25-Size Float Set

Assembly Manual

E-flite™

Table of Contents

Introduction

Thank you for purchasing the E-flite™ Fiberglass Floats. They have been designed for optimum performance when used with our J-3 Cub (EFL4000), Ultra Stick 25e (EFL4025), and other upcoming 25-size ARF planes. The floats have been constructed from high quality fiberglass, have been painted with fuel-proof paint for glow applications, and have the struts pre-welded for ease of installation. The floats are ready to use out of the box with only minor assembly required by the builder.
We hope you enjoy your float experience as much as we have.

Tools Required

Phillips screwdriver
File or rotary tool
Hobby knife
Pliers
Drill
Drill bit: 5/64" (2mm)
Hex wrench: 1.5mm, 3/32"

Adhesives Required

HAN8000	6-Minute Epoxy
Threadlock	

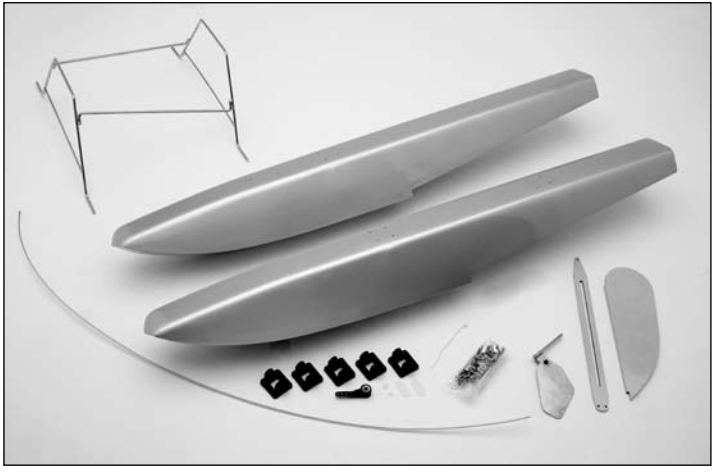
Using the Manual

This manual is divided into sections to help make assembly easier to understand, and to provide breaks between each major section. In addition, check boxes have been placed next to each step to keep track of each step completed. Steps with a single circle (❍) are performed once, while steps with two circles (❍ ❍) indicate that the step will require repeating, such as for a right or left wing panel, two servos, etc.

Remember to take your time and follow the directions.

Replacement Parts

EFLA501	Wire Struts
EFLA502	Float A
ELFA503	Water Rudder
EFLA504	Hardware Package
EFLA505	Float B



Note: Both floats are identical in construction. When reordering parts, Float B (EFLA505) has the holes drilled on the stern for the rudder assembly mount bracket. Float B (EFLA502) does not have the holes pre-drilled.

Limited Warranty Period

Horizon Hobby, Inc. guarantees this product to be free from defects in both material and workmanship at the date of purchase.

Limited Warranty & Limits of Liability

Pursuant to this Limited Warranty, Horizon Hobby, Inc. will, at its option, (i) repair or (ii) replace, any product determined by Horizon Hobby, Inc. to be defective. ***In the event of a defect, these are your exclusive remedies.***

This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than an authorized Horizon Hobby, Inc. service center. This warranty is limited to the original purchaser and is not transferable. In no case shall Horizon Hobby's liability exceed the original cost of the purchased product and will not cover consequential, incidental or collateral damage. Horizon Hobby, Inc. reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon Hobby, Inc. Further, Horizon Hobby reserves the right to change or modify this warranty without notice.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. HORIZON HOBBY, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

As Horizon Hobby, Inc. has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

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

Safety Precautions

This is a sophisticated hobby product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. ***This product is not intended for use by children without direct adult supervision.***

The product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the product has been started, you must contact Horizon Hobby, Inc. directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

Questions or Assistance

For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If your product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon Hobby, Inc. is not responsible for merchandise until it arrives and is accepted at our facility. Include your complete name, address, phone number where you can be reached during business days, RMA number, and a brief summary of the problem. Be sure your name, address, and RMA number are clearly written on the shipping carton.

Warranty Inspection and Repairs

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

Non-Warranty Repairs

Should your repair not be covered by warranty and the expense exceeds 50% of the retail purchase cost, you will be provided with an estimate advising you of your options. You will be billed for any return freight for non-warranty repairs. Please advise us of your preferred method of payment. Horizon Hobby accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly.

