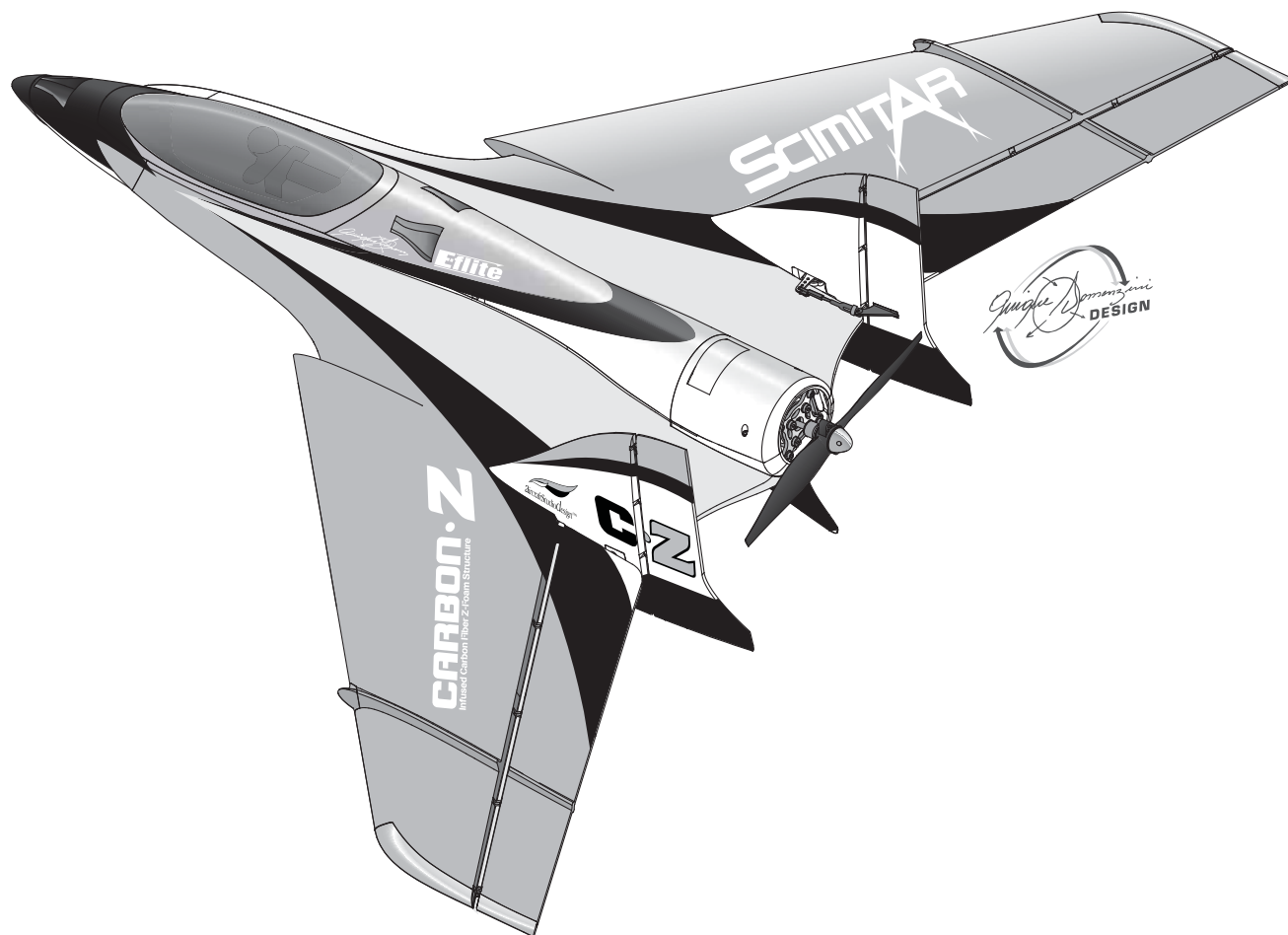


Carbon-Z™ Scimitar™

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



Bind-N-Fly.® Ready to fly. redefined.

PNP
PLUG-N-PLAY®

CARBON  STRUCTURE

E-flite®
ADVANCING ELECTRIC FLIGHT

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. 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:

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

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

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.



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 attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. 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.

Additional 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.

Age Recommendation: Not for children under 14 years. This is not a toy.

- This model is controlled by a radio signal subject to interference from many sources outside your control. 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 margin will help 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.

Battery Warnings

The Battery Charger included with your aircraft is designed to safely charge the Li-Po battery.

CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120° F. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- NEVER USE A Ni-Cd OR Ni-MH CHARGER. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside safe temperature range.
- Never charge damaged batteries.

Welcome to the cutting edge of electric flight! Your E-flite® Carbon-Z™ Scimitar™ aircraft is a quantum leap in tailless swept wing design that combines patent-pending Carbon-Z construction with the latest in high-output brushless motor and vector-thrust propeller engineering. The speed and maneuverability this makes possible is nothing short of spectacular. Read this manual thoroughly before taking your first flight. The Carbon-Z Scimitar can cover a lot of ground in a hurry. The better understanding you have of its performance and systems before your first flight, the better that flight, and every one after, will be.

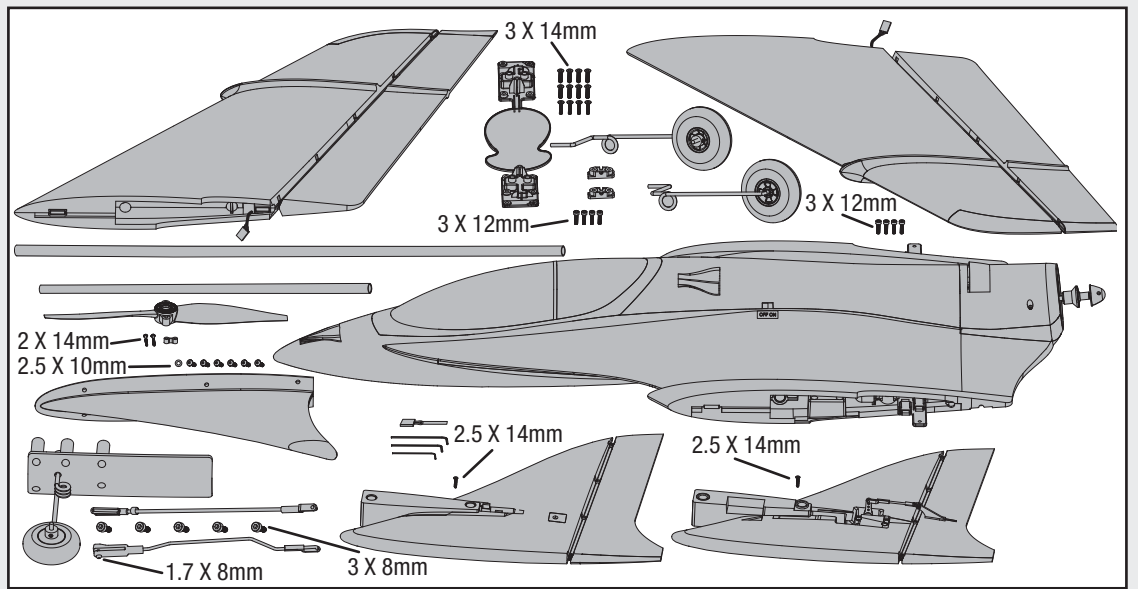
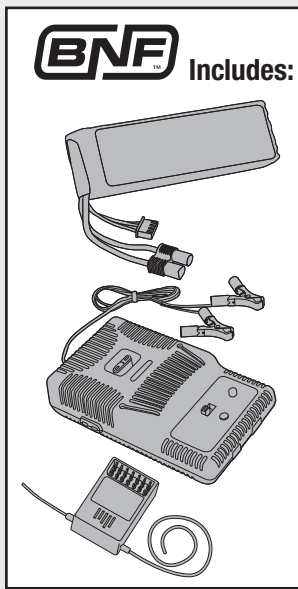
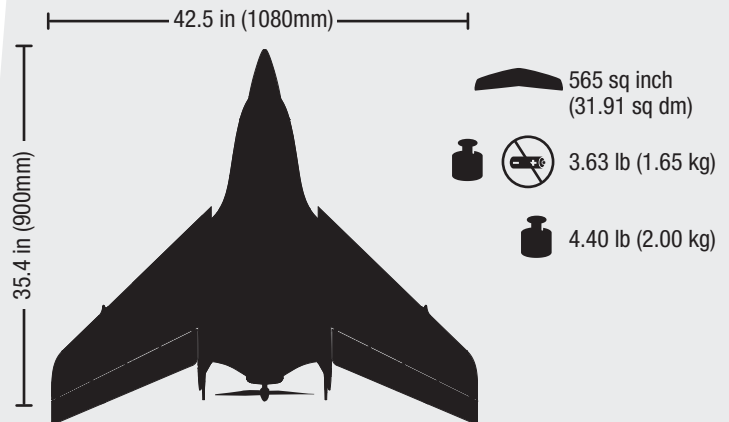


