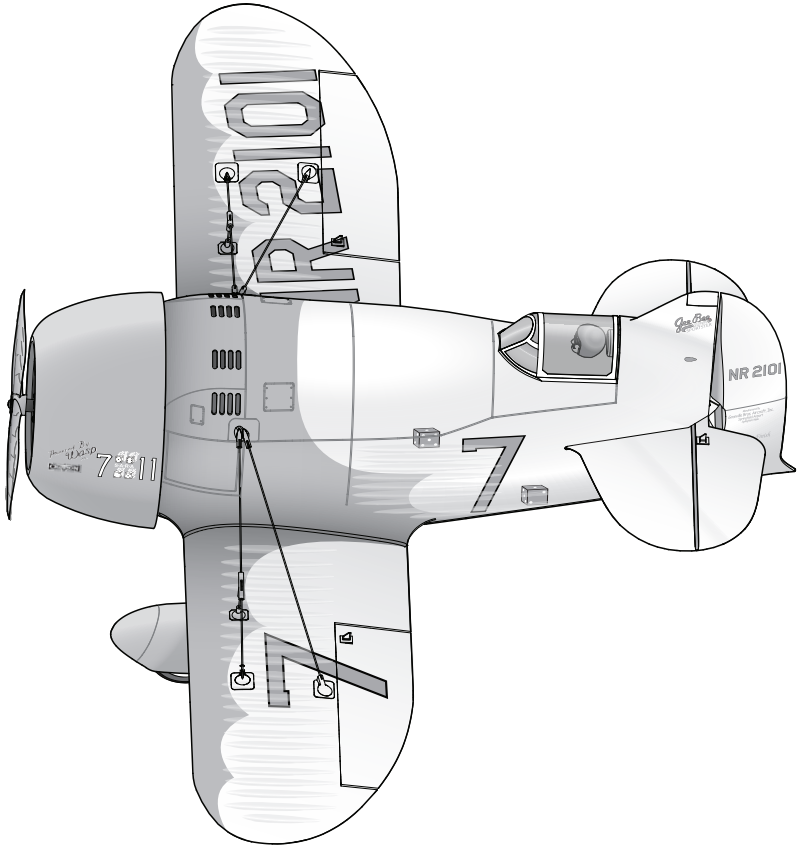
HORIZON HOBBY

E-flite ADVANCING ELECTRIC FLIGHT

UMX™ Gee Bee®

Instruction Manual • Bedienungsanleitung • Manuel d'utilisation • Manuale di Istruzioni



SAFE®

AS3X®

Bind-N-Fly® BASIC

SAFE® Select Technology, Optional Flight Envelope Protection

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, LLC. For up-to-date product literature, visit www.horizonhobby.com and click on the support tab for this product.

MEANING OF SPECIAL LANGUAGE

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. 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. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. This 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 serious injury.

14+ **AGE RECOMMENDATION: Not for children under 14 years. This is not a toy.**

WARNING AGAINST COUNTERFEIT PRODUCTS: If you ever need to replace your Spektrum receiver found in a Horizon Hobby product, always purchase from Horizon Hobby, LLC or a Horizon Hobby authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, LLC disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum technology.

Safety Precautions and Warnings

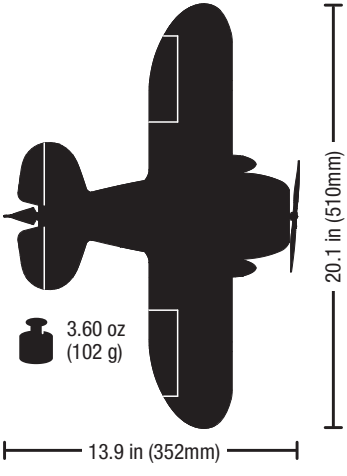
As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Always ensure failsafe is properly set before flying.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

Box Contents

Quick Start Information			
Transmitter Setup	Set up your transmitter using the transmitter setup chart		
Dual Rates		Hi Rate	Low Rate
	Ail	100%	70%
	Ele	100%	70%
Center of Gravity (CG)	26mm back from leading edge of the wing at the root		
Flight Timer Setting	4 minutes		
Operating Frequency	2404–2476 MHz		

