

T-34 Mentor 25 ePTS

Assembly Manual



Specifications

| | |
|---------------------|-------------------------|
| Wingspan: | 55 in (1575mm) |
| Length: | 44 in (1110mm) |
| Wing Area: | 545 sq in 34.9 sq dm) |
| Weight w/ Battery: | 4.4-4.5 lb (1.9-2.0 kg) |
| Weight w/o Battery: | 5.0-5.2 oz (2.2-2.3 kg) |

E-flite[®]
ADVANCING ELECTRIC FLIGHT

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Introduction

For decades, the T-34 has been the airplane in which nearly all U.S. Navy, Marine, and Coast Guard aviators have earned their wings of gold. Based upon the civilian Model 35 Bonanza, the all-metal T-34 has been rugged and reliable, enduring countless loops, rolls, stalls and hard landings at the hands of student pilots throughout the years.

And now, E-flite provides you with the most advanced electric training aircraft in the RC world. ePTS™ stands for Electric Progressive Trainer System—an airplane that will allow you to go from training to aerobatics without upgrading or purchasing a new plane.

This warbird comes ready-to-fly—no building is required and everything needed to fly is included. The T-34 Mentor sports removable NACA droops and a progressive 3-position flap system to provide extra stability and slow flying. Master the basics, remove the droops, and change flap position to move up to great sport performance and mild aerobatics.

Progress from student pilot to aerobatic performer with E-flite's T-34 Mentor 25 ePTS RTF.

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.

Contents of Kit/Parts Layout

Large Parts:

| | |
|------------|-------------------------|
| EFL4801 | Wing Set w/Ailerons |
| EFL4802 | Fuselage |
| EFL4803 | Tail Set |
| EFL4804 | Cowling |
| EFL4805 | Fuselage Hatch |
| EFL4806 | Pushrod Set |
| EFL4807 | Landing Gear |
| EFL4808 | Spinner |
| EFL4809 | Tail Cone |
| EFLP12080E | 12x8 Electric Propeller |



Required Tools and Adhesives

Tools & Equipment

EFLA250 Park Flyer Tool Assortment, 5-piece

Or Purchase Separately

EFLA257 Screwdriver, #1 and #2 Phillips
(or included with EFLA250)

Covering iron

Adjustable wrench

Pin drill

Drill bit: 1/16-inch (1.5mm), 5/64-inch (2mm)

Flat blade screwdriver

Phillips screwdriver: #1, #2

Medium CA

Threadlock

Hex wrench: 2.5mm

Ruler

Optional Accessories

EFLA110

Power Meter

EFLC3005

Celectra™ 1- to 3-Cell Li-Po Charger

EFLC505

Intelligent 1- to 5-Cell Balancing Charger

EFLB32003S

3200mAh 3S 11.1V 20C Li-Po Battery

APC12080E

12x8 Electric Prop

JSP20050

ST47 Standard Servo

SPM6805

Trainer Cord

DYN4055

12-Volt, 10-Amp Power Supply

Warranty Information

Warranty Period

Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon 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. 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 Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon 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.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

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 directly. This will enable Horizon to better answer your questions and service you in the event that you may need any 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 this 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 is not responsible for merchandise until it arrives and is accepted at our facility**. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided 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 the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon 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. **Please note: non-warranty repair is only available on electronics and model engines.**

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.

Note on Lithium Polymer Batteries



Lithium Polymer batteries are significantly more volatile than alkaline or Ni-Cd/Ni-MH batteries used in RC applications. All manufacturer's instructions and warnings must be followed closely. Mishandling of Li-Po batteries can result in fire. Always follow the manufacturer's instructions when disposing of Lithium Polymer batteries.

Warning

An RC aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably at AMA (Academy of Model Aeronautics) approved flying sites, following all instructions included with your radio.

Keep loose items that can get entangled in the propeller away from the prop, including loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the propeller.

Safety, Precautions, and Warnings

As the user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.

This model is controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is necessary to always keep a safe distance in all directions around your model, as this margin will help to avoid collisions or injury.

- Always operate your model in an open area away from cars, traffic, or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model out into the street or populated areas for any reason.
- Never operate your model with low transmitter batteries.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.

Wing and Landing Gear Assembly

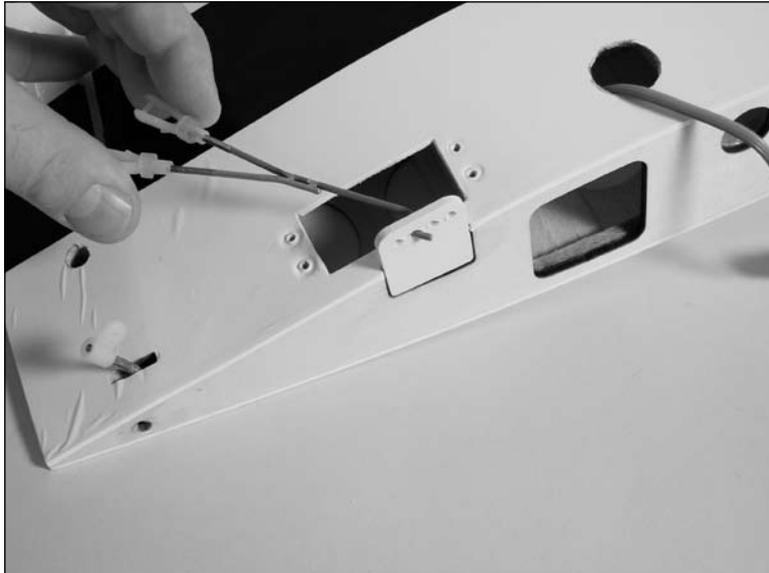
Required Parts

Wing panel (left and right) Landing gear strap (5)
Flap linkage (fixed flap) Wing tube
Aluminum anti-rotation pin
3mm x 10mm sheet metal screw (10)

Required Tools and Adhesives

Medium CA Phillips screwdriver: #2

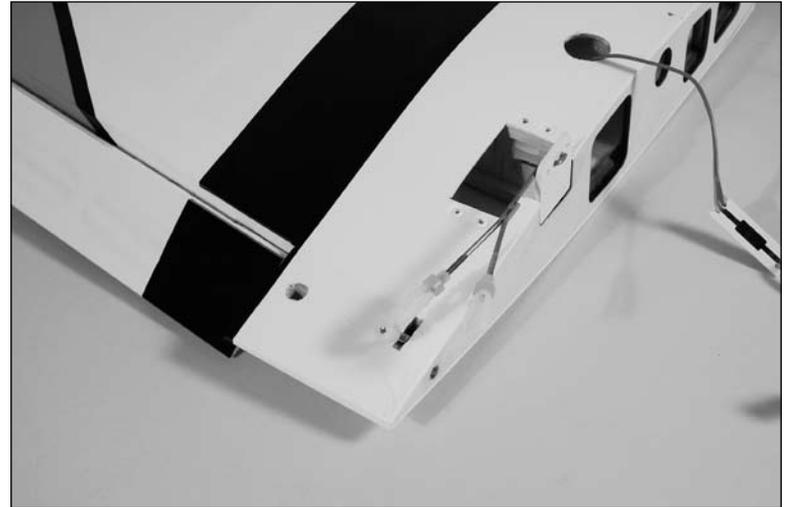
- 1. Attach the flap linkage to the flap linkage stay. The linkage will attach to the third hole.



Note: The flap will be set to the training position in this section. Setting the flap position for your particular level of flight skills will be covered later in the manual.

Hint: You can skip steps 1 and 2 if you plan on installing a servo for the operational flaps. Follow the steps in the section "Operational Flap Installation (Optional)" instead.

- 2. Connect the clevis to the flap control horn. You will note the flap is driven down when you connect the clevis. We will adjust this position in a few steps.



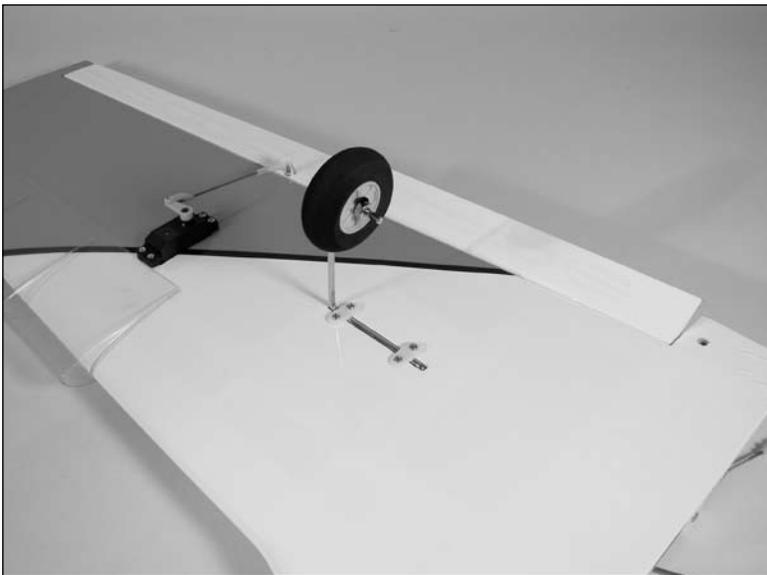
- 3. Slice the aluminum anti-rotation pin into the wing. It is suggested to use medium CA to glue the pin in place to prevent it from falling out and getting lost.



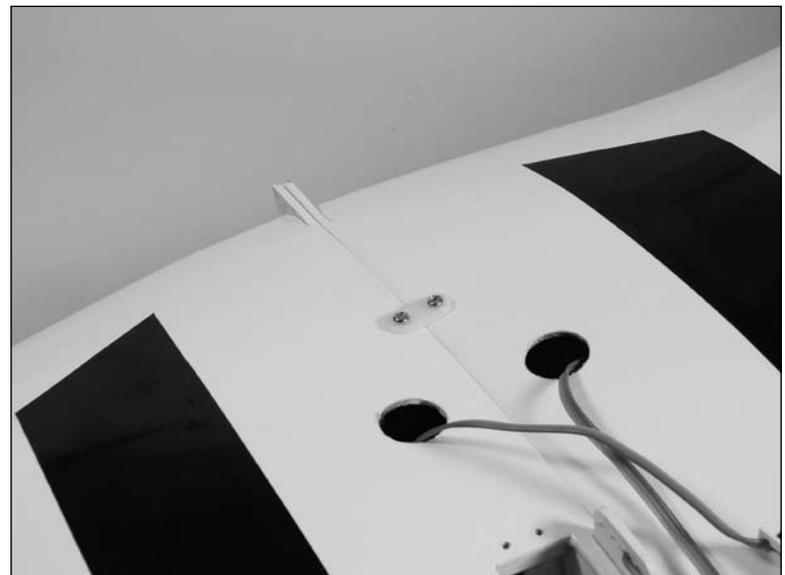
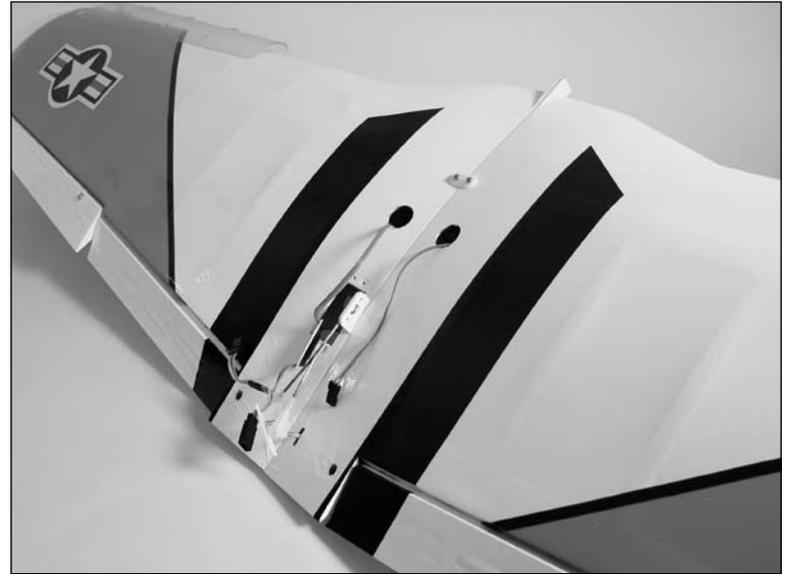
- 4. Slide the wing tube into the wing panel at this time.