Electronics and engines requiring inspection or repair should be shipped to the following address (freight prepaid):

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

All other products requiring inspection or repair should be shipped to the following address (freight prepaid):

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822

Float Installation (J-3 Cub)

Required Parts

- Fuselage
- Ventral fin mount
- 3mm setscrew (4)
- Nylon bracket (4)
- 5/32" wheel collar (4)
- 3mm x 12mm sheet metal screw (16)
- 2mm x 12mm sheet metal screw (3)
- Nylon strap (2)
- Landing gear
- Ventral fin
- Hex wrench: 1.5mm

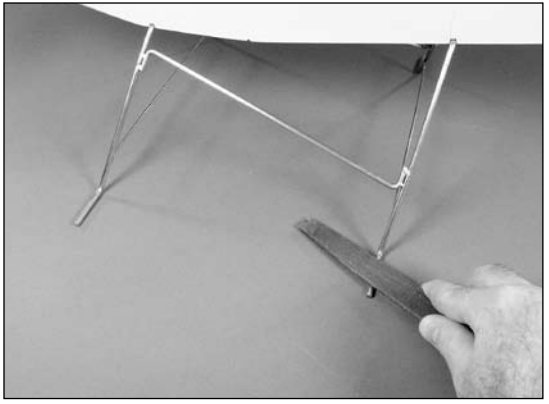
Required Tools and Adhesives

- Phillips screwdriver
- Threadlock
- 6-minute epoxy
- File or rotary tool
- Hobby knife

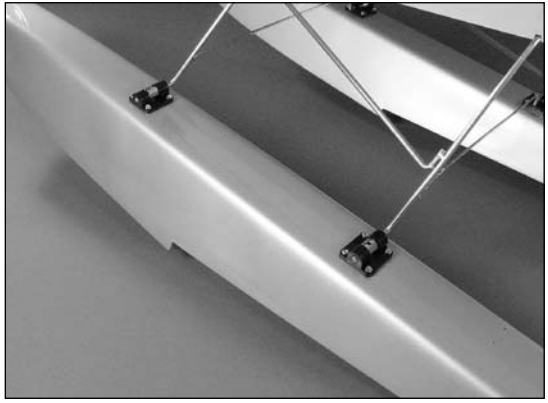
❍ 1. Remove the packing material from the landing gear. Attach it to the fuselage using the two nylon straps that were used to hold on the main gear and the two nylon straps included with the float kit. Use 2mm x 12mm screws to install the nylon straps.

❍ ❍ 2. Attach two of the brackets to each float using eight 3mm x 12mm sheet metal screws. Each float uses two brackets, so you'll install four brackets in all.

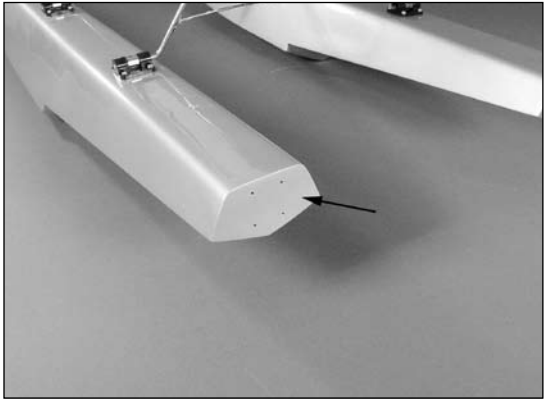
❍ 3. Use a file or rotary tool to make a flat on the top of each of the landing gear extensions.



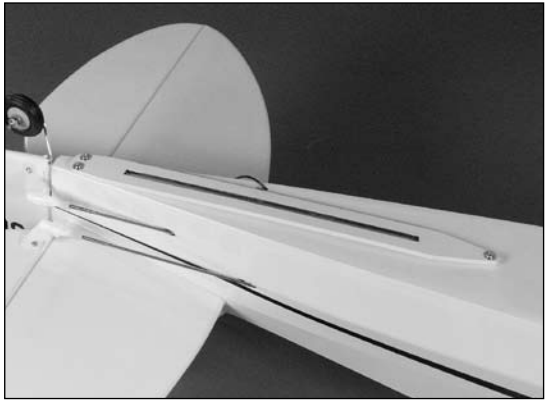
❍ 4. Attach the floats using the four 5/32" wheel collars and four 3mm setscrews. Make sure to use threadlock when tightening the setscrews onto the flats made in the previous step.



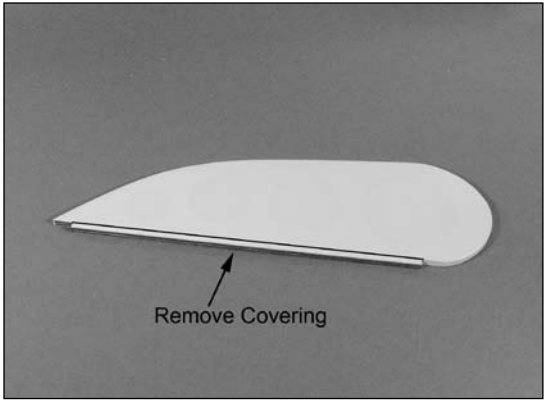
Note: One float has holes drilled in the aft end for the rudder bracket. This float is mounted on the same side as the rudder linkage.



❍ 5. Attach the ventral fin mount using three 2mm x 12mm sheet metal screws.



❍ 6. Remove the bottom 1/8" (3mm) of covering from the ventral fin using a hobby knife.



❍ 7. Attach the ventral fin to the mount using 6-minute epoxy. Make sure the fin is in line with the vertical centerline of the fuselage.

