Use eye protection.** Always wear ANSI approved impact safety goggles when assembling and using this product.
9. **Use the right Airplane and components.** There are certain applications for which this Airplane was designed. Do not modify this Airplane and do not use this Airplane for a purpose for which it was not intended.
10. **Do not use or assemble the Airplane 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 Airplane.
11. **Do not pick up the Airplane while it is in motion.**
12. **Use only Batteries of the type recommended.**
13. **Do not mix old and new batteries.**
14. **Remove batteries if the Airplane is not used for a long period of time.**
15. **Make certain to use the Airplane in a large area free from interference from trees, electrical power lines and other obstacles. 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 1640 feet away from one another.**
16. **Never fly near buildings, cars or busy streets.**
17. **Do not fly the Airplane at or near other people or animals.**
18. **Keep this product away from small children; small parts can be easily swallowed.**

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.

Unpacking

When unpacking your Airplane with Radio Controller, check to make sure the parts listed on the next page are included. If any parts are missing or broken, please call **HARBOR FREIGHT TOOLS** at **1-800-444-3353**.

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.

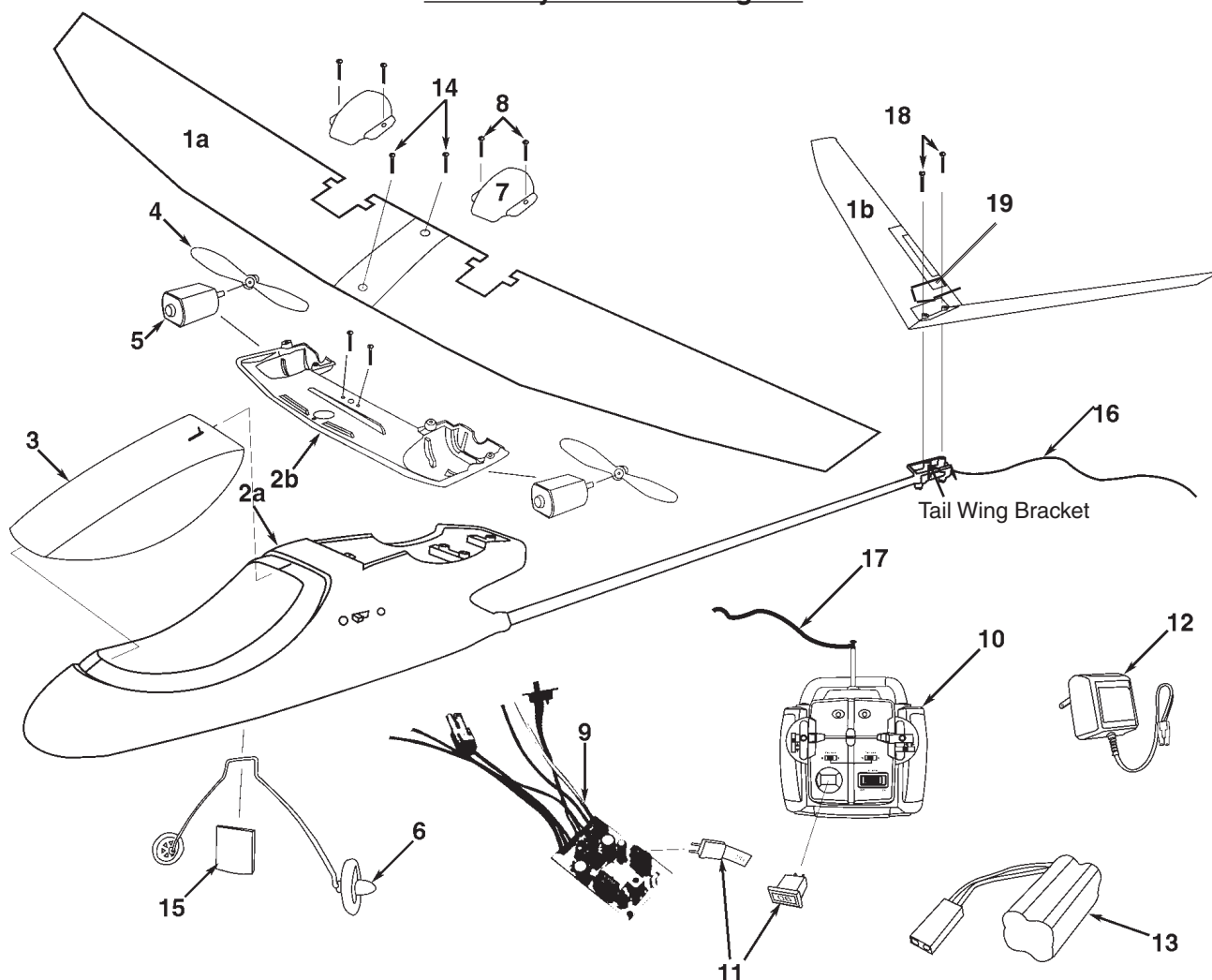
Assembly/ Operation

Your Airplane with Radio Controller will require complete assembly. It is important that you read the entire manual to become familiar with the product BEFORE you use the Airplane. Before assembling the Airplane be sure that you have all parts described in the Parts List and Assembly Diagram, below.

Parts List

| Part | Description | Qty | Part | Description | Qty | Part | Description | Qty |
|------|----------------------------------|-----|------|--|-----|------|--|-----|
| 1a | Main Wing | 1 | 6 | Landing Gear | 1 | 13 | Rechargeable Battery Pack | 1 |
| 1b | Tail Wing | 1 | 7 | Motor Housing* | 2 | 14 | Wing Mount Screws | 2 |
| 2a | Fuselage | 1 | 8 | Motor Housing Screw | 4 | 15 | Landing Gear Brace | 1 |
| 2b | Lower Motor Housing* | 1 | 9 | Receiver | 1 | 16 | Wire Antenna | 1 |
| 3 | Canopy | 1 | 10 | Remote Control | 1 | 17 | Ribbon | 1 |
| 4 | Propeller (2 spares included) | 4 | 11 | Crystal Set (Transmitter and Receiver) | 1 | 18 | Tail Wing Screws | 2 |
| 5 | Motor | 2 | 12 | Charger | 1 | A | *Motor Housing Set (Contains Part 2b & Part 7x2) | - |
| | | | | | | 19 | Tail Wing Support Brace | 1 |

Assembly and Parts Diagram



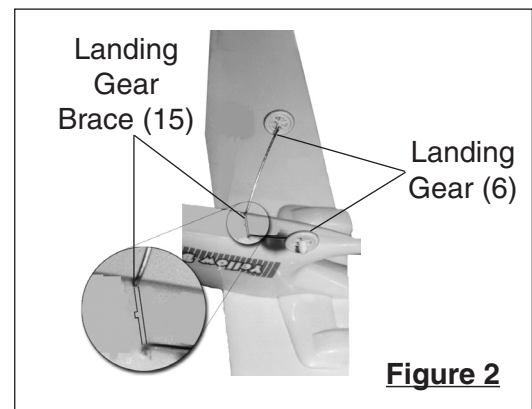
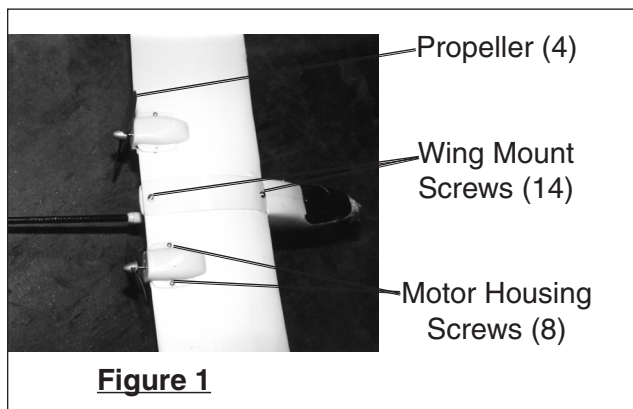
NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

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Set out all parts on a clear and level surface prior to assembly.