Specifications



	Motor: BL180 (Brushless) Outrunner Motor, 36Kv (EFLUM180BLC)	**Installed**
ESC	**ESC:** 6Ch UMX AS3X Receiver BL-ESC (EFLA6420BLGB)	**Installed**
	(4) 2.3-Gram Performance Linear Long Throw Servo (SPMSA2030L)	**Installed**
	Recommended Battery: 200mAh 2S 25C Li-Po (EFLB2002S25)	**Required to Complete**
	Recommended Battery Charger: 2S 7.4V Li-Po (EFLUC1007)	**Required to Complete**
	Recommended Transmitter: Spektrum™ DSM2®/DSMX® with dual-rates and expo (DX4e and up)	**Required to Complete**

If you own this product, you may be required to register with the FAA.
For up-to-date information on how to register with the FAA, visit https://registermyuas.faa.gov/.
For additional assistance on regulations and guidance on UAS usage, visit www.knowbeforeyoufly.org/.

Table of Contents

SAFE® Select Technology

The evolutionary SAFE® Select technology can offer an extra level of protection so you can perform the first flight with confidence. No complex transmitter programming is required. Just follow the simple bind process to make the SAFE Select system active. When activated, bank and pitch limitations keep you from over-controlling and automatic self-leveling makes recovery from risky or confusing attitudes as simple as releasing the sticks. In fact, with the aileron, elevator and rudder sticks in the neutral position, SAFE Select will automatically keep the airplane in a straight and level attitude.

Expand the advantage of what SAFE® Select technology offers by assigning it to a switch. No transmitter programming is required and you'll be able to turn the system ON and OFF with the flip of a switch. For example, turn SAFE select ON for takeoffs to counter the torque of the propeller. Turn it OFF in flight for unrestricted aerobatic performance, and turn it back ON when a buddy wants to try out your cool aircraft. Turn SAFE Select ON for landings. SAFE Select reduces your workload by compensating for pitch changes automatically, regardless of throttle position. It will help keep the correct pitch attitude and wings level during the final approach. Whether you're a beginner or an expert, SAFE Select can make your flights a great experience.

When the normal bind process is followed, the SAFE Select system is disabled, leaving specially tuned AS3X® technology in place to deliver a pure, unrestricted flight experience.

Preflight Checklist

✓	
	1. Charge flight battery.
	2. Install flight battery in aircraft (once it has been fully charged).
	3. Bind aircraft to transmitter.
	4. Make sure linkages move freely.
	5. Perform Control Direction Test with transmitter.

✓	
	6. Set dual rates and exponential.
	7. Adjust center of gravity.
	8. Perform a radio system Range Check.
	9. Find a safe and open area.
	10.Plan flight for flying field conditions.

AS3X® Stabilization

DELIVERS BREAKTHROUGH PERFORMANCE

The AS3X® system for airplanes is an electronic enhancement system that makes it possible for you to experience super-smooth flight performance, yet still have full control authority for sport or scale flight.

Turbulence, torque and tip stalls are just some of the many complications to assess when trying to achieve smooth flight. The Horizon Hobby world-class team of RC pilots developed the AS3X system for airplanes based on the successful use of AS3X with ultra micro flybarless helicopters. Specially tuned for airplanes, the AS3X system invisibly helps with complicated corrections, allowing you to experience ultra-smooth flight performance that feels so natural that you'll quickly build confidence in the capability of the airplane.

AS3X system setup is simple. Just bind your DSM2®/DSMX® transmitter to the model using a basic airplane program and AS3X will assure that the locked-in feel and control authority you want is instantly at your command to help show off your RC pilot skills.

AS3X will innovate the way you'll want to fly now and in the future.

Transmitter and Receiver Binding

Binding is the process of programming the receiver of the control unit to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum™ DSM2®/DSMX® technology equipped aircraft transmitter to the receiver for proper operation.

Any Spektrum DSM2/DSMX transmitter can bind to the AS3X® DSM® receiver. For optimal performance, use a transmitter with exponential and dual rates.

✓	Binding Procedure
	1. Refer to your transmitter's unique instructions for binding to a receiver.
	2. Make sure the flight battery is disconnected from the aircraft.
	3. Power off the transmitter.
	4. Connect the flight battery in the aircraft. The receiver LED will begin to flash rapidly, (typically after 5 seconds).
	5. Make sure the transmitter controls are at neutral and the throttle and throttle trim are in the low position.
	6. Put your transmitter into bind mode. Refer to your transmitter's manual for binding button or switch instructions.
	7. After 5 to 10 seconds, the receiver status LED will become solid, indicating that the receiver is bound to the transmitter. If the LED does not turn solid, refer to the Troubleshooting Guide at the back of the manual.