Linkage Installation

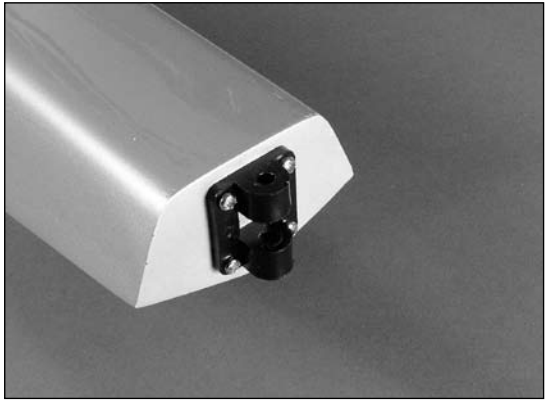
Required Parts

- Fuselage w/floats
- Steering arm
- 3mm setscrew (2)
- Tie wrap
- Full brass strap (3)
- Rudder shaft assembly
- Nylon bracket
- 5/32" wheel collar
- Pushrod connector (2)
- Half brass strap
- Connector backplate (2)
- 3mm x 12mm sheet metal screw (4)
- 29 3/4" (755mm) pushrod cable
- 25 3/4" (655mm) pushrod tube
- 2mm x 10mm sheet metal screw (7)

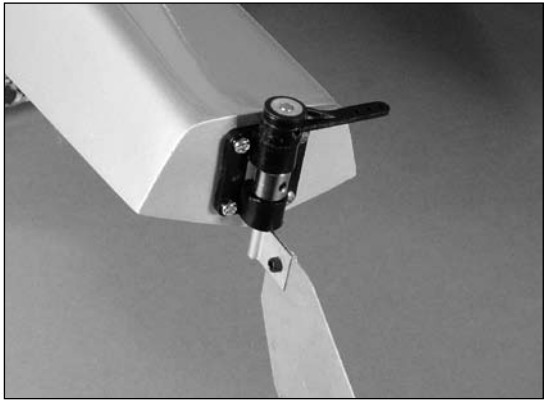
Required Tools and Adhesives

- Phillips screwdriver
- Pliers
- Drill
- Hex wrench: 1.5mm, 3/32"
- Hobby knife
- Threadlock
- Drill bit: 5/64" (2mm)

❍ 1. Attach a nylon bracket to the rear of the float using four 3mm x 12mm sheet metal screws.

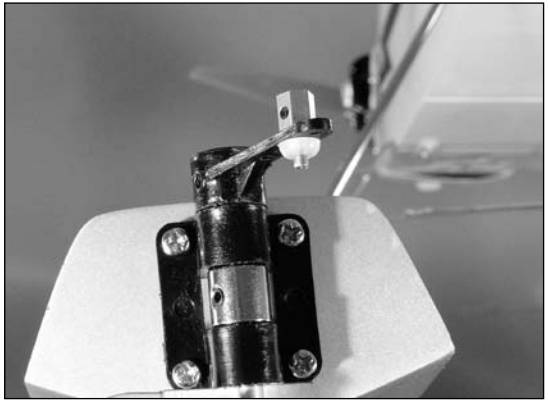


❍ 2. Place a 5/32" wheel collar in the center of the nylon bracket. Slide the rudder assembly through the nylon bracket and the wheel collar. Secure the steering arm at the top and the wheel collar using 3mm setscrews.

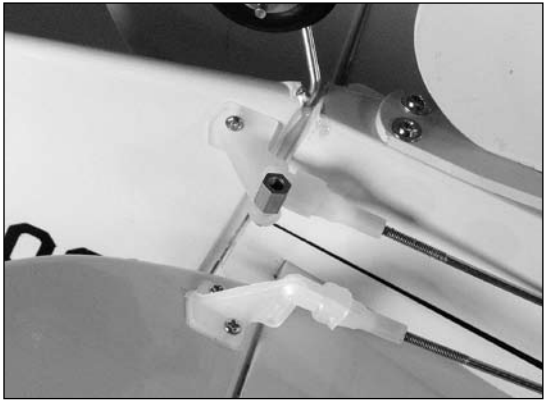


Note: Remember to use threadlock on both setscrews.

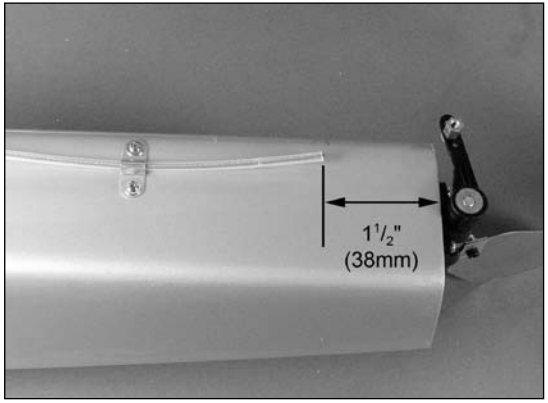
❍ 3. Enlarge the middle hole in the steering arm with a 5/64" (2mm) drill bit. Secure a pushrod connector on the steering arm using a pushrod connector backplate.



