Mini Funtana

Assembly Manual

Available from: www.modelflight.com.au

Table of Contents

Introduction

Thank you for purchasing the E-flite Mini Funtana 3D ARF Park Flyer. The Mini Funtana is an extreme 3D aerobatic electric park flyer, based on the proven abilities of the popular Hangar 9 FuntanaS airplanes. We developed this aerobatic performer especially for park flyers pilots who are looking for great 3D performance.

The designed characteristics incorporated into the Mini Funtana, in addition to the lightweight balsa and light-ply construction, should provide you with the optimized precision 3D freestyle aerobatics you desire. We also include plenty of extras like the carbon fiber landing gear, fiberglass cowl and wheel pants, and a gearbox that easily accepts one of our popular Park 400 Brushless Motors (EFLM1100 or ELFM1105- purchased separately).

Specifications

Wingspan: 37 in (940 mm)
Length: 36 in (915 mm)
Wing Area: 329 sq in (21 sq dm)
Weight w/o Battery: 18.5 oz (525 g)
Weight w/ Battery: 20–24 oz (565–680 g)

Additional Required Equipment

Recommended JR® Systems

Radio: JR 4-channel
Servos: JR 241 Sub-micro servo (JRPS241) (4)
Receiver: JR R610M 6-channel micro FM Rx (JRPR610 or JRPR610UL)
Or purchase:
JR Quattro Lite system (JRP4487) and
(2) JR 241 Sub-micro servo (JRPS241)
Other Radio accessories:
Large Arms w/Screws (JRPA212) (2)
6" (150mm) Servo Extension (JRPA095) (2)
9" (230mm) Servo Extension (JRPA097) (2)

Battery and Speed Control Requirements

Li-Po Battery: 11.1V 1800–2100 3-Cell (EFLB1025, EFLB1035 or THP21003S)
Speed Control: E-Flite 20 amp brushless ESC (EFLA311) or Castle 25 amp brushless ESC (CSEPHX25)

Motor/Gearbox/Propeller

6.6:1 gearbox (included) (EFLM221)
12x6 Propeller (included) (EFLP1260)
Park 400 Brushless Motor, 4200KV (EFLM1100)
Park 400 Brushless Motor, 3700KV (EFLM1105)

Additional Tools and Adhesives

Tools

Square	T-pins
Hobby knife	Drill
Ruler	Felt-tipped pen

Hex wrench: 3/32"
Phillips screwdriver (small)
Drill bit: 3/32" (2.5mm), 1/8" (3mm)

Adhesives

Thin CA	Medium CA
6-minute epoxy	Canopy glue
Threadlock	

Other

Heat gun	Paper towels
Wax paper	150–180 grit sandpaper

Optional Parts

11x4.7 Slow Flyer Propeller (2)	EFLP1147
11x7 Slow Flyer Propeller (2)	EFLP1170
12x3.8 Slow Flyer Propeller (2)	EFLP1238
Celectra™ 1- to 3-cell LiPo Charger	EFLC3005
Spur Gear, 66T w/Shaft	EFLM222
Pinion Gear, 10T (0.4 module)	EFLM207

Before Starting Assembly

Before beginning the assembly of your Mini Funtana 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.

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.

Important Information About Motor Selection

We are recommending either the E-flite Park 400 Brushless Motor with 4200Kv (EFLM1100) or the version with 3700Kv (EFLM1105). The 3700Kv motor provides plenty of power for sport and entry level 3D pilots with the ability to hover and climb vertically using the stock 6.6:1 gearbox and 12 x 6 propeller. This motor will draw less current and provide longer flight duration. The 4200Kv motor should only be used by experienced pilots who manage throttle appropriately. This motor will provide even better vertical performance at the expense of flight duration due to the increased current draw. It is extremely important to monitor gearbox wear and motor temperature when using the 4200Kv motor. Lack of proper throttle management using this motor may result in damage to the motor, gearbox, esc, and battery.

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.