- 5. Attach the landing gear to the bottom of the wing using two landing gear straps, four 3mm x 10mm sheet metal screws and a #2 Phillips screwdriver. Attach both main gears at this time.



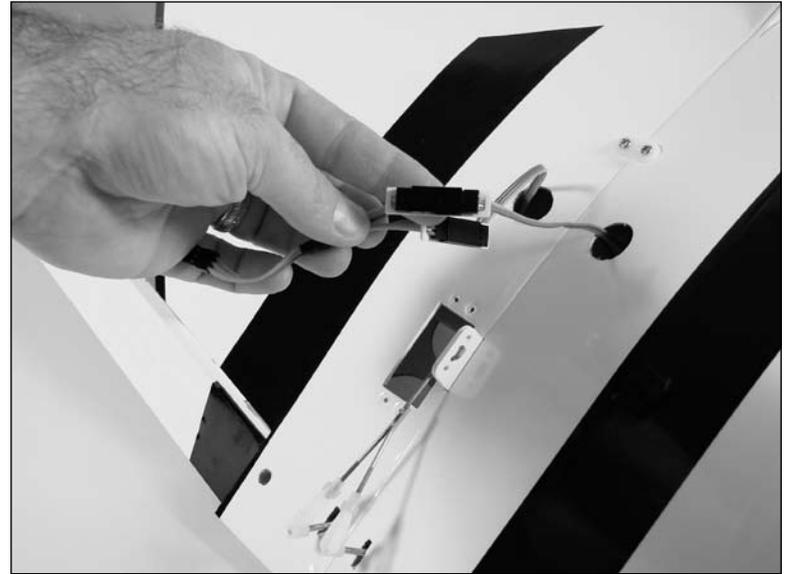
- 6. Slide the two wing panels tightly together. Once together install the wing securing strap with two screws using a #2 Phillips screwdriver.



- 7. Slide the lead from the wing panel through the connector stay as shown. The stay will prevent the lead from being unplugged accidentally.



- 8. Rotate the lead in the stay so the colors align with those of the lead already installed. Plug the two connectors together and slide them tight against the stay.



- 9. Connect the flap linkage to the flap control horn. We will adjust the flaps to their correct setting later on in the manual in the "Positioning the Flaps" section on page 27.



Tail Installation

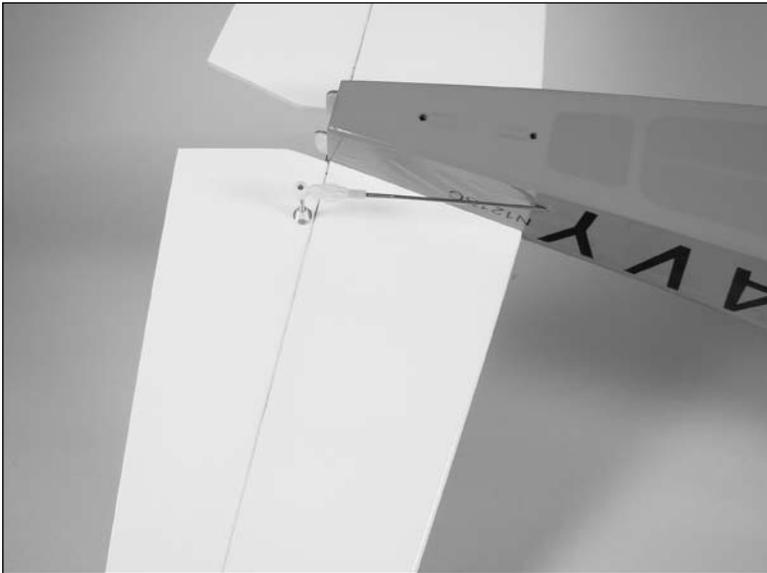
Required Parts

| | |
|-------------------|---------------------------------|
| Fuselage assembly | Stabilizer/elevator |
| Fin/rudder | 3mm washer (2) |
| 3mm locknut (2) | 2mm x 8mm sheet metal screw (2) |
| Tail cone | |

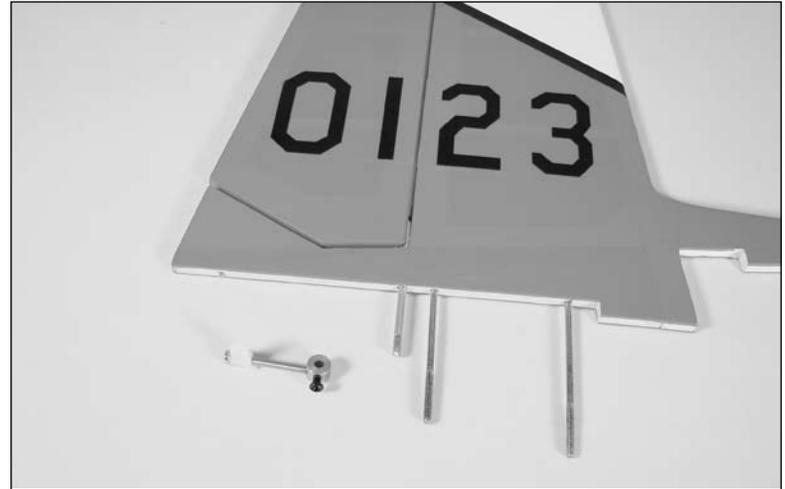
Required Tools and Adhesives

Phillips screwdriver: #1, #2 Adjustable wrench
Threadlock

- 1. Slide the stabilizer/elevator into the slot at the rear of the fuselage. Make sure the control horn faces the bottom of the fuselage. Align the holes in the stabilizer with the holes in the fuselage. Connect the elevator pushrod to the elevator control horn.



- 2. Use a #2 Phillips screwdriver to remove the rudder control horn. You will need to loosen both the short black screw and control horn screw to remove the control horn.



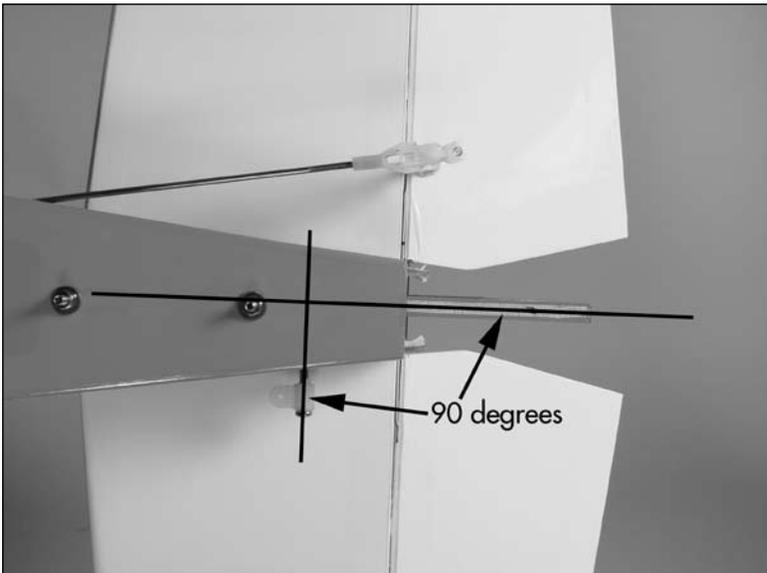
- 3. Slide the rudder partially into the fuselage. Install the control horn so the black screw faces the rear of the fuselage.



- 4. Slide the fin fully into position. Use two 3mm washers and two 3mm locknuts to secure the fin. Tighten these nuts down using an adjustable wrench.



- 5. Align the control horn so it is 90 degrees to the rudder as shown.



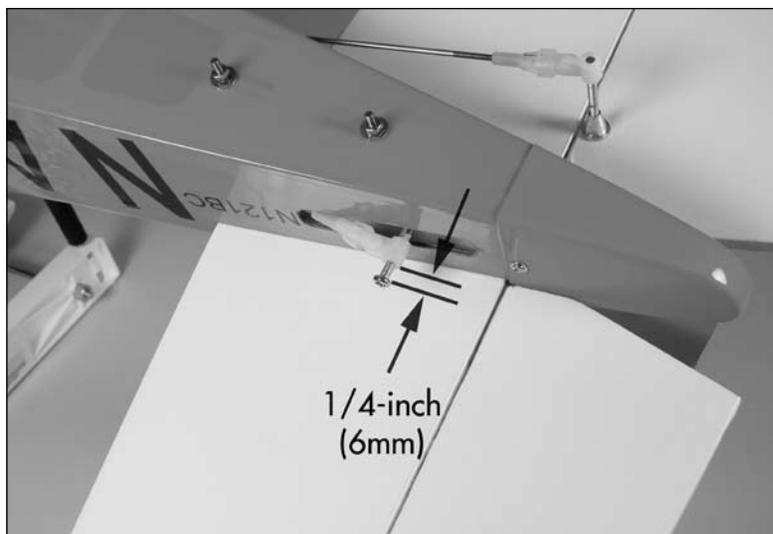
- 6. Center the control horn vertically in the slot on the side of the fuselage. Use a #2 Phillips screwdriver to tighten the black screw against the rudder control rod. Use threadlock on the screw to prevent it from vibrating loose.



- 7. Use a #2 Phillips screwdriver to tighten the control horn screw. Again, the use of threadlock is necessary to prevent the screw from vibrating loose.



- 8. Screw the nylon control horn in 1/4-inch (6mm). Connect the clevis from the rudder pushrod to the rudder control horn.



- 9. Attach the tail cone to the fuselage using two 2mm x 8mm sheet metal screws and a #1 Phillips screwdriver.