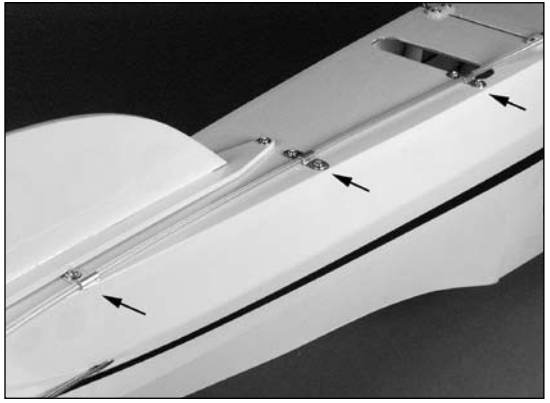
❍ 4. Enlarge the outboard hole in the rudder control horn using a 5/64" (2mm) drill bit. Secure a pushrod connector on the rudder horn using a pushrod connector backplate.



❍ 5. With the pushrod cable inside the pushrod tube, attach the tube to the float using a full brass strap and two 2mm x 10mm sheet metal screws. The end of the pushrod tube is 1 $^{1}/_{2}$" (38mm) from the end of the float.



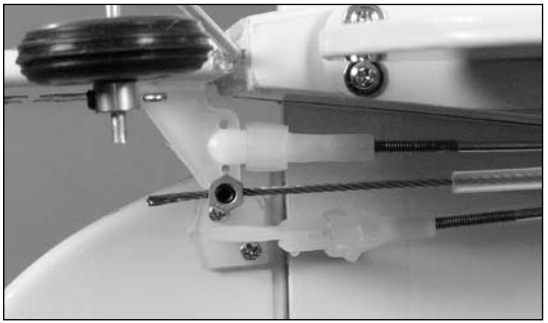
❍ 6. Use two full brass straps and the half brass strap to attach the pushrod tube to the bottom of the fuselage. Leave the straps slightly loose so it can be moved around for the next step.

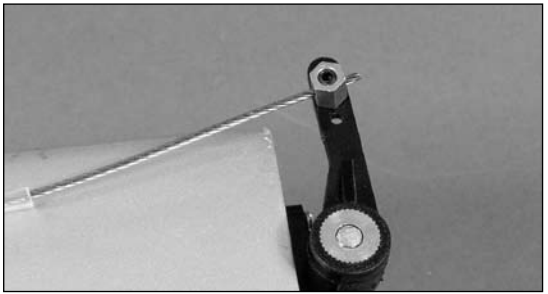


Note: These straps are secured onto the crossbraces on the bottom of the fuselage.

❍ 7. Use a tie wrap to attach the pushrod tube to the landing gear. Slide the tube as necessary. Once attached, go back and tighten the screws for the brass straps.

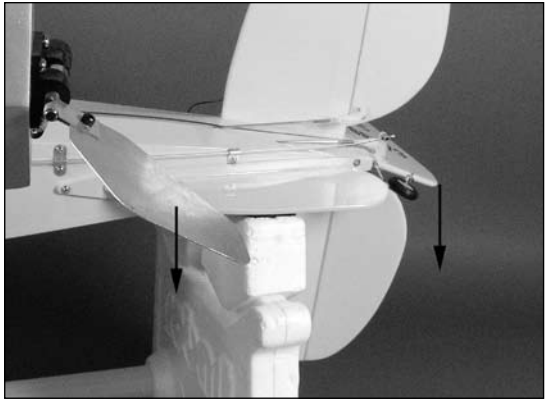
❍ 8. With the rudder centered, secure the pushrod cable using a 3mm setscrew. Place the steering arm parallel with the end of the float and secure the cable at the steering arm end using a 3mm setscrew.



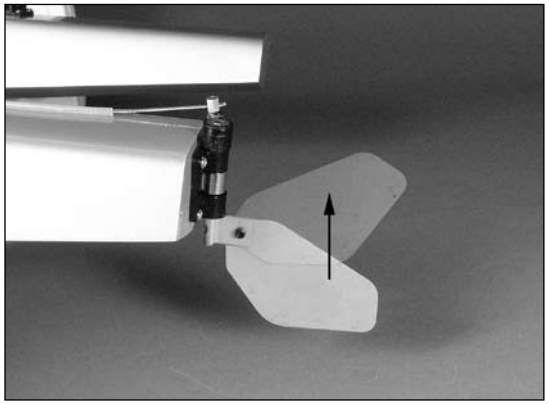


❍ 9. Position the water rudder parallel to the rudder of the aircraft. It may be necessary to loosen the setscrew at the steering arm to do so.

❍ 10. Test the operation of the water rudder with the aircraft rudder. The water rudder will move left when the aircraft rudder moves left, and right when the aircraft rudder moves right.



❍ 11. Adjust the water rudder to move up and down by tightening or loosening the 4-40 socket head screw on the rudder shaft. The water rudder should be able to deflect up if it hits an obstruction in the water.