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Specifications

	Bind-N-Fly® Aircraft	Plug-N-Play® Aircraft
32-size BL outrunner; 1010Kv	Installed	Installed
EFL 60A Pro Switch Mode BEC brushless ESC	Installed	Installed
(5) Digital high-speed servo (1) Digital high-speed/power metal gear mini servo	Installed	Installed
Receiver: Spektrum™ AR600 6-channel Sport DSMX® Receiver	Installed	Needed to Complete
Battery: 3200mAh 4S 30C Li-Po Battery Charger: EFL 3-4 cell variable rate DC Li-PO balancing fast charger	Included	Needed to Complete
Required Transmitter: Full-Range 6-channel aircraft transmitter with adjustable D/R and Expo	DSM2™/DSMX® Needed	Needed to Complete

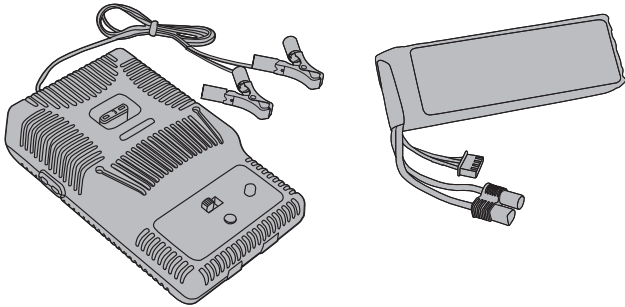


To register your product online, visit www.e-fliterc.com



Charging the Flight Battery

Your E-flite Carbon-Z Scimitar comes with a DC balancing charger and 4S Li-Po battery. You must charge the included Li-Po battery pack with a Li-Po specific charger only (such as the included charger). Never leave the battery and charger unattended during the charge process. Failure to follow the instructions properly could result in a fire. When charging, ensure the battery is on a heat-resistant surface. Charge the battery pack while you are assembling the aircraft. You will need the flight battery to confirm proper aircraft operation in future steps.



DC Li-Po Balancing Charger Features

- Charges 3- to 4-cell lithium polymer battery packs
- Variable charge rates from 500mAh to 3-amp
- Simple single push-button operation
- LED charge status indicator
- LED cell balance indicator
- Audible beeper indicates power and charge status
- 12V accessory outlet input cord

Specifications

- Input power: 12V DC, 3-amp
- Charges 3- to 4-cell Li-Po packs with minimum capacity of 500mAh

E-flite 4S 14.8V 3200mAh 30C Li-Po Battery Pack (EFLB32004S30)

The E-flite® 4S Li-Po battery pack features a balancing lead that allows you to safely charge your battery pack when used with the included E-flite Li-Po balancing charger.



CAUTION: The balance connector **must** be inserted into the correct port of your charger prior to charging.

The Battery Charging Process

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. Attach the input cord of the charger to the appropriate power supply (12V accessory outlet).
3. When the Li-Po charger is correctly powered up, there will be an approximate 3-second delay, then an audible “beep” and the green (ready) LED will flash.
4. Turn the control on the Amps selector so the arrow points to the charging rate required for the battery (the Scimitar 3200mAh Li-Po battery will charge at 3.0 amps). DO NOT change the charge rate once the battery begins charging.
5. Move the cell selector switch to 4-cell for your battery.
6. Connect the balancing lead of the battery to the 4-cell (5 pin) charger port and press the Start button to begin battery charging.
7. The green and red LEDs may flash during the charging process when the charger is balancing cells. Balancing prolongs the life of the battery.
8. When the battery is fully charged, a beep will sound for about 3 seconds and the green LED will shine continuously. Attempting to charge an over-discharged battery will cause the charger to repeatedly flash and beep, indicating an error has occurred.
9. Always unplug the battery from the charger immediately upon completion of charging.



CAUTION: Overcharging a battery can cause a fire.



CAUTION: Only use a charger specifically designed to charge a Li-Po battery. Failure to do so could result in fire causing injury or property damage.



CAUTION: Never exceed the recommended charge rate.

NOTICE: If using a battery other than the included Li-Po battery, refer to your battery manufacturer's instructions for charging.

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The 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 pulses, showing that some battery power is reserved for flight control and safe landing.

When the motor 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. Fully charge your Li-Po battery before storing it. During storage, make sure the battery charge does not fall below 3V per cell.



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.

Please visit www.bindnfly.com for a complete list of compatible transmitters.

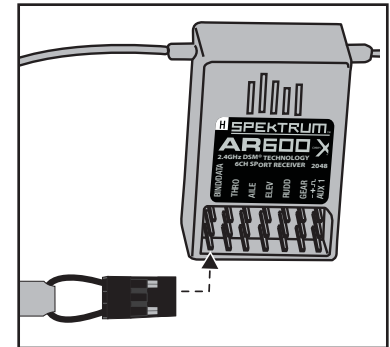
NOTICE: When using a Futaba transmitter with a Spektrum DSM® module, you must reverse the throttle channel.

BIND PLUG



✓ Binding Procedure Reference Table

Set up the transmitter for delta wing elevons before binding.	Before binding:
1. Read the transmitter instructions for binding to a receiver (location of transmitter's Bind control).	1. Choose a blank model memory with only default (zero) settings (including trim and sub-trim).
2. Make sure the transmitter is powered off.	2. Choose Wing Type as Delta Wing or Elevons.
3. Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) and to low positions (throttle, throttle trim).*	3. Set servo reversing (as recommended in the "Transmitter Setup" section).
4. Install a bind plug in the receiver bind port extension.	
5. Connect the flight battery to the ESC.	
6. Power on the ESC switch. The receiver LED will begin to flash rapidly.	
7. Power on the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for binding button or switch instructions.	
8. When the receiver binds to the transmitter, the light on the receiver will be solid and the ESC will produce a series of sounds. A long tone followed by three short tones confirm that the LVC is set for the ESC.	
9. Remove the bind plug from the bind port extension.	
10. Safely store the bind plug (some owners attach the bind plug to their transmitter using two-part loops and clips).	
11. The receiver should retain the binding instructions received from the transmitter until another binding is done.	