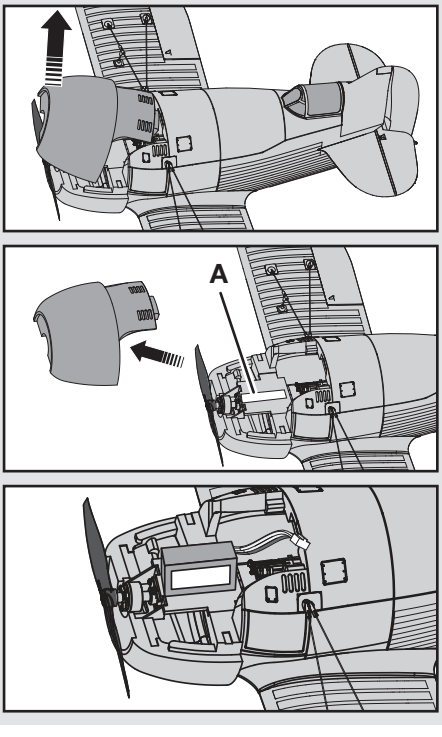
For subsequent flights, power on the transmitter for 5 seconds before connecting the flight battery.

Installing the Flight Battery

1. Remove the battery hatch.
2. Attach the flight battery to the hook and loop strip (**A**) on the battery tray. See the *Adjusting the Center of Gravity* instructions for the battery's position.
3. Place the aircraft on the ground out of the wind and connect a fully charged flight battery.
   Ensure the aircraft is immobile for 5 seconds so the AS3X system initializes correctly. See the *Arming the ESC* instructions for correct connection of the battery to the ESC.
4. Install the battery hatch.

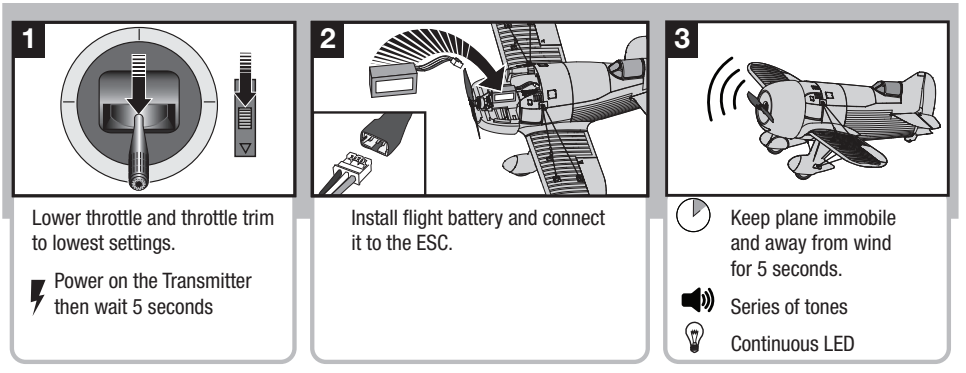
NOTICE: If using a different battery than the recommended 2-Cell 7.4V 200mAh 25C Li-Po, use hook and loop tape (PKZ1039) to secure the battery.

⚠ **CAUTION:** Always disconnect the Li-Po battery from the aircraft receiver when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.



Arming the ESC

Arming the ESC also occurs after binding as previously described, but subsequent connection of a flight battery requires the steps below.



If you accidentally connect the battery while the throttle is fully raised, the ESC will enter programming mode. Disconnect the battery immediately.

The AS3X system will not activate until the throttle stick or trim is increased for the first time. Once the AS3X is active, the control surfaces may move rapidly on the aircraft. This is normal.

AS3X will remain active until the battery is disconnected.

⚠ **CAUTION:** Always keep hands away from the propeller. When armed, the motor will turn the propeller in response to any throttle movement.

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The aircraft's ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor. Power to the motor quickly decreases and increases, showing that some battery power is reserved for flight control and safe landing.

When the motor power pulses, land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Before storage, charge the Li-Po battery to full capacity. During storage, make sure battery charge does not fall below 3V per cell.