Battery and Wing Installation

Required Parts

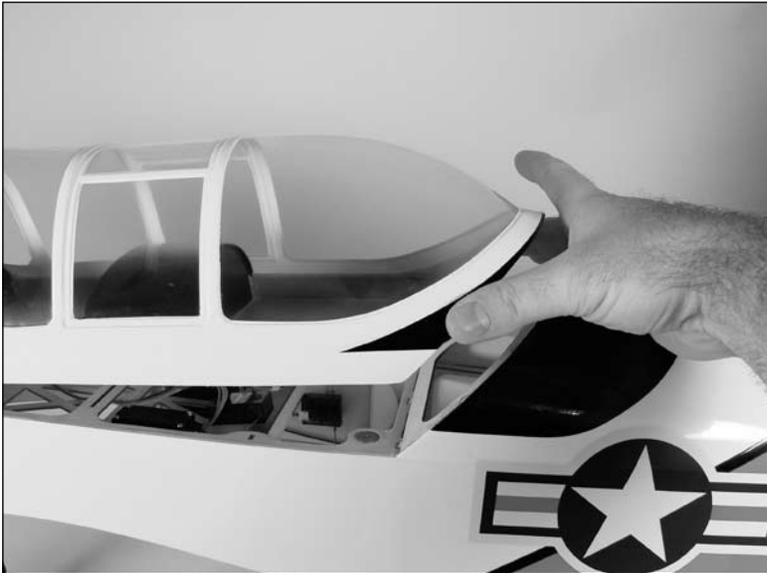
Fuselage assembly
Motor battery

Wing assembly
Nylon wing bolt (2)

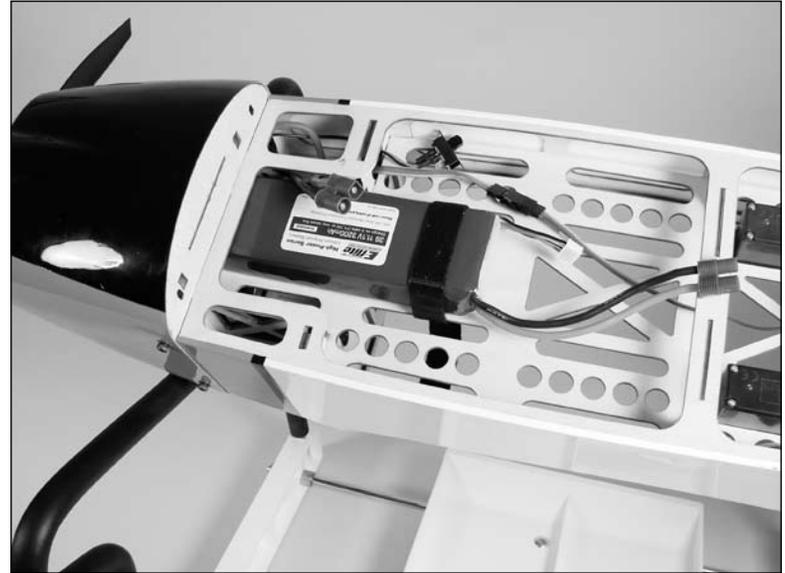
Required Tools and Adhesives

Flat screwdriver: 1/4-inch

- 1. Remove the canopy from the fuselage by grasping the canopy at the aft edge and rocking it left to right. This will disengage the magnets that hold it in place. The front has two pins that key into the fuselage.



- 2. Use the hook and loop straps to secure the motor battery in the fuselage. The position of the battery can be adjusted inside the fuselage to correctly balance the aircraft. For your initial flights, position the battery as far forward in the fuselage as possible.



- 3. Pass the leads for the ailerons (and flap) through the cross bracing in the fuselage. Guide the tab at the front of the wing into the slot in the fuselage.



- 4. Use two nylon wing bolts and a flat screwdriver to secure the wing to the fuselage.



- 5. Plug the aileron lead into the receiver in the slot marked **AILE**. (The flap servo is plugged into the AUX1 slot of the receiver when the optional flaps have been installed.) Replace the canopy back onto the fuselage. You will want to make sure you have the wires pressed down flat and to the side of the receiver before installing the top hatch.



Centering the Control Surfaces and Checking Control Direction

Required Parts

Assembled airframe
Radio system

Motor battery

Required Tools and Adhesives

AA battery (4)

Note: This section is designed to help you become acquainted with the operation of the radio in correlation to the model. If a flight control moves in the incorrect direction we will instruct you how to change it in the next section. ,

- 1. Follow the radio instructions to install the four AA batteries.



- 2. Turn the radio on and check that the sticks and trims have been centered. The transmitter should display "T-34EPTS" on the screen.

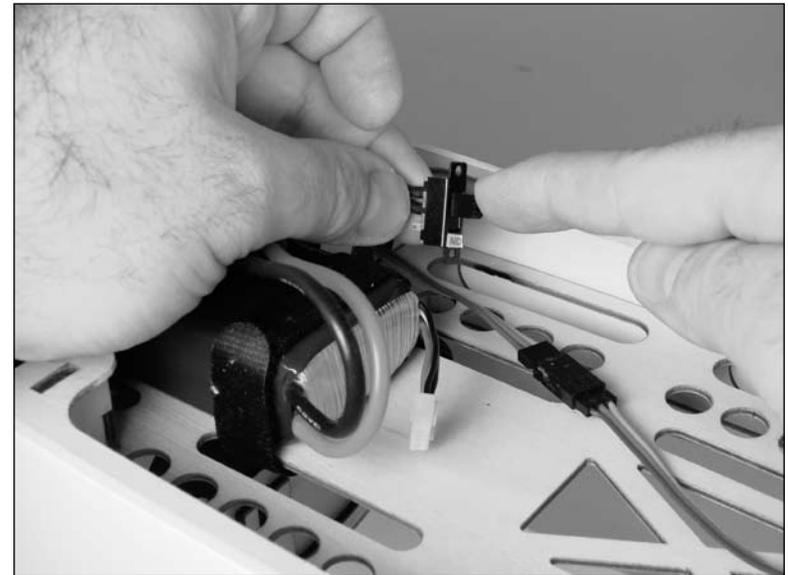


- 3. Plug the motor battery into the speed control. Set the throttle stick to low throttle and turn on the speed control. You will hear a series of beeps or tones when you plug the battery in. During this process it is normal for the prop to pulse slightly as the ESC powers up. Please ensure you are not in line with the prop or in front of it during power up.



Important: Always use extreme caution around the propeller when the motor battery is plugged in. A spinning propeller can cause serious damage or injury. It is always best to stay behind the propeller and keep it away from loose objects when the battery and speed control are connected.

- 4. Your transmitter should still be on and the battery plugged in. Now turn the switch on inside the model. The radio in the model should link up within 10 seconds. If it does not, turn the switch off and the transmitter off. Then turn the transmitter on and the switch inside the model on again and see if the radio links up. If the radio does not link up at this time, you will need to rebind the system. This is accomplished in the radio manual that is included with your system.



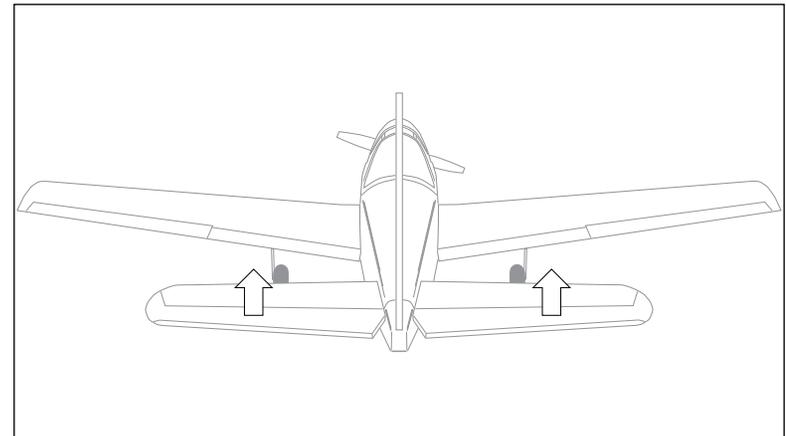
Note: The following steps will ensure your flight controls are centered for the first flight. In the instructional DVD included with your T-34, we have shown you how to adjust the clevises and also servo arms if necessary. Use both of these instructions to accomplish the following steps.

Checking the Elevator

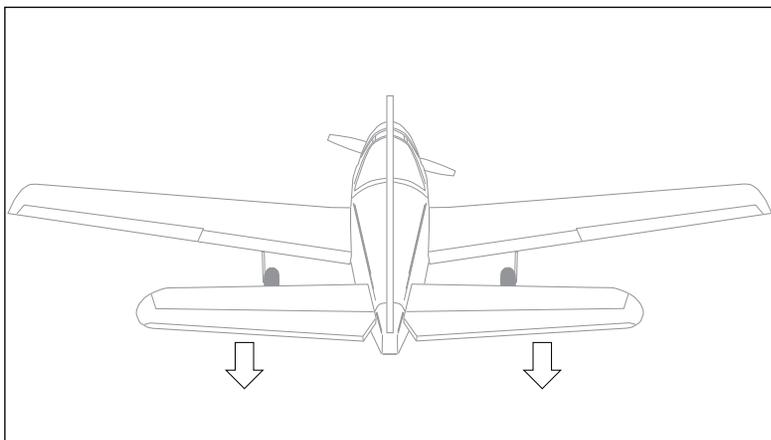
- 5. Center the elevator stick and trim. Thread the clevis in or out on the elevator pushrod until the elevator is aligned with the stabilizer as shown.



- 6. Check the movement of the elevator with the radio system. Pulling the elevator/aileron stick (right stick on the transmitter) back will make the airplane elevator move up.

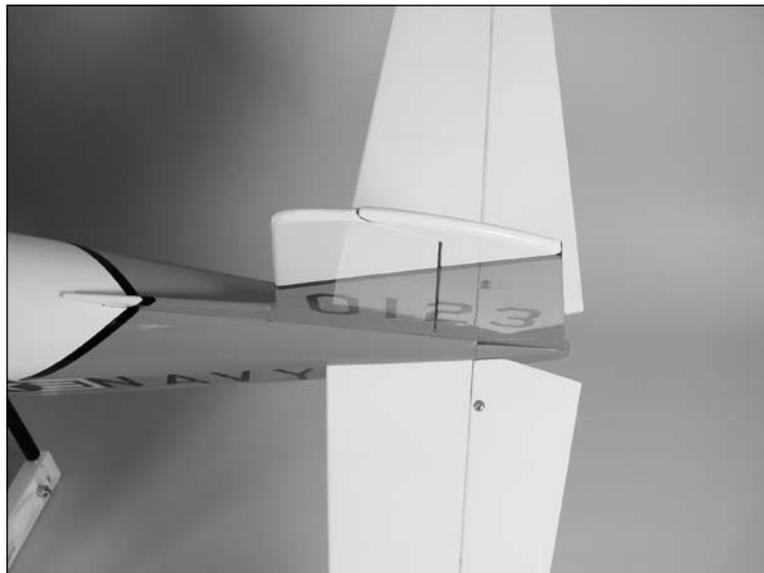


- 7. Check the movement of the elevator with the radio system. Pushing the elevator/aileron stick forward will make the airplane elevator move down.