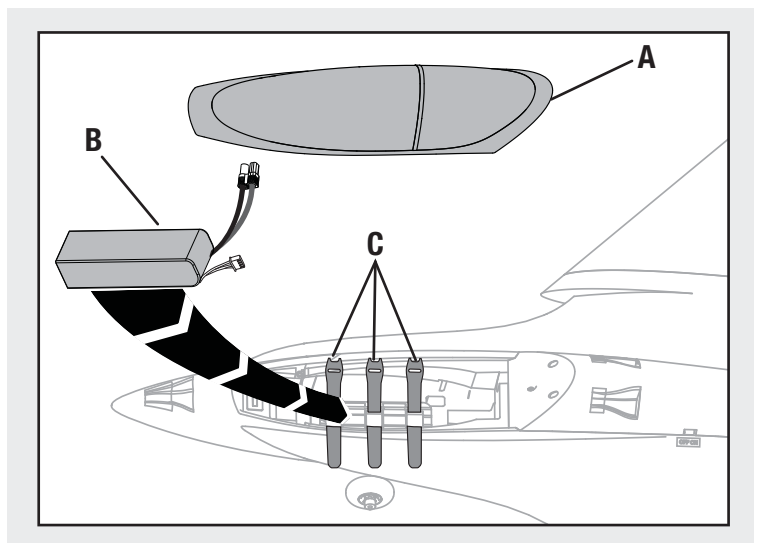
* The throttle will not arm if the transmitter's throttle control is not put at the lowest position. If you encounter problems, follow binding instructions and refer to the transmitter troubleshooting guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

Installing Battery

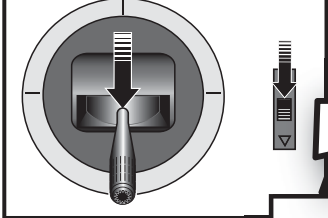
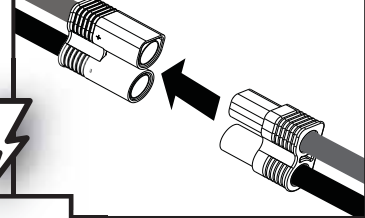
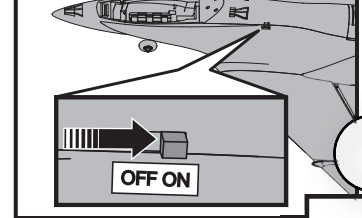
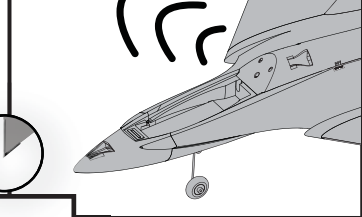
- Lift the front edge of the canopy (A) and pull the canopy forward and up from the fuselage.
- Install the included flight battery (B) all the way to the front of the battery tray.
- Connect the battery connector to the ESC connector.
- Make sure the battery is secure in the battery compartment using hook and loop straps (C).
- Align the canopy pins with the two holes in the fuselage and install the canopy so the magnets on the front of the canopy and fuselage meet. Disassemble the model in reverse order.

⚠ 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.

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



Before Flight

<p>1</p> 	<p>2</p> 	<p>3</p> 	<p>4</p> 
<ul style="list-style-type: none"> • Lower throttle and throttle trim to lowest settings. 	<p>Power on Transmitter</p> <ul style="list-style-type: none"> • Connect battery to ESC. 	<ul style="list-style-type: none"> • Power on ESC switch. 	<p>Wait 5 seconds</p> <ul style="list-style-type: none"> • Continuous LED • Series of tones

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Installing a Receiver

1. Install your full-range receiver in the fuselage using hook and loop tape or double-sided servo tape.
2. Attach the right aileron to the elevator channel of your receiver. Attach the left aileron to the aileron channel of your receiver.
3. Attach the Gear to channel 5.
4. Attach the Vector Thrust (VT) to AUX 1.
5. You will also need to activate the delta wing/elevon configuration of your transmitter.
For specific setups for JR®/Spektrum 6+ channel transmitters, see the "Transmitter Setup or Model Setup" sections in this manual.
6. Attach the ESC connector to the throttle channel of your receiver.

Battery Selection and Installation

1. We recommend the E-flite 3200mAh 4S 14.8V 30C Li-Po Battery (EFLB32004S30).

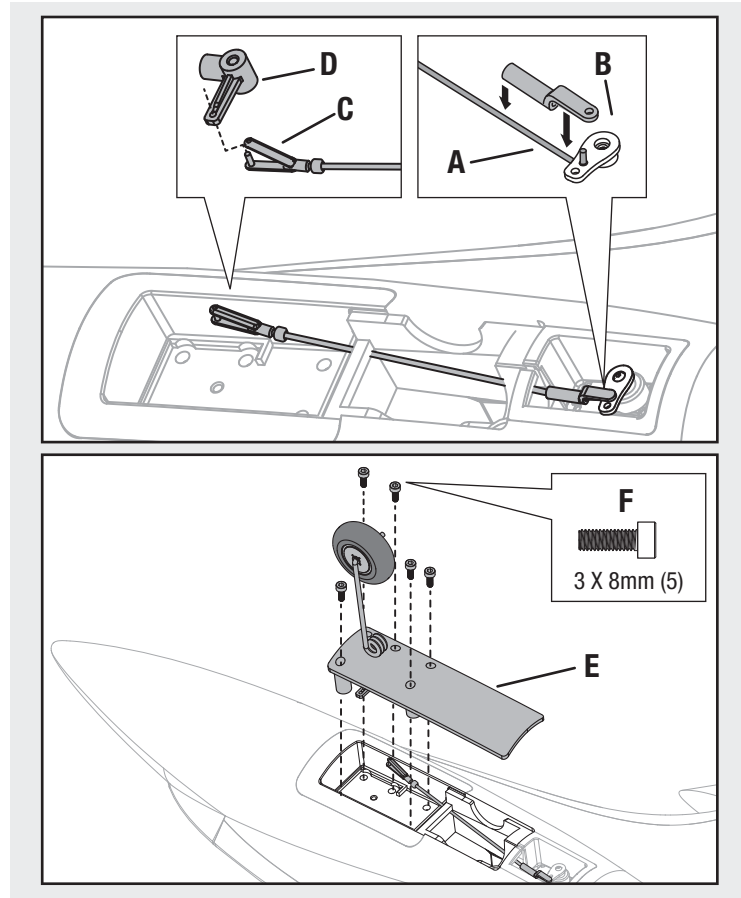
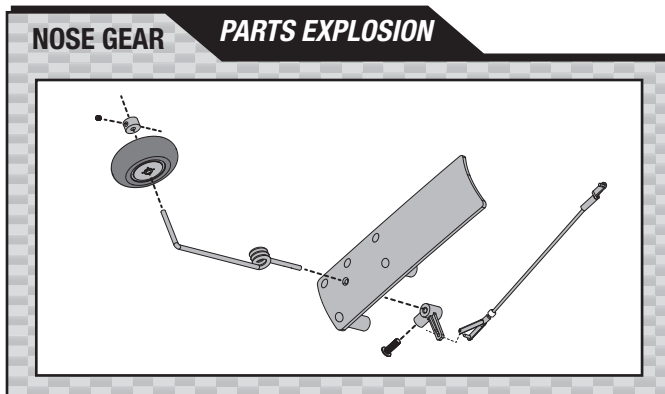
TIP: To find the correct CG, start by installing the 3200mAh battery all the way to the front of the battery cavity, then adjust as needed until the desired CG is achieved.

