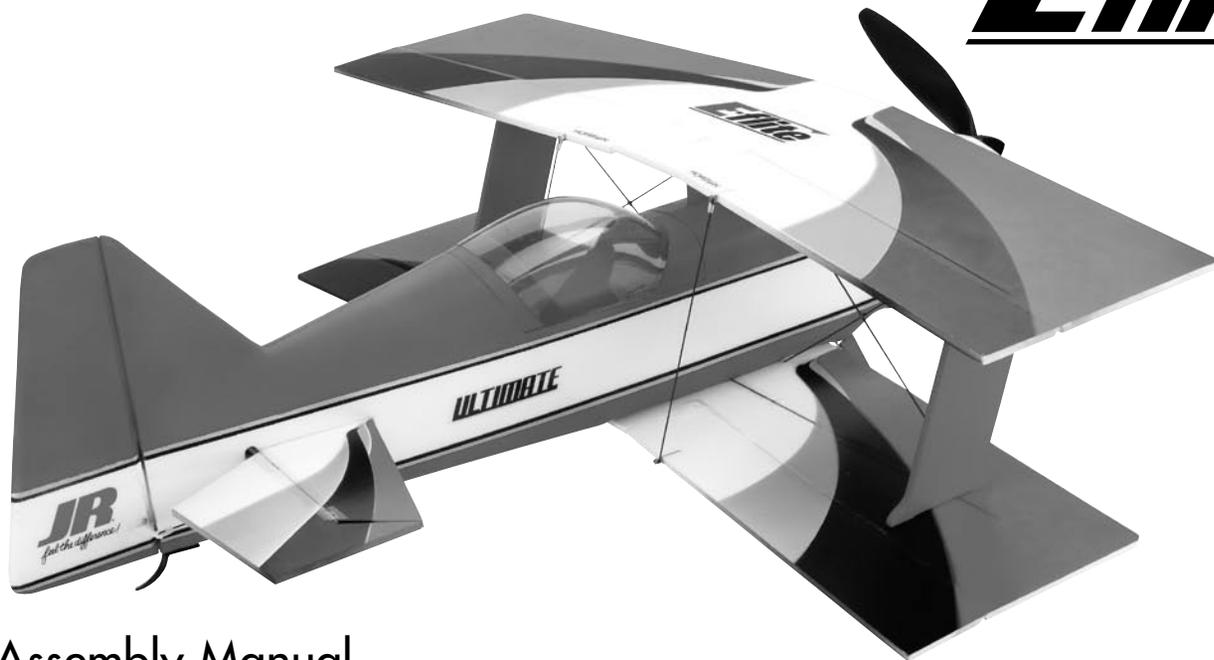


Ultimate FX 3D

E-flite[™]



Assembly Manual

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Introduction

Thank you for purchasing the Ultimate FX 3D ARF, a three-dimensional vacuum formed fuselage version of the original E-flite™ profile Ultimate. The stiffer fuselage construction means less flex making this model better equipped to handle outdoor flying, yet it's light enough to still fly indoors. The Ultimate FX 3D is a great freestyle aerobatic foamie and has added carbon fiber support stiffeners for reinforcement and added wing support to make this a great outdoor 3D foamie.

We provide a 6.6:1 gearbox and a 12 x 6 propeller so you can easily add our E-flite Park 370 Inrunner Brushless Motor, 4100Kv for high extreme performance. Like many other E-flite models, you will not be disappointed with the added features such as a painted lightweight fiberglass cowl, formed wheel pants, and a pre-painted trim scheme.

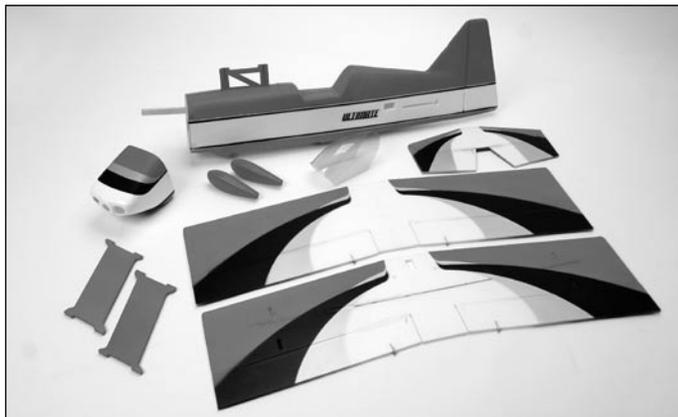
Specifications

Wingspan:	28" (710 mm)
Length:	31" (790 mm)
Wing Area:	435 sq in (28 sq dm)
Weight w/o Battery:	12.5–13.5 oz (355–380 g)
Weight w/ Battery:	14.5–16.5 oz (410–470 g)

Contents of Kit/Parts Layout

Large Replacement Parts:

EFL2176	Wing Set with Struts
EFL2177	Fuselage with Hatch and Rudder
EFL2178	Horizontal Tail Assembly
EFL2179	Cowl
EFL2180	Wheel Pants
EFL2181	Landing Gear Covers
EFL2182	Hatch
EFL2183	Canopy
EFL2184	Landing Gear