Tip: Due to the quiet nature of the aircraft, you may not hear the pulsing of the motor.

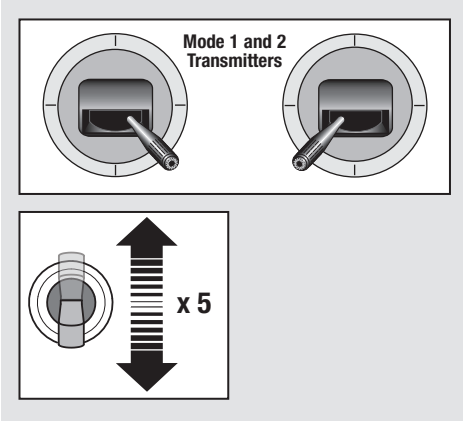
For your first flights, set your transmitter timer or a stopwatch to 3 minutes. Adjust your timer for longer or shorter flights once you have flown the model. Flights of 4.5 minutes or more are achievable if using proper throttle management.

NOTICE: Repeated flying to LVC will damage the battery.

SAFE® Select Switch Designation

To enable and disable SAFE® Select Technology use the following steps:

1. Power on transmitter.
2. Connect battery to the airplane and allow it to initialize.
3. Hold sticks in lower inside corners.
4. Toggle the Channel 5 switch five times. The ailerons will cycle twice, indicating SAFE Select is toggled ON/OFF.



AS3X Control Direction Test

This test ensures that the AS3X® control system is functioning properly. Assemble the aircraft and bind your transmitter to the receiver before performing this test.

1. Raise the throttle just above 25%, then lower the throttle to activate AS3X technology.

CAUTION: Keep all body parts, hair and loose clothing away from a moving propeller, as these items could become entangled.

2. Move the entire aircraft as shown and ensure the control surfaces move in the direction indicated in the graphic. If the control surfaces do not respond as shown, do not fly the aircraft. Refer to the receiver manual for more information.

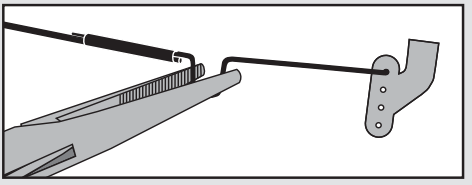
Once the AS3X system is active, control surfaces may move rapidly. This is normal. AS3X remains active until the battery is disconnected.

Aircraft Movement	Control Surface Reaction (viewed from the rear)
Pitch up	
Pitch down	
Roll left	
Roll right	

Control Centering

Before the first flights, or in the event of an accident, make sure the flight control surfaces are centered. Adjust the linkages mechanically if the control surfaces are not centered. Use of the transmitter sub-trims may not correctly center the aircraft control surfaces due to the mechanical limits of linear servos.

1. Make sure the control surfaces are neutral when the transmitter controls and trims are centered. The transmitter sub-trim must be always be set to zero.
2. When needed, use a pair of pliers to carefully bend the metal linkage (see illustration).
3. Make the U-shape narrower to make the connector shorter. Make the U-shape wider to make the linkage longer.

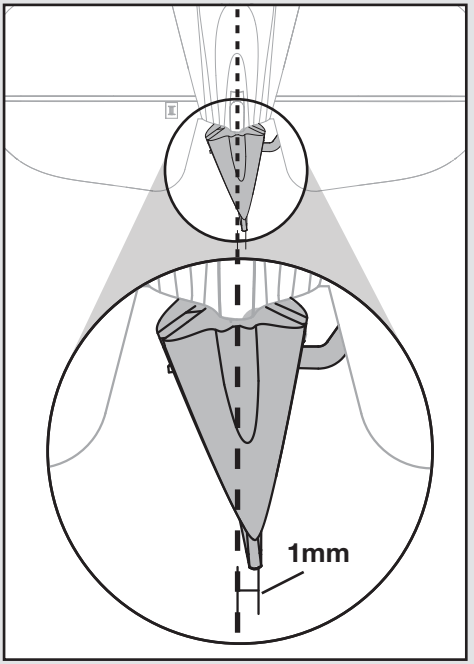


Centering Controls After First Flights

For best performance with AS3X, it is important that excessive trim is not used. If the model requires excessive transmitter trim (4 or more clicks of trim per channel), return the transmitter trim to zero and adjust the linkages mechanically so that the control surfaces are in the flight trimmed position.