2. If using another battery, the battery must be at least a 30C 3200mAh battery.
3. Your battery should be approximately the same capacity, dimensions and weight as the E-flite Li-Po battery.

Fixed Landing Gear Installation

Installing Nose Gear

1. Connect the linkage (A) to the steering servo arm (B). Always ensure the steering linkage clevis is adjusted correctly to make the model steer straight when the rudder control is at neutral.
2. Connect the clevis (C) to the arm of the nose gear (D).
3. Install the nose gear plate (E) on the fuselage using five screws (F).

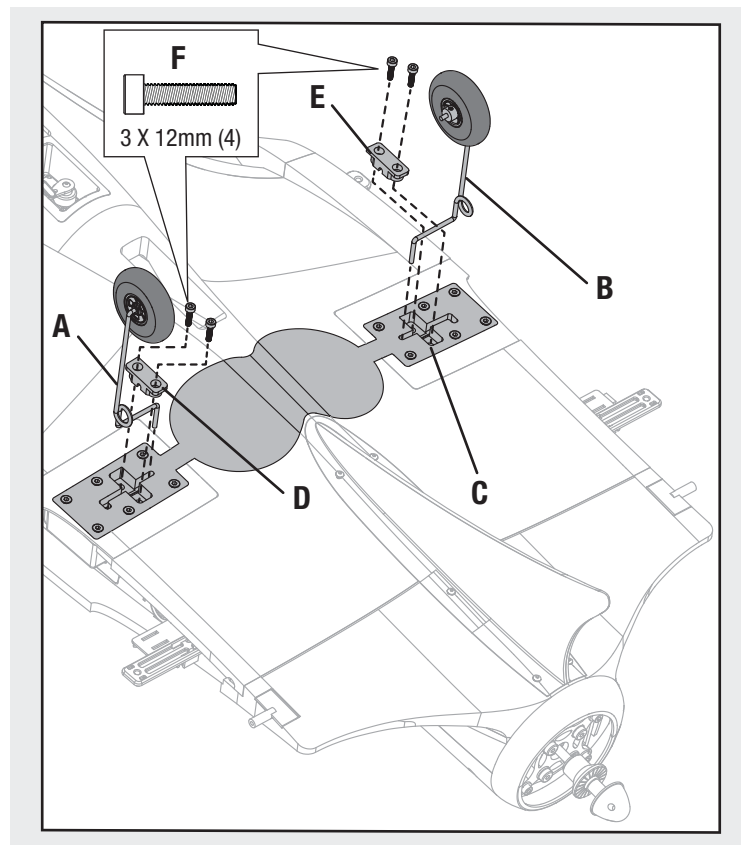
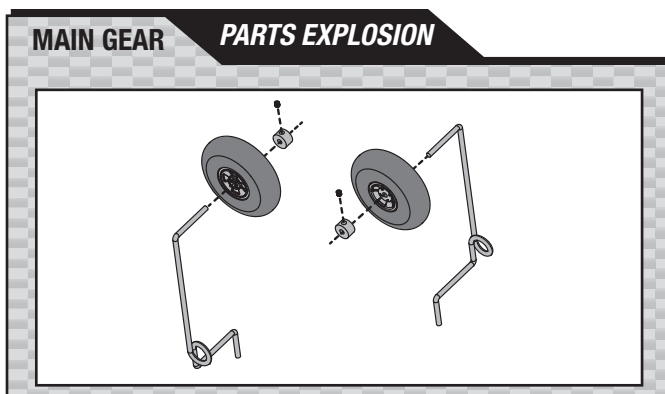


Installing Main Gear

1. Install the left and right gear struts (A and B, respectively) into the rear gear plate (C). Please refer to the below illustration (Main Gear Parts Explosion) to determine the proper orientation of the left and right struts.
2. Install the left and right strut cover plates (D and E, respectively) using four screws (F).
3. Apply a small amount of threadlock to the wheel axle, collar and screw in the collar.

Disassemble the model in reverse order.

The difference in length of the gear struts between the fixed gear and optional electric retract struts serve different purposes. The longer struts of the fixed gear give more ground clearance for the aircraft to operate on rougher grass runways.



Installing Optional Retractable Landing Gear

OPTIONAL

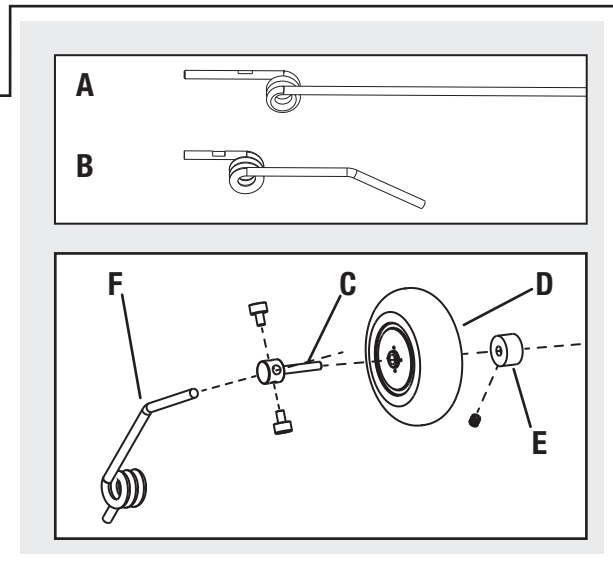
This equipment is sold separately:

- 10- to 15-Size Tricycle Electric Retracts (EFLG110)
- Nose gear strut (EFL1018017)

Changing Stock Scimitar Nose Strut (EFL1018017) to Retractable Nose Gear

Use of the nose gear strut included with the electric retracts does not let the nose gear retract into the fuselage well.

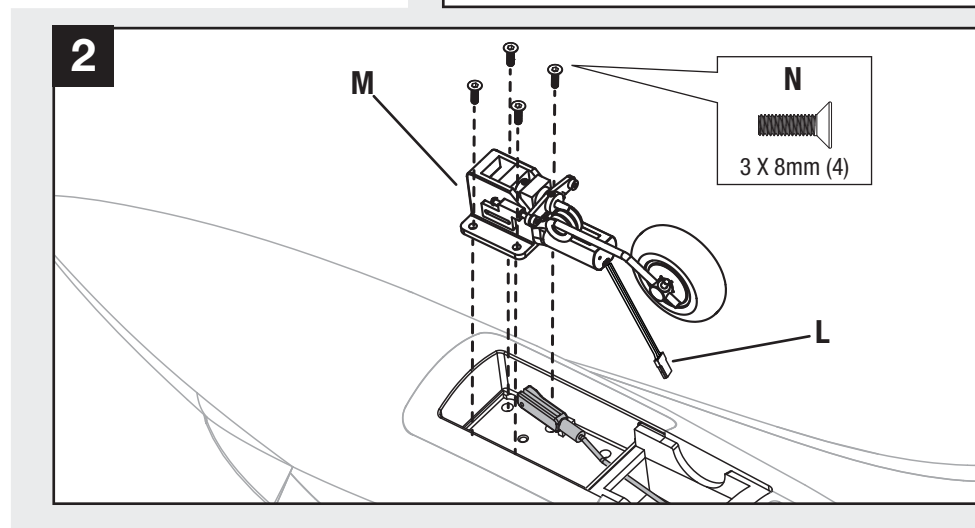
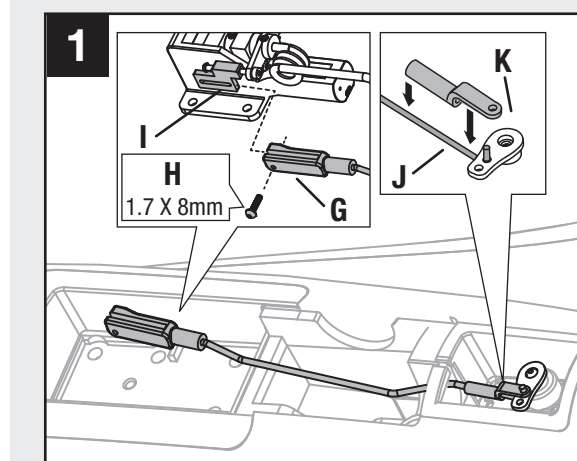
1. Replace the nose gear strut (A) (included with the electric retracts) with the nose gear strut (B) designed for the Scimitar (EFL1018017) (sold separately). The spring is under tension on the nose strut mount. Carefully install the new strut so the spring stays on the nose strut mount.
2. Install the shaft (C), in the Scimitar nose wheel (D) and collar (E) on the strut (F). The bushing on the wheel should face the shaft base.



