



J-3 CUB 370 RTF

Ready-To-Fly Electric Radio-Controlled Airplane

OPERATING INSTRUCTIONS



Includes 27Mhz FM Radio Control System and 600mAh NiMH Flight Battery!

The Phase 3 J-3 Cub 370 RTF is distributed exclusively in North America by Global Hobby Distributors and in the U.K. by Ripmax

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SPECIFICATIONS AND FEATURES:

- **Wing Span:** 36.5 Inches (93cm)
 - **Wing Area:** 200 Square Inches (12.9dm²)
 - **Length:** 25 Inches (63.5cm)
 - **Weight RTF:** 18 Ounces (510gr)
 - **Wing Loading:** 13 Ounces Per Square Foot (39.5gr/dm²)
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- Molded from Durable Plastic and Foam
 - Preinstalled 4Ch FM 27Mhz Radio Control System
 - Three-Channel Control - Elevator, Rudder and Throttle
 - Rechargeable NiMH Flight Battery
 - AC Charger and 12V DC Fast-Charger
 - Direct Drive 370 Size Motor with Propeller and Safety Spinner
 - Easy-to-Access Flight Battery

◆**IMPORTANT**◆ Before beginning assembly, please read and understand the warnings listed on the next page. Failure to read and understand these warnings could lead to bodily harm and/or injury. The Phase 3 J-3 Cub 370 RTF is not intended for those under 14 years of age, unless closely supervised by an adult.

Kit Product Number: 107100

FOR YOUR SAFETY - PLEASE READ AND UNDERSTAND THESE WARNINGS!

GENERAL WARNINGS

- Do not fly your airplane if another model is on the same frequency as you. The frequency number is printed on the front of the radio transmitter and on the receiver.
- Never fly your airplane from the street or at night. Always fly in an open area free of obstructions.
- When flying, make sure any spectators are behind you.
- Always be conscious of the spinning propeller. Be careful not to allow loose clothing to be drawn into the propeller.
- Because your airplane is operated by radio control, it is important to make sure you are always using fresh and/or fully charged batteries. Never allow the batteries to run low or you could lose control of the airplane.
- Never attempt to disassemble any of the airplane's components, especially the transmitter and flight battery.
- Do not allow any of the components to get wet or electrical damage may occur.
- You should complete a successful range check of your radio equipment prior to each new day of flying, or prior to the first flight of a new or repaired airplane.
- If your airplane gets dirty, do not use any solvents to clean it. Solvents will damage the foam and plastic. Use a dry cloth to clean any dirt from the outside of the airplane.

FLIGHT BATTERY WARNINGS

- Never overcharge the flight battery or damage to the flight battery may occur.
- To prevent the flight battery from overheating during the charging process, allow the flight battery to completely cool before recharging it.
- Always completely discharge the flight battery by running the motor until it stops before recharging the flight battery.
- Never attempt to disassemble the flight battery or dispose of it in fire. The flight battery should be recycled at an authorized recycling center.

RADIO SYSTEM WARNINGS

- Always turn on the transmitter before turning on the airplane and always turn off the airplane before turning off the transmitter.
- Always unplug the flight battery when not flying the airplane.
- Never cut the receiver antenna shorter or you could lose control of the airplane during flight.
- When flying the airplane, make sure the transmitter antenna is completely extended.
- Never attempt to disassemble or modify any of the radio system components.

CUSTOMER SERVICE INFORMATION

If you should have trouble with any of the steps listed in these operating instructions, we have provided a troubleshooting guide on page # 22. The troubleshooting guide is provided to help you find a quick and immediate resolution to any number of problems that might occur. If you cannot solve a problem using the troubleshooting guide, or if you have any other questions or concerns, please contact us using the information below:

In North America:



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18480 Bandilier Circle
Fountain Valley, CA 92708
USA

Phone: (714) 963-0329

Fax: (714) 964-6236

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Green Street, Enfield
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Email: mail@ripmax.com

OUR GUARANTEE

Phase 3 guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This does not cover any component parts damaged by use, misuse or modification. **In no case shall Phase 3's liability exceed the original cost of the purchased kit.**

In that Phase 3 has no control over the final assembly or material used for final assembly, no liability shall be assumed for any damage resulting from the use by the user of the final user-assembled product. By the act of using the final user-assembled product, the user accepts all resulting liability.

INTRODUCTION

Thank you for purchasing the Phase 3 J-3 Cub 370 RTF. Before completing the final assembly of your new airplane, please carefully read through these operating instructions in their entirety. Doing so will ensure your success the first time around!

- Molded from Durable Plastic and Foam
- Preinstalled 4Ch FM 27Mhz Radio Control System
- Three-Channel Control - Elevator, Rudder and Throttle
- Rechargeable NiMH Flight Battery
- AC Charger and 12V DC Fast-Charger
- Direct Drive 370 Size Motor with Propeller and Safety Spinner
- Easy-to-Access Flight Battery



Phase 3 is proud to present the J-3 Cub. This trainer aircraft is modeled after aircraft from the Golden Age of Aviation and made for new flyers to learn and master real radio control flight. You'll find your new Phase 3 J-3 Cub gentle in the air and good looking in the Hangar. And most important, you'll be flying with confidence in no time. Get a Cub, Get Flying, and Enjoy Model Aviation.

PARTS IDENTIFICATION

Before beginning assembly, remove the different parts from the box and use the photos below to verify that your kit contains all of the correct parts. If your kit is missing a part or if a part appears to be damaged, please contact us immediately, using the Customer Service Information on page # 2.



Fuselage Assembly



Transmitter and Flag



Wing Assembly

NOT SHOWN: SMALL WOOD SCREWS (12)



AC Charger



Horizontal & Vertical Tails



Landing Gear



Flight Battery



Propeller and Spinner



Wing Struts and Clips (4)



Wing Brace and Bands (2)



DC Fast-Charger

RECOMMENDED ITEMS

This section lists the items you will need to fly your new airplane. As you can see, there's not much to it!

- 8 Pack AA Alkaline batteries for the transmitter
- Small Phillips Head Screwdriver and Small Adjustable Wrench

UPGRADE TIPS

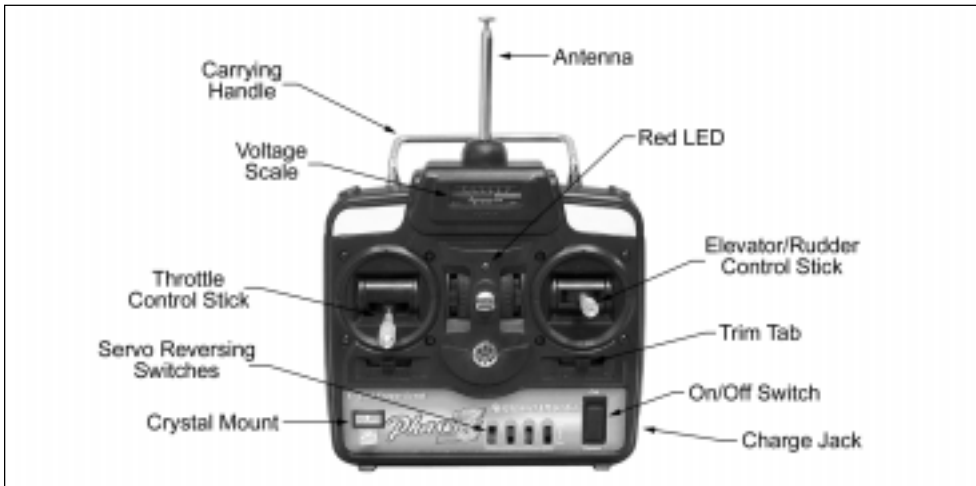
Your J-3 Cub 370 RTF includes a 6 cell Nickel Metal-Hydride flight battery. If you want to, you can purchase a second flight battery (P/N 109015) so that you have two. That way, you can take two fully-charged batteries with you to fly. That means twice as much fun! See your local Phase 3 dealer for purchasing information.

Upgrading the transmitter to use rechargeable NiCD cells is easy. All you need to do is purchase 8 AA rechargeable NiCD cells and a 110V AC Tx overnight charger - both available at your local hobby dealer. This will save you money in the long run, since the NiCD batteries can be recharged. This means no more buying AA Alkaline batteries!



BECOMING FAMILIAR WITH YOUR J-3 CUB 370 RTF

Each airplane transmitter comes with a sticker on the crystal mount showing which frequency in the 27Mhz band that the radio control system operates on. The 27Mhz band is shared between model airplanes, cars and boats, so check the frequency if others are in the area before turning on the radio control system. No two models can operate near each other if they are on the same frequency.



Channel #	Frequency
01	16.995
02	27.045
03	27.095
04	27.145
05	27.195
06	27.255

Antenna: Transmits the signal from the transmitter to the receiver inside the airplane.

Crystal Mount: This is where the transmitter's crystal is located. The radio's frequency is printed on the crystal mount.

Elevator/Rudder Control Stick: This stick can move both right and left, and up and down at the same time. The stick moves the airplane's elevator and rudder which make the airplane climb, descend, turn right and turn left.

On/Off Switch: Turns the transmitter on and off.

Red LED: This LED glows red when the transmitter is turned on.