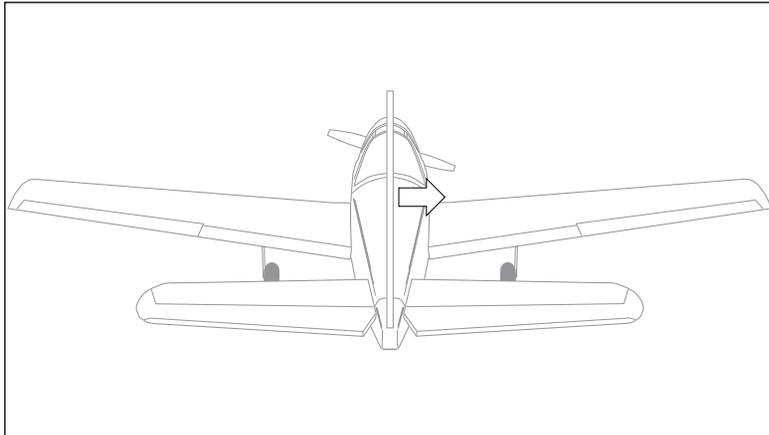


Checking the Rudder

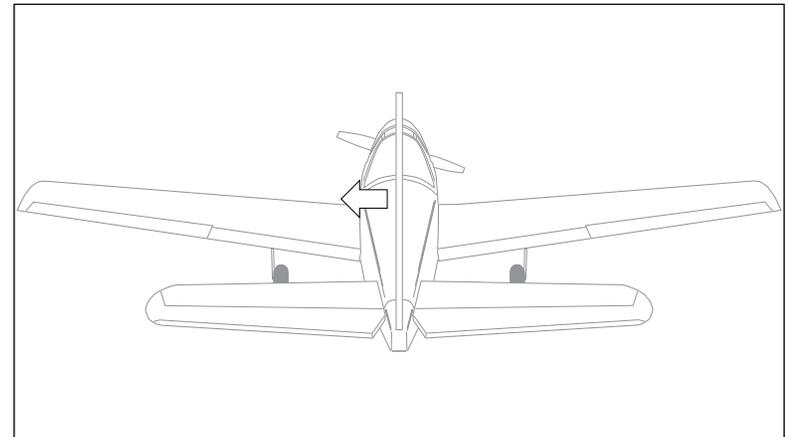
- 8. Center the rudder stick and trim. Thread the clevis in or out on the rudder pushrod until the rudder is aligned with the fin as shown.



- 9. Check the movement of the rudder using the transmitter. When the rudder/throttle stick (left side of the transmitter) is moved right, the rudder should also move right.



- 10. Check the movement of the rudder using the transmitter. When the left stick is moved left, the rudder should also move left.

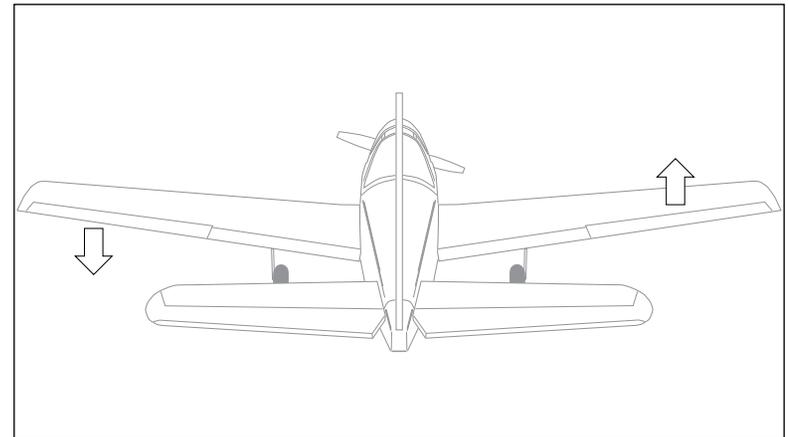


Checking the Ailerons

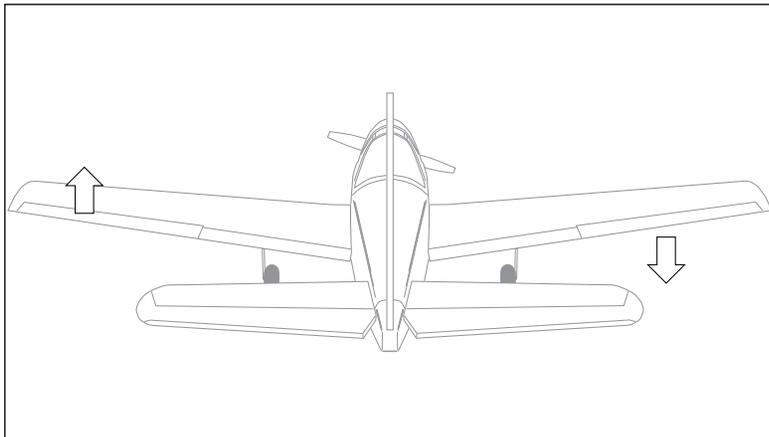
- 11. Center the aileron stick and trim. Thread the clevis in or out on the aileron pushrod until the ailerons are aligned with the wing as shown.



- 12. Check the movement of the aileron using the transmitter. When the elevator/aileron stick is moved right, the right aileron will move up and the left aileron will move down.

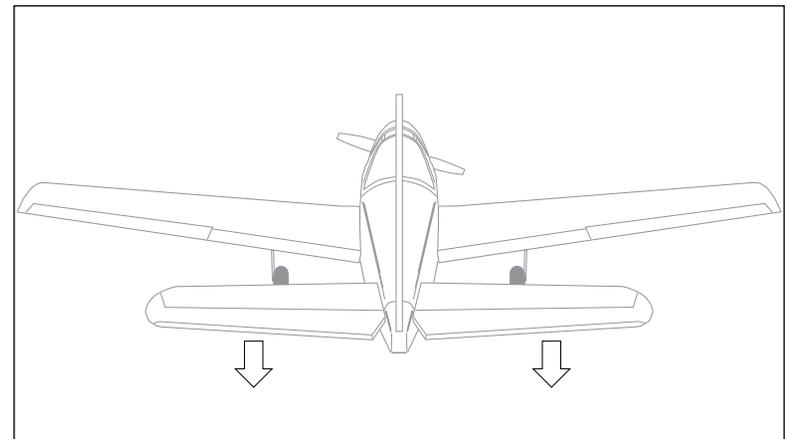


- 13. Check the movement of the aileron using the transmitter. When the aileron/elevator stick is moved left, the left aileron will move up and the right aileron will move down.



Reversing Direction of Flight Controls

If you find any of the control surfaces moving in the opposite direction (example shown below), you will need to use the **Servo Reversing** feature of your radio system. Follow the instructions for the radio to enter the programming and change the servo reversing of the offending control surface.



Setting the Control Throws

Required Parts

Assembled airframe Motor battery
Radio system

Required Tools and Adhesives

Ruler

Your transmitter and model come out of the box set up and ready to fly. Should you need to replace your fuselage or wing due to a mishap or such, this section will help you reset your control throws to the factory settings.

Note: Measurements are taken at the widest point on the surface.

These are general guidelines measured from our own flight tests. You can experiment with different rates to match your preferred style of flying.

- 1. Turn the radio on and check that the sticks and trims have been centered.



- 2. Plug the motor battery into the speed control. Set the throttle stick to low throttle and turn on the speed control.

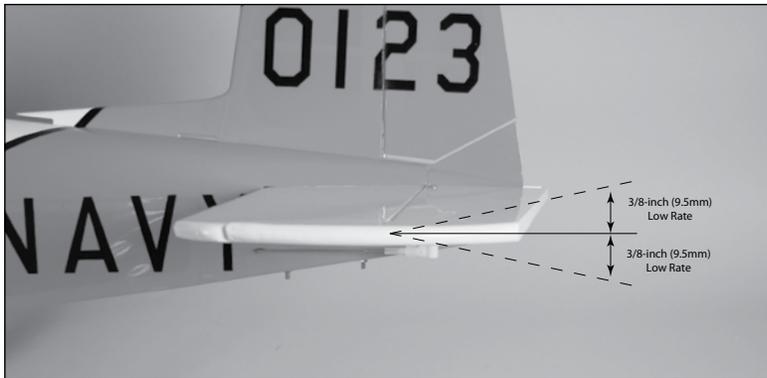


Important: Always use extreme caution around the propeller when the motor battery is plugged in. A spinning propeller can cause serious damage or injury. It is always best to stay behind the propeller and keep it away from loose objects when the battery and speed control are connected.

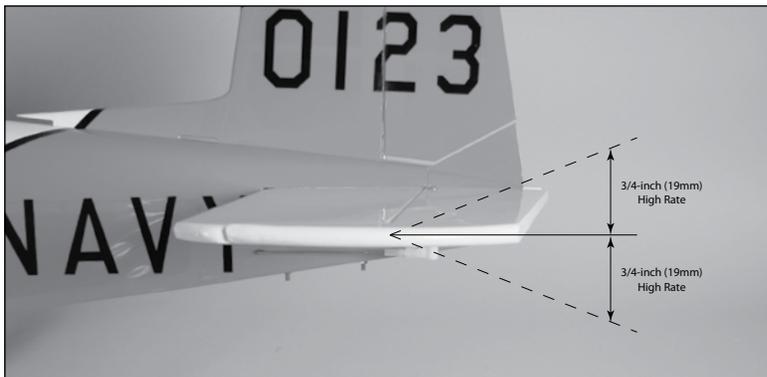
Elevator Throw

- 3. Use a ruler to check the amount of throw for the elevator. Move the elevator stick fully and check the measurements. Adjust the radio as necessary following the instructions provided with the radio to achieve the following measurements.

Low Rate: 3/8-inch (9.5mm) (Up/Down)



High Rate: 3/4-inch (19mm) (Up/Down)

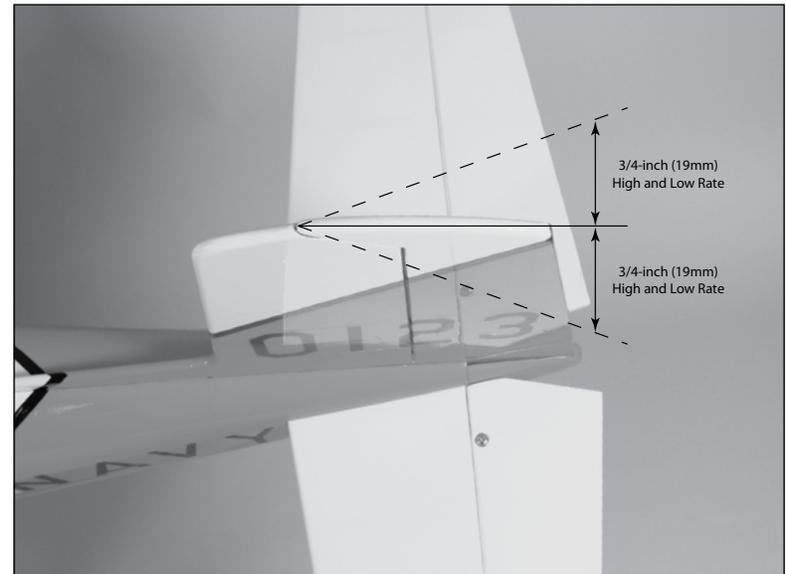


Rudder Throw

- 4. Use a ruler to check the amount of throw for the rudder. Move the rudder stick fully and check the measurements. Adjust the radio as necessary following the instructions provided with the radio to achieve the following measurements.