Installing Retractable Nose Gear

- 1
 - Connect the nose gear linkage (G) (included with the Scimitar) to the nose gear using a screw (H) on the linkage clevis (I). Apply a small amount of threadlock to hold the screw in the clevis.
 - Connect the linkage (J) to the steering servo arm (K).
- 2
 - Connect the connector (L) to the gear extensions installed in the fuselage.
 - Install the nose retract (M) in the fuselage using four of the five included screws (N).
 - Connect the gear extensions to the GEAR port on your receiver.
 - Apply a small amount of threadlock to the wheel axle, collar and screw in the collar.

Always make sure the steering linkage clevis is adjusted correctly to ensure the model steers straight when the rudder control is at neutral.

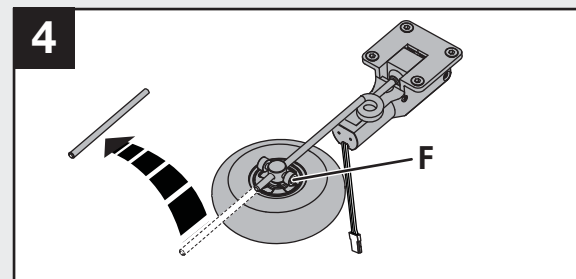
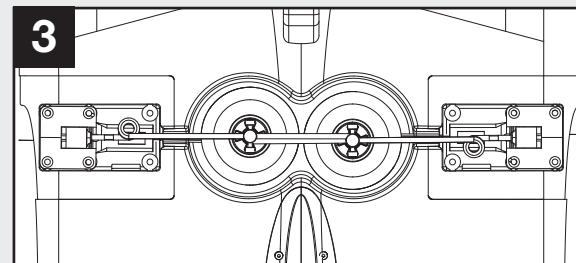
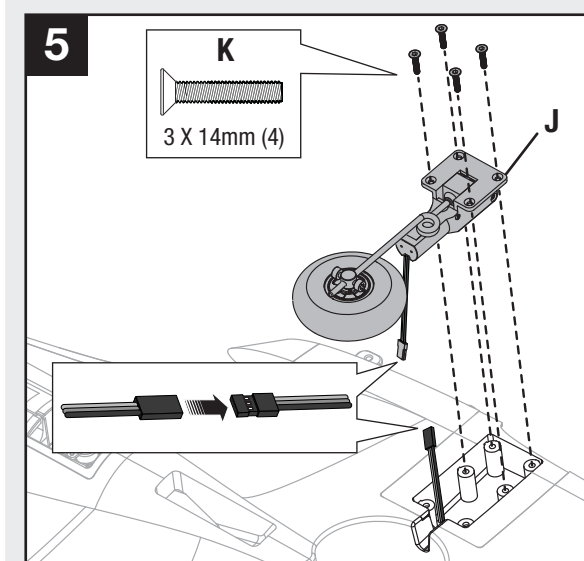
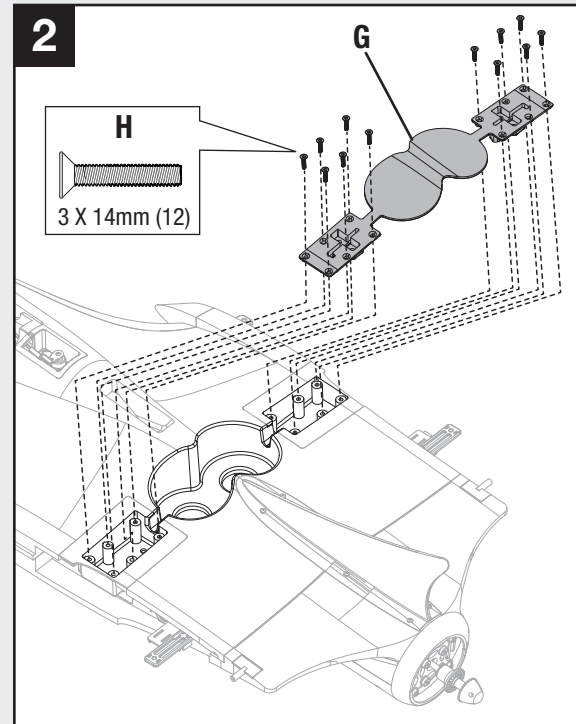
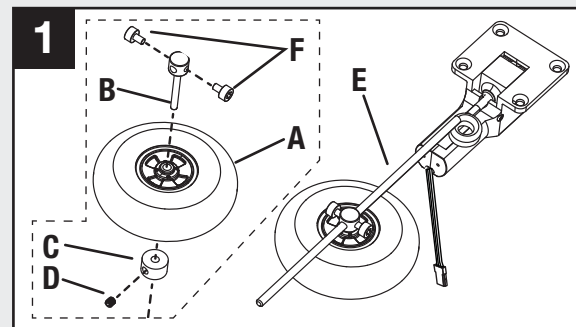


Installing Optional Retractable Landing Gear (Continued)