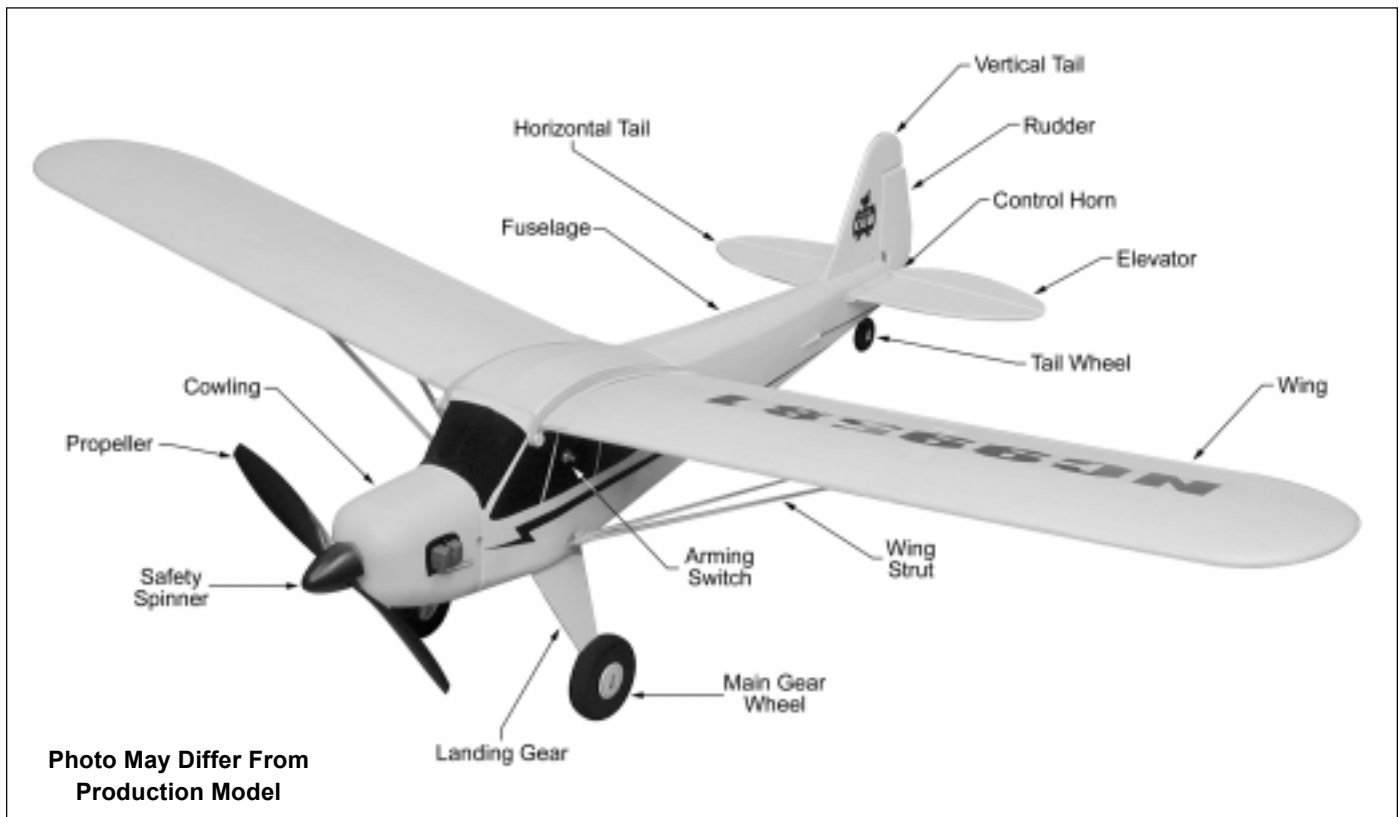
Servo Reversing Switches: These switches allow you to electronically change the direction the servos move.

Throttle Control Stick: This stick can move both right and left, and up and down at the same time, and is used to apply power to the motor. The stick is proportional, meaning that motor power can be applied gradually from off to full power. In this airplane, there is no right or left function for the throttle control stick.

Trim Tab: Used to electronically make minor trim adjustments to the control surfaces.

Voltage Scale: When the transmitter is turned on, the voltage scale displays the status of the transmitter batteries.

BECOMING FAMILIAR WITH YOUR J-3 CUB 370 RTF, CONTINUED....



Arming Switch: This is a safety device. When the flight battery is plugged in, the motor can be turned on only after pressing this switch once.

Control Horn: A plastic piece that is secured to the control surfaces. The pushrod wire from the servo inside the airplane attaches to the control horn, so the control surface can be moved.

Fuselage: The main body of the airplane. All of the main airplane assemblies are attached to the fuselage.

Horizontal Tail: Provides stability for the airplane during level flight.

Landing Gear: Comprised of a length of wire, two wheels and two strut covers, the landing gear supports the airplane while on the ground. The landing gear allows you to take off and land from hard surfaces.

Propeller: The propeller is attached to the front of the motor. When spinning, the propeller creates forward thrust which pulls the airplane forward.

Vertical Tail: Provides stability for the airplane during turns.

Wing: The wing has a special airfoil shape and provides the main source of lift for the airplane.

LOCATING THE CENTER OF GRAVITY

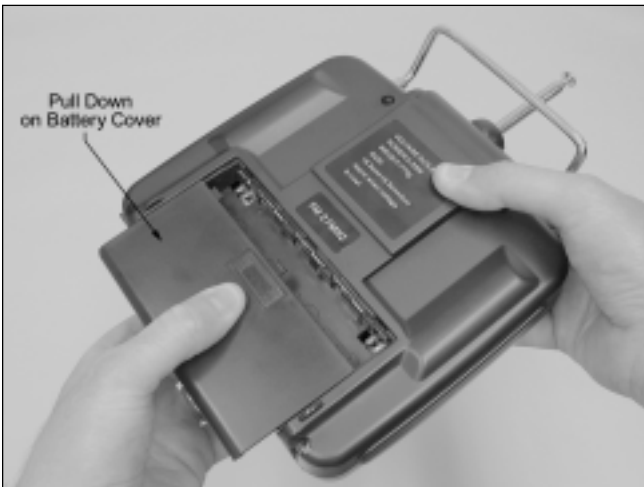
The airplane is designed to balance properly directly out of the box when using the included flight battery. You may wish to double-check the balance of the airplane, though, before flying it for the first time or after any repairs are made.

The J-3 Cub 370 RTF's Center of Gravity (Balance Point) is located 1-3/8" behind the leading edge of the wing, measured at the fuselage sides. The airplane should be balanced right side up with the flight battery and the wing struts installed.

WARNING The flight battery included with your airplane comes from the factory partially charged. **DO NOT charge the flight battery until after testing the motor.** This will ensure that the flight battery is run down completely before recharging it. This is important to ensure that the flight battery receives a full charge and is cycled before your first flight.

ASSEMBLING YOUR J-3 CUB 370 RTF

STEP 1: INSTALLING THE TRANSMITTER BATTERIES



- ❑ Carefully remove the battery cover from the back of the transmitter by pulling down on it with one hand while holding the transmitter with your other hand.

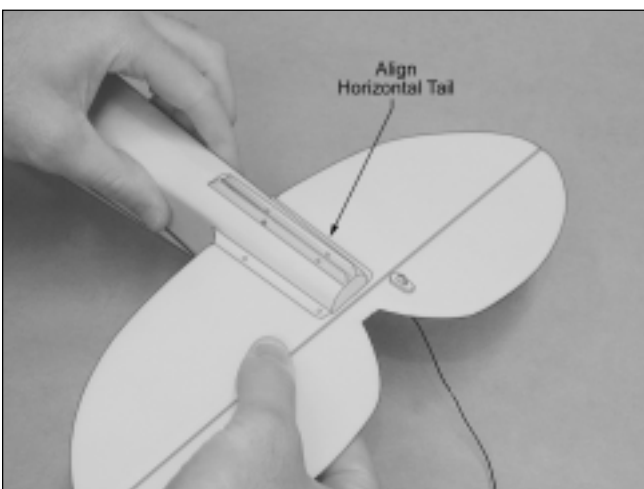


- ❑ Install 8 fresh AA Alkaline batteries, being careful to make sure that the polarity is correct for each battery.

PRO TIP If you use rechargeable AA NiCD cells, double-check to make sure that they are fully charged before installing them into the transmitter. **Never attempt to charge or recharge Alkaline cells.**

- ❑ After double-checking that the batteries are installed correctly, reinstall the battery cover, making sure it's firmly seated into place.

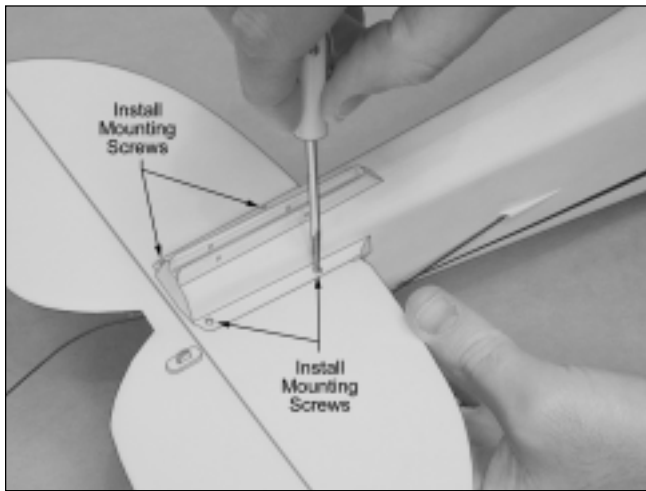
STEP 2: INSTALLING THE HORIZONTAL TAIL



- ❑ Carefully slide the horizontal tail into the slot in the back of the fuselage. When aligned properly, the horizontal tail should be pushed forward all the way and the outside edges of the strips of plastic tape should be centered with the outside edges of the fuselage, on both the top and the bottom.

◆**IMPORTANT**◆ Make sure that when you install the horizontal tail that the plastic control horn is toward the bottom of the fuselage.