Wing, Motor and Propeller Assembly

1. Remove the Screws (8) on the Motor Housings (7). Remove the Motor Housings.
2. Attach the Main Wing (1a) to the Fuselage (2a) and thread in Screws (14) - see Figure 1.
3. Insert Motor (5) into each Motor Housing (7). Put the Motor Housing back together again and replace the Screws (8). Make certain that the assembly is secured and that the Motors (5) are tightly in place. Make sure that wiring is inside fuselage and does not get pinched inside any connections or interfere with the proper fit of any parts.
4. Locate both Propellers (4). Place each Propeller (4) onto the shaft of each Motor (5).
5. Set the Tail Wing (1b) into the Tail Wing Bracket (refer to page 4). Place the Tail Wing Support Brace (19) on top of the Tail Wing (1b) then insert two Screws (18) through the Tail Wing Support Brace (19) and the Tail Wing (1b) then screw them in.



Landing Gear Assembly

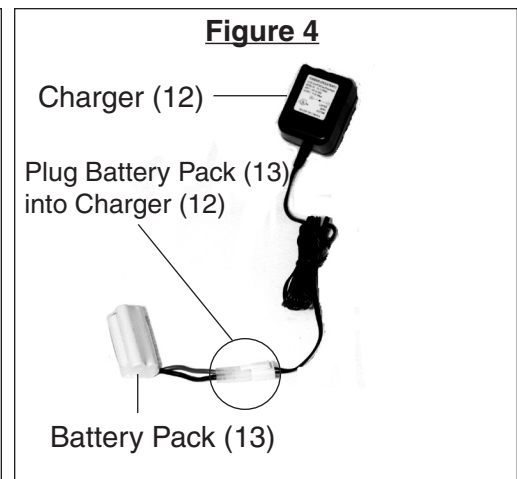
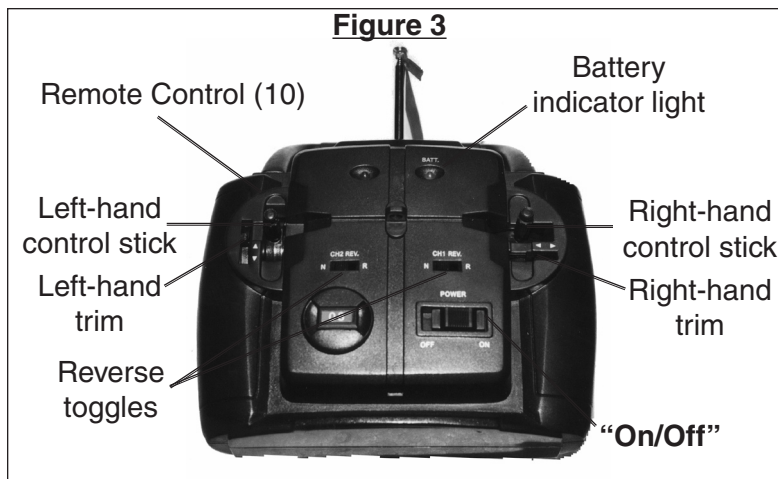
1. Push Landing Gear (6) into the slot located under the front of the Fuselage (2a) - see Figure 2.
2. Insert the Landing Gear Brace (15) into the Fuselage (2a) at the center of the Landing Gear (6). The Brace (15) has a tab that fits only one way into the Fuselage - see Figure 2, inset.

IMPORTANT:
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Battery Charging

1. Plug the Battery Pack (13) into the Charger (12). Plug the Charger (12) into a 120V electrical outlet. Allow up to three hours for the initial charge. Do not leave unattended when charging. Disconnect the Battery Pack (13) from the Charger (12) when the charge is complete-see Figure 4. The batteries will become warm when they are ready for use. If you feel them becoming overly hot, immediately disconnect the Charger (12).
2. Make certain that the "ON/OFF" Switch for the Airplane is in the "OFF" position. Plug the Battery Pack (13) into the socket located underneath the Canopy (3). Insert the battery Pack (13) into the Fuselage (2a) and close the Canopy (3).
3. Remove cover and insert eight "AA" batteries (not included) into the Remote Control (10). Switch "ON" the "ON/ OFF" Switch on the Remote Control (10).