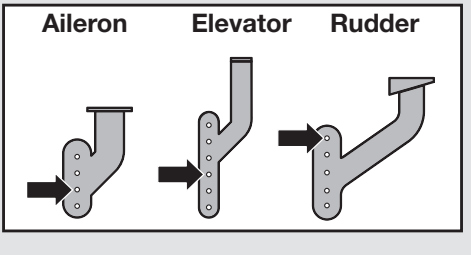
1mm Offset of Rudder

After centering the rudder, we recommend adjusting the rudder linkage so the rudder center is **1mm** right (measured at the trailing edge of the rudder) from center while rudder trim on your transmitter is at neutral.



Settings for Control Horns

The following illustration shows the factory settings for linkages on the control horns. After flying, carefully adjust the linkage positions for the desired control response.



Dual Rates and Expos

To obtain the best flight performance, we recommend using a DSM2/DSMX radio capable of Dual Rates and Expo. The suggested settings shown here are the recommended starting settings. Adjust according to the individual preferences after the initial flight.

NOTICE: Do not set your transmitter travel adjust over 100%. If the TRAVEL ADJUST is set over 100%, it will not result in more control movement, it will overdrive the servo and cause damage.

It is normal for linear servos to make significant noise. The noise is not an indication of a faulty servo.

Tip: For the first flight, fly the model in low rate.

Tip: For landing, we recommend using high rate elevator.

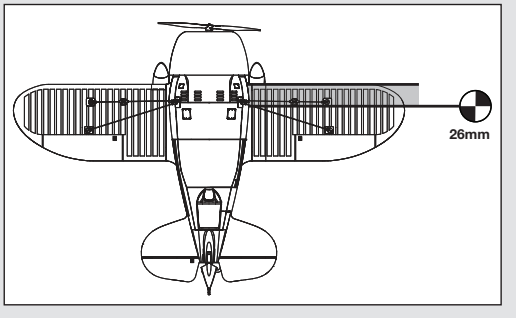
Dual Rates		High Rate	Low Rate
	Aileron	100%	70%
	Elevator	100%	70%
	Rudder	100%	70%

Expos		High Rate	Low Rate
	Aileron	0%	0%
	Elevator	10%	0%
	Rudder	0%	0%

Adjusting Center of Gravity (CG)

The CG location is **26mm** back from leading edge of the wing at the root. This CG location has been determined with the included 2S 200mAh 7.4V Li-Po battery installed in the front of the battery cavity.

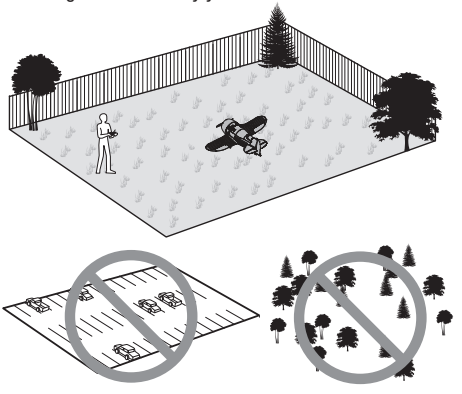
The battery tray is oversized to allow for Center of Gravity adjustment. Start by placing the battery at the front edge of the battery tray with the connector plug facing the rear of the aircraft. Adjust as needed by sliding the battery back or forward.



Flying Tips and Repairs

Flying

We recommend flying your E-flite® UMX Gee Bee outside in calm to moderate winds or in a large gymnasium. Always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards or soccer fields. Consult local laws and ordinances before choosing a location to fly your aircraft.



Takeoff

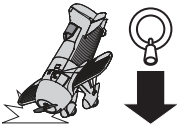
Place the UMX Gee Bee in position for takeoff (facing into the wind if flying outdoors). Gradually increase the throttle to full power, holding a small amount of up elevator and steering with the rudder. Climb gently to check trim. Once the trim is adjusted, begin exploring the flight envelope of the UMX Gee Bee.

Landing

Land into the wind. This is very important for this model. Fly the aircraft to approximately 6 inches (15cm) or less above the runway, using a small amount of throttle for the entire descent. Keep the throttle on until the aircraft is ready to flare. During flare, keep the wings level and the airplane pointed into the wind. Gently lower the throttle while pulling back on the elevator to bring the aircraft down on all three wheels.