Small Replacement Parts

EFL2007	Hook & Loop, Hinge Tape
EFL2185	Pushrod/Carbon Wing Support Set
EFLA200	Micro Control Horns
EFLA202	Micro Tail Skid
EFLA201	Micro Pushrod Keepers
EFLA203	Micro Control Connectors
EFLA204	Micro Rubber Spinner
EFLA213	E-flite/JR/Horizon Decals
EFLA221	Foam Park Wheels, 1.5"
EFLM207	Pinion Gear, 10T 0.4 Module
EFLM221	Gearbox (v2), 6.6:1, 0.4 Module
EFLM222	Spur Gear, 66T w/Shaft
EFLP1260	12 x 6 Slow Flyer Prop (Kit includes only 1)

Required Electronics

JRP6654**	6102FM, R610UL & 4-S241 – Complete radio system
JRPR610UL**	R610UL 6CH FM Receiver, Shrink-wrap
EFLRS75	7.5-Gram Sub-Micro Servo (3) (Includes long servo arms)
or	
JRPS241	S241 Sub-micro servo (3)
JRPA212	Long Servo Arms (2)

* Regardless of equipment chosen you will require a transmitter, micro receiver and three sub-micro servos.

JRPA092	Servo Extension 3"
EFLC3005	Celectra 1- to 3-Cell Li-Po Charger

High Power Motor Setup*

EFLM1000	Park 370 Brushless Motor, 4100Kv
EFLA311A	20-Amp Brushless ESC (v2)
EFLP1260	12 x 6 Slow Flyer Prop (2)—keep extras on hand
EFLB1016	11.1V 1200mAh 3-Cell Li-Po, 16GA
or	
THP13203S	1320mAh 3-Cell 11.1V Li-Po, 16GA

* Use with included 12 x 6 prop, 6.6:1 gearbox, and 10T pinion. Proper throttle management is required when using high performance setups.

High Power Outrunner (direct drive) Motor Setup*

EFLM1305	Park 400 Outrunner Motor, 920Kv
EFLA311A	20-Amp Brushless ESC (v2)
EFLM1915	Outrunner Stick Mount
EFLP1047	10 x 4.7 Slow Flyer Prop (2)
or	
EFLP1147	11 x 4.7 Slow Flyer Prop (2)
or	
APC11038SF	11x3.8 Slow Flyer Propeller
EFLB1016	11.1V 1200mAh 3-Cell Li-Po, 16GA
or	
THP13203S	1320mAh 3-Cell 11.1V Li-Po, 16GA

* Proper throttle management is required when using high-performance setups.

Lightweight Setup

EFLM1305	Park 400 Brushless Motor, 920Kv
EFLA311A	20-Amp Brushless ESC (v2)
EFLM1915	Outrunner Stick Mount
EFLP1047	10x4.7 Slow Flyer Propeller (2)
or	
APC11038SF	11x3.8 Slow Flyer Propeller
EFLB1005	11.1V 860mAh 3-Cell Li-Po, 16GA
THP9003S	900mAh 3-Cell 11.1V Li-Po, 16GA

Optional Accessories

EFLA110	Power Meter
EFLA212	Gear Puller: 1mm–5mm Shaft
JRPS281	DS281 Micro Digital Servo (3)

Additional Tools and Adhesives

Tools & Equipment

Hot glue gun (low temperature)
Hobby Knife
Square
Ruler
Felt-tipped pen
T-pins
Paper towel / tissue
150–180 grit sandpaper
Wax paper
String
Tape (blue low tack painters)
Needle-nose pliers
Small Phillips screwdriver
(EFLA257 or included with EFLA250)
Hex Wrench: 3/32" (EFLA251 or included with EFLA250)
Nut Driver: 5.5mm (EFLA255 or included with EFLA250)
EFLA250 Park Flyer Tool Assortment, 5-piece

Adhesives

EFLA208 Foam Safe CA / Activator
Hot glue
Canopy glue
Thread lock (for mounting motor to gearbox)

Important Information about Motor Selection

We are recommending the E-flite™ Park 370 Brushless Motor with 4100Kv (EFLM1000) or the Park 400 Outrunner Brushless Motor, 920Kv (EFLM1305). The Park 370 Brushless Motor, 4100 Kv provides plenty of power for sport and 3D pilots with the ability to hover and climb vertically using the included 6.6:1 gearbox and 12x6 propeller. It is extremely important to monitor gearbox wear and motor temperature when using the 4100Kv motor. Lack of proper throttle management using this motor may result in damage to the motor, gearbox, ESC, and battery. Proper motor cooling is very important so make sure the motor is cooled properly in the cowl. A direct drive Outrunner alternative would be the Park 400 Outrunner, 920Kv that will also provide plenty of power without worrying about gearboxes.

Using the Manual

This manual is divided into sections to help make assembly easier to understand, and to provide breaks between each major section.

Remember to take your time and follow the directions.

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.

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.

Before Starting Assembly

Before beginning the assembly of your Ultimate FX 3D, remove each part from its bag for inspection. Closely inspect the fuselage, wing panels, rudder and stabilizer for damage. If you find any damaged or missing parts, contact the place of purchase.

Warranty Information

Horizon Hobby, Inc. guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damage by use or modification. In no case shall Horizon Hobby's liability exceed the original cost of the purchased kit. Further, Horizon Hobby reserves the right to change or modify this warranty without notice.

In that Horizon Hobby has no control over the final assembly or material used for the final assembly, no liability shall be assumed nor accepted for any damage resulting from the use of the final assembled product. By the act of using the assembled product, the user accepts all resulting liability.