Low Rate: 3/4-inch (19mm) (Right/Left)

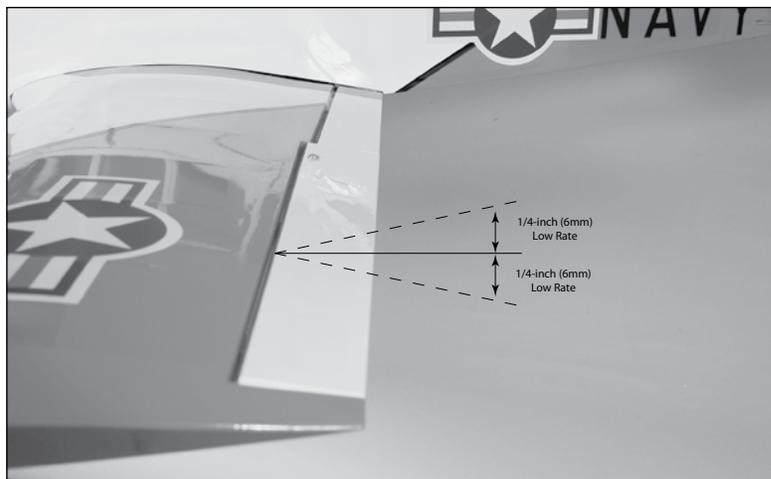
High Rate: 3/4-inch (19mm) (Right/Left)



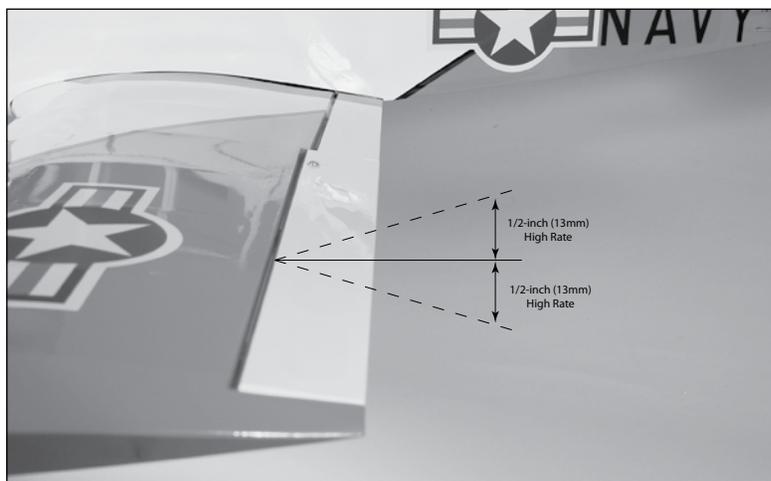
Aileron Throw

- 5. Use a ruler to check the amount of throw for the ailerons. Move the aileron stick fully and check the measurements. Adjust the radio as necessary following the instructions provided with the radio to achieve the following measurements.

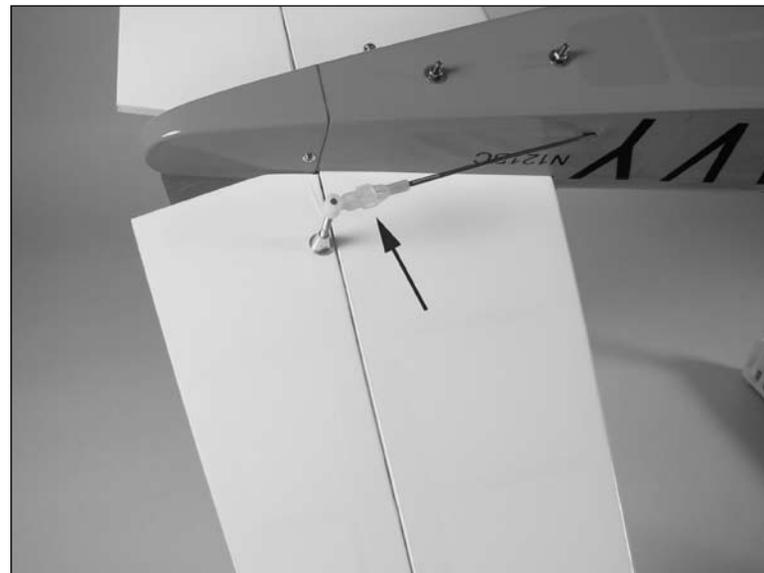
Low Rate: 1/4-inch (6mm) (Up/Down)



High Rate: 1/2-inch (13mm) (Up/Down)



- 6. Once all the control throws have been set, make sure to slide the clevis retainers over the clevises to prevent them from opening accidentally.



General Maintenance

Required Parts

Fuselage

Required Tools and Adhesives

Phillips screwdriver: #1 Hex wrench: 2.5mm

- 1. Use a #1 Phillips screwdriver to remove the two screws that secure the spinner cone to the spinner backplate.



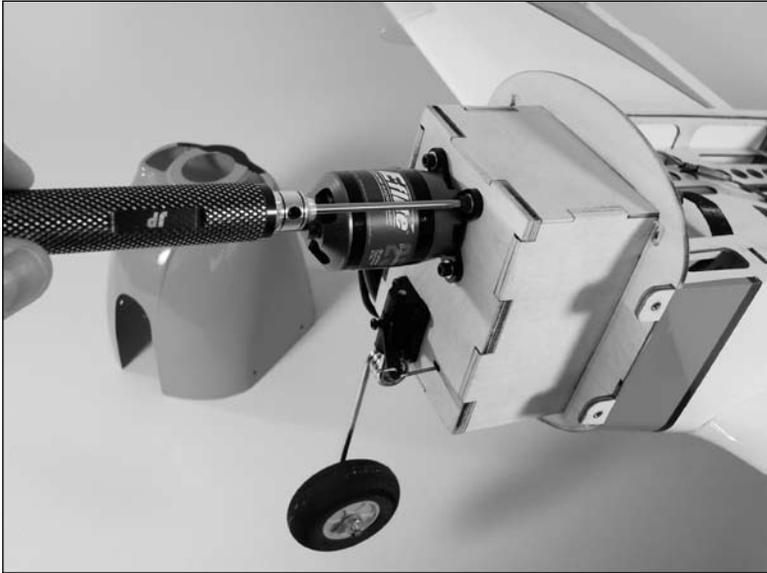
- 2. Check that the propeller adapter is tight using a hex wrench or screwdriver that fits into the hole in the adapter. You will turn this nut counterclockwise to loosen or clockwise to tighten.



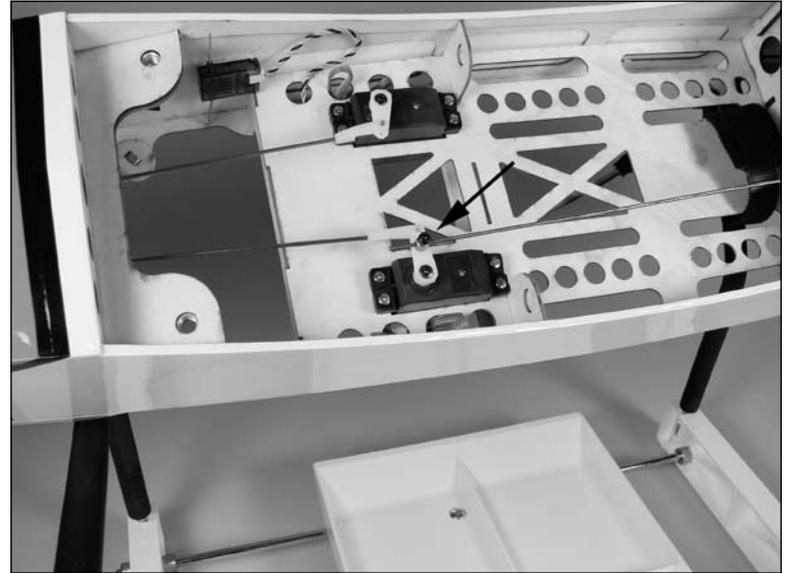
- 3. To check that the motor is secure to the firewall, you will first need to remove the spinner. Use a 2.5mm hex wrench to remove the four screws that secure the cowling to the fuselage.



- 4. Use the same 2.5mm hex wrench to check the four screws that secure the motor to the firewall. Once the motor screws are tight, reverse the previous steps to install the cowling, propeller and spinner.



- 5. If your aircraft does not track straight during taxi, use the screw at the rudder servo and a #1 Phillips screwdriver to correct the trim. **Do not** use the radio trim for ground tracking. The rudder trim at the radio is only used to trim the rudder in flight.



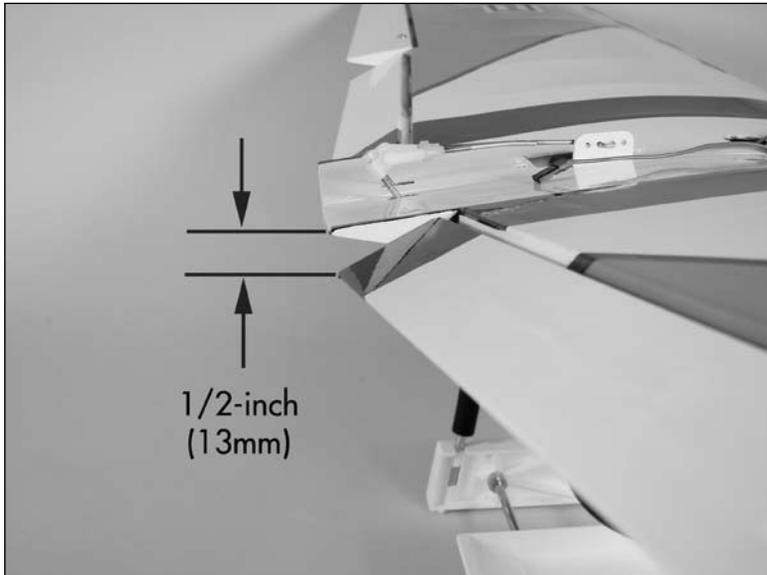
Positioning the Flaps

Required Parts

Wing assembly

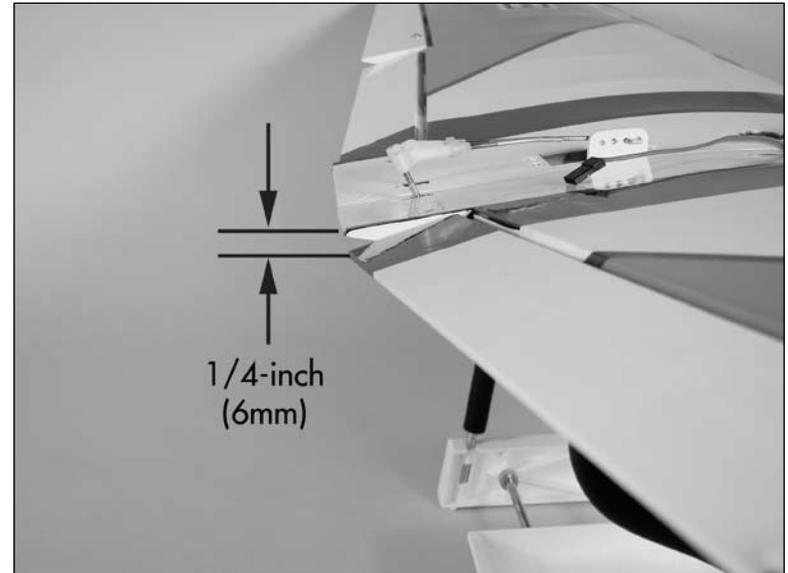
Initial Training Flap Settings

- 1. Setting the linkage to the third hole back from the front of the stay sets the flaps to the position for initial flight training. This will allow the plane to fly at its slowest speed and will be slowest during landing as well. The setting for the flaps in this position is 1/2-inch (13mm) when measured from the trailing edge of the wing to the trailing edge of the flap.