Failure to lower the throttle stick and trim to the lowest possible positions during a crash could result in damage to the ESC in the receiver unit, which may require replacement.

⚠ CAUTION



Always decrease throttle at propeller strike.

Over Current Protection (OCP)

The UMX Gee Bee is equipped with Over Current Protection. OCP protects the ESC from overheating and stops the motor when the transmitter throttle is set too high and the propeller cannot turn. OCP will only activate when the throttle is positioned just above ½ throttle. After the ESC stops the motor, fully lower the throttle to re-arm the ESC.

Repairs

Crash damage is not covered under warranty.

Repair this model using foam-compatible CA glue or clear tape. Only use foam-compatible CA glue as other types of glue can damage the foam. When parts are not repairable, see the Replacement Parts List for ordering by item number.

For a listing of all replacement and optional parts, refer to the list at the back of this manual.

NOTICE: Use of foam-compatible CA accelerant on your model can damage paint. DO NOT handle the model until accelerant fully dries.

Additional 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.

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

- Always keep a safe distance in all directions around your model to avoid collisions or injury.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.

Post Flight Checklist

✓	
	1. Disconnect flight battery from ESC (Required for Safety and battery life).
	2. Power off transmitter.
	3. Remove flight battery from aircraft.
	4. Recharge flight battery.

✓	
	5. Store flight battery apart from aircraft and monitor the battery charge.
	6. Make note of flight conditions and flight plan results, planning for future flights.

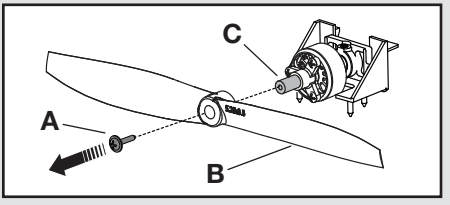
Service of Power Components

Disassembly

CAUTION: Before performing any propeller maintenance, always disconnect the battery. Handling the propeller while the aircraft is armed may result in personal injury.

Propeller

1. The front of the cowling covers the battery compartment. Lift the cowling to access the battery compartment.
2. Carefully remove the screw (**A**) and the propeller (**B**) from the motor shaft (**C**).

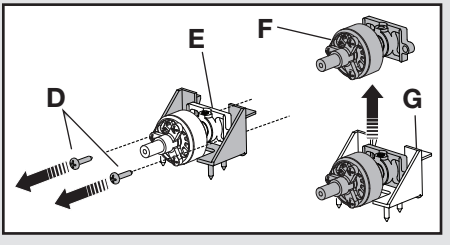


Motor and Firewall

1. Remove 2 screws (**D**), the firewall (**E**) and the motor (**F**) from the fuselage motor mount (**G**).

The motor magnet may attract screws to the motor.

2. Remove the screw (**H**) from the firewall (**E**) and motor (**F**).
3. Disconnect the motor wire connectors from the ESC/receiver connectors.



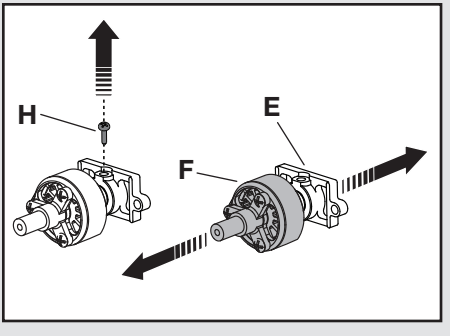
Assembly

Motor and Firewall

1. Connect the motor wire connectors to the ESC/receiver connectors so the wire colors align.
2. Install the motor in the firewall using a screw in the top of the firewall.
3. Attach the firewall to the fuselage motor mount using 2 screws.

Propeller

1. Install the propeller on the motor shaft using a screw. Numbers on the propeller must face out from fuselage for correct propeller operation.
2. Put the foam battery hatch on the fuselage and slide it back to fully engage the fuselage.



Removing tape or decals may remove paint from the fuselage.