◆**IMPORTANT**◆ Before securing the horizontal tail into place in the next procedure, make sure that the receiver antenna exits the back of the fuselage **below** the horizontal tail. It's important that the receiver antenna not be pinched between the fuselage and the horizontal tail.



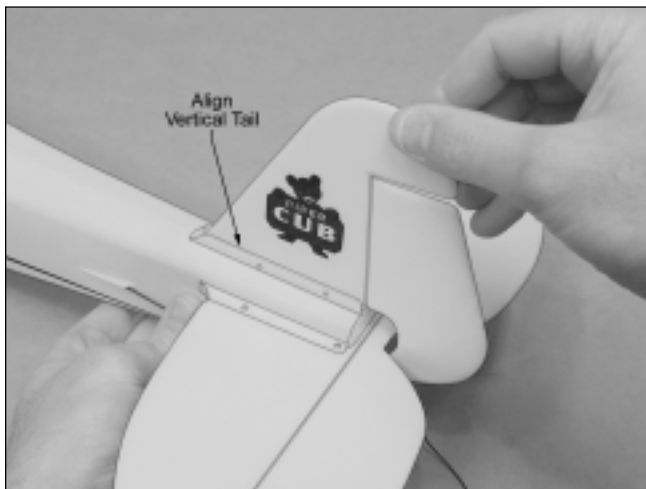
 X 8

□ While holding the horizontal tail in place and aligned, secure it to the fuselage by threading eight small screws through the predrilled holes in the fuselage and into the plastic tape on the horizontal tail.

◆ **IMPORTANT** ◆ Four screws should be installed on the top and four on the bottom. Tighten the screws gently. Overtightening them can strip the plastic tape.

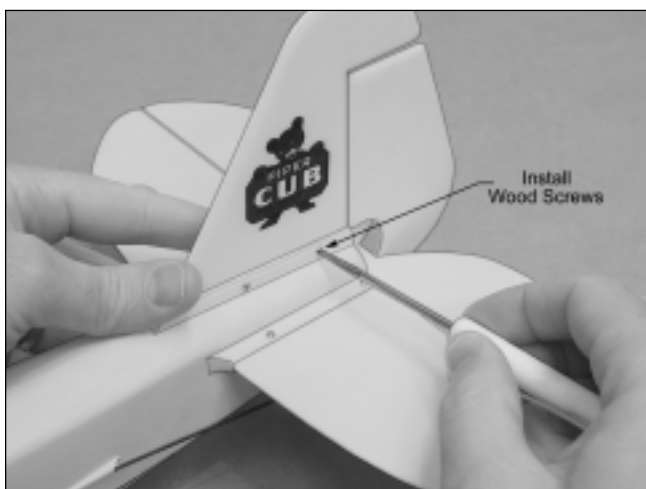
PRO TIP If you have a problem threading the screws into the plastic tape, carefully use a push-pin to make a pilot hole in the plastic tape for each of the screws.

STEP 3: INSTALLING THE VERTICAL TAIL



□ Carefully slide the front portion of the vertical tail down into the mounting slot in the fuselage.

□ Push the vertical tail down in position. When aligned properly, the tab in the base of the vertical tail should fit into the notch in the middle of the horizontal tail, and the vertical tail should be pushed down firmly against the top of the horizontal tail.



 X 4

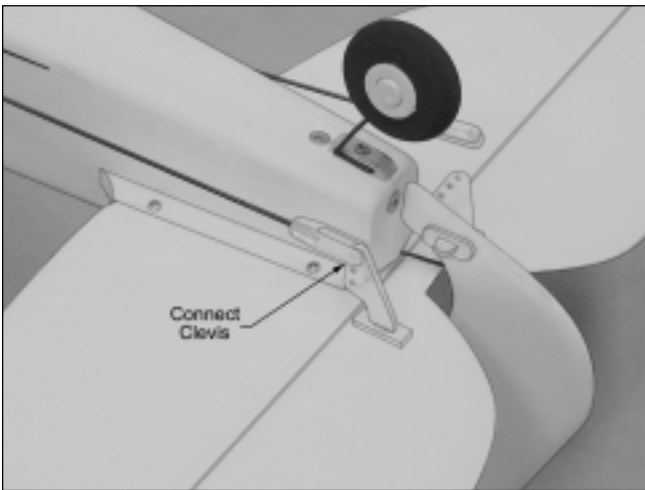
□ While holding the vertical tail in place and aligned, secure it to the fuselage by threading four small screws through the predrilled holes in the fuselage and into the plastic tape.

◆ **IMPORTANT** ◆ Two screws should be installed on each side. Tighten the screws gently. Overtightening them can strip the plastic tape.

PRO TIP If you have a problem threading the screws into the plastic tape, carefully use a push-pin to make a pilot hole in the plastic tape for each of the screws.

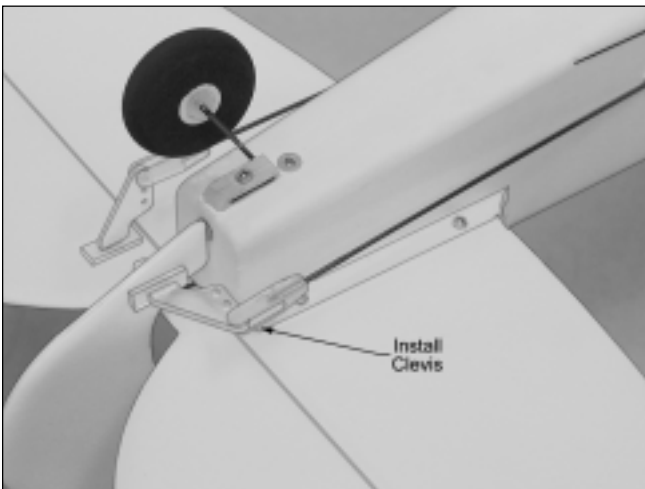
STEP 4: CONNECTING THE PUSHROD WIRES

◆**IMPORTANT**◆ When you snap the plastic clevises into the plastic control horns in the next two procedures, the elevator and rudder (control surfaces on the back of the horizontal tail and the vertical tail) might not be centered. That's okay for now. We'll center them by adjusting the clevises when we test the radio system later.



- Carefully snap the plastic clevis on the pushrod wire into the **outermost hole** in the elevator control horn.

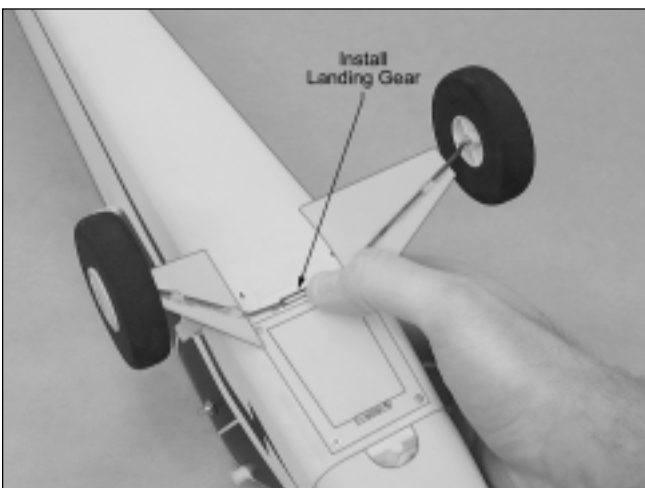
PRO TIP We suggest installing the clevis into the outermost hole in the control horn for your first few flights. This will make it easier to control the airplane. Once you're proficient at flying the airplane, you can move the pushrod wire into the middle or inner hole to increase the control response.



- Carefully snap the plastic clevis on the pushrod wire into the **outermost hole** in the rudder control horn.

PRO TIP We suggest installing the clevis into the outermost hole in the control horn for your first few flights. This will make it easier to control the airplane. Once you're proficient at flying the airplane, you can move the pushrod wire into the middle or inner hole to increase the control response.

STEP 5: INSTALLING THE LANDING GEAR ASSEMBLY



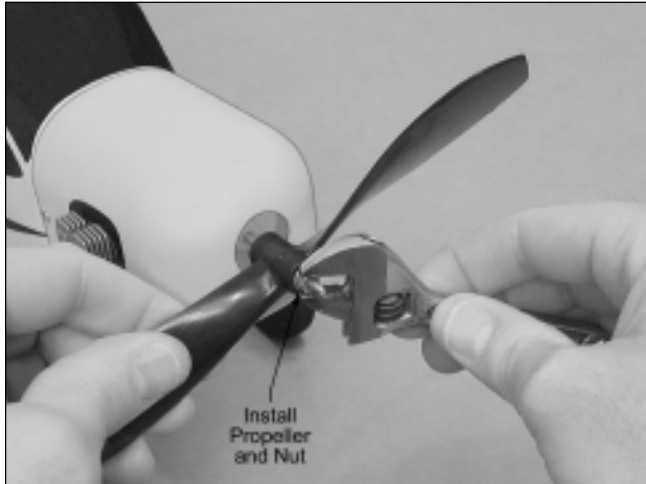
- Install the landing gear assembly by first gently squeezing the two landing gear wire legs together, then by pushing the landing gear assembly firmly into the slot in the bottom of the fuselage until the assembly "snaps" into place.

☞ The straight edge of the plastic landing gear fairings should be toward the front of the airplane, as shown.

◆**IMPORTANT**◆ After installation, pull down on the landing gear assembly to ensure that it's snapped firmly into place.