Intermediate Setting

- 2. As you continue to advance, the flap linkage can again be moved forward one hole. The measurement for the flaps in this setting is 1/4-inch (6mm) from the trailing edge of the wing to the trailing edge of the flaps. As described in Step 1, this will allow the aircraft to fly slightly faster, but will also require a slightly faster landing speed.



Advanced Setting

- 3. Setting the linkage in the forward hole will place the flap in the full "UP" position. This is the preferred position for those with flight experience, as the plane will fly more like a sport aircraft and will require the greatest amount of skill (for this type of aircraft) during landing.

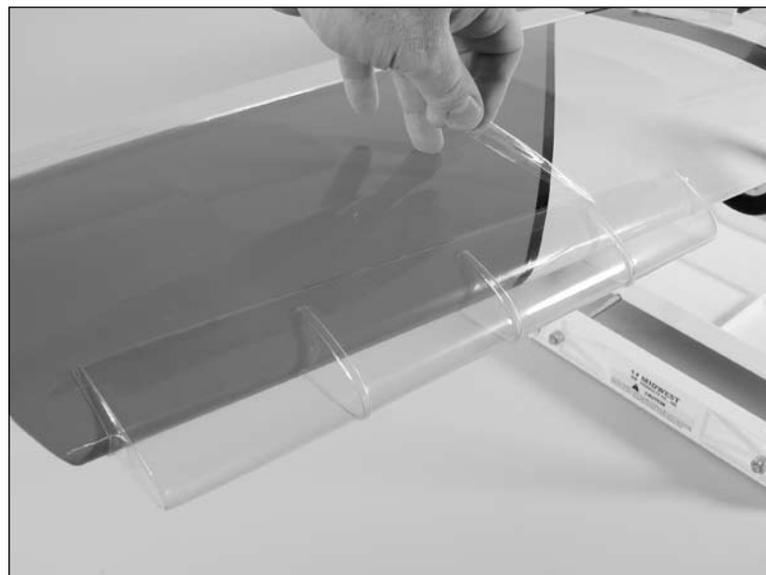


Removing the NACA Wing Droops

Required Parts

Wing panel (left and right)

- 1. Carefully remove the tape from the wing on both the top and bottom of the wing droop.



- 2. Once the wing droop has been removed, use a cleaner to remove the tape residue from the wing.



Note: Check your particular cleaner in an inconspicuous place before applying it to the wing. If your cleaner is not compatible with the covering of your aircraft and damages the covering, it will be in a place that cannot be seen.

Operational Flap Installation (Optional)

Required Parts

Wing panel (left and right) Flap servo w/hardware
Flap linkage (operational flap)

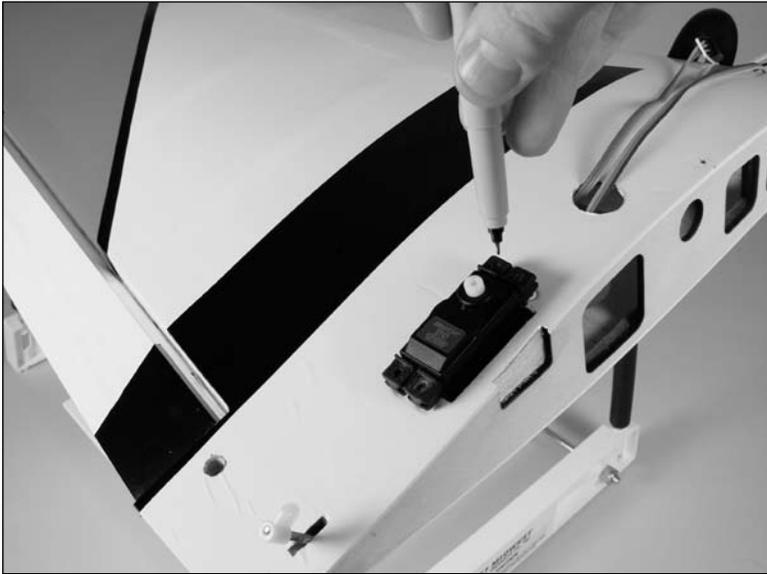
Required Tools and Adhesives

Phillips screwdriver: #1 Pin drill
Thin CA
Drill bit: 1/16-inch (1.5mm), 5/64-inch (2mm)

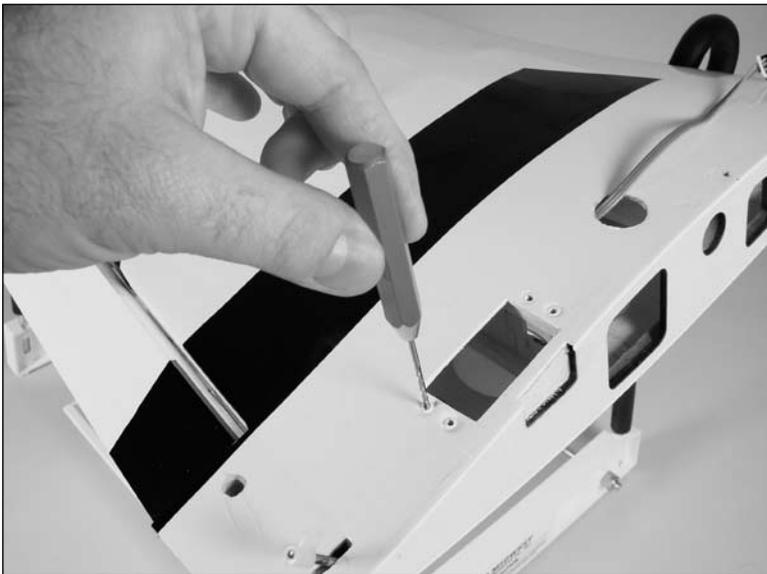
- 1. Carefully remove the flap stay from the wing panel as shown.



- 2. Position the flap servo in the wing. Use a felt-tipped pen to mark the locations for the four servo mounting screws.



- 3. Use a pin drill and 1/16-inch (1.5mm) drill bit to drill the four holes in the wing to mount the flap servo.



- 4. Apply a few drops of thin CA into each hole. This will harden the surrounding wood, making the screws more secure when they are installed.



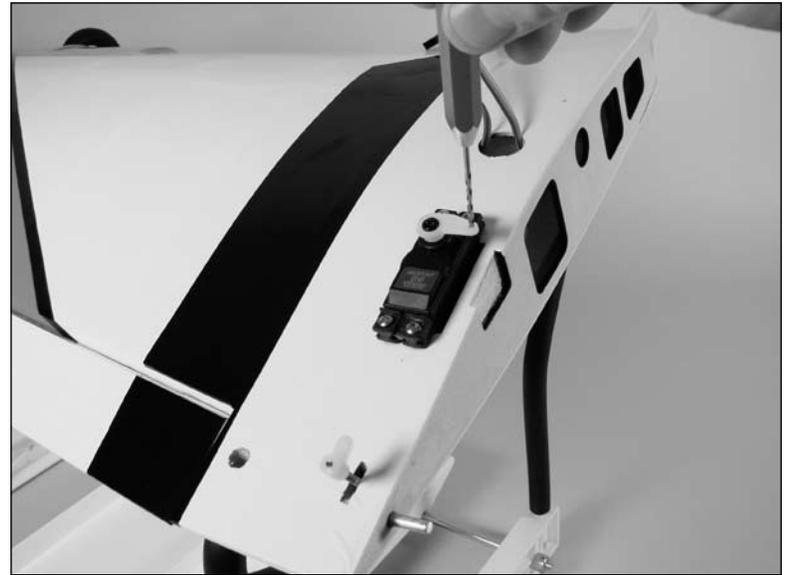
- 5. Install the flap servo in the wing using hardware provided with the servo. The lead from the servo will pass through the wing and out of the same hole the aileron lead exits.



- 6. Use the radio system to center the flap servo. Install the servo arm so it is perpendicular to the servo. You will want equal throw in both directions from this position to operate the flaps.



- 7. Use a pin drill and 5/64-inch (2mm) drill bit to enlarge the outer hole of the servo arm.



- 8. Slide the flap linkage into the hole as shown.



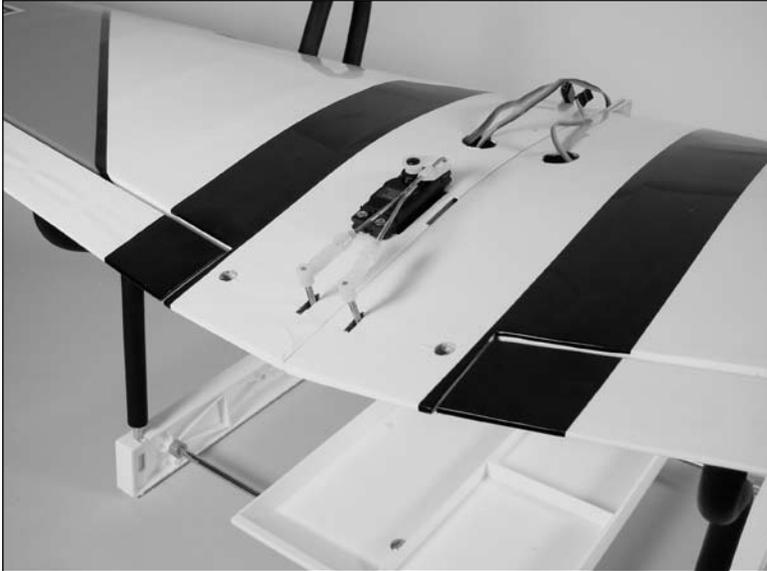
- 9. Slide the linkage connector on the wire, then rotate it so it snaps on the wire.