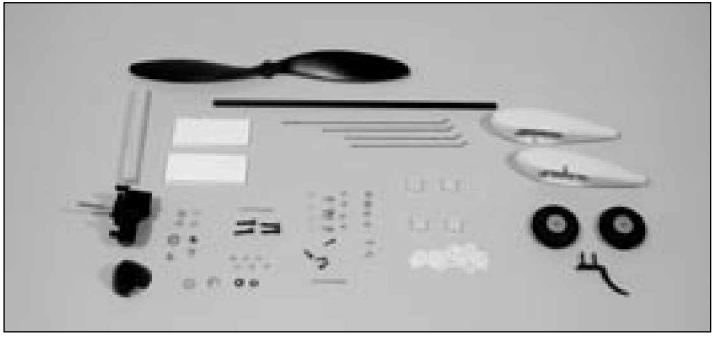
Contents of Kit/Parts Layout

Large Replacement Parts:

Wing Set w/ Ailerons	EFL2076
Fuselage w/Hatch	EFL2077
Tail Set	EFL2078
Carbon Fiber Main Gear	EFL2080
Fuselage Hatch	EFL2081
Canopy	EFL2082
Fiberglass Cowling	EFL2083

Small Replacement Parts:

Wheel Set	EFL2056
Pushrod Set	EFL2079
Fiberglass Wheel Pant Set	EFL2084
Wing Tube	EFL2085
Hook and Loop Tape	EFL2086
Decal Set	EFL2087
Micro Control Horns	EFLA200
Tail skid	EFLA202
Micro Control Connectors	EFLA203
Micro Rubber Spinner	EFLA204
12x6 Slow Flyer Propeller	EFLP1260
6.6:1 Gearbox	EFLM221



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
www.horizonhobby.com

Landing Gear Installation

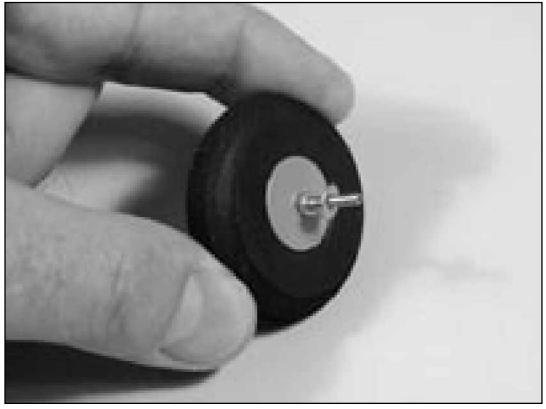
Required Parts

- Fuselage
- Tail skid
- 1 1/2" (38mm) Wheel (2)
- 2mm nut (4)
- 4-40 x 1/2" socket screw (2)
- 2mm x 6mm wood screw (2)
- Carbon main gear
- Wheel pant (2)
- 2mm x 25mm screw (2)
- #4 washer (black) (2)
- 2mm washer (4)

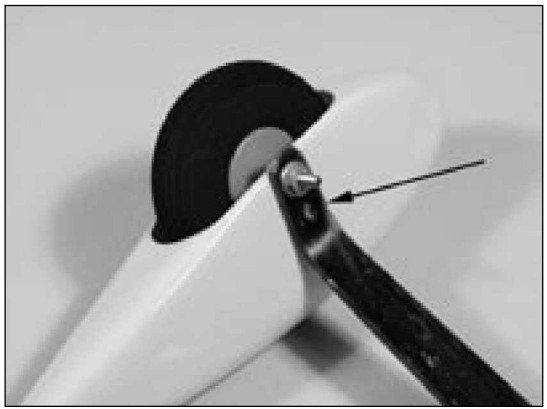
Required Tools and Adhesives

- Threadlock
- Drill
- Hobby knife
- Phillips screwdriver (small)
- 1/8" (3mm) drill bit
- Medium CA
- Hex wrench: 3/32"

1. Slide the 2mm x 25mm screw through one of the wheels. Thread a 2mm nut onto the screw. Slide a 2mm washer onto the screw. This will all fit inside the wheel pant.