STEP 6: INSTALLING THE PROPELLER AND SAFETY SPINNER

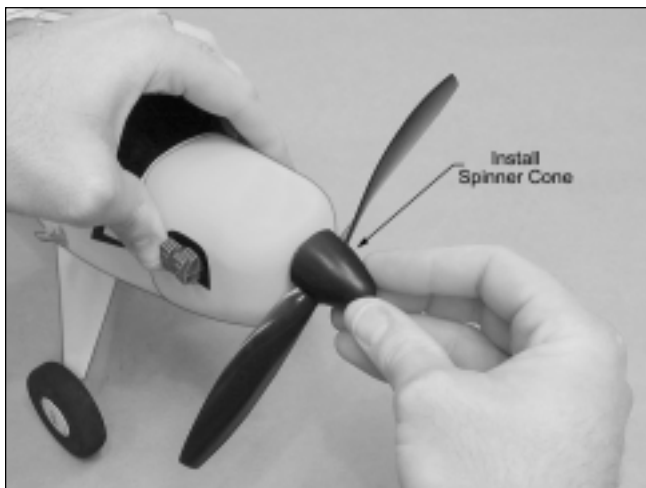
- ❑ Thread one hex nut onto the propeller shaft and tighten it by hand until it will not thread on any further.



- ❑ Slide the propeller onto the propeller shaft, making sure that the back of the propeller slides firmly over the hex nut.

☞ The back of the propeller is molded to fit over the hex nut.

- ❑ Slide the flat washer up against the propeller and thread on the second hex nut. Tighten the hex nut, using an adjustable wrench, to hold the propeller in place.

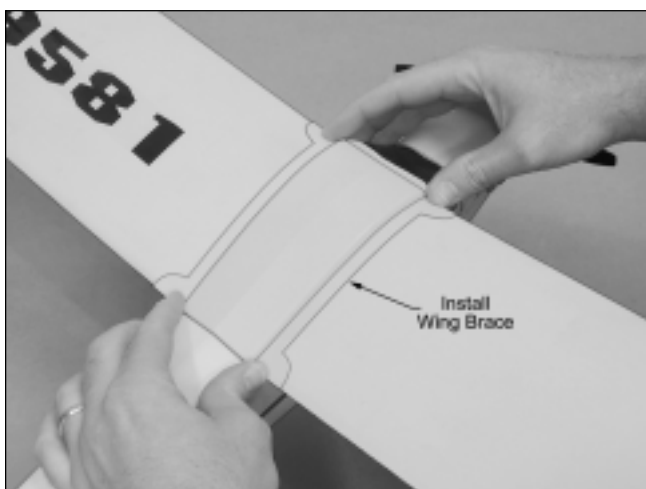


- ❑ Install the rubber safety spinner over the front of the propeller, as shown. To ensure that the safety spinner is held securely in place, make sure to push it firmly onto the front of the propeller.

☞ The inside of the rubber safety spinner is molded to fit securely over the hex nut and threaded propeller shaft.

◆**WARNING**◆ Do not operate the motor or fly the airplane without the rubber safety spinner installed.

STEP 7: INSTALLING THE WING

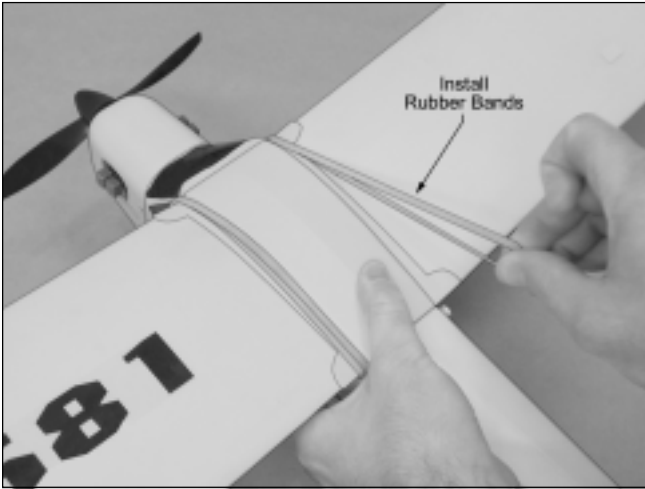


- ❑ Set the wing onto the top of the fuselage.

- ❑ Line up the molded dimples at the front and the back of the wing with the sides of the fuselage. This will ensure that the wing is centered.

- ❑ Place the plastic wing brace over the top of the wing, making sure to line up the molded contours of the wing brace with the top and sides of the fuselage.

◆**IMPORTANT**◆ When you position the plastic wing brace, make sure that the wing stays lined up with the fuselage. You will need to push the plastic wing brace down firmly against the wing, so that the top of the wing brace will be even with the top of the fuselage.



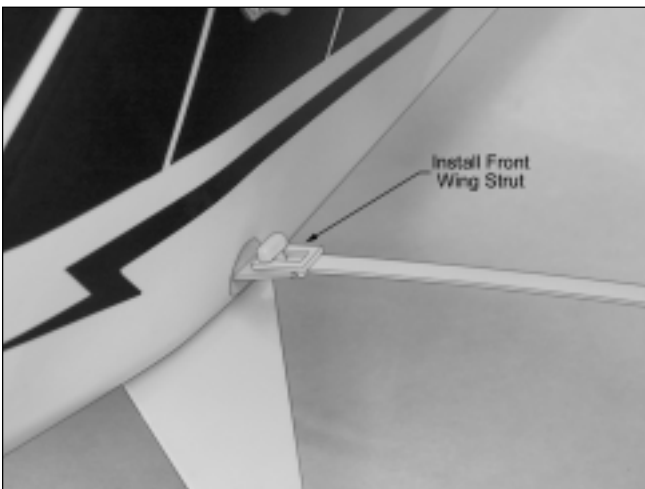
❑ Secure the wing to the fuselage using two rubber bands, making sure that they are looped securely over the mounts at the front and back of the wing.

◆**IMPORTANT**◆ The rubber bands should overlap the mounting tabs on the plastic wing brace. This will ensure that the plastic wing brace (as well as the wing) is held firmly in place.

◆**WARNING**◆ The plastic wing brace not only keeps the rubber bands from digging into and damaging the front and back of the wing, it also strengthens the center of the wing. Never fly the airplane without the plastic wing brace installed or the wing will fail during flight.

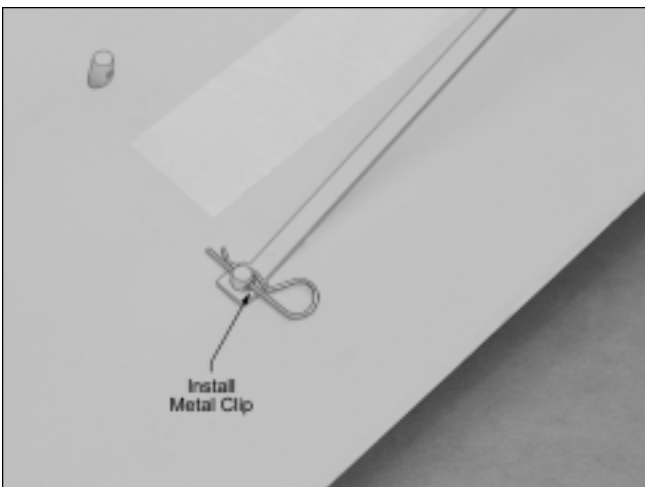
STEP 8: INSTALLING THE WING STRUTS

PRO TIP There are four plastic wing struts included. There are two longer ones (for the front) and two shorter ones (for the rear). When installing them in the next few procedures, make sure to install the two front wing struts first, followed by the two rear wing struts. This will ensure that they line up properly.



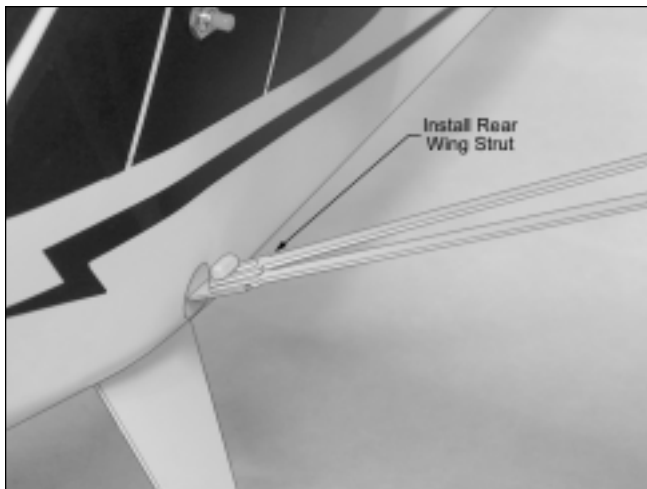
❑ Carefully slip one front wing strut (longer strut) over the plastic mount at the base of the fuselage, then rotate the strut 90° to lock it into place.

◆**IMPORTANT**◆ Make sure that the molded "step" in the end of the wing strut overlaps the mount, as shown.



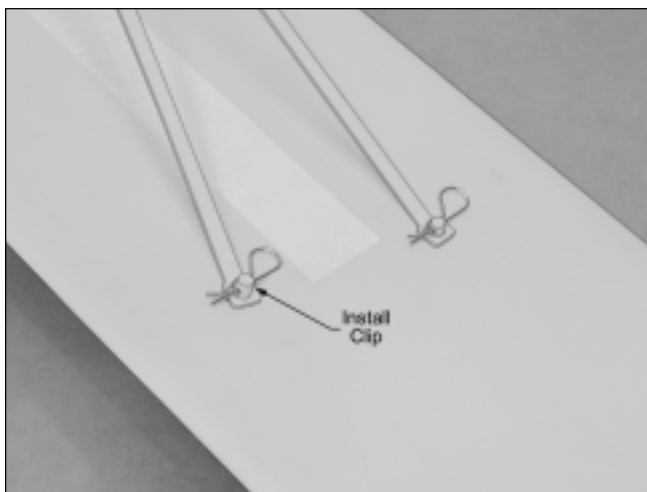
❑ With the airplane upside down, slip the predrilled hole in the outer end of the wing strut over the forward-most plastic post in the bottom of the wing.