Please note that once assembly of the model has been started, you must contact Horizon Hobby, Inc. directly regarding any warranty question. Please do not contact your local hobby shop regarding warranty issues, even if that is where you purchased it. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

Horizon Hobby, Inc.
4105 Fieldstone Road
Champaign, Illinois 61822
877-504-0233
horizonhobby.com

Wing Installation

Required Parts

Fuselage

Wing (Top and Bottom)

Wing strut (2) 24" (60cm) string

Carbon wing brace, 11 ³/₄" (300mm) (2)

Carbon wing brace, 11 ³/₈" (290mm) (2)

Required Tools and Adhesives

Square

Hot glue

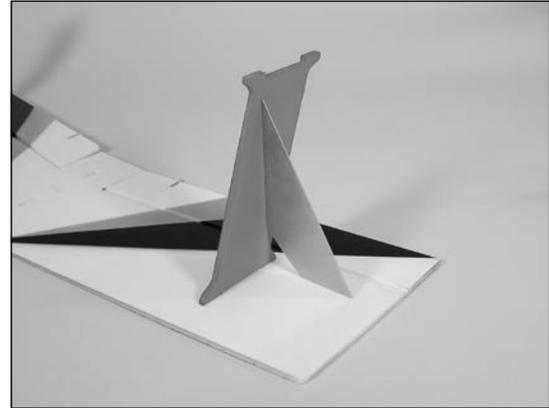
Paper towel / tissue

Foam compatible CA

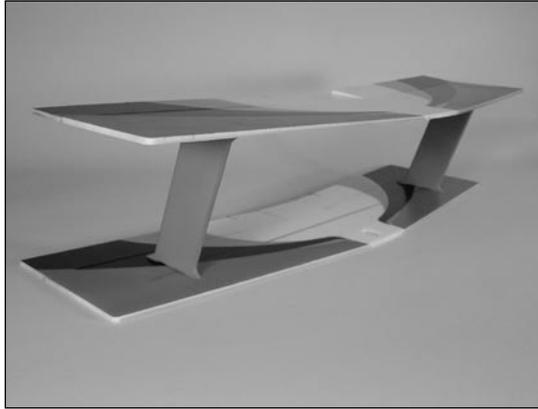
Foam compatible activator

Note: When using a hot glue gun, be sure not to touch the tip to the foam. The hot tip will burn and melt the foam.

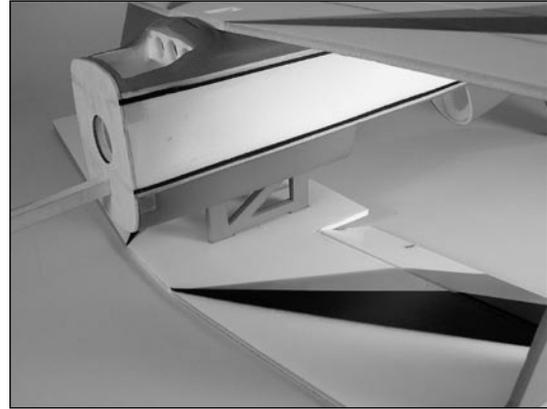
- 1. Locate the wing struts. Place the struts onto the top wing, which has the cutouts for the center cabane strut. The struts angle towards the trailing edge of the wing. Use a square and either foam compatible CA or hot glue to secure the struts to the wing.



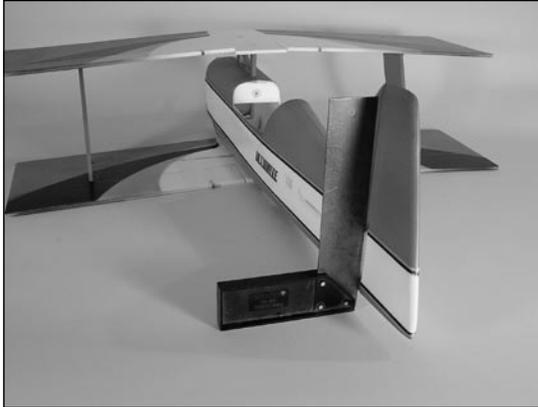
- 2. Attach the bottom wing to the struts using foam compatible CA or hot glue. Again, check that the struts are square to the wing.



- 3. Slide the fuselage between the wing panels. Key the cabane into the top wing. Use foam compatible CA or hot glue to secure the top wing to the cabane.



- 4. Rest the bottom wing flat on the work surface. Use a square to align the fin perpendicular to the work surface. Mark the location of the fuselage onto the bottom wing.

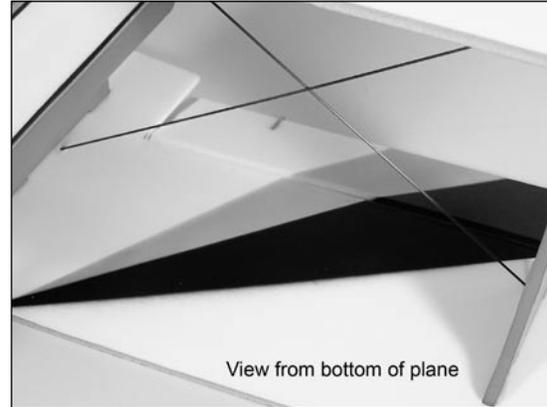
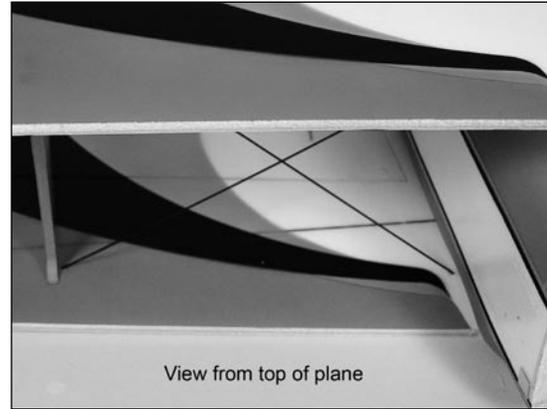


- 5. Use hot glue to attach the bottom wing to the fuselage. Do not use foam compatible CA for this step. Use the marks from Step 4 for alignment.