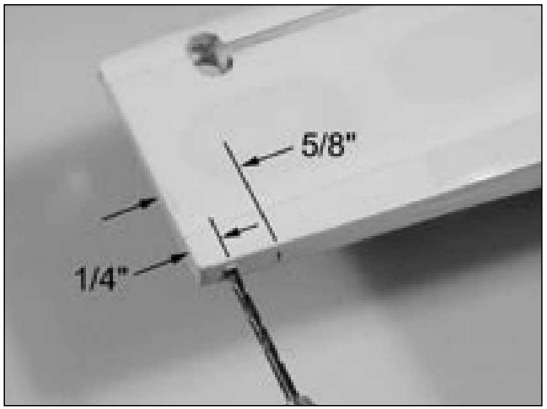
2. Fit the assembly from Step 1 into the wheel pant. Use a 2mm washer and nut to attach the wheel to the lower hole on the landing gear.



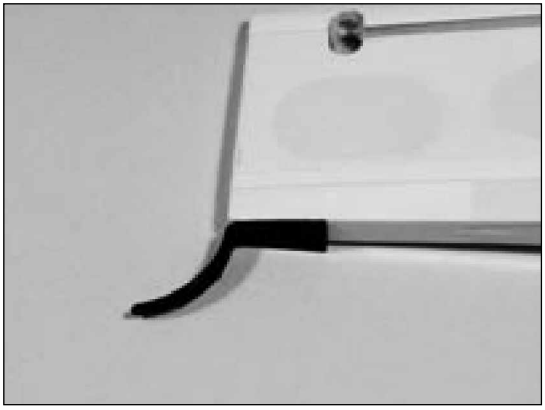
Note: Use threadlock on both nuts to prevent them from loosening during flight.

3. Repeat Steps 1 and 2 for the remaining wheel and pant.

4. Drill 1/8" (3mm) holes in the tail for the tail skid.

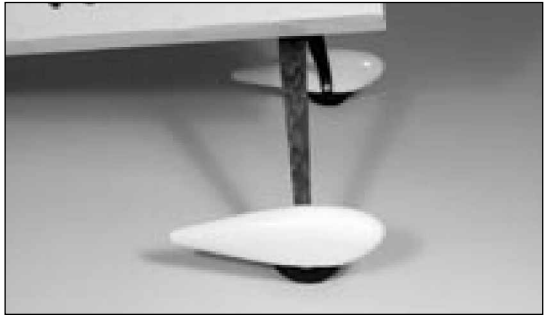


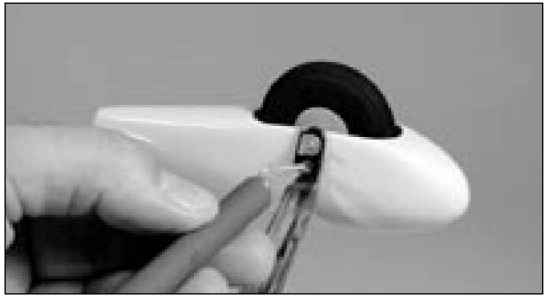
5. Glue the tail skid into position using Medium CA.



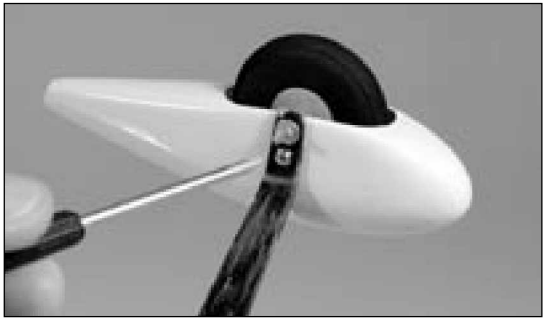
6. Attach the landing gear using a 3/32" hex wrench, two 4-40 x 1/2" socket head screws and two #4 washers (black).