❍ 12. Now that your floats have been installed, you ***MUST*** verify that the Center of Gravity of your model is still correct. Use the Center of Gravity provided in the manual included with your particular aircraft.

Float Installation (Ultra Stick 25e)

Required Parts

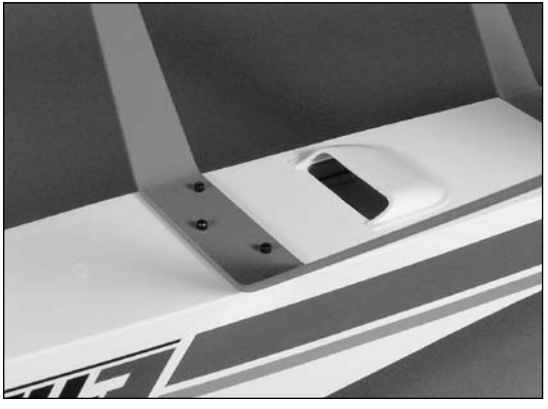
- Fuselage
- Landing gear
- 3mm setscrew (4)
- Nylon bracket (4)
- 4-40 x 1/2" socket head screw (3)
- 5/32" wheel collar (4)
- 3mm x 12mm sheet metal screw (16)

Required Tools and Adhesives

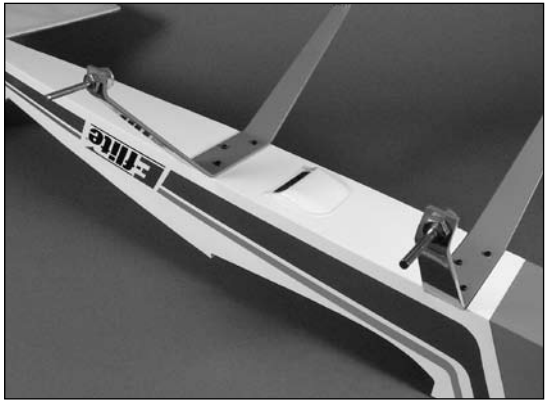
- Phillips screwdriver
- File or rotary tool
- Threadlock
- Hobby knife
- Hex wrench: 3/32"

Note: The Ultra Stick 25e comes with the necessary landing gear mounts for the installation of the floats. You will also find 4 molded 3.5mm spacer blocks in the Ultra Stick 25e kit which will be used when mounting the float mounts onto the floats. Use these parts in addition to the float hardware to complete the installation.

❍ 1. Locate the holes on the fuselage for the rear landing gear. These are located behind the air exit on the fuselage. Use a hobby knife to remove the covering. Attach the landing gear to the fuselage using three 4-40 x 1/2" socket head screws.

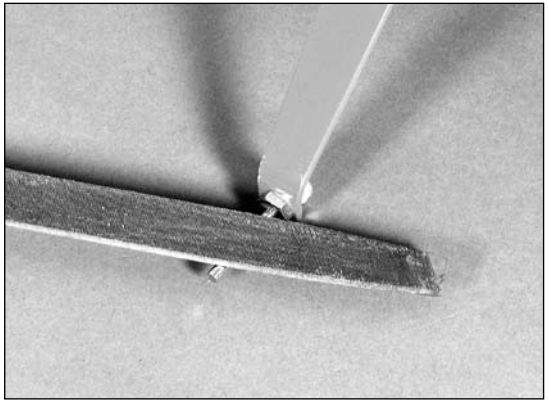


❍ 2. Remove the wheels and wheel collars from the main gear.

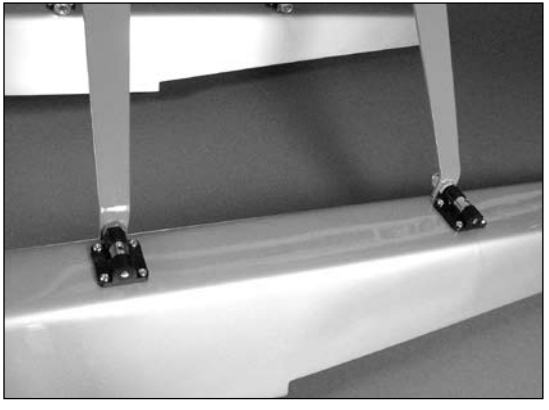


❍ ❍ 3. Attach two of the brackets and float mounts to each float using eight 3mm x 12mm sheet metal screws. Each float uses two brackets and two float mounts, so you'll install eight pieces in all.

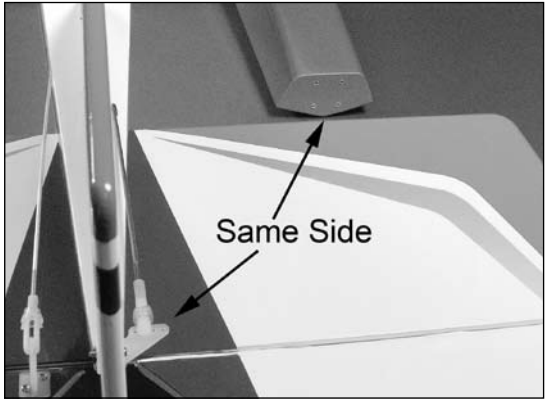
❍ 4. Use a file or rotary tool to make a flat on the top of each of the four axles.