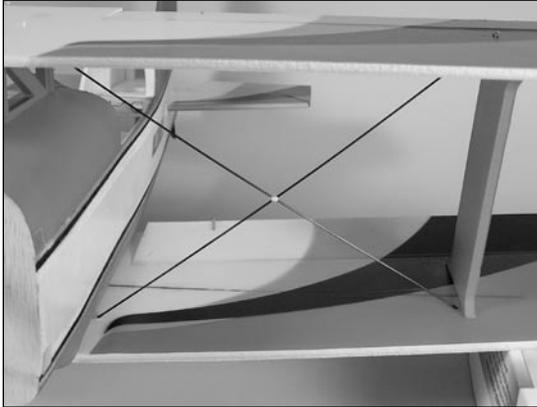


Note: The long brace (11 ³/₄") goes from the top near the cabane to the strut on the bottom wing.

- 6. Install the carbon wing braces by first positioning a hole in the bottom of the lower wing by gently sliding a carbon fiber brace through the four plastic ring washers at the proper angle, then remove. Next, gently slide each carbon fiber brace through the plastic ring washers on the top of the upper wing, at the proper angle, and have each exit through the plastic ring washers on the bottom of the lower wing through the holes you have already made. Glue the braces using foam compatible CA on the insides and outside the plastic ring washers to secure them in place.



- 7. Cut the supplied 24" (60cm) string into two equal 12" pieces. Wrap the intersection of the braces with the string. Make sure to wrap both vertically and horizontally around the braces. Apply thin CA to the string to secure its location.



Horizontal Stab Installation

Required Parts

Stabilizer
Fuselage assembly
110mm x 12mm hinge tape (2)

Required Tools and Adhesives

Ruler
String
T-pins
Tape
Paper towel / tissue
Foam compatible CA
Foam compatible activator

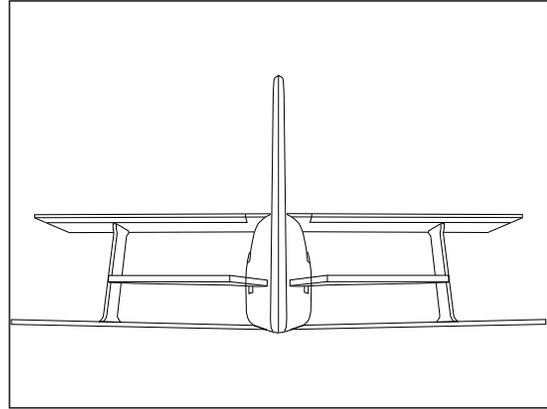
- 1. Remove the partially taped elevator from the stabilizer. Slide the stabilizer into the fuselage. Use the supplied 110mm x 12mm clear tape to hinge the elevator half on the top and bottom of the hinge line.



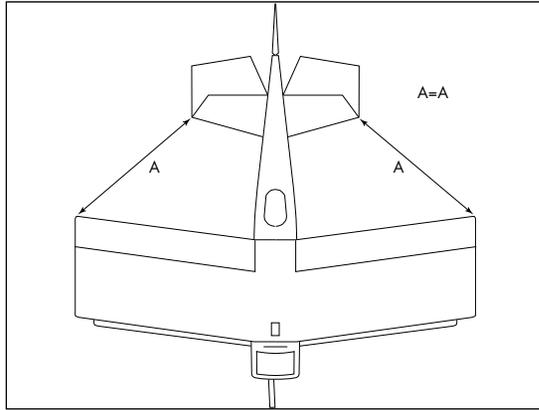
- 2. Use foam compatible CA to attach the elevator joiner to the elevator. Use low-tack painter's tape to tape down the elevator with the joiner attached. Apply the hot glue to the elevator and then tape down the remaining elevator half until the glue cures. You may use activator to speed up the cure time.



- 3. Adjust the stabilizer so it is parallel to the wings. It may be necessary to lightly sand the fuselage where the stabilizer is inserted to achieve alignment.



- 4. Measure from the tips of the stabilizer to the wing tips. Adjust the stabilizer so both measurements are equal. Center the stabilizer in the fuselage as well.



- 5. Double-check the positioning of the stabilizer as described in Steps 3 and 4. Once satisfied with the position, use foam compatible CA to glue the stabilizer to the fuselage. Apply foam compatible activator as needed.