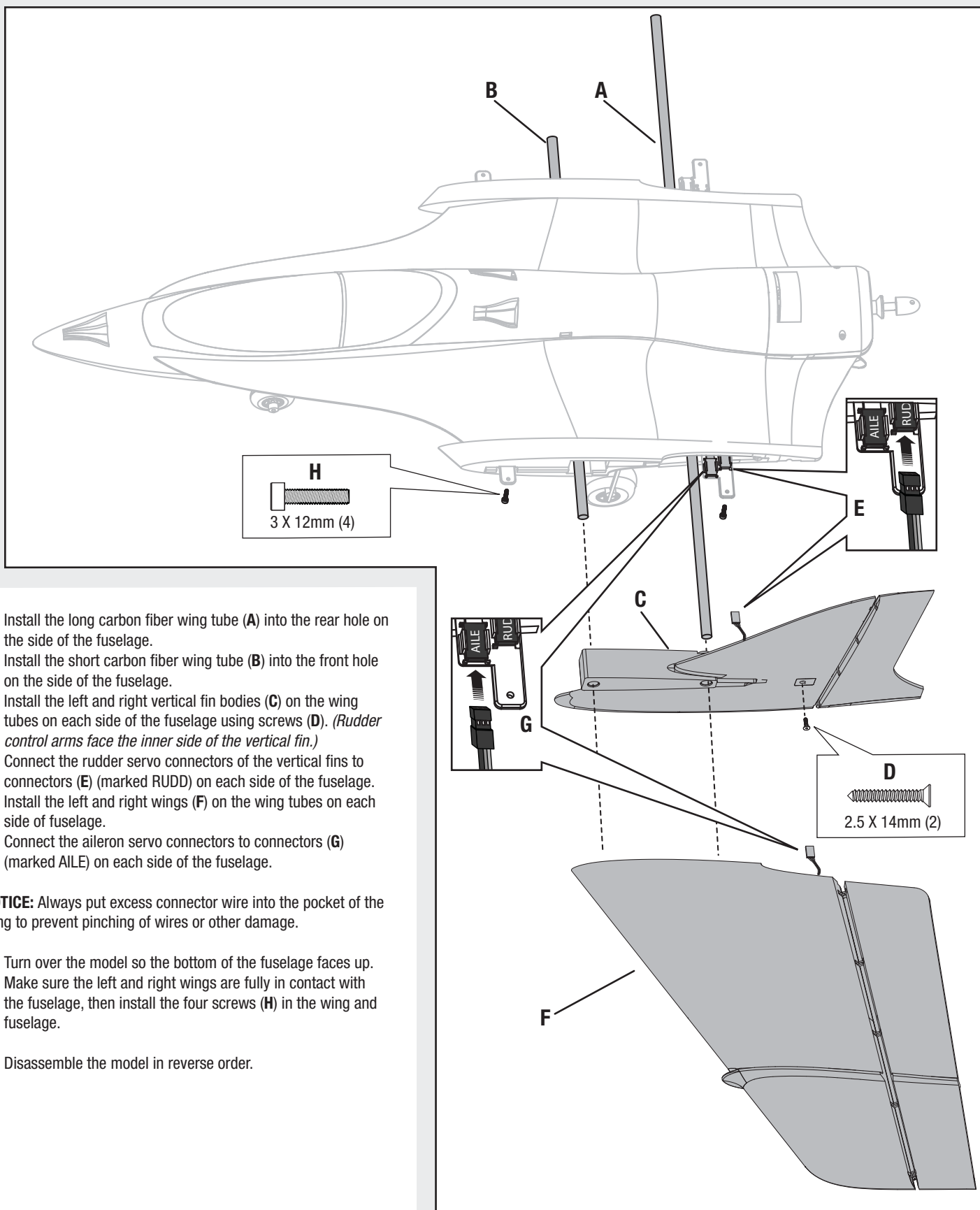
OPTIONAL

Installing Retractable Main Gear

- 1**
 - Install the Scimitar rear wheels (A) on the retract shafts (B) using the collars (C) and setscrews (D).
 - Loosely fit the shafts (B) on the rear landing gear struts (E) using two screws (F).
- 2**
 - Remove Main Gear Plate (G) from the fuselage by removing 12 screws (H).
- 3**
 - Put the retracts in the fuselage.
 - Adjust the wheels and shafts on the struts so that the wheels almost touch in the wheel wells.
- 4**
 - Mark the struts for cutting just below the shaft on the strut.
 - Remove the wheels from the shafts.
 - Carefully cut the struts to the marked length.
 - Replace the wheels on the shafts.
 - Tighten the two screws (F) of each shaft on each strut.
 - Apply threadlock to the strut and wheel shaft hole.
- 5**
 - Connect the retracts to the gear extensions installed in the fuselage.
 - Install each main retractable gear (J) on the left and right side of the fuselage using four of the six screws (K) used for the fixed gear.
 - Connect the retract connector to the GEAR port on your receiver.
 - Operate the retracts. Make adjustments so that the wheels retract into the wheel wells and extend without being blocked.
 - Apply a small amount of threadlock to the wheel axle, collar and screw in the collar.



Installing Wings and Vertical Fins



1. Install the long carbon fiber wing tube (A) into the rear hole on the side of the fuselage.
2. Install the short carbon fiber wing tube (B) into the front hole on the side of the fuselage.
3. Install the left and right vertical fin bodies (C) on the wing tubes on each side of the fuselage using screws (D). (*Rudder control arms face the inner side of the vertical fin.*)
4. Connect the rudder servo connectors of the vertical fins to connectors (E) (marked RUDD) on each side of the fuselage.
5. Install the left and right wings (F) on the wing tubes on each side of fuselage.
6. Connect the aileron servo connectors to connectors (G) (marked AILE) on each side of the fuselage.

NOTICE: Always put excess connector wire into the pocket of the wing to prevent pinching of wires or other damage.

7. Turn over the model so the bottom of the fuselage faces up.
8. Make sure the left and right wings are fully in contact with the fuselage, then install the four screws (H) in the wing and fuselage.

Disassemble the model in reverse order.

Balancing the Propeller

NOTICE: Because of the Vector Thrust on the Scimitar, the propeller must be precisely balanced to prevent excess vibration and damage to the vector thrust servo.

Your propeller needs to be balanced before you install it on your airplane. Balancing a propeller prevents motor and/or airframe damage. Always balance a new propeller before use. The following procedure applies to propellers of all brands and materials e.g., plastic, wood, carbon fiber. The instructions below describe sanding or adding material to a propeller to achieve proper balance. It is important to use a high-precision propeller balancer, like the DU-BRO Tru Spin Propeller Balancer, in an area with no air movement.

Install the propeller on the balancer shaft. Make sure the propeller turns freely on the balancer shaft. Balance the propeller using the instructions below.

TIP: If a propeller is difficult to balance, make sure the propeller's hole is centered in the hub.

Horizontal Balancing

1. Align the propeller's blade horizontally along the balancer shaft.
2. If the propeller blade falls out of horizontal alignment, carefully use sandpaper to remove a small amount of plastic from the entire front of the heavier propeller blade (in the areas marked **(A)** on the illustrated propeller).
 - Use 80-grit sandpaper to remove large amounts of material.
 - Use a finer sandpaper (150-grit or greater) to remove small amounts of material for a smoother finish.

Remove plastic from the blade until the propeller stays properly aligned in the horizontal position.

3. Use clear tape or paint to add material if you desire to avoid sanding your propeller.
 - If tape is used, apply tape across the leading edge of the propeller to the back and front of the propeller in order to prevent an increase in air resistance. Do not apply tape to the ears (**(B)**).

Vertical Balancing

1. Align the propeller's blade vertically along the balancer shaft. (This is often called "balancing the hub".)
2. If the propeller blade falls out of vertical alignment, modify the ears (**(B)**) on the center hub to achieve vertical balance. Turn the prop to vertical and observe to which side of the hub the propeller falls. Remove material from the heavier side of the hub (from the "ears" projecting from the side of the hub between the blades).
3. After vertical balancing, turn the propeller back to the horizontal position and make sure the propeller keeps its horizontal balance. Keep turning the propeller between vertical and horizontal to make sure removing material only improves balance.

Final Balancing

1. After vertical and horizontal balancing, turn the propeller to other angles along the balancer shaft.
2. If the propeller blades fall from an angle, carefully use sandpaper to remove a small amount of plastic from the front of the heavier propeller blade or the ears on the hub until the propeller is fully balanced.
3. Remove plastic from the blade or ears until the propeller stays properly aligned along the balancer shaft at any angle.

CAUTION: Always discard a chipped or cracked propeller. A damaged propeller can fail when turning at high speed, causing your airplane to crash. This can cause property damage and/or injury.