Troubleshooting Guide

AS3X

Problem	Possible Cause	Solution
Control surfaces not at neutral position when transmitter controls are at neutral	Control surfaces may not have been mechanically centered from factory	Center control surfaces mechanically by adjusting the U-bends on control linkages
	Aircraft was moved after the flight battery was connected and before sensors initialized	Disconnect and reconnect the flight battery while keeping the aircraft still for 5 seconds
Model flies inconsistently from flight to flight	Trims are moved too far from neutral position	Neutralize trims and mechanically adjust linkages to center control surfaces
Controls oscillate in flight (model rapidly jumps or moves)	Propeller is unbalanced causing excessive vibration	Remove propeller and rebalance or replace it if damaged
	Prop screw is too loose, causing vibration	Tighten the prop screw

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle stick and/or throttle trim too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor disconnected from receiver	Open fuselage and make sure motor is connected to the receiver
Extra propeller noise or extra vibration	Damaged propeller, spinner or motor	Replace damaged parts
	Prop screw is too loose	Tighten the prop screw
	Prop out of balance	Balance the prop
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller installed backwards	Install propeller with numbers facing forward
	Flight battery damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity too low for flight conditions	Replace battery or use a larger capacity battery

Troubleshooting Guide (Continued)

Problem	Possible Cause	Solution
LED on receiver flashes and aircraft will not bind to transmitter (during binding)	Transmitter too near aircraft during binding process	Power off transmitter, move transmitter a larger distance from aircraft, disconnect and reconnect flight battery to aircraft and follow binding instructions
	Bind switch or button not held long enough during bind process	Power off transmitter and repeat bind process. Hold transmitter bind button or switch until receiver is bound
LED on receiver flashes rapidly and aircraft will not respond to transmitter (after binding)	Less than a 5-second wait between first powering on transmitter and connecting flight battery to aircraft	Leaving transmitter on, disconnect and reconnect flight battery to aircraft
	Aircraft bound to different model memory (ModelMatch™ radios only)	Select correct model memory on transmitter and disconnect and reconnect flight battery to aircraft
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Flight battery charge is low	Fully recharge flight battery
	Control linkage does not move freely	Make sure control linkage moves freely
Controls reversed	Transmitter settings reversed	Adjust controls on transmitter appropriately
Motor loses power	Damage to motor or power components	Do a check of motor and power components for damage (replace as needed)
Motor power quickly decreases and increases then motor loses power	Battery power is down to the point of receiver/ESC Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
Motor/ESC is not armed after landing	Over Current Protection (OCP) stops the motor when the transmitter throttle is set high and the propeller cannot turn	Fully lower throttle and throttle trim to arm ESC
Servo locks or freezes at full travel	Travel adjust value is set above 100% overdriving the servo	Set Travel adjust to 100% or less and/or set sub-trims to Zero and adjust linkages mechanically

Limited Warranty

What this Warranty Covers
Horizon Hobby, LLC, (Horizon) warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

What is Not Covered
This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations, or (vii) use that violates any applicable laws, rules, or regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy
Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability
HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. 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 the Product, purchaser is advised to return the 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). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES
Questions, Assistance, and Services
Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or 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 visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services
If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. 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. An Online Service Request is available at http://www.horizonhobby.com/content/service-center_render-service-center. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Service

Should your service not be covered by warranty, service 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 service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website http://www.horizonhobby.com/content/service-center_render-service-center.

ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

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Contact Information

Country of Purchase	Horizon Hobby	Contact Information	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 877-504-0233	
	Sales	websales@horizonhobby.com 800-338-4639	
European Union	Horizon Technischer Service	service@horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

FCC Information

FCC ID: BRWEFLA6420BL
This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE: Modifications to this product will void the user's authority to operate this equipment.

IC Information

IC: 6157A-EFLA6420BL
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Compliance Information for the European Union

EU Compliance Statement:
Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED and EMC Directives.
A copy of the EU Declaration of Conformity is available online at: http://www.horizonhobby.com/content/support-render-compliance.

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 collections 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 make sure 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.