Landing Gear Installation

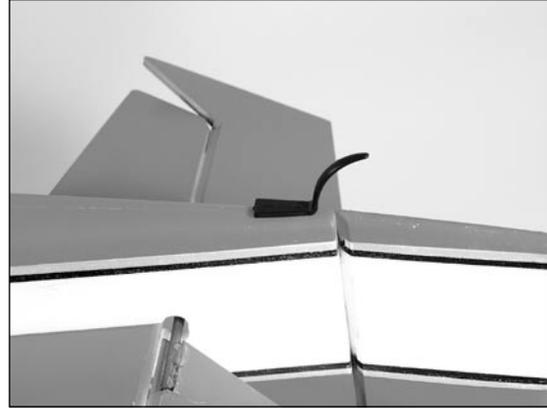
Required Parts

Airframe	Landing gear
Tail skid	1 1/2" wheel (2)
Wheel retainer (2)	Landing gear fairing (2)
Wheel pant (2)	Wheel pant straps (2)
2mm x 6mm sheet metal screw (4)	

Required Tools and Adhesives

Hot glue	Foam compatible CA
Needle-nose pliers	Hobby knife

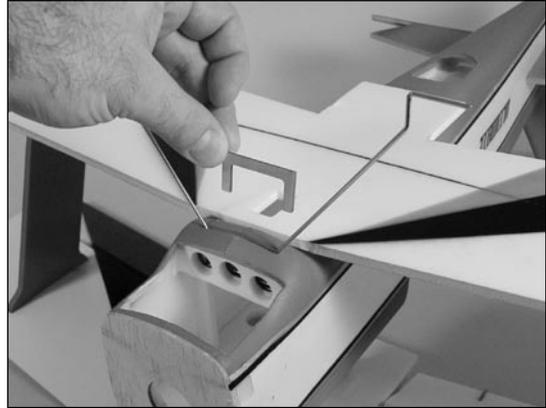
- 1. Glue the tail skid using foam compatible CA



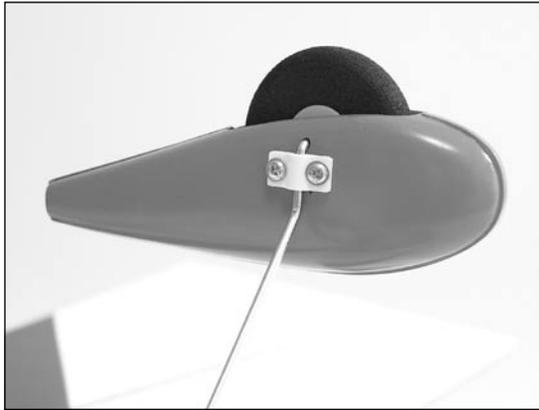
- 2. Install the landing gear into position by pressing it into the landing gear mount.



Note: If the landing gear is loose and you choose to permanently attach the gear, use foam compatible CA to glue the plywood landing gear retainer into the slot.



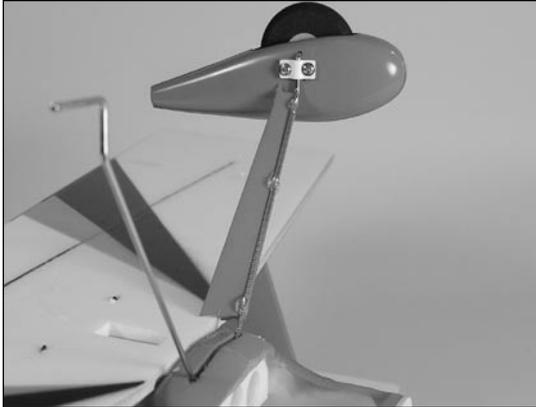
- 3. Install the wheel pants and wheels. Use needle-nose pliers to insert the wheel retainers on the ends of each of the axle portions of the landing gear inside of the wheel pant. Each wheel pant is secured using two 2mm x 6mm sheet metal screws and a wheel pant strap. Drill the holes for the screws into the wheel pants using a hobby knife.



Note: If you choose not to use the wheel pants, you can secure the wheels on the landing gear using the wheel retainers. Use hot glue or foam compatible CA to glue the retainers onto the end landing gear. Use care not to glue the wheel to the landing gear.



- 4. Attach the landing gear fairing using hot glue. Apply glue at the top, center and bottom of the fairing only. You will notice a groove in the fairing that will rest on the wire.



Servo & Receiver Installation

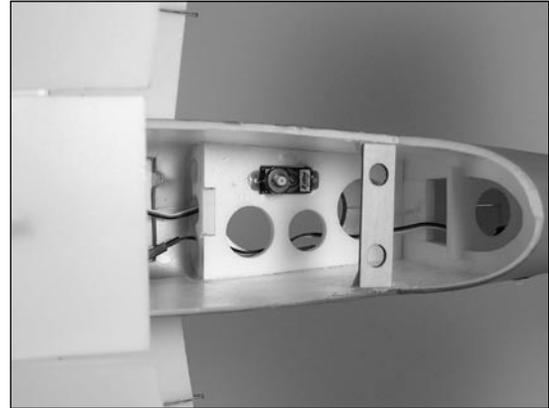
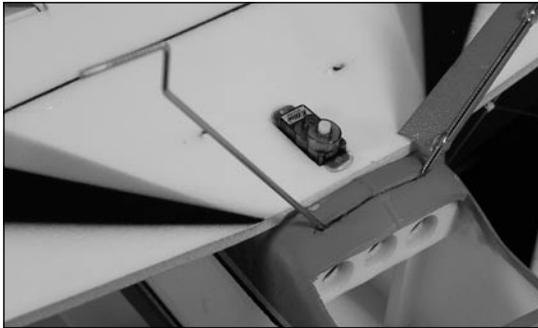
Required Parts

Airframe
Receiver
Servo extension, 3"
Servos: E-flite's 7.5 gram Sub-Micro (EFLRS75) (3)
Double-sided tape
Hook and loop

Required Tools and Adhesives

Hot glue

1. Use hot glue to install the rudder, elevator and aileron servos. A 3" servo extension will be required for the elevator servo.