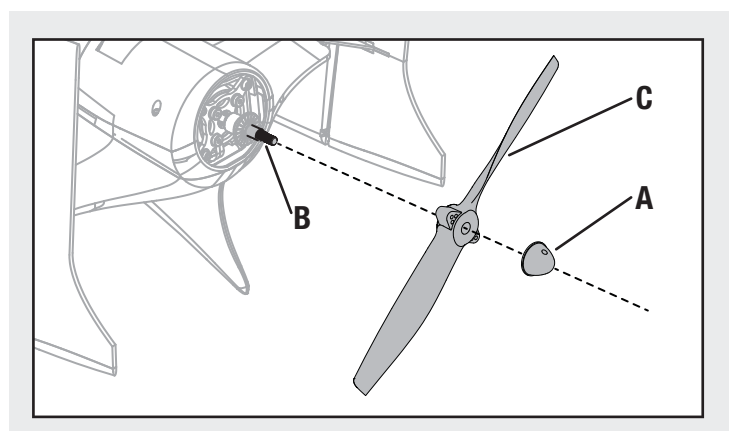
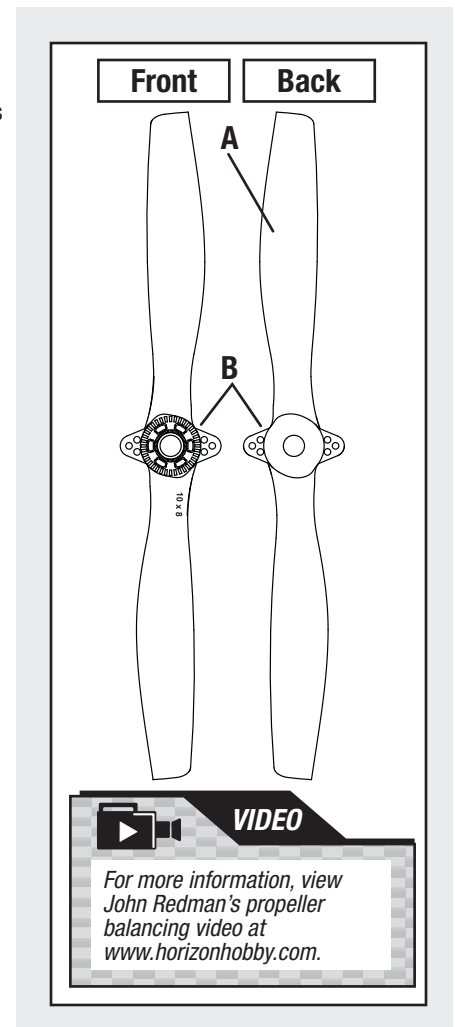
NOTICE: If the propeller is not balanced, the vector thrust servo may be quickly damaged. Horizon Hobby does not warranty this if the servo is used under extreme vibration or if the servo is used with an unbalanced propeller.

Installing the Propeller

1. Power off the ESC switch on the side of the fuselage or disconnect the flight battery from the aircraft.
 2. Remove the spinner nut (**(A)**) from the collet shaft (**(B)**).
 3. Install a balanced propeller (**(C)**) on the collet shaft using the spinner nut with the numbers on the propeller **facing the front of the plane**.
 4. Put the shaft of a tool (for example, a screw driver) in the hole in the side of the spinner to tighten the spinner on the collet shaft.
- Remove the propeller in reverse order.

TIP: The propeller included with the Scimitar does not require the use of the included washer. The washer must be installed between the backplate and the propeller when an alternative balanced propeller has a hub thinner than 13mm (from front to back).

CAUTION: After installation of the propeller, keep hands away from the propeller. Always assume the motor is powered on and that the propeller blades may turn at any time.



Opening the Fuselage

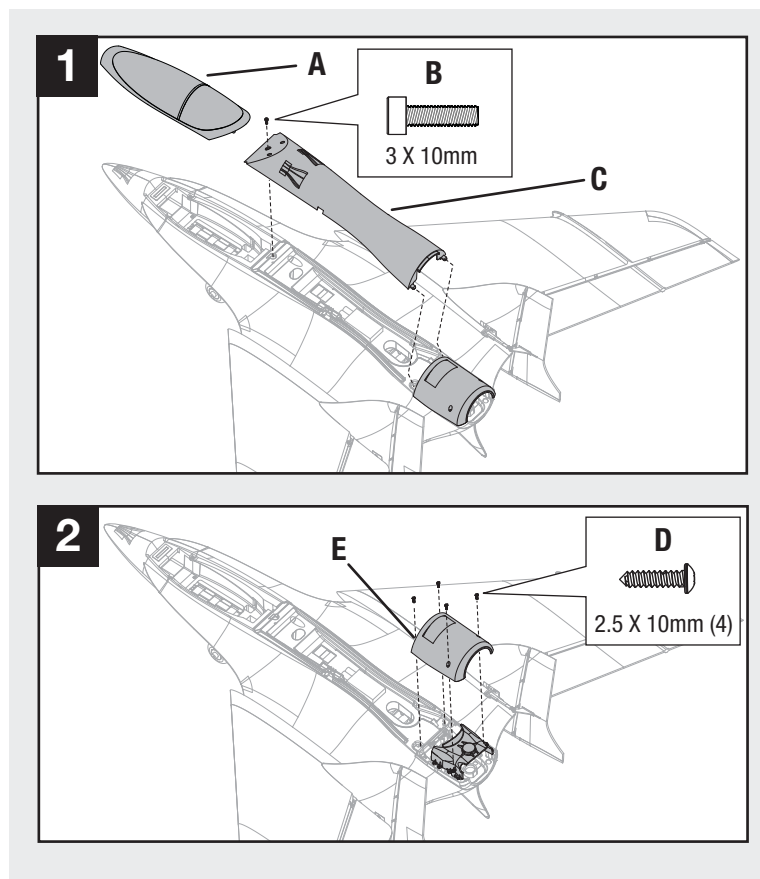
1

- Lift the front edge of the canopy (A) then pull the canopy forward and off the fuselage.
- Loosen the screw (B) from the front of the receiver hatch (C), then lift the front edge of the receiver hatch and pull it forward and off the fuselage (carefully moving the tabs from under the retainers).