7. Place the fuselage on its wheels and position the wheel pants parallel to the work surface. Drill a hole through the landing gear into each wheel pant using a hobby knife.





8. Secure the location of the wheel pants using 2mm x 6mm wood screws and a small phillips screwdriver.



Aileron Hinging

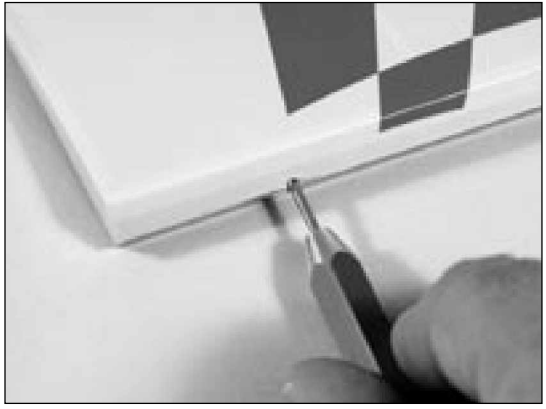
Required Parts

Wing (left and right)
Aileron (left and right)
CA hinges (8)

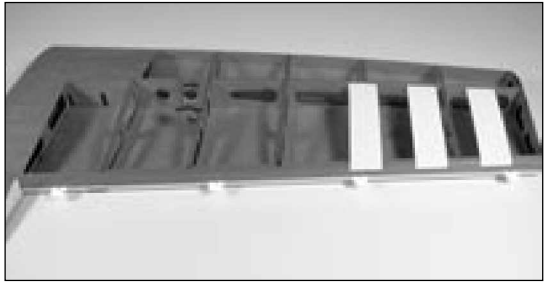
Required Tools and Adhesives

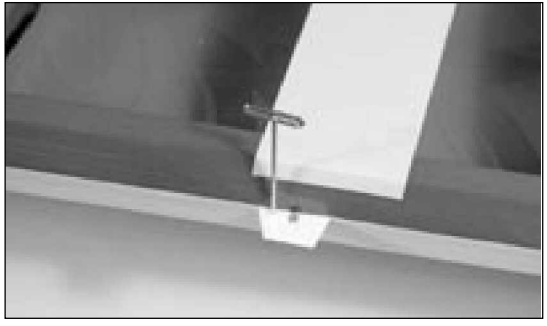
3/32" (2.5mm) drill bit
Drill
T-pins
Thin CA
Paper towel

1. Locate the positions for the hinges. Drill a 3/32" (2.5mm) hole in the center of each slot. This creates a tunnel for the CA, allowing the CA to penetrate into the hinge better, bonding the hinges more securely.



2. Slide four hinges into the slits in the wing. Center the slot in the hinge with the hole drilled in Step 1. Place a T-pin in each hinge to prevent it from being pushed into the wing when installing the aileron.