- 2. Use hook and loop to attach the receiver to the inside of the fuselage. Route the receiver antenna to the rear of the fuselage.



Note: Do not cut the receiver antenna. Changing the length of the antenna will seriously reduce the range of your radio system.

Linkage Installation

Required Parts

- Airframe
- Long servo arm (3)
- Micro control connector (4)
- Control connector backplate (4)
- 2mm x 3mm screw (4)
- Micro pushrod keeper (6)
- Micro control horn (4)
- Micro control horn backplate (4)
- Rudder linkage wire, 12" (305mm)
- Elevator linkage wire, $5\frac{1}{8}$ " (130mm)
- Aileron linkage wire, $5\frac{5}{16}$ " (135mm) (2)
- Aileron inter-connection linkage wire, $7\frac{1}{8}$ " (180mm) (2)

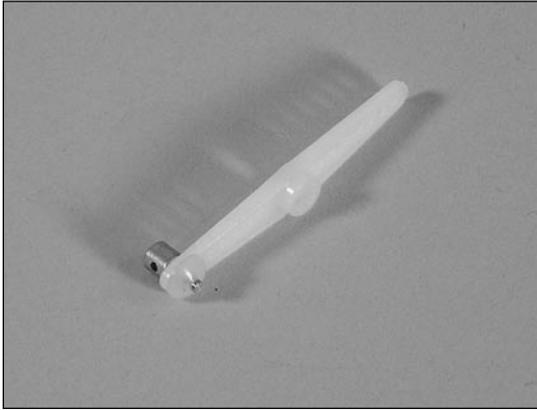
Required Tools and Adhesives

- Foam compatible CA
- Phillips screwdriver (small)
- Felt-tipped pen

- ○ 1. Attach the micro control horn to the elevator using the micro control horn backplates. Apply a few drops of foam compatible CA to the backplate where it meets the control horn.

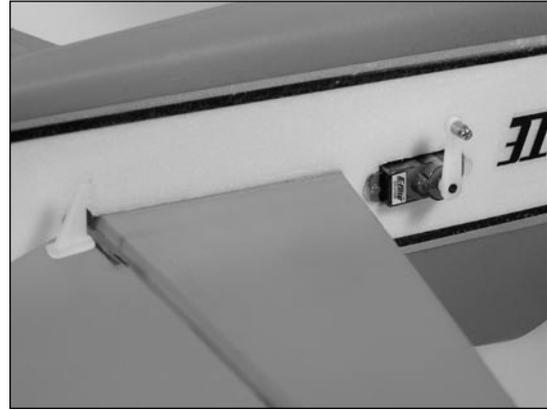


- ○ 2. Install a micro control connector into a long servo arm. Secure it using the control connector back plates.

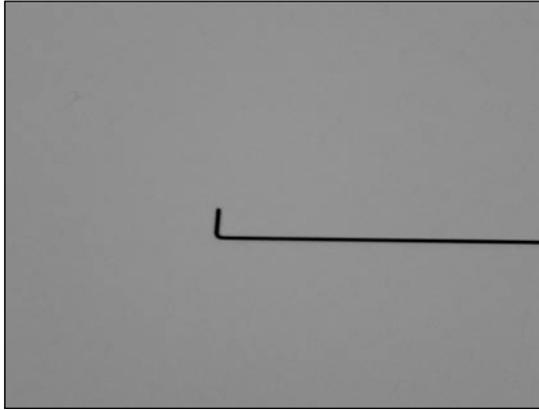


Note: Cut off the unused half of the long 3D servo arm for the elevator servo. the aileron servo will use the complete servo arm.

- ○ 3. With the radio system on, install the servo arm on the elevator servo.



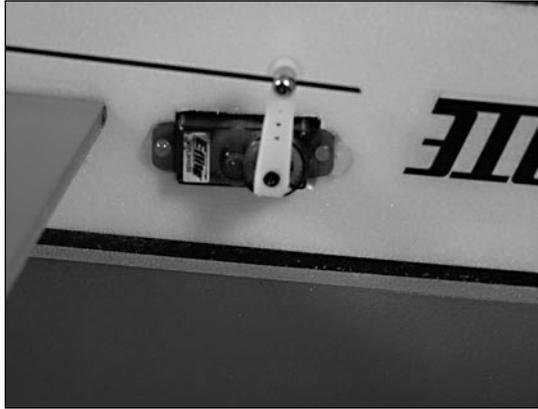
- ○ 4. Place an "L" bend 1/4" from the end of the elevator linkage wire, 5 1/8" (130mm).



- ○ 5. Attach the elevator linkage wire. The "L" bend side is installed on the elevator control horn using a micro pushrod keeper. Pass the wire through the micro control connector.



- ○ 6. With the radio system on, hold the elevator in neutral. Secure the pushrod in the micro control connector using a 2mm x 3mm screw.



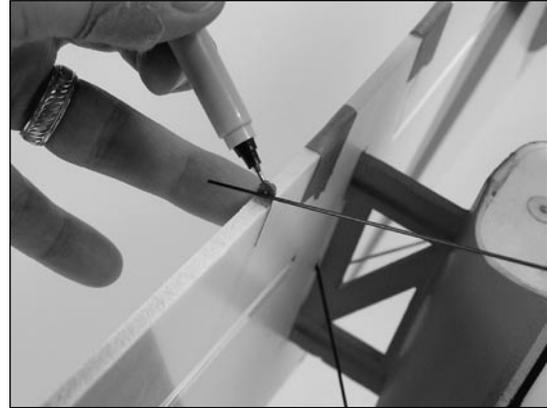
- 7. Repeat the techniques in Steps 1 through 6 to install the two aileron linkage wires, $5\frac{5}{16}$ " (135mm).