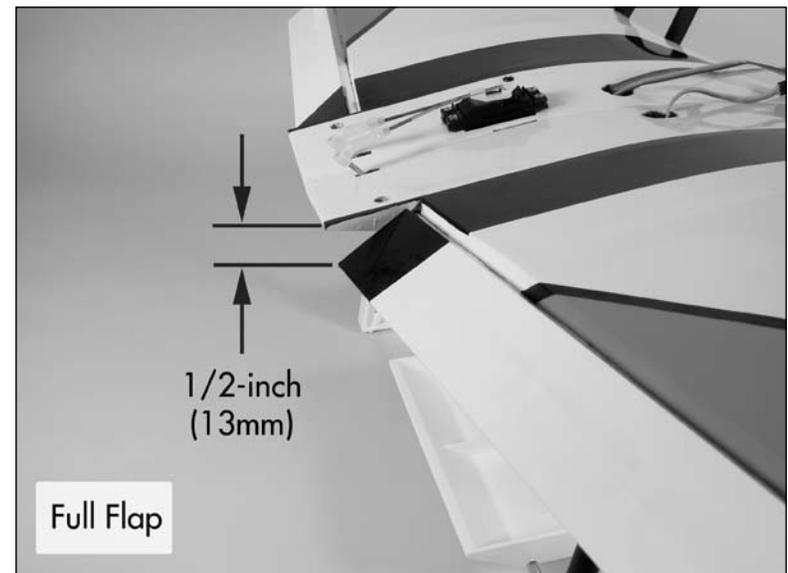
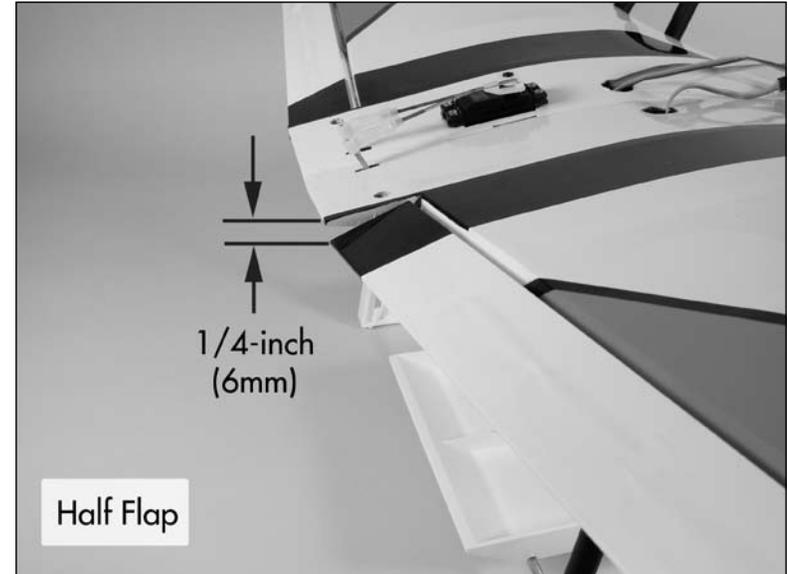
- 10. Use the radio to move the flap servo to the "UP" position. The servo arm will face toward the leading edge of the wing. Connect the clevis to the flap control horn. Check that the flap is aligned with the wing. If not, thread the clevis in or out until the flap is aligned with the wing.



- 11. Slide the wing panels together. Connect the linkage to the remaining flap control horn and adjust the linkage to set the neutral position for the remaining flap. Secure the wing panels together as outlined in the first section of the manual; Wing and Landing Gear Installation beginning on page 7.



- 12. Use the radio system to set the position for the flap. It may be necessary to use the radio system to change the amount of throw electronically to match those in the following images. Your goal here is to mimic the flap settings from the previous section.



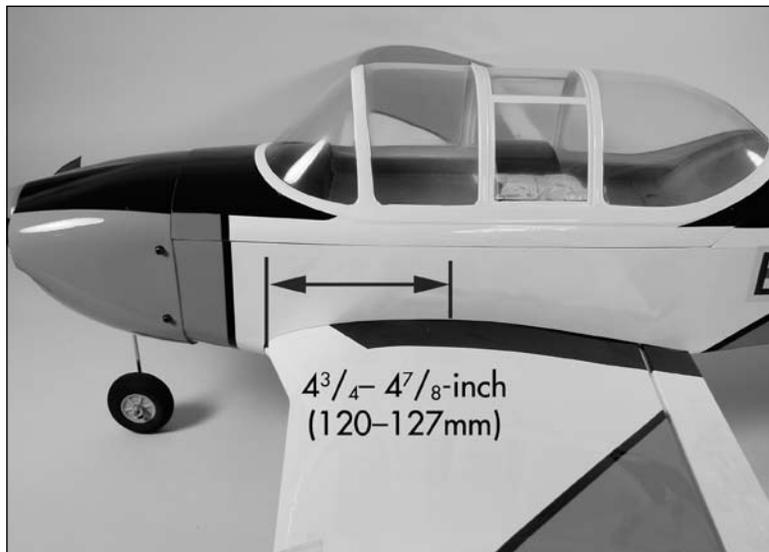
Center of Gravity

An important part of preparing the aircraft for flight is properly balancing the model.

Caution: Do not inadvertently skip this step!

The recommended Center of Gravity (CG) location for the T-34 Mentor ARF is $4\frac{3}{4}$ – $4\frac{7}{8}$ -inch (120–124mm) back from the leading edge of the wing. Mark the location of the CG on the top of the wing.

Please balance your model while it is inverted with the battery installed. With the model inverted, lift the model at the marks using your fingertips, or use a commercially available balancing stand. The model will rest level or slightly nose down when balanced correctly. Adjust the position of the motor battery, or add weight to the nose or tail if necessary to achieve the correct CG. Please understand that if you use a different Li-Po battery than the one included, you need to rebalance the model to verify the Center of Gravity.



After the first flights, the CG position can be adjusted for your personal preference.

Range Test Your Radio

- 1. Please consult your radio instructions for complete range testing instructions.
- 2. Double-check that all controls (aileron, elevator, rudder and throttle) move in the correct direction.
- 3. Be sure that your transmitter batteries are fully charged, per the instructions included with your radio.

Instructions for Disposal of WEEE by Users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



Preflight

Check Your Radio

Before going to the field, be sure that your batteries are fully charged per the instructions included with your radio. Charge both the transmitter and receiver pack for your airplane. Use the recommended charger supplied with your particular radio system, following the instructions provided with the radio. In most cases, the radio should be charged the night before going out flying.

Before each flying session, be sure to range check your radio. See your radio manual for the recommended range and instructions for your radio system. Each radio manufacturer specifies different procedures for their radio systems. Next, start the motor. With the model securely anchored, check the range again. The range test should not be significantly affected. If it is, don't attempt to fly! Have your radio equipment checked out by the manufacturer.

Note: Keep loose items that can get entangled in the propeller away from the prop. These include loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the propeller.

Double-check that all controls (aileron, elevator, rudder and throttle) move in the correct direction.

Check the radio installation and make sure all the control surfaces are moving correctly (i.e. the correct direction and with the recommended throws). Test run the motor and make sure it transitions smoothly from off to full throttle and back. Also ensure the engine is installed according to the manufacturer's instructions, and it will operate consistently.

Check all the control horns, servo horns, and clevises to make sure they are secure and in good condition. Replace any items that would be considered questionable. Failure of any of these components in flight would mean the loss of your aircraft.

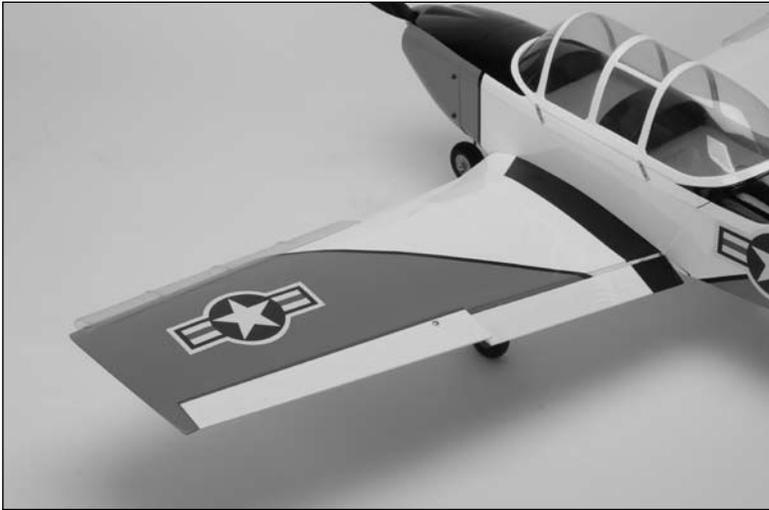
Flying the T-34 Mentor

It is recommended for your first flights to search out the assistance of a qualified instructor, who will help you through your first flights and assist you in the basics of Radio Controlled flight. You can find this guidance at your local hobby dealer's store. Your T-34 is capable of flying in winds up to 20 mph but, for flight training, it is recommended to fly in the lightest wind possible. You will need to ensure your battery is fully charged and the model is set up accordingly for your first flight. Do not attempt to fly the model on a partially charged battery.

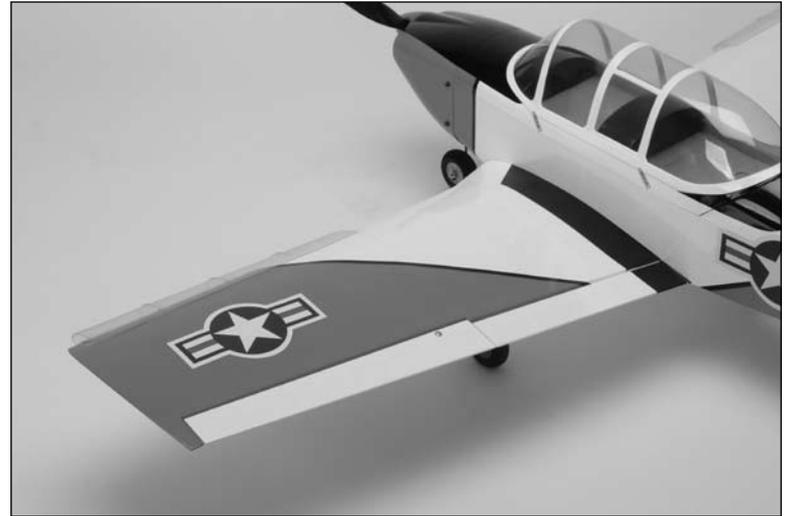
The Initial Training Flap Setting is set up for slow gentle flight with very easy landing characteristics. This setting uses the flaps in their full down position (as shown on page 27 of the manual) with the NACA droops installed on the wings. The NACA droops come pre-installed for you out of the box. This setting is used for initial flight training as well as initial landing training. In this configuration, the model will not drop a wing during flight or landing approach. You will notice a slight amount of down elevator trim required for level flight due to the flap position. Use this setting for your first flights and first landing approaches.