❑ Secure the wing strut to the plastic post by carefully pushing one metal clip through the predrilled hole in the plastic post.



❑ Install the rear wing strut (shorter strut) into place by securing the end of it over the plastic mount at the base of the fuselage, using the same technique that you used to install the front wing strut.

☞ Notice that the rear wing strut is installed on top of the front wing strut.



❑ Secure the outer end of the rear wing strut to the rear-most plastic post in the wing, using one metal clip.

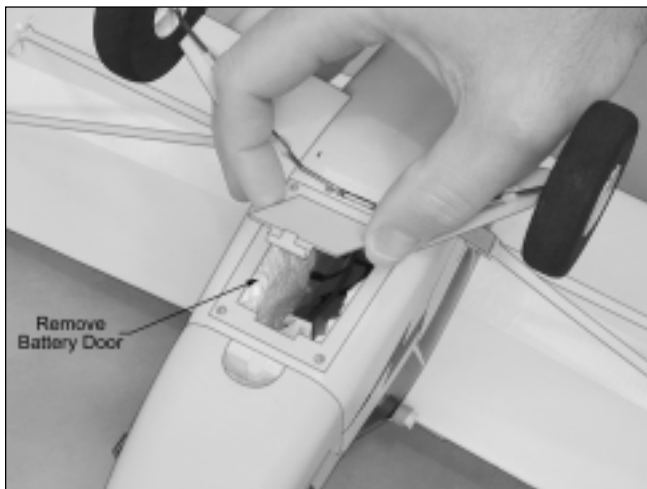
❑ Repeat the previous procedures to install the front and rear wing struts onto the other side of the airplane.

STEP 9: INSTALLING THE FLIGHT BATTERY

◆**WARNING**◆ Do not charge the flight battery before installing it. Charging will be done later. Before installing the flight battery, you'll need to make sure that the transmitter **is turned on**.

❑ Turn on the transmitter. The needle in the voltage meter should move into the silver "safe" area. If it doesn't, replace the batteries with a fresh set.

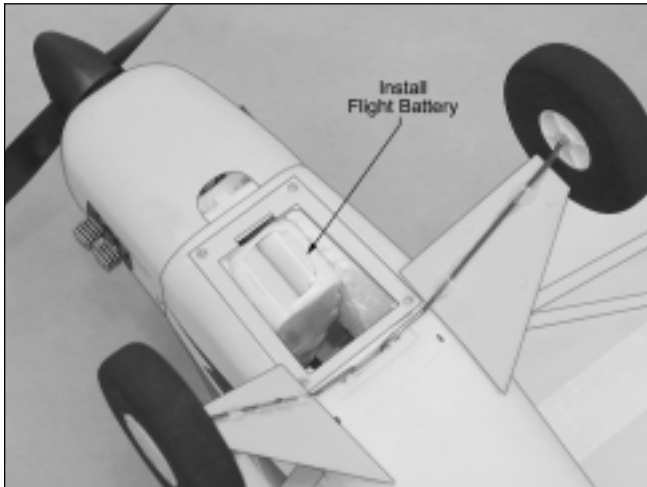
PRO TIP Always make sure you turn on the transmitter first, before plugging in and installing the flight battery. After you're done flying, unplug and remove the flight battery first, then turn off the transmitter. This will prevent unexpected radio signals from interfering with your radio system.



◆**WARNING**◆ The J-3 Cub 370 RTF does not have an on/off switch. When you plug in the flight battery, the receiver and servos will be powered up. **The motor will not power up until the red arming switch is pressed.**

❑ Remove the plastic battery door on the bottom of the fuselage by carefully pulling back, then up, on the latch at the front of the battery door.

- ❑ With the transmitter turned on, double-check that the throttle control stick (left-side stick) is pulled all the way back toward the bottom of the transmitter.



- ❑ Plug the connector on the flight battery into the connector that is inside the fuselage. When plugged in properly, the connectors should "click" together.

◆**IMPORTANT**◆ As a safety feature, the connectors can only be plugged in one way.

- ❑ Push the flight battery down into its slot between the pieces of white styrofoam, making sure that it's pushed as far forward as possible. The flight battery should be held firmly in place.

- ❑ Reinstall the battery door, making sure that the latch "snaps" into place.

◆**WARNING**◆ It's important that the flight battery be pushed as far forward as possible. This will ensure that the flight battery is installed in the correct position, which will make the airplane fly better. If the flight battery is installed too far back, the airplane could become uncontrollable during flight.

◆**IMPORTANT**◆ After a crash or hard landing, remove the battery door and double-check that the flight battery has not moved back. It should be held firmly in place and not move back during normal flight.

LEARNING TO FLY YOUR J-3 CUB 370 RTF

STEP 1: BASIC OPERATION

Before actually flying your airplane you should understand how the airplane is controlled. Below we list the four basic flight modes:

Climb: Climbing is controlled by pushing the throttle control stick on the transmitter (the left-hand stick) completely forward to turn on the motor, then by pulling back on the elevator control stick (the right-hand stick). When you push forward on the throttle control stick, the motor will turn on. When you pull back on the elevator control stick, the elevator will move up, causing the airplane to pitch up and climb.

Descent: Descent is also controlled by the throttle and elevator control sticks. When you pull the throttle control stick all the way back, the motor will turn off and the airplane will begin to slowly descend. To make the airplane descend faster, you can also push forward on the elevator control stick. This will make the elevator move down, causing the airplane to pitch down and descend.

Right Turn: A right turn is done by moving the rudder control stick (the right-hand stick) on the transmitter. This is the same stick as the elevator control stick, only it moves right and left. When you move the stick to the right, the rudder moves right, causing the airplane to bank and turn right.

Left Turn: A left turn is done by moving the rudder control stick on the transmitter to the left. When you move the stick to the left, the rudder moves left, causing the airplane to bank and turn left.

STEP 2: GROUND OPERATIONS TESTING

Now that you're familiar with the four basic flight modes, you can test the radio control system and the motor while seeing first-hand how the different controls operate to make the airplane climb, descend, turn right and turn left.

PRO TIP You'll want to do Ground Operations Testing until the flight battery no longer has enough power to operate the motor. This will allow you enough time to become familiar with how the different controls react to the inputs from the transmitter control sticks and it will prepare the flight battery for its first full recharge before flight.

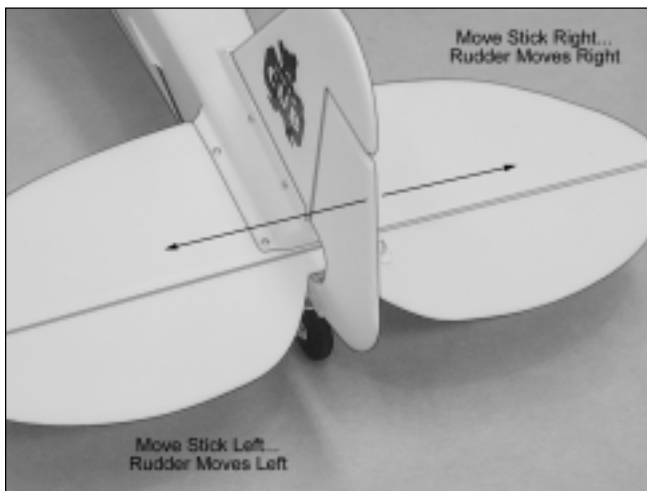
❑ First, make sure that the on/off switch on the transmitter is in the "ON" position and that the flight battery is installed and plugged in. The wing and wing struts should be installed, too.

◆**WARNING**◆ Do not press the red motor arming switch yet.



❑ Carefully adjust the three control trim tabs on the transmitter so that they are centered, as shown.


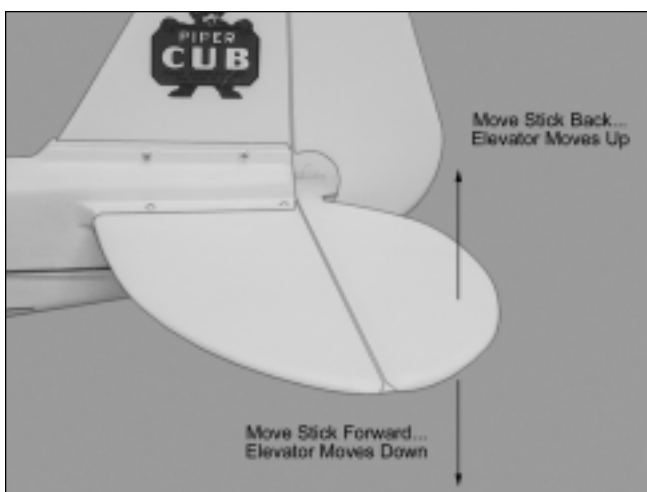
PRO TIP The horizontal trim tab below the throttle control stick is not used in this application.



❑ Looking from the back of the airplane, push the right-hand control stick completely to the right. The rudder should move right.

❑ Again, looking from the back of the airplane, push the right-hand control stick completely to the left. The rudder should move left.


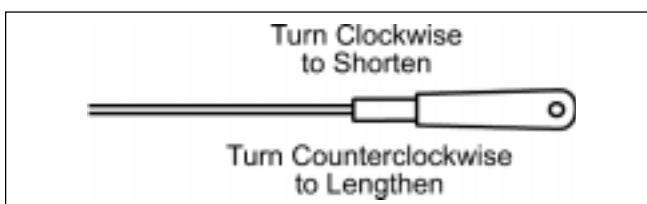
PRO TIP If the rudder does not move in the correct direction, flip the CH 1 servo reversing switch on the front of the transmitter, as shown.