❍ 5. Attach the floats using the four 5/32" wheel collars and four 3mm setscrews. Make sure to use threadlock when tightening the setscrews onto the flats made in the previous step.



Note: One float has holes drilled in the aft end for the rudder bracket. This float is mounted on the same side as the rudder linkage.



Linkage Installation

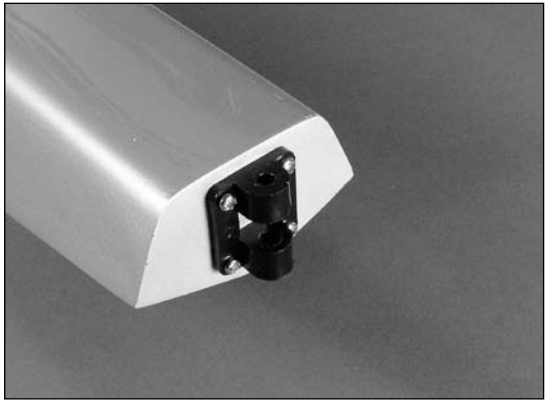
Required Parts

- Fuselage w/floats
- Steering arm
- 3mm setscrew (4)
- Rudder shaft assembly
- Full brass strap (3)
- Nylon bracket
- 5/32" wheel collar
- Pushrod connector (2)
- Tie wrap
- Connector backplate (2)
- 3mm x 12mm sheet metal screw (4)
- 29 3/4" (755mm) pushrod cable
- 25 3/4" (655mm) pushrod tube
- 2mm x 10mm sheet metal screw (6)

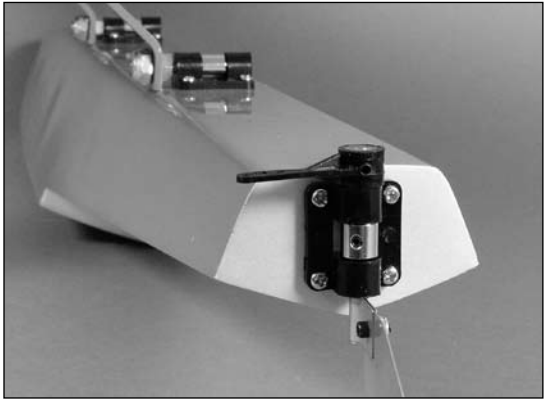
Required Tools and Adhesives

- Phillips screwdriver
- Pliers
- Drill
- Hex wrench: 1.5mm, 3/32″
- Hobby knife
- Threadlock
- Drill bit: 5/64" (2mm)

❍ 1. Attach a nylon bracket to the rear of the float using four 3mm x 12mm sheet metal screws.

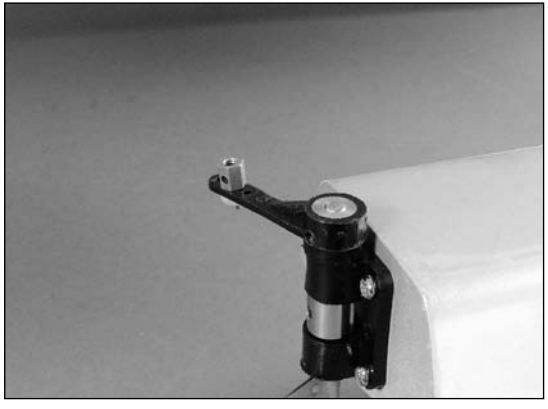


❍ 2. Place a 5/32" wheel collar in the center of the nylon bracket. Slide the rudder assembly through the nylon bracket and the wheel collar. Secure the steering arm at the top and the wheel collar using 3mm setscrews.

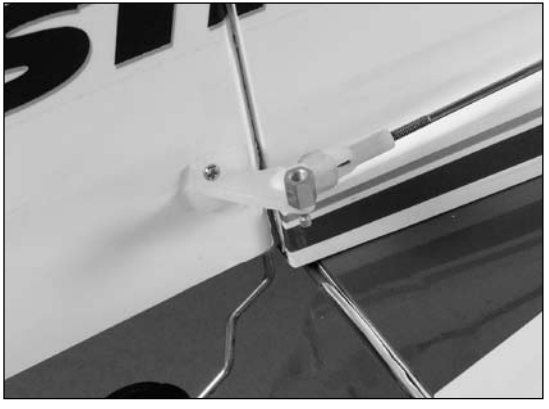


Note: Remember to use threadlock on both setscrews.