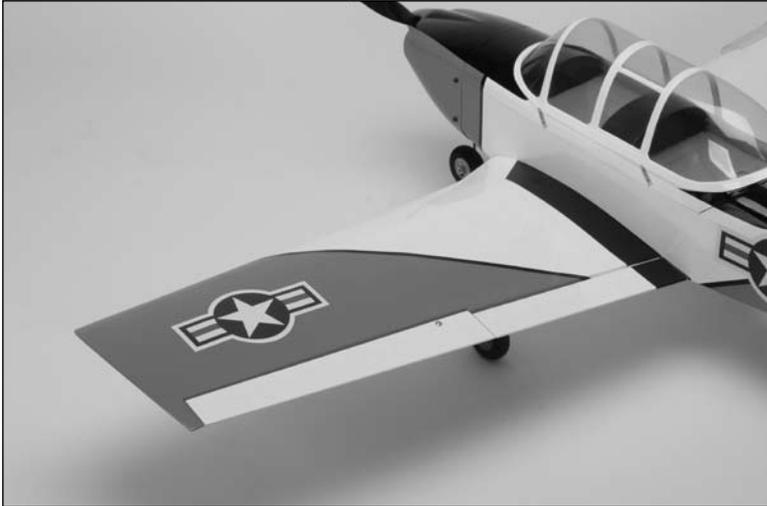
The Intermediate Flap Setting is set up for gentle flight with easy landing characteristics. This setting uses the flaps in their half down position and the NACA droops installed. In this setting, you will notice a slightly faster landing speed and still very gentle flight characteristics. A very slight amount of down elevator trim is required for level flight due to the flap position. Use this setting for flight once you have mastered the basic flight parameters. For some, it may be possible to use this setting for your first landing approaches.



The Advanced Flap Setting is set up for your final training flights. With the flaps all the way up and the NACA droops still installed, you will find the stall characteristics of the model continue to be very benign, but the model will be faster in flight and more maneuverable. Landings will be a bit faster but still very easily accomplished with the stability of the T-34. You will find the basic flight maneuvers of loops and rolls are easily accomplished with the model in the Advanced Flap Setting mode.



The final setting is to remove the NACA droops. With these removed, you will find the T-34 very lively in its flight abilities while maintaining a very docile flight profile. Stalls in this configuration will routinely fall straight ahead and recover almost instantly. Inverted flight, loops, and rolls all are easily accomplished while maintaining the model's quality scale appearance.



We hope you enjoy the T-34 as much as we have. We are confident you will enjoy many flights with your T-34. Happy landings.

Li-Po Battery Pack Information

Warning!

Lithium Polymer (Li-Po) batteries are significantly more volatile than other rechargeable batteries used in RC applications. Failure to read and follow these instructions and safety precautions **may result in fire, personal injury and damage to property**. E-flite, Horizon Hobby, Inc., its retailers, and any other representatives, assume absolutely no liability for use of this product or failure to comply with these instructions and precautions.

If you are not prepared to accept complete liability for the purchase and/or use of this product, you are advised to return it new and unused to the place of purchase immediately.

Never ship batteries without the expressed permission of the recipient. Batteries carrying 25% or more charge cannot be shipped safely. Batteries which are damaged cannot be shipped safely. Damage or loss due to unsafe shipping is the legal responsibility of the person who shipped the product.

CAUTION: This product may ignite under certain conditions. Please read all safety precautions before use.

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.

Usage Guidelines, Warnings and Safety Precautions

- **Li-Po batteries may explode if damaged or if disposed of improperly.**
- **Always inspect batteries before charging.**
- **Never** charge or use a Li-Po battery or pack that shows any damage or disfigurement of any kind. Swelling is a sign of internal damage. Any breach of protective cover, wiring or plugs is also reason to discontinue use (See Disposal Instructions).
- **Use specific Lithium Polymer charger only. Do not use a Ni-Cd or Ni-MH charger** – failure to do so may cause a fire, which may result in personal injury and/or property damage.
- **Never** charge around or in the area of any flammable or combustible materials.
- **Always** charge Li-Po batteries in or on fire resistant materials or containers.
- **Never** leave battery and charger unattended while in use. **Improper charging or discharging of Li-Po batteries could result in fire.**
- **Constantly monitor** the temperature of the battery pack while charging. If the battery becomes hot to the touch discontinue charging immediately. Disconnect the battery from the charger and observe it in a safe place for at least 15 minutes.
- If at any time you see a battery starting to balloon or swell up, discontinue charging or using immediately.

- **Lithium batteries can still ignite after at least 45 minutes** due to a delayed chemical reaction. If battery is damaged or overheats, observe the battery in a safe area outside of any building or vehicle and away from combustible material.
- **Do not allow children to charge Li-Po battery packs.**
- **Do not allow children to use Li-Po batteries without adult supervision.**
- **Shorting the wire leads can cause fire.** If you accidentally short the wires, the battery must be placed in a safe area for observation for at least 15 minutes.
- Never store or charge a battery pack where the temperature will go below 32 degrees Fahrenheit or above 130 degrees Fahrenheit. Extreme temperatures will damage the battery pack and may cause a fire. Battery performance may be diminished by less extreme temperatures.
- Any of the following may cause the battery to be damaged resulting in battery swelling, leaking, or fire:
 - Bending, folding or dropping of the battery
 - Damaging the edge seal of the battery
 - Taking apart the battery
 - Mixing cells of differing chemistry, or types, or sizes
 - Mixing cells of different ages

Crash Damage

If there are signs of smoke or overheating, DO NOT go near the battery or equipment until it has been observed from a safe distance for at least 15 minutes. Once it is safe, remove the battery and check for damage. Dispose of damaged batteries appropriately.

Swollen Batteries

Immediately stop using or charging. If the battery is not warm to the touch, move it to an open safe area and observe it for at least 15 minutes. Be VERY CAREFUL when moving the batteries. Do NOT put ANY pressure on the batteries or covering as this may cause fire.

Additional Information & Guidelines

1. Battery temperature the best indicator for safety. The E-flite Li-Po Battery's temperature should never drop below 32 degrees Fahrenheit or go above 130 degrees Fahrenheit while charging or discharging.
2. Changing plugs is NOT recommended as the process is dangerous and any error can cause immediate fire. Improperly installed plugs can also cause fire due to shorts, reverse polarity or other improper handling which can cause battery damage.
3. Batteries should be stored in a vented, fire resistant container. Each pack should be stored in its own locked plastic bag within the container. The number of battery packs per container should be extremely limited to avoid chain reactions. Storage temperatures should not fall below 32 degrees F or above 130 degrees F. Damaged batteries must be kept at even more ambient temperatures. High temperatures may cause fire even with undamaged batteries.

Battery Disposal

Li-Po batteries require special handling for safe disposal. The following are basic instructions for safe disposal. For more detailed safety, disposal and recycling information please go to: www.rbrc.org or www.earth911.org.

Basic Disposal Instructions

Before discarding any Li-Po battery it must be rendered safe. The following steps must be taken to avoid damage or injury to yourself, your property and anyone who comes in contact with the battery.

If the battery is undamaged but no longer useful:

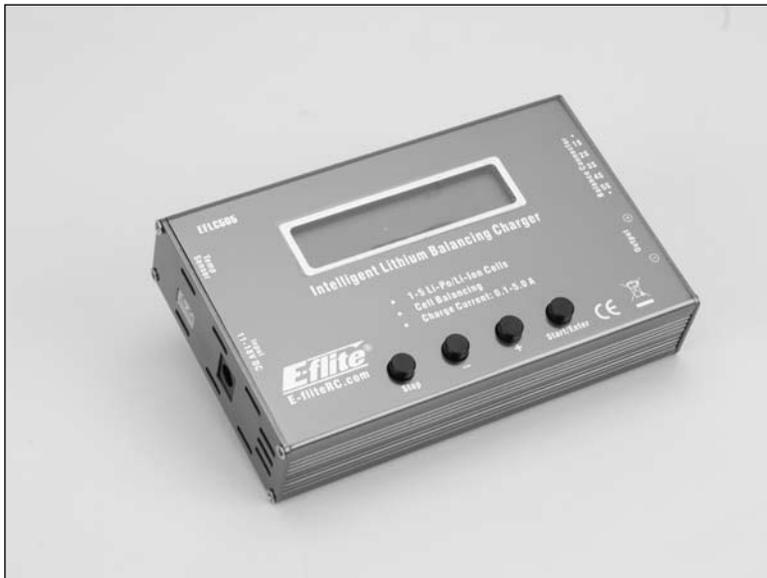
1. Discharge the battery to a maximum of 2.5V using a slow, safe discharge method.
2. Leave battery uncharged and retest after at least 24 hours. Many batteries experience "rebound" and may have more than 2.5V after 24 hours. If the battery is over 2.5V, repeat the procedure until the battery is 2.5V or less.
3. Insulate each wire lead with electrical tape or other appropriate material.
4. Assure that wire leads cannot touch each other by taping them to opposite sides of the battery.
5. Place battery in a sealed plastic bag and place plastic bag in a vented, fire-safe container.
6. Use fire-safe container to deliver battery to a recycling center authorized for Lithium Polymer batteries. Please note that not all battery-recycling services include Li-Po's. If no Li-Po recycling facility is available in your area, contact your state or local Hazmat agencies for instructions.
7. If the battery or wiring is damaged please contact your state or local Hazmat facilities for instructions. Batteries must be rendered safe before being transported or recycled. Do NOT transport or ship batteries which have more than 2.5V charge OR that show signs of damage without following the instructions given by authorities. Damaged batteries should be rendered as safe as possible and stored in a vented fireproof container until recycled.

Optional Items for Your T-34 Mentor

As you have selected the world of electric power to begin your RC experience, we thought it would be good to show you some optional equipment that will help you grow and enjoy the world of electric flight. The equipment included with your T-34 ePTS works very well and will serve your needs without hesitation. All of the items shown in this section are available from your local hobby dealer.

The chargers listed in this section will help you achieve a more versatile charging network for you to operate your electric powered models.

E-flite 1-5 cell Li-Po charger



The E-flite Li-po balancing charger is capable of charging up to 5 cell Li-Po packs. Ask for part number #EFLC505 at your local hobby dealer.

Thunder Power 610 Charger



The Thunder Power charger is a charger that can charge any battery currently in use in the RC industry. It has software for charging Ni-cd, NiMh, Li-Ion, Li-Po, and A123 cells. Ask for part number #THP610 at your local hobby dealer.

Thunder Power 33003S battery



The Thunder Power Extreme V2 battery is the highest quality, strongest power density battery in its class. This battery requires the Thunder Power 610 Charger listed in this section. Ask for part number #THP33003SXV2 at your local hobby dealer.

E-flite 32003S battery



The E-flite battery is a high quality replacement battery that can use either of the chargers listed in this section. Ask for part number EFLB32003S at your local hobby dealer.

2008 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.



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