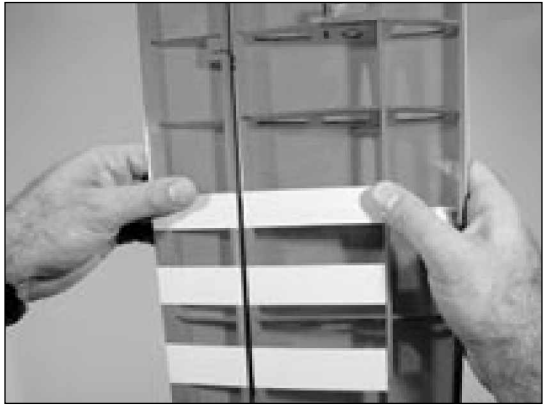




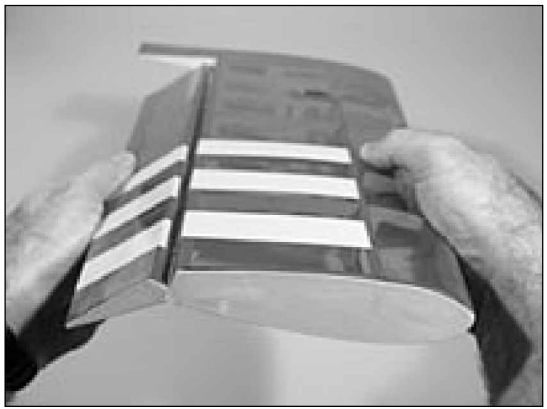
Note: Do not use CA accelerator during the hinging process. The CA must be allowed to soak into the hinge to provide the best bond. Using accelerator will not provide enough time for this process.

3. Slide the aileron into position. Check to make sure it can move without interference at the wing root. Remove the T-pins and apply Thin CA to each hinge. Make sure the hinge is fully saturated with CA. Use a paper towel to clean up any excess CA from the wing and aileron. Make sure to apply CA to both sides of the hinge.

4. Firmly grasp the wing and aileron and gently pull on the aileron to ensure the hinges are secure and cannot be pulled apart. Use caution when gripping the wing and aileron to avoid crushing the structure.



5. Work the aileron up and down several times to work in the hinges and check for proper movement.



6. Repeat Steps 1 through 5 for the remaining aileron.

Aileron Servos and Linkages

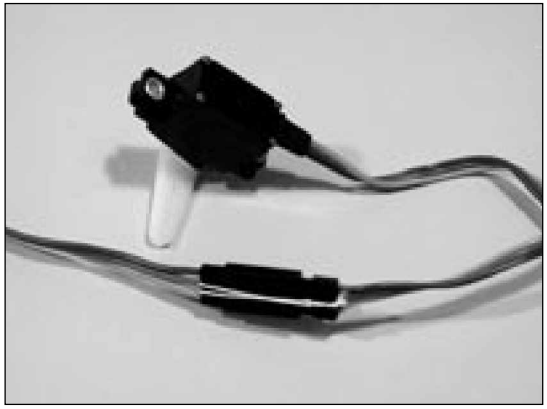
Required Parts

Wing panel (right and left)
Micro control connector (2)
2mm x 4mm screw (2)
4" (100mm) pushrod (2)
Control horn and backplate (2)
Servos: JR 241 Sub-micro servo (JRPS241) (2)
Large Arm w/Screws (JRPA212) (2)

Required Tools and Adhesives

Hobby knife
6" (150mm) servo extension (2)
Phillips screwdriver (small)
6-minute epoxy
String

1. Install the grommets and brass eyelets on the servo using instructions provided with the radio system. Attach a 6" (150mm) servo extension. Use string to secure the servo lead and extension to prevent them from unplugging in flight.

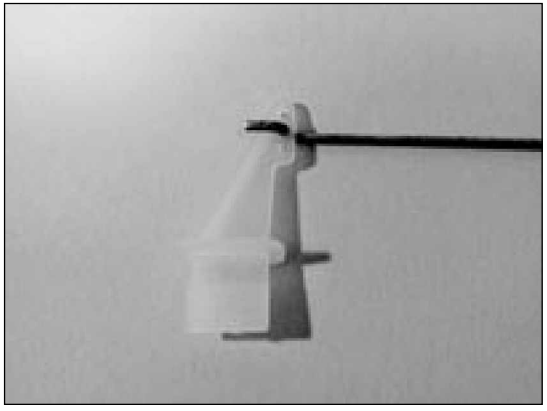


Note: We suggest using the Large Arms w/ Screws (JRPA212) on all JR® servos for the Mini Funtana. Replace all existing arms before installing the servos.

2. Place the servo in the wing. Guide the servo lead out through the opening at the wing root.

3. Secure the aileron servo using the screws provided with the servo.

4. Use a hobby knife to enlarge the center hole in the control horn to fit the 4" (100mm) long aileron pushrod wire.



5. Repeat Steps 1 through 4 for the other wing panel.