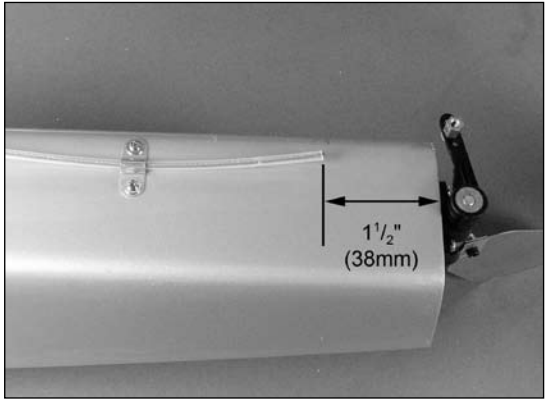
❍ 3. Enlarge the middle hole in the steering arm with a 5/64" (2mm) drill bit. Secure a pushrod connector on the steering arm using a pushrod connector backplate.



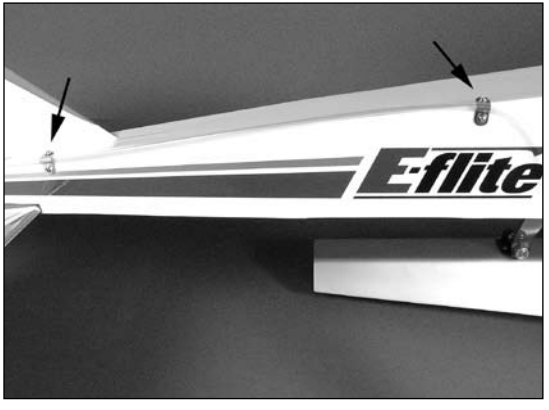
❍ 4. Enlarge the outboard hole in the rudder control horn using a 5/64" (2mm) drill bit. Secure a pushrod connector on the rudder horn using a pushrod connector backplate.



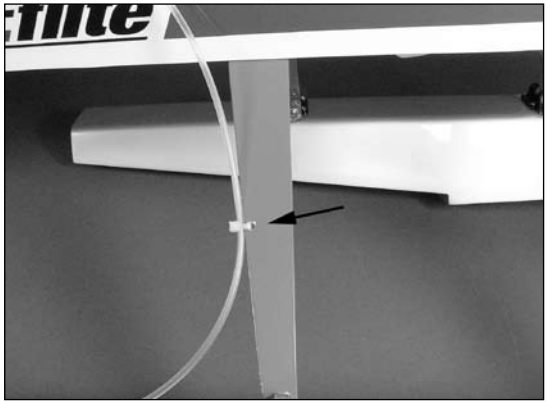
❍ 5. With the pushrod cable inside the pushrod tube, attach the tube to the float using a full brass strap and two 2mm x 10mm sheet metal screws. The end of the pushrod tube is 1 1/2" (38mm) from the end of the float.



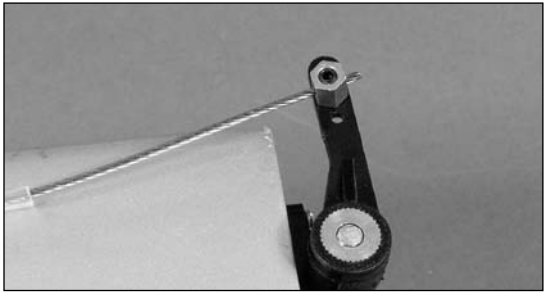
❍ 6. Bend two full brass straps to attach the pushrod tube to the top of the fuselage. Leave the straps slightly loose so it can be moved around for the next step.



❍ 7. Use a tie wrap to attach the pushrod tube to the landing gear. Slide the tube as necessary. Once attached, go back and tighten the screws for the brass straps.

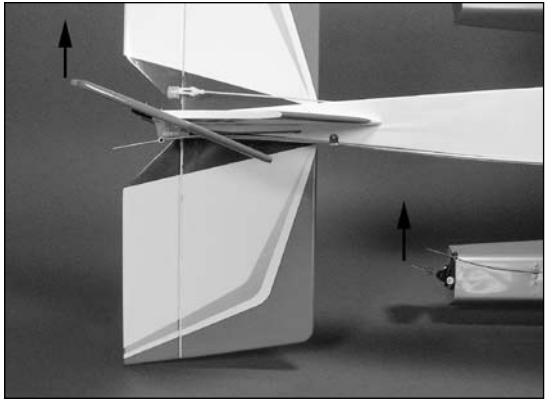


❍ 8. With the rudder centered, secure the pushrod cable using a 3mm setscrew. Place the steering arm parallel with the end of the float and secure the cable at the steering arm end using a 3mm setscrew.

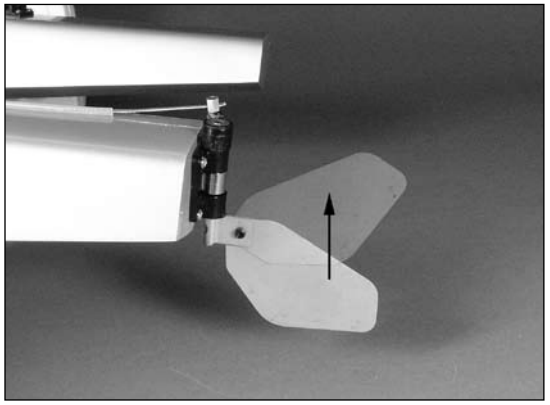


❍ 9. Position the water rudder parallel to the rudder of the aircraft. It may be necessary to loosen the setscrew at the steering arm to do so.