❑ Looking from the back of the airplane, pull the right-hand control stick completely back. The elevator should move up.

❑ Again, looking from the back of the airplane, push the right-hand control stick completely forward. The elevator should move down.

PRO TIP If the elevator does not move in the correct direction, flip the CH 2 servo reversing switch on the front of the transmitter, as shown.

❑ If the control surfaces are not exactly even with the tail, unsnap the clevises and thread them in or out until the control surfaces are even with the tail. After you're satisfied with the alignment, snap the clevises back into the **outermost hole** in the control horns.

❑ Now, test the operation of the motor. Double-check that the throttle control stick is pulled completely back. While keeping clear of the propeller, press the red motor safety arming switch on the side of the fuselage once.

◆**WARNING**◆ During the motor test, keep everything clear of the propeller, especially fingers and loose clothing.

❑ While holding the airplane upright in the air **with the propeller pointing away from you**, push the throttle control stick completely forward. The propeller will spin at a high rate of speed.

PRO TIP If the motor turns on when the throttle control stick is pulled completely back, flip the CH 3 servo reversing switch on the transmitter, as shown.



❑ Continue the Ground Operations Testing until the flight battery no longer has enough power to operate the motor. This should give you enough time to become familiar with how the airplane's controls operate.

Once the flight battery no longer has enough power to operate the motor, remove the battery door, unplug and remove the flight battery, and turn off the transmitter.

GETTING READY TO FLY YOUR J-3 CUB 370 RTF

STEP 1: CHARGING THE FLIGHT BATTERY

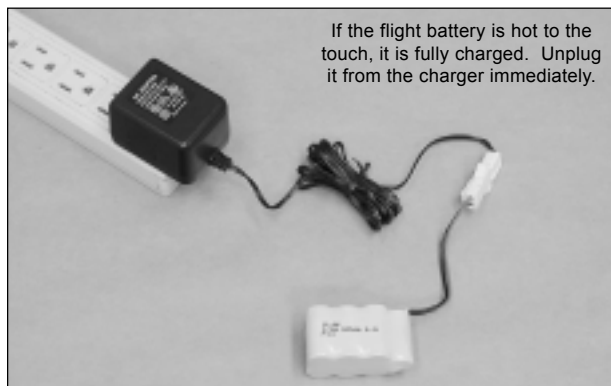
◆**IMPORTANT**◆ Before charging the flight battery, the flight battery must be fully discharged. Discharge the flight battery by running the motor until it stops. This will ensure that you don't overcharge the flight battery.

The flight battery can be charged using either the AC charger or the DC fast-charger. Note that the DC fast-charger features a socket-style input connector. This connector can be plugged into your vehicle's cigarette lighter or 12V power socket. Note that depending on your vehicle, you may need to turn the key into the accessory position to power the charger.

Flight Battery Charging Tips:

- Always run the motor until it stops before recharging the flight battery. This will ensure that the battery is properly discharged.
- Charge-time using the AC wall charger for a fully discharged battery is approximately 2-3 hours.
- Charge-time using the DC fast-charger for a fully discharged battery is approximately 20-30 minutes.
- If the flight battery becomes hot to the touch, unplug it from the charger immediately.
- Always allow the battery to completely cool before recharging it.
- Never leave the battery unattended during the charging process.

USING THE AC WALL CHARGER



If the flight battery is hot to the touch, it is fully charged. Unplug it from the charger immediately.

❑ Plug the flight battery connector into the battery charger connector. When plugged in properly the connectors should "click" together.

PRO TIP As a safety feature, the connectors can only be plugged in one way.

❑ Plug the charger into an AC wall outlet.

❑ Charge the flight battery for 2-3 hours. **Be careful not to overcharge the flight battery.**

❑ To unplug the connectors, squeeze the tab on the battery connector and pull the two connectors apart.

❑ After charging the flight battery, install it into the fuselage, using the same techniques as when you installed it previously.

◆**WARNING**◆ Always remove the flight battery from the fuselage for the charging process.

USING THE DC FAST-CHARGER

Before using the DC fast-charger, please read the flight battery charging tips on the next page. Please also read and understand the tips below that are specific to the DC fast-charger.

- Do not attempt to disassemble the DC fast-charger.
- Do not charge any other type or size of flight battery using the DC fast-charger.
- Do not modify the socket-style input connector.
- Do not block the cooling holes and vents during the charging process. Do not set the charger on carpet during the charging process.
- Your vehicle can be running during the charging process, but start your vehicle first to prevent any power surge that could damage the charger.

- ❑ Plug the socket connector from the DC fast-charger into your vehicle's cigarette lighter or 12V power socket.
- ❑ Plug the flight battery connector into the battery charger connector. When plugged in properly the connectors should "click" together.

PRO TIP As a safety feature, the connectors can only be plugged in one way.



- ❑ When the charger has power and the flight battery is plugged in, the LED will be solid red.

◆IMPORTANT◆ Depending on your vehicle, you may need to turn the key into the accessory position to power the charger.

- ❑ Press the CHARGE button once and the LED will turn green and begin to blink. This indicates that the flight battery is charging.
- ❑ Allow the flight battery to charge. When the LED turns solid green, the flight battery has been fully charged and should be removed from the charger.

- ❑ To unplug the connectors, squeeze the tab on the battery connector and pull the two connectors apart.
- ❑ After charging the flight battery, install it into the fuselage, using the same techniques as when you installed it previously.

◆WARNING◆ Always remove the flight battery from the fuselage for the charging process.

STEP 2: CHOOSING A DAY TO FLY

- ❑ Until you become a proficient flyer you should always plan on flying your airplane when there's no wind. **We strongly suggest waiting for a calm day.** If it's windy and you attempt to fly, it will only make learning to fly the airplane more difficult.

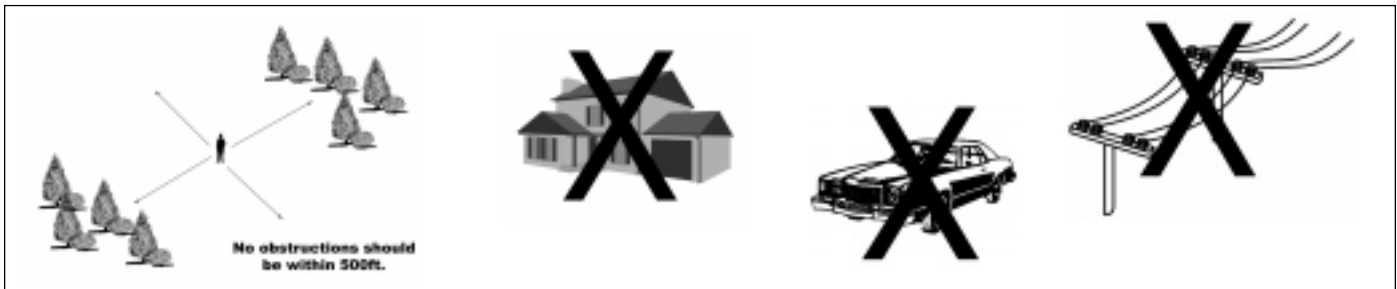
Once you are proficient at flying the airplane, you can fly the airplane in light wind - no more than 8-10 miles per hour. Flying in stronger wind is not recommended.



- ❑ Tie the red flag to the end of the transmitter's antenna.
- ❑ Out at the flying field, before you fly, hold the transmitter up at an angle. If the flag hangs down, go ahead and fly. If the flag hangs at a 45° angle or more, don't fly. Wait for a calmer day.

STEP 3: CHOOSING YOUR FLYING FIELD

❑ The flying field you choose should be a large, open field with grass. There should not be any vehicles, buildings, power lines, trees, large rocks or anything else that your airplane can crash into.



STEP 4: RANGE TESTING THE RADIO CONTROL SYSTEM

After getting out to your flying field, but before you fly for the first time, you must range test the radio control system. This will ensure that the transmitter is "talking" correctly to the airplane. You should follow this procedure before every first flight of the day and after you have a hard landing, crash, or after a repair.

- ❑ Turn on the transmitter, then plug in the flight battery and install it into the fuselage.
- ❑ Set the airplane on the ground and extend the transmitter's antenna completely. Move the right-hand control stick on the transmitter several times to check the controls. They should operate smoothly.
- ❑ Walk approximately 75ft. from the airplane and move the right-hand control stick on the transmitter once more. Check to make sure that the controls are operating smoothly at this distance. You may need a friend to help you with this step.

◆ **WARNING** ◆ If the airplane does not range check, don't fly! Please refer to the troubleshooting guide on page # 22.

YOUR FIRST FLIGHT

After all this, we bet you're ready to actually go flying! If you've skipped anything prior to this section, we suggest going back through the instructions. Doing so will help ensure your success.

*****WARNING***WARNING***WARNING***WARNING***WARNING***WARNING*****

If at any time during your flight, the airplane gets stuck up in a tree, in power lines or on a roof top, **DO NOT attempt to retrieve the airplane yourself.** The airplane is not worth the risk. We strongly suggest contacting your local fire department for assistance. Attempting to retrieve the airplane yourself in any of these cases could potentially result in extreme harm or even death.