E328

Replacement Parts | Ersatzteile | Piéces de rechange | Recapiti per i ricambi

Part # • Nummer Numéro • Codice	Description	Beschreibung	Description	Descrizione
EFLU4067	Prop Adapter	Prop Adaptor	Adaptateur d'hélice	Adattatore elica
EFLU4546	Pushrod Linkage Set	Gestänge	Tringleries	Set asta di spinta
EFLU4547	Skid Protection Covers	Kufenschutzabdeckung	Couvercles de protection	Coperture protezione antisbandamento
EFLU4555	Landing Gear and Tail Wheel Set	Hauptfahrwerk u. Spornrad	Train d'atterrissage et roulette de queue	Set ingranaggi di atterraggio e Ruota posteriore
EFLU4558	Fuselage Set	Rumpf Set	Fuselage	Set fusoliera
EFLU4559	Wing	Tragfläche	Aile	Ala
EFLU4560	Horizontal Tail Set w/ Accessories	Höhenruder m. Zbh Set2	Stabilisateur horizontal	Set coda orizzontale con accessori
EFLU4561	Wing Struts w/ Mounting Hardware	Flächenstreben mit Zbh	Haubans d'aile	Montante dell'ala con staffa di montaggio
EFLU4562	Battery Hatch	Akkuklappe (Motorhaube)	Capot de batterie	Portello della batteria
EFLU4563	Clear Canopy	Kabinenhaube klar	Verrière	Tettuccio semplice
EFLU4565	Decal Sheet	Dekorbogen	Planche de décoration	Foglio con decalcomanie
EFLA6420BLGB	6 Ch UMX AS3X RX BL ESC	6 Kanal UMX AS3X RX bürstenloser Geschwindigkeitsregler	Récepteur UMX AS3X 6 canaux et variateur ESC sans balais	6 canali UMX AS3X RX BL ESC
EFLUM180BLC	BL180 Brushless Outrunner Motor, 3600 Kv	BL180 Brushless Außenläufer Motor, 3600 Kv	Moteur Brushless 180 à cage tournante 3600Kv	BL180 motore Outrunner brushless, 3600Kv

Recommended Parts | Empfohlene Teile | Pièces Recommandées | Parti Raccomandati

Part # • Nummer Numéro • Codice	Description	Beschreibung	Description	Descrizione
EFLB2802S30	280mAh 2S 7.4V 30C LiPo Battery	280 mA 2S 7,4 V 30C LiPo-Akku	Batterie Li-Po 200 mAh 2 S 7,4 V 30 C	Batteria Li-Po 280 mAh 2S 7,4V 30C
EFLC1105A	Ultra Micro-4, 4x9W, AC/DC Battery Charger	Ultra Micro-4, 4x9 W, Wechsel-/Gleichstrom-Akkuladegerät	Chargeur de batterie CA/CC, Ultra Micro-4, 4 x 9 W	Caricabatterie Ultra Micro-4, 4x9 W, AC/DC
SPMR6750	DX6 6-Channel DSMX Transmitter Only Gen 3, Mode 2	Nur DX6 DSMX Sender mit 6 Kanälen Generation 3, Modus 2	Émetteur DSMX DX6 6 canaux 3ème gén uniquement, Mode 2	Trasmettitore DSMX a 6 canali DX6 solo Gen 3, Modalità 2
EFLC4000UK	DX8 Transmitter Only MD2	Nur DX8-Sender MD2	Émetteur DX8 uniquement MD2	Solo trasmittente DX8 MD2

Optional Parts | Optionale Bauteile | Piéces optionnelles | Parti opzionali

Part # • Nummer Numéro • Codice	Description	Beschreibung	Description	Descrizione
EFLA111	LiPo Cell Voltage Checker	LiPo-Zellspannungsprüfer	Contrôleur de tension pour batterie Li-Po	Tester di tensione per batterie LiPo
PKZ1039	Hook and Loop Set (5): Ultra Micros	Klettbandsatz (5): Ultra Micros	Set de bandes auto-agrippantes (5) : Ultra Micros	Fascette di velcro (5): Ultra Micros
	DX5e DSMX 5-Channel Transmitter	Spektrum DX5Ee DSMX 5 Kanalsender ohne Empfänger	Emetteur DX5e DSMX 5 voies	DX5e DSMX Trasmettitore 5 canali
	DX6i DSMX 6-Channel Transmitter	DX6i DSMX 6-Kanal Sender	Emetteur DX6i DSMX 6 voies	DX6i DSMX Trasmettitore 6 canali
	DX7s DSMX 7-Channel Transmitter	Spektrum DX7s 7 Kanal Sender	Emetteur DX7s DSMX 7 voies	DX7s DSMX Trasmettitore 7 canali
	DX8 DSMX Transmitter	Spektrum DX8 nur Sender	Emetteur DX8 DSMX 8 voies	DX8 DSMX Solo trasmettitore

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