❍ 10. Test the operation of the water rudder with the aircraft rudder. The water rudder will move left when the aircraft rudder moves left, and right when the aircraft rudder moves right.



❍ 11. Adjust the water rudder to move up and down by tightening or loosening the 4-40 socket head screw on the rudder shaft. The water rudder should be able to deflect up if it hits an obstruction in the water.



❍ 12. Now that your floats have been installed, you ***MUST*** verify that the Center of Gravity of your model is still correct. Use the Center of Gravity provided in the manual included with your particular aircraft.

Float Flying

Flying from floats can be great fun. There are a few things to remember when you hit the lake. First, make sure you pick a location where you can take off and land parallel to the shore line with no obstructions. You will want to make sure you are taking off and landing into the wind.

Verify your water rudder is down and the plane is powered up. Set the plane into the water and begin to taxi out. It is common to hold full up elevator (back stick) during all taxi maneuvers. This helps to eliminate prop splash and keeps the water rudder deep in the water for improved steering. You may want to use a high rate for your rudder during this operations as well. You will switch to a low rate rudder for takeoff.

Taxi slow to get the hang of the rudder. Once you have lined up for takeoff, set your rudder dual rate to low. The water rudder becomes very effective during takeoff. Apply full up elevator and apply throttle slowly at first. As the plane picks up speed, you will notice it coming up on step. At this time, you can relax the elevator input and fly off the water the same way you take off from hard ground.

Once in the air, you will find the plane to behave slightly different that before. The added weight below the model acts similar to a pendulum effect in flight. It will slightly effect the aerobatic performance as well. You will notice a higher power setting from normal due to the added drag and weight of the floats.

Float Flying

Landing on water is very similar to landing on hard ground. Set up like you normally would and turn onto final approach. Maintain power during the approach, as a plane with floats tends to land slightly faster than when equipped with landing gear. As you come down, begin to flair and hold it until touchdown. Once you have touched down on the water, as the plane slows down, begin to feed in up elevator as the plane settles. Once you are slowed down, taxi back to shore and get ready for another day at the lake.

Please refer to the instruction manual for the J-3 Cub or Ultra Stick 25e for further information on flying with floats.

We hope you enjoy flying off water as much as we do.

Happy Float Flying.

2006 Official AMA National Model Aircraft Safety Code

GENERAL

1) I will not fly my model aircraft in sanctioned events, air shows or model flying demonstrations until it has been proven to be airworthy by having been previously, successfully flight tested.

2) I will not fly my model higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.

3) Where established, I will abide by the safety rules for the flying site I use, and I will not willfully or deliberately fly my models in a careless, reckless and/or dangerous manner.

4) The maximum takeoff weight of a model is 55 pounds, except models flown under Experimental Aircraft rules.

5) I will not fly my model unless it is identified with my name and address or AMA number on or in the model. (This does not apply to models while being flown indoors.)

6) I will not operate models with metal-bladed propellers or with gaseous boosts, in which gases other than air enter their internal combustion engine(s); nor will I operate models with extremely hazardous fuels such as those containing tetranitromethane or hydrazine.

RADIO CONTROL

1) I will have completed a successful radio equipment ground range check before the first flight of a new or repaired model.

2) I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.

3) At all flying sites a straight or curved line(s) must be established in front of which all flying takes place with the other side for spectators. Only personnel involved with flying the aircraft are allowed at or in front of the flight line. Intentional flying behind the flight line is prohibited.

4) I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band frequencies.)

5) Flying sites separated by three miles or more are considered safe from site-to-site interference, even when both sites use the same frequencies. Any circumstances under three miles separation require a frequency management arrangement, which may be either an allocation of specific frequencies for each site or testing to determine that freedom from interference exists. Allocation plans or interference test reports shall be signed by the parties involved and provided to AMA Headquarters.

Documents of agreement and reports may exist between (1) two or more AMA Chartered Clubs, (2) AMA clubs and individual AMA members not associated with AMA Clubs, or (3) two or more individual AMA members.

6) For Combat, distance between combat engagement line and spectator line will be 500 feet per cubic inch of engine displacement. (Example: .40 engine = 200 feet.); electric motors will be based on equivalent combustion engine size. Additional safety requirements will be per the RC Combat section of the current Competition Regulations.

7) At air shows or model flying demonstrations, a single straight line must be established, one side of which is for flying, with the other side for spectators.

8) With the exception of events flown under AMA Competition rules, after launch, except for pilots or helpers being used, no powered model may be flown closer than 25 feet to any person.

9) Under no circumstances may a pilot or other person touch a powered model in flight.

Notes

Notes

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