Some Things to Remember:

- With the flight battery fully charged, you can expect anywhere from 4-6 minutes of flight time, so plan your landing accordingly.
- Make sure that your flying field has no obstructions you can fly into.
- The flying field should be large enough that you can land anywhere if you get into trouble. Until you are proficient at flying the airplane, you don't want to have to worry about landing in a small, localized area.
- There should be no wind during your first few flights; also try to orientate yourself so you're not looking directly into the sun while flying.
- Fully charge the flight battery just before coming to the flying field. Do not charge the flight battery the night before, then go flying the next day. The flight battery will have lost some charge and it won't produce full power.
- Double-check that the elevator and rudder control surfaces are moving in the correct direction. If they aren't, flip the servo reversing switches as described on page # 13.
- Double-check that the elevator and rudder control surfaces are centered and that the trim tabs on the transmitter are centered, too. If not, center them as described on page # 13.

TAKING OFF THE J-3 CUB 370 RTF

◆**IMPORTANT**◆ The J-3 Cub 370 RTF can take off from the ground, provided the surface is smooth and hard, such as asphalt, concrete or hard-packed dirt. The airplane can also take off from tightly mowed grass. If there is no suitable place to take off from the ground, you should hand-launch the airplane, following the procedures in the section below.

- With the transmitter turned on and the flight battery installed, carefully extend the transmitter antenna completely.
- Double-check that the throttle control stick is pulled completely back, then press the red motor arming switch on the side of the fuselage once.
- Set the airplane on the ground, making sure that the airplane is pointing directly into the wind. Slowly push the throttle control stick forward until the motor is running at full power. The airplane will quickly begin to accelerate.

PRO TIP As the motor is powered up and the airplane accelerates, the airplane will have a tendency to pull toward the left. This is normal and is caused by the torque from the spinning propeller. Gently move and hold the right-hand control stick (rudder) to the right to keep the nose of the airplane pointing straight ahead.

- As the airplane continues to accelerate faster, the tail of the airplane will begin to lift off the ground and the airplane will now be rolling down the runway on its main landing gear. At this point, the airplane is ready to take off. To take off, gently pull back on the right-hand control stick (elevator) and the airplane will lift off the ground. Continue to hold the right-hand control stick back gently so that the airplane continues to climb. After the airplane lifts off, you can move the rudder back to center.

◆**WARNING**◆ Be careful not to climb too steeply after takeoff or the airplane might slow down too much and stall.

HAND LAUNCHING THE J-3 CUB 370 RTF

- With the transmitter turned on and the flight battery installed, carefully extend the transmitter antenna completely.
- Double-check that the throttle control stick is pulled completely back, then press the red motor arming switch on the side of the fuselage once.
- Carefully grasp the fuselage directly beneath the center of the wing with your thumb and forefingers. While holding the transmitter in your other hand, push the throttle control stick forward to check that the motor powers up. Now, pull the stick completely back.
- If there is any wind, turn to face it. While holding the throttle control stick completely forward (the propeller will spin very fast), hold the airplane just above shoulder level and gently toss the airplane straight ahead and level. Allow the airplane to fly straight and continue to hold the throttle control stick completely forward so that the airplane climbs.

PRO TIP If the airplane begins losing altitude after launching, pull back gently (only a small amount) on the right-hand control stick (elevator). This will cause the airplane to gently pitch up and climb. The airplane may start to bank right or left after launching, too. If this happens, gently move the right-hand control stick (rudder) right or left to level the wing.

FLYING THE J-3 CUB 370 RTF

- Once the airplane is in the air, keep the motor running and allow the airplane to continue to climb. After reaching about 80 - 100 feet of altitude you should start making shallow turns, moving the right-hand control stick right or left, to keep the airplane near you.

PRO TIP We recommend trying to keep the airplane near you while flying. The airplane is small, so if it gets too far away, it will be difficult for you to see. This will make it more difficult to learn to fly the airplane and could result in complete visual loss of the airplane.

- Now that the airplane has climbed to a safe altitude you can begin to learn the basics of flight. General flying should be done with the motor at full power. You control the altitude of the airplane by moving the right-hand control stick either forward or back. Moving the stick forward will cause the airplane to pitch down and lose altitude, and moving the control stick back will cause the airplane to pitch up and gain altitude. These control inputs should be done gently, so you don't overcontrol the airplane.

PRO TIP When the airplane climbs you will notice that it will begin to lose speed. You'll also notice that the airplane will gain speed when the airplane descends. If you climb too steeply, the airplane may slow down so much that it stops flying and stalls. Conversely, if you descend too steeply, the airplane may fly so fast that you begin to lose control. For these reasons, we suggest using small, gentle control inputs to prevent this from happening.

- To turn the airplane, you need to move the right-hand control stick in the direction you want the airplane to turn, either right or left. To make smooth, gentle turns, gently move the control stick in the direction you want the airplane to turn and **HOLD** the control stick in that position for a second or two and the airplane will begin to turn. After the airplane has turned in the direction you want, move the control stick gently in the opposite direction to level the wing, then allow the control stick to return to center.

PRO TIP The longer you hold the control stick over, the tighter the radius the airplane will turn in. We recommend gentle turns until you are proficient with the flight characteristics of the airplane.

◆**WARNING**◆ Do not hold the right-hand control stick either right or left for more than a few seconds. Hold it over only long enough for the airplane to begin to bank and turn. Holding the control stick over longer can cause the airplane to roll too steeply and the nose to drop rapidly, possibly causing a crash to occur.

- When going into a turn, the airplane will have a natural tendency to lose some altitude. Unless you want to descend, you should gently pull back on the right-hand control stick to keep the airplane level during the turn. The steeper the turn the more altitude the airplane will lose and the more you will need to pull back on the control stick.
- You should continue to fly, making circles and S-turns for about 3 minutes or so. This will give you plenty of time for landing. Remember for now to keep the motor at full power and use gentle control inputs to keep the airplane level throughout the entire flight. Also remember to keep in mind that when you make turns the airplane will want to lose altitude, so you'll need to pull back gently on the control stick to keep the airplane level.

PRO TIP If there is any wind when you are flying, you will notice that when the airplane turns into the wind it will slow down and climb slightly. When this happens, gently move the control stick forward to pitch the airplane down if you don't want the airplane to climb. When the airplane turns down-wind (with the wind), the airplane will speed up and descend slightly. You should gently pull back on the control stick to keep the airplane from descending too much while flying down-wind.

- After some practice, you will learn how to minimize the amount of up and down, and right and left movements of the airplane and be able to control the airplane in a smooth and graceful manner.

When flying toward you, you will notice that it seems that the right and left controls are reversed. An easy way to learn to overcome this confusion is to move the right/left control stick toward the "lower" side of the wing to level the airplane. You can also try to "envision yourself in the cockpit." This helps a lot when trying to coordinate right and left turns when the airplane is flying toward you.

LANDING THE J-3 CUB 370 RTF

- Landing should always be done into the wind with the wing level.
- To prepare for landing from normal flight, make a shallow turn so that the airplane is flying directly into the wind. Make small turns to level the wing, then pull back completely on the throttle control stick to turn off the motor. When you do this, the airplane will gradually descend straight ahead.
- Allow the airplane to gradually descend. If the airplane seems to be descending too fast, gently pull back on the right-hand control stick to make the airplane pitch up to level flight. This will bleed off speed and slow the descent. Once the airplane has slowed down, release the control stick and allow the airplane to continue its descent. Once the airplane is about 15 feet off the ground, make sure that the wing is level and continue a shallow descent. Just before touch-down, gently pull back on the right-hand control stick to level the airplane with the ground for landing.

PRO TIP If you need to turn the airplane while descending for landing, make gentle, shallow turns. Making steep turns may cause the airplane to stall and crash. Also, you should just try to land anywhere on your flying field, as long as it's into the wind. Don't try to land in a particular spot. You can do that once you've mastered flying the airplane.

- After landing, unplug and remove the flight battery from the fuselage, then turn off the transmitter. Allow the flight battery to cool completely, then recharge it for your next flight.

FLIGHT-TRIMMING THE J-3 CUB 370 RTF

If you're flying the airplane and it seems to always want to turn right or left or pitch up or down, you can use the electronic trim tabs on the transmitter to correct these tendencies. We suggest flying the airplane straight ahead and level, then letting go of the right-hand control stick for a few seconds. Watch what the airplane does. It may pitch up or down, or it may turn right or left, or it may do a combination of these. Do this several times to double-check your findings. If the airplane does one of the following while in straight and level flight without your hand on the control stick, move the following electronic trim tab(s) to correct it:

- If the airplane pitches up: Move the right-hand control stick vertical trim tab (elevator) forward a couple of clicks.
- If the airplane pitches down: Move the right-hand control stick vertical trim tab (elevator) back a couple of clicks.
- If the airplane turns right: Move the right-hand control stick horizontal trim tab (rudder) left a couple of clicks.
- If the airplane turns left: Move the right-hand control stick horizontal trim tab (rudder) right a couple of clicks.

You can make these trim tab changes while you are flying, but we suggest having a friend move them for you so you don't lose sight of the airplane. We also recommend moving the trim tabs only a couple of clicks at a time so you don't over-correct for the trim problem.

FIXING MINOR CRASH DAMAGE

While you're flying your airplane, there comes a time when you might crash. If the crash isn't too bad, most damage can be repaired quickly and easily. If the damage is beyond repair, spare parts are available for purchase. If a foam part is going to break during a crash it will usually break cleanly. To repair a clean break, follow the procedures below:

- Glue the broken parts together, using a thin layer of 5 minute epoxy or white glue, following the directions on the glue bottle. Hold the parts together and in alignment until the glue fully cures.
- Apply a strip of clear Scotch[®] tape over the seams to strengthen the joint even more.

PRO TIP It is very important that you use no solvents or Cyanoacrylate (C/A) glue, which can damage foam. If any of these chemicals comes in contact with the foam parts, the parts will be destroyed. Use only epoxy or white glue to repair damaged foam parts.

