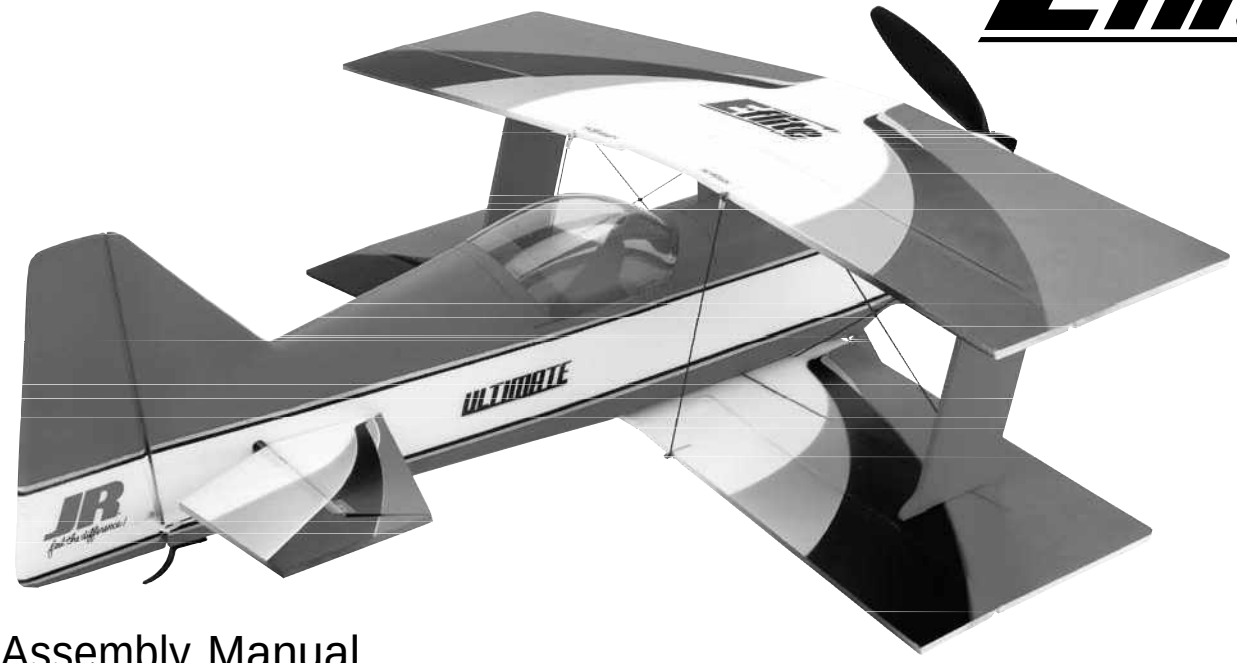
Ultimate FX 3D



Assembly Manual

Available from: www.modelflight.com.au

Table of Contents

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.

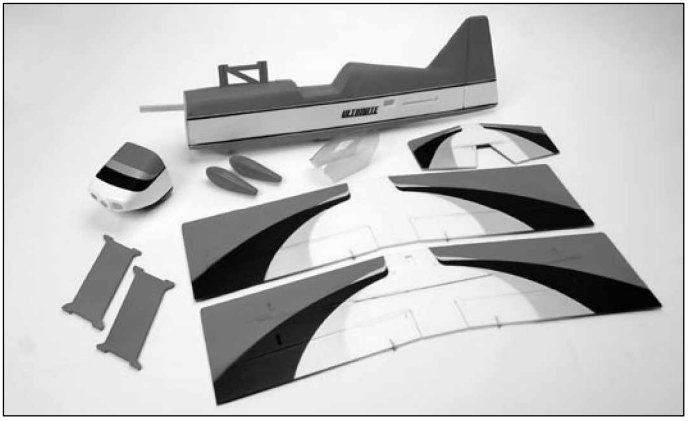
Specifications

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)

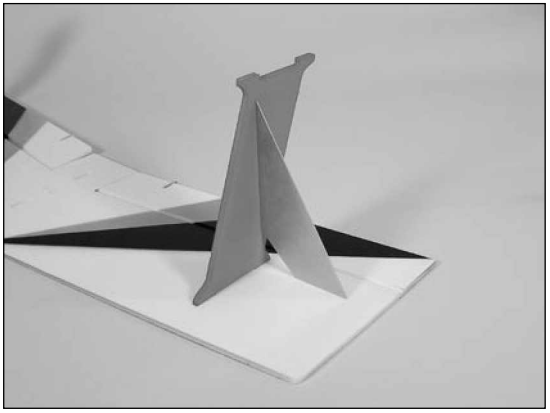
Required Tools and Adhesives

Square
Hot glue
Paper towel / tissue
Foam compatible CA
Foam compatible activator

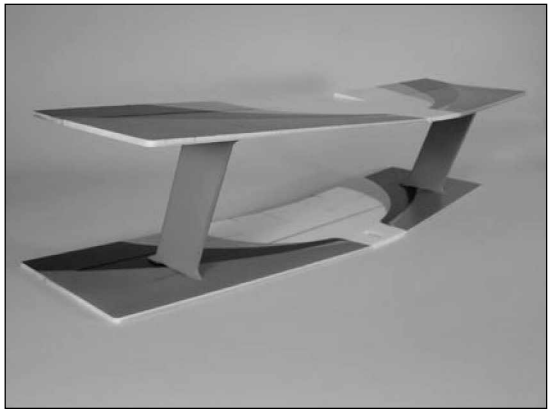
Note: When using a hot glue gun, be sure not to touch the tip to the foam. The hot tip will burn and melt the foam.

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.

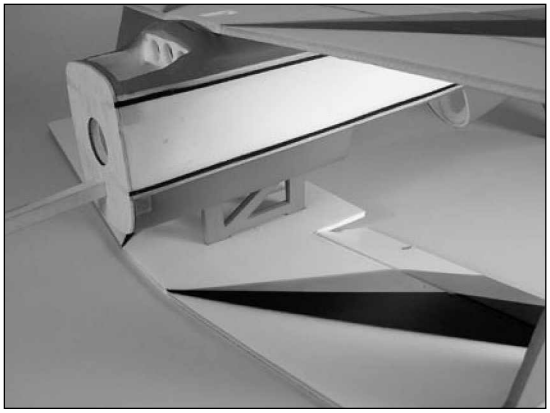
   Use a square and either foam compatible CA or hot glue to secure the struts to the wing.



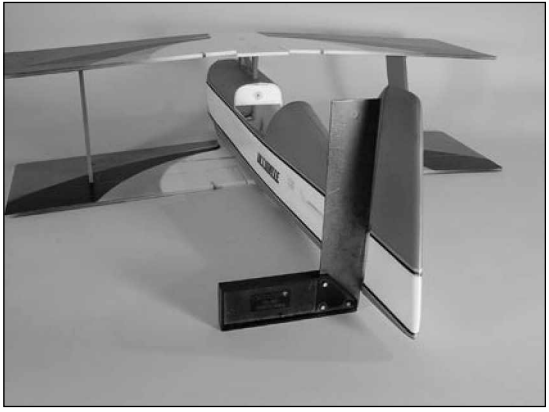
2. Attach the bottom wing to the struts using foam compatible CA or hot glue. Again, check that the struts are square to the wing.



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.