2

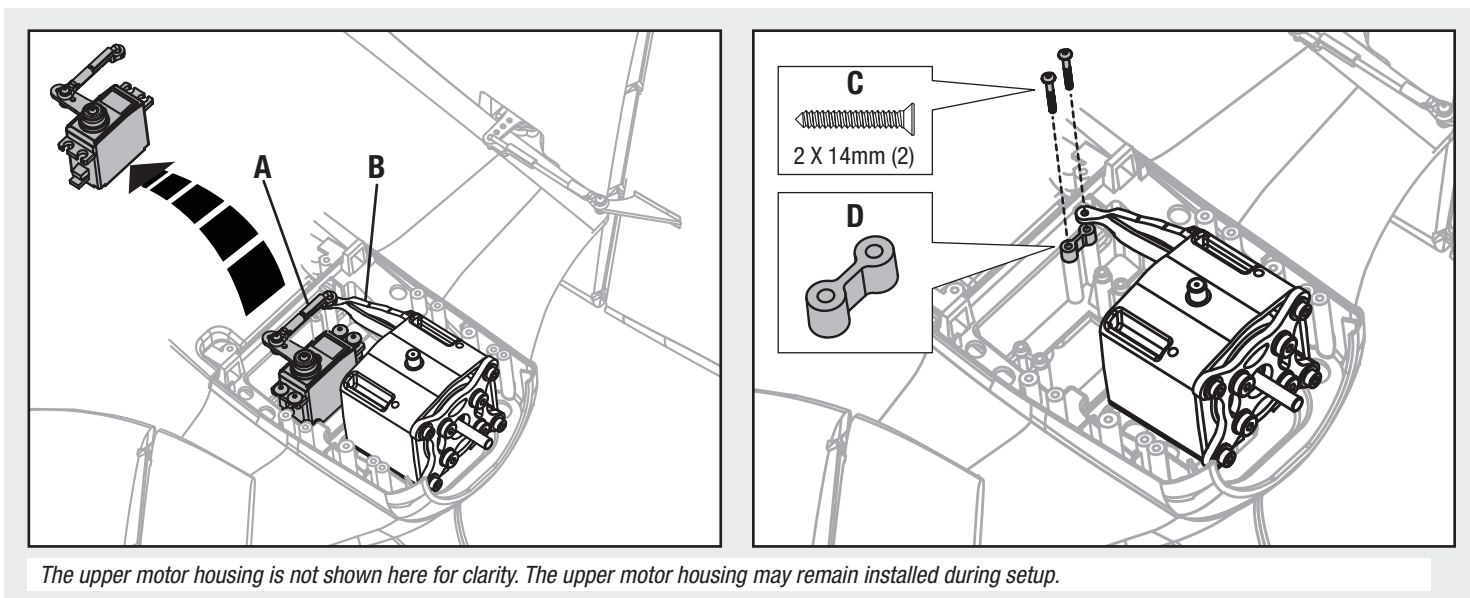
- Remove four screws (D) and the motor hatch (E) from the fuselage.

Remove these hatches when setting up the Scimitar. Replace these hatches before checking CG.



Installing the Vectored Thrust Lock

When the use of the Vectored Thrust (VT) is not desired, the VT can be locked. Follow the directions below to lock the Vectored Thrust.



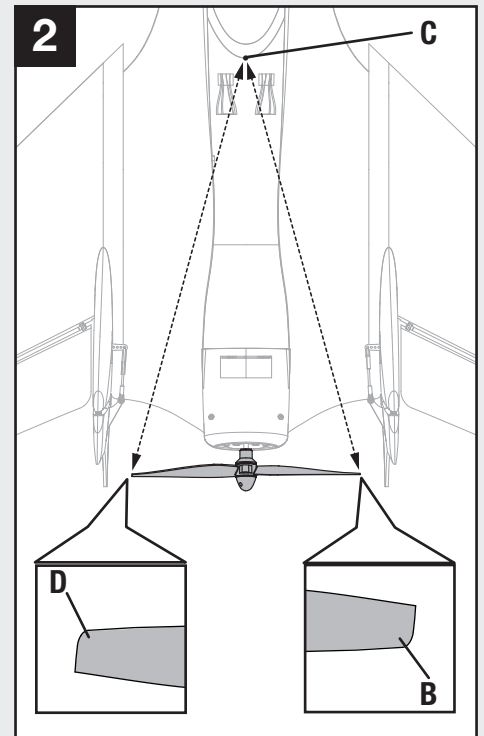
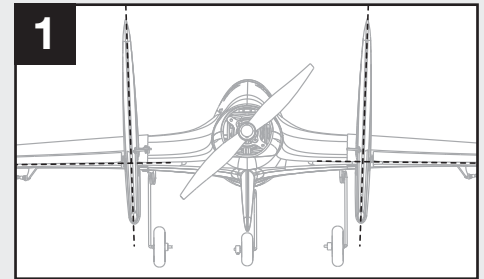
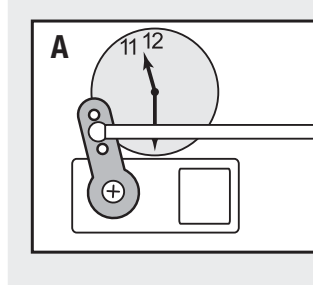
1. Disconnect the vector-thrust servo connector from the AUX 1 servo extension under the receiver hatch.
2. Remove the linkage (A) from the arms of the vector-thrust unit (B) and the servo.
3. Install a screw (C) through both the arms of the vector-thrust unit and the lock (D) into the fuselage.

4. Install the other end of the lock on the fuselage using a screw.

TIP: Four screws and the vector-thrust servo may be removed from the fuselage if the vector-thrust lock is used. (See Servo Service instructions for Vectored Thrust.)

Control Centering

- Make sure servo directions (reversing) on your transmitter are correct. Ensure control surfaces move freely by performing a Control Test.
- Make sure trim and sub-trims are set to zero.
- Make sure the servo arms are set to 90 degrees. If not, remove a servo arm and put the arm in a spline position closest to the 90 degree position (perpendicular to the servo's long axis). If 90 degrees exactly cannot be reached, use the sub-trim on your transmitter to adjust the servo arm to the 90 degree position.
- The Vectored-Thrust (VT) servo arm is neutral at the **11:30 position** (on a clock face) (A) when looking down from above while standing at the rear of the airplane. This neutral position gives the VT servo maximum throw in both directions.



1 Elevons and Rudder Centering

- The center for the elevons is alignment with the trailing edge of the fuselage between the rudders.
- The center of the rudders is alignment with the center of the vertical fin to which the rudder is attached.

2 Vectored-Thrust Centering

⚠ CAUTION: Always disconnect the flight battery from the ESC before handling the propeller or injury could result.

- Turn the propeller to horizontal on the model.
- From above the model, measure from the right end of the propeller (leading edge tip (B) to the center of the back of the canopy (C).
- Measure from the left end of the propeller (leading edge tip (D)) to the center of the back of the canopy (C).
- These two measurements (A to B and B to C) are the same distance when the VT unit is centered.

Nose Gear Centering

- The center for nose steering occurs when the model follows a straight path while the rudder input is at neutral.

TIP: When needed, turn the ball link or clevis until the control surface is at the center position (up/down or left/right).

Refer to your transmitter's manual for instructions about making adjustments to control surfaces, Sub-Trim and Reverse.

Adjusting a Clevis or Ball link

After binding a transmitter to the model receiver, set trims and sub-trims to 0, ensure servo arms are in the correct positions, then adjust clevises or ball links to center the control surfaces.

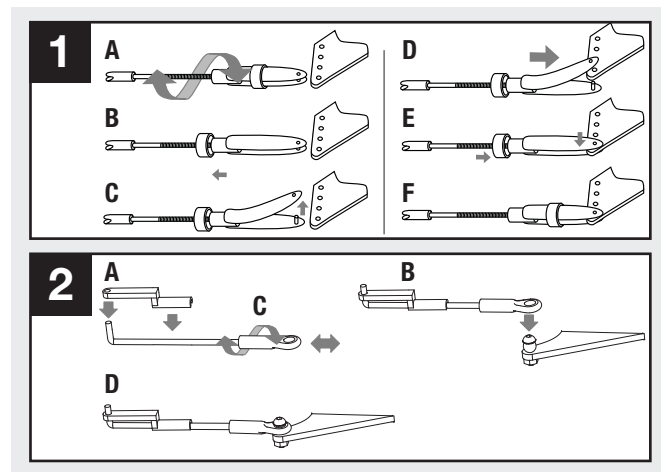
Tip: Turn the clevis or ball link clockwise or counterclockwise on the linkage.

1 Adjusting a Clevis

- Pull the silicone tube from the clevis to the linkage.
- Carefully spread the clevis and put the clevis pin in a selected hole in the control horn.
- Move the tube to tighten the clevis on the