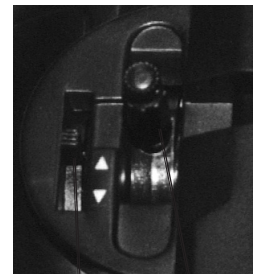
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Setting up The Controls

1. Tie the Ribbon (17) to the end of the antenna, as shown in Figure 3.
2. Make certain that your hands are clear of the Propellers and any moving parts. Turn on the switch on the Airplane.
3. If both trims are adjusted properly, the Propellers (4) should be still when the Airplane is initially turned "ON".
4. Each control stick has a Trim Adjustment next to it, as shown to the right. This is used to fine-tune the neutral position of the control.
5. Pulling downward on the left hand control stick (see Figure 3) will cause the Propellers (4) to spin faster. Returning the left hand control stick to the center position should stop both Propellers (4) from spinning if both trims are adjusted correctly.
6. If neither of the Propellers stop spinning when the left hand control stick is in the center position, you will have to adjust the left hand trim slowly, just until one of the propellers stop. The propellers should start spinning when the control stick is moved even slightly, if not then the left hand trim is adjusted too far.
7. The right hand control stick controls the left and right Propellers (4). Move the control stick right to speed up the left Propeller (4), turning right; and left to speed up the right Propeller (4), turning left. When the control stick is in the center position, neither Propeller (4) should be spinning.
8. If one of the propellers still spins while both sticks are released, then adjust the right hand trim until both propellers are stationary. If the left hand trim was not adjusted properly, the propellers may still spin and steps 5-7 should be repeated until the controls operate the plane reliably.
9. Practice these steps until you are comfortable activating the Propellers (4).
10. To steer the Airplane, move the right hand control stick to the left to steer to the left, and right to steer it right. Move the right hand control stick slightly to adjust for minor changes in direction and tilt of the Airplane.
11. The reverse toggles can be used to reverse the operation of each of the control sticks. Each reverse toggle controls the Control Stick nearest it. There are two settings: "N"=Normal Operation; "R"=Reversed Controls (left=right, forward=backward, and vice-versa).

**Left Hand
(Throttle) Controls**



**Trim Control
Adjustment Stick**

Operating and Flying the Airplane

1. Choose a day when the wind is light. The Ribbon (17) attached to the Remote Control antenna should be blowing slightly (not greater than 30 degrees) and not be blowing straight out. Find a wide-open field.
2. Face the Airplane into the wind. Move the left hand control stick all the way down so that both motors are running at full power.

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

3. With the Airplane tilted at about 10 degrees, propel and release it into the wind.
4. Let the Airplane climb to and fly at about 50 to 300 feet high. By moving the right and left control sticks you can change speed and direction.
5. If the Airplane rises too slowly, or dives, it indicates that the Nose is too tight. Adjust for this by tightening the front Tail Wing Screw and loosening the rear Tail Wing Screw.
6. To steer the Airplane, move the right transmitter control stick to the left to steer to the left, and right to steer it right. Move the right control stick slightly to adjust for minor changes in direction and tilt of the Airplane.
7. If the Airplane continues to fly to far right or to far left, correct for it by moving the right transmitter control the opposite direction. If flying left, move the control right. If flying right, move the control left.
If adjusting the right control does not work, land the Airplane and adjust the Rudder on the side it is leaning toward. If leaning left, adjust the left Rudder up slightly. If tilting right, move the right Rudder up slightly.
8. Note that letting go of the control sticks will automatically bring them to a center position. This will cause the Airplane to glide, unpowered.
9. Normal flight time for one full charge is about twenty (20) minutes. If the plane appears to be losing power or climbs with difficulty, the batteries are low. Land the plane.
10. When the remote control's battery begins to reach the end of its power, the red indicator light will blink or it will make a warning noise. When this occurs, **IMMEDIATELY LAND THE AIRPLANE. If the remote control's battery is allowed to die completely, the plane will be uncontrolled and may cause damage to property or SEVERE PERSONAL INJURY.**
11. To bring in the Airplane for landing, glide the Airplane down against the wind. Move the left control stick toward the center to slow the Propellers (4). Move the right control stick to adjust for direction. Continue to decrease the Propeller (4) speed and direction until you bring them to a stop and land the Airplane. If airplane descends too quickly, press slightly harder on the left control stick to compensate.