- ○ 8. Use low tack painter's tape to attach the upper aileron in the neutral position. Attach the "Z" bend side of the aileron inter-connection linkage wire, $7\frac{1}{8}$ " (180mm), to the bottom wood aileron horn.



- ○ 9. Use a felt-tipped pen to mark the wire where it crosses the hole in the upper aileron horn.

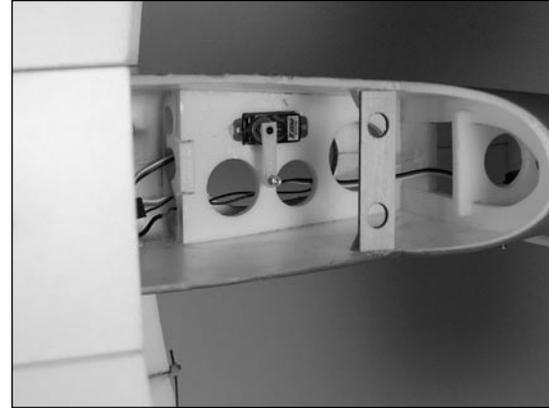


- ○ 10. Make an “L” bend in the wire and attach “L” bend side to the upper aileron horn using micro pushrod keeper.



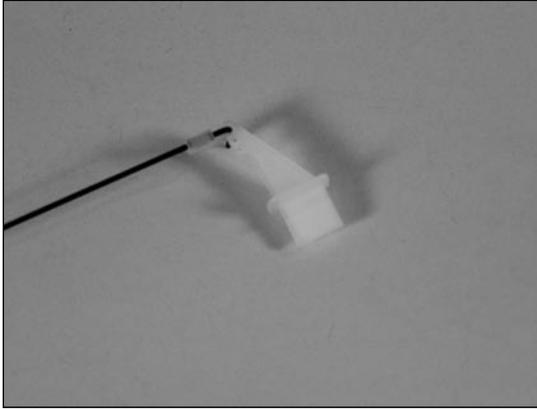
- 11. Repeat Steps 8 through 10 for the remaining aileron connecting linkage.

- 12. Install a micro control connector into a long servo arm. Secure it using the control connector back plates. With the radio system on, install the servo arm on the rudder servo.



Note: You will need to cut the unused half of the full 3D arm for the rudder servo.

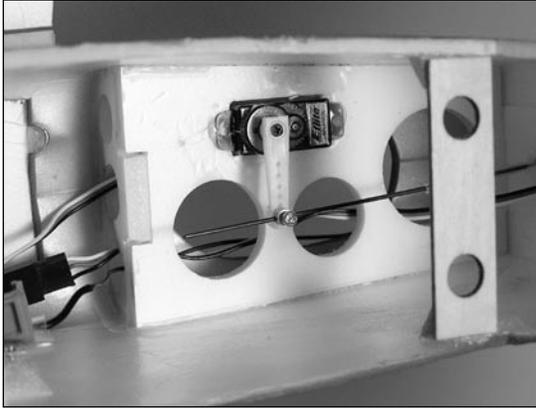
- 13. Attach the "L" bend side of the 12" (305mm) rudder linkage wire to the rudder control horn using a micro pushrod keeper.



- 14. Slide the wire into the rudder pushrod tube and pass through the micro control connector on the rudder servo. Use foam compatible CA to attach the control horn to the rudder.



- 15. With the radio system on, hold the rudder in neutral. Secure the pushrod in the micro control connector using a 2mm x 3mm screw.



Motor & Speed Control Installation

Required Parts

Airframe
Brushless motor
Brushless speed control
6.6:1 (66T spur) gearbox
2mm x 8mm sheet metal screw
10T pinion gear, 0.4 module x 6mm

Required Tools and Adhesives

Phillips screwdriver (small)

Optional Parts

Outrunner motor
Outrunner Stick Mount (EFLM1915)

Important Information About Your Brushless ESC

Make sure your ESC brake is programmed to off. Also, be sure to use an ESC with the proper 9V cutoff when using 3-Cell Li-Po packs. We suggest this cutoff to be of the soft variety to prevent hard motor cutoffs during low-level 3D flying.

- 1. It may be necessary to attach motor adapters or other accessories to your particular motor at this time.

Note: Use the instructions provided with the motor to install any accessories. Follow the instructions provided with the gearbox for some helpful hints for installing the motor. When installing your motor into the E-flite™ gearbox, it is very important that the gear mesh is set correctly and is smooth with no binding. The E-flite gearbox features adjustable slotted mounting holes to ensure your gear mesh is correct. Remember if the gear mesh is too loose or too tight, it may strip the gears. To extend the life of your gearbox, we also recommend using a small amount of grease, such as lithium grease, on the spur gear.

It is also very important to check to be sure the propeller is balanced before installing onto the shaft. An unbalanced propeller may strip the gears. When installing the propeller, please be sure not to over-tighten the 3mm locknut. The use of the locknut will prevent the propeller from coming loose.

Use the 10-tooth pinion we include with this airplane on the motor.

Note: Skip to Page 33 for Outrunner installation.

- 2. Attach the motor to the gearbox using the screws provided with the motor.