FLIGHT TIPS AND WARNINGS



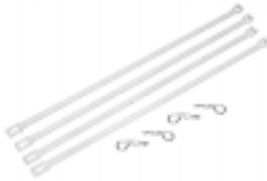





- Check before every flight to ensure that the batteries in the transmitter are working properly. The needle in the voltage meter should be in the silver "safe" area. Change the batteries when the needle falls into the red "unsafe" area.
- Before recharging the flight battery, let the motor run until the flight battery is discharged and the motor won't run any longer. This will ensure you don't overcharge the flight battery.
- Do not recharge the flight battery if it is hot. Wait for the flight battery to cool before recharging it.
- Never leave the flight battery plugged into the airplane unless you are flying or testing the controls.
- Before flying, always double-check that you've extended the transmitter antenna completely.
- Never cut or otherwise shorten the receiver antenna or you will lose control of the airplane in a very short distance. Let the antenna hang behind the back of the fuselage.
- Before each flight, do a quick motor test to make sure that the motor is producing full power. If it isn't, you may need to charge the flight battery longer. If using the AC wall charger, do not charge the flight battery longer than 3 hours. If using the DC fast-charger, do not charge the flight battery more than one cycle (approximately 30 minutes). Charging the flight battery longer than recommended can cause damage to the flight battery. If the flight battery becomes hot to the touch, remove it from the charger immediately.
- Before each flight, double-check that the control surfaces are moving in the correct direction. If they aren't, adjust the servo reversing switches on the transmitter as described on page # 13.

- When you fly, orientate yourself so that the sun is at your back. Don't fly directly into the sun or you may lose sight of the airplane.
- Separate flight batteries can be purchased and charged before going to the flying field. An extra flight battery will double your flight time. See the replacement parts list on the next page for the part number of the flight battery.
- Do not fly in wind over 10-15 miles per hour, or the airplane will be very difficult to control and a crash might occur.
- Do not fly your airplane if another model is on the same frequency as you. The frequency number is printed on front of the crystal mount on the transmitter and on the receiver.
- Always be conscious of the spinning propeller. Be careful not to allow loose clothing to be drawn into the propeller.
- If you're under 14 years of age we suggest you fly while accompanied by an adult.
- Never attempt to disassemble any of the airplane's components, especially the transmitter, charger and flight battery.
- Do not allow any of the electrical components to get wet or damage may occur.
- Periodically double-check that the propeller nut is tight. Check the propeller for cracks or other damage. If the propeller is damaged, replace it immediately.
- If you have encountered any trouble with any of the steps listed in these operating instructions, or with how the airplane flies, please refer to the troubleshooting guide on page # 22. The troubleshooting guide is provided to help you find a quick and immediate resolution to any number of problems that might occur.

J-3 CUB 370 REPLACEMENT PARTS

We stock a complete line of replacement parts for your Phase 3 J-3 Cub 370 RTF. Listed below are the replacement parts that are available, along with their respective part numbers for easy ordering convenience. We suggest ordering directly from your local Phase 3 dealer.

**If your local dealer does not stock Phase 3 products, you can order directly from us
using the Customer Service Information on page # 2**

			
109001 <i>Instruction Manual</i>	109002 <i>Wing Assembly</i>	109003 <i>Wing Struts</i>	109004 <i>Fuselage - Complete w/o Radio</i>
			
109005 <i>Cowling</i>	109006 <i>Stabilizer Set (Tail Set)</i>	109007 <i>Landing Gear Assembly</i>	109008 <i>Battery Door</i>

<p>Sorry. No Photo Available</p>			
<p>109009 Decal Set</p>	<p>109010 370 Motor w/Leads and Gear</p>	<p>109011 Gear Box Assembly</p>	<p>109012 Propeller (2)</p>
			
<p>109013 Propeller Nuts & Washer</p>	<p>109014 Rubber Safety Spinner (2)</p>	<p>109015 600mAH NiMH Battery</p>	<p>109016 AC Charger (110V)</p>
			
<p>109017 AC Charger (220V)</p>	<p>109018 DC Fast-Charger</p>	<p>109019 Transmitter w/o Crystal 27Mhz</p>	<p>109020 Receiver w/o Crystal 27Mhz</p>
			
<p>109021 27Mhz FM Crystal Set Ch 1</p>	<p>109022 27Mhz FM Crystal Set Ch 2</p>	<p>109023 27Mhz FM Crystal Set Ch 3</p>	<p>109024 27Mhz FM Crystal Set Ch 4</p>
			
<p>109025 27Mhz FM Crystal Set Ch 5</p>	<p>109026 27Mhz FM Crystal Set Ch 6</p>	<p>109027 Servo</p>	<p>109028 Motor Controller</p>

TROUBLESHOOTING GUIDE

This troubleshooting guide has been provided to help you diagnose and solve most problems that you may encounter with your airplane. Most problems encountered can be solved by carefully following the problem-cause-solution sections below.

If you cannot solve the problem using this troubleshooting guide, please feel free to contact us using the Customer Service Information on page # 2.

PROBLEM	CAUSE	SOLUTION
1) Transmitter does not turn on	A) Transmitter batteries depleted B) Transmitter batteries not installed properly	A) Replace batteries with new ones B) Reinstall batteries, double-checking for correct polarity
2) Motor does not turn on	A) Flight battery depleted B) Transmitter batteries depleted C) Transmitter not turned on D) Flight battery not plugged in E) Did not press red motor arming switch F) A crash has damaged an internal component	A) Recharge flight battery B) Replace batteries with new ones C) Turn on transmitter D) Plug in flight battery E) Press red motor arming switch once F) Contact customer service on page # 2
3) Airplane is difficult to control	A) You are flying in too much wind B) Flight battery depleted C) Transmitter batteries depleted D) Transmitter antenna not extended completely E) You are over-controlling	A) Fly when there is no wind B) Recharge flight battery C) Replace batteries with new ones D) Extend transmitter antenna completely E) Use small, gentle control inputs
4) Airplane constantly turns right or left without any control input	A) You are flying in too much wind B) The airplane is out of trim adjustment	A) Fly when there is no wind B) Adjust the transmitter trim tab as described on page # 19
5) Airplane constantly climbs or descends, without any control input	A) You are flying in too much wind B) The airplane is out of trim adjustment	A) Fly when there is no wind B) Adjust the transmitter trim tab as described on page # 19
6) Airplane will not climb	A) Flight battery is depleted B) Propeller is damaged C) Motor is damaged D) The airplane is out of trim adjustment	A) Fully charge the flight battery 2-3 hours B) Check and replace propeller C) Check and replace motor D) Center the elevator control surface as described on page # 13
7) The flight battery is warm after charging	A) This is normal	A) The flight battery will be warm when fully charged. It should not be hot to the touch
8) The motor vibrates excessively	A) Propeller is damaged B) Motor and or gear box is damaged	A) Check and replace propeller B) Check and replace motor and/or gear box
9) Radio system fails range test	A) Transmitter antenna not extended completely B) Transmitter batteries depleted C) Receiver antenna inside airplane damaged D) A crash has damaged an internal component	A) Extend transmitter antenna completely B) Replace batteries with new ones C) Contact customer service on page # 2 D) Contact customer service on page # 2
10) Control surfaces move the wrong direction	A) Servo direction is reversed	A) Adjust servo reversing switches as described on page # 13
11) When taking off from the ground, airplane pulls to the left	A) This is normal and is caused by propeller torque	A) Use right rudder to keep airplane rolling straight
12) DC fast-charger has no power	A) No power from your vehicle	A) Turn vehicle key into accessory position

PHASE 3 J-3 CUB 370 RTF WARRANTY SERVICE INFORMATION

Before returning your airplane for warranty consideration, the status of the unit must be within the guarantee as stated at the bottom of this page. Do not return your airplane to the place of purchase. They are not authorized or equipped to perform warranty work on Phase 3 products. When requesting warranty service, please observe the following:

- Crash damage will not be covered under warranty. Do not request warranty service for a crash-damaged product.
- Always send the airplane complete with the transmitter. Please unplug and/or remove the batteries from both the transmitter and the airplane, but include them in the package for testing.
- Include a note detailing the problem or service you are requesting. Service cannot be provided without this information. Include your daytime phone number, shipping address and/or email address in the event we need more details pertaining to the service requested.
- You may request an estimate of services at the time you return your airplane for service. An omission of this request implies permission for Phase 3 to service your airplane at our discretion.
- Include a method of payment for any service charges.
- Send the unit to us by United Parcel Service, Federal Express or by Insured Mail. Postage is non-refundable. Send your package to:

In North America:



Global Services
18480 Bandilier Circle
Fountain Valley, CA 92708
USA
Phone: (714) 963-0329
Fax: (714) 964-6236
Email: service@globalhobby.net



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Fax: +44 (0) 20 8282-7500
Email: mail@ripmax.com

OUR GUARANTEE

Phase 3 guarantees this kit to be free from defects in both material and workmanship, at the date of purchase. This does not cover any component parts damaged by use, misuse or modification. **In no case shall Phase 3's liability exceed the original cost of the purchased kit.**

In that Phase 3 has no control over the final assembly or material used for final assembly, no liability shall be assumed for any damage resulting from the use by the user of the final user-assembled product. By the act of using the final user-assembled product, the user accepts all resulting liability.

IMPORTANT WARRANTY INFORMATION

Your Phase 3 J-3 Cub 370 RTF is warranted against manufacturer defects in materials and workmanship for a period of 90 days from the date of purchase. Warranty service will be provided within 90 days of the date of purchase only if you are able to provide the original or a copy of the original dated sales receipt.