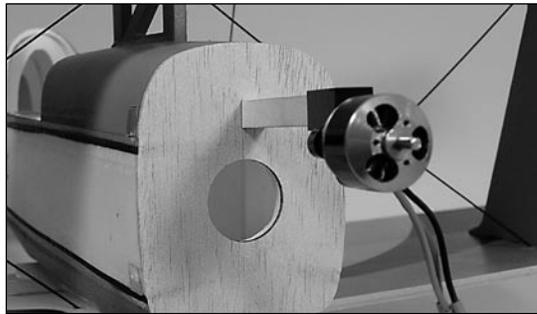
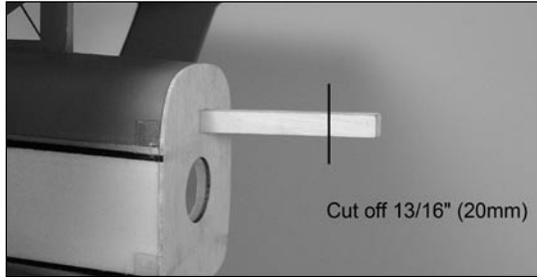


- 3. Slide the gearbox onto the motor shaft. Use a hobby knife to drill a hole through the plastic and into the motor mount stick. Secure the gearbox using a 2mm x 8mm sheet metal screw.



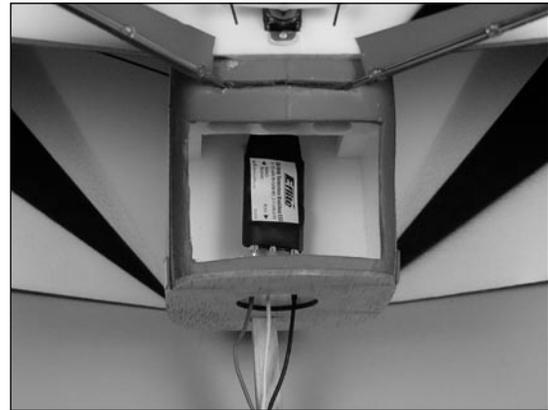
Hint: You may want to plug in the speed control before installing the gearbox.

Note: When using the E-Flite outrunner motor and mount, you will need to shorten the motor mount stick by 13/16" (20mm).



Attach the outrunner motor using the outrunner stick mount (EFLM1915). Attach mount with motor to the motor mount stick.

4. Secure the speed control location using hook and loop. Run the lead from the speed control to the receiver. It may be necessary to use a servo extension. Exact speed control location may vary depending on the brand used and the center of gravity. This photo shows the location in the front of the fuse if you are using our E-flite™ 20-amp Brushless ESC.



Cowling and Canopy Installation

Required Parts

Airframe

Cowling

Canopy

Spinner

2mm x 10mm sheet metal screw (4)

Propeller

(Use 12 x 6 if you are using the provided gearbox with our recommended motor)

Required Tools and Adhesives

Phillips screwdriver (small)

Nut driver: 5.5mm (for gearbox)

Canopy glue

Hobby knife

- 1. Slide the cowl onto the fuselage. Center the motor shaft in the opening.

- 2. Attach the propeller to the gearbox using the supplied 3mm washer and 3mm locknut. Make sure not to over-tighten the 3mm locknut. Install the spinner into position on the gearbox shaft. If using an Outrunner motor, install the propeller adapter and propeller.



Note: It is very important that you check to be sure the propeller is balanced before installing onto the shaft. An unbalanced propeller may strip the gear. When installing the propeller, please do not over-tighten the 3mm locknut. The use of the locknut will prevent the propeller from falling off in flight.

- 3. Check to make sure the propeller and spinner will not interfere with the front of the cowl and there is adequate clearance. Use a hobby knife to make holes in the cowl at the same location as the tabs on the fuselage. Secure the cowl to the fuselage using the 2mm x 10mm wood screws and a Phillips screwdriver.



- 4. Use canopy glue to glue the canopy to the canopy hatch. Once the glue has cured, place the hatch into position.



Center of Gravity / Battery Installation

Required Parts

Airframe
Battery
Hook and loop

- 1. The battery for the Ultimate FX is located inside the front of the fuselage behind the firewall. The battery attaches to the side of the fuselage with hook and loop material.



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 Ultimate FX is 3 1/2" (90mm) to 4" (100mm) behind the leading edge of the upper wing against the fuselage.

The C.G. range was determined from our flight tests using a Thunder Power 11.1V 1320mAh Li-Po battery pack.

Control Throws

- 1. Turn on the transmitter and receiver of your Ultimate FX. Check the movement of the rudder using the transmitter. When the stick is moved right, the rudder should also move right. Reverse the direction of the servo at the transmitter if necessary.

- 2. Check the movement of the elevator with the radio system. Moving the elevator stick down will make the airplane elevator move up.

- 3. Use a ruler to adjust the throw of the elevator, ailerons and rudder. Adjust the position of the pushrod at the control horn to achieve the following measurements when moving the sticks to their endpoints.

Ailerons:

Low Rate 1" (25mm) or 20 degrees Up/Down

High Rate 1 1/2" (38mm) or 30 degrees Up/Down

Elevator:

Low Rate 1" (25mm) or 25 degrees Up/Down

High Rate 2 3/8" (60mm) or 45 degrees Up/Down

Rudder:

Low Rate 1" (25mm) or 20 degrees Right/Left

High Rate 1 5/8" (40mm) or 30 degrees Right/Left

These are general guidelines measured from our own flight tests. You can experiment with higher rates and exponentials to match your preferred style of 3D flying.

2005 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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HORIZON
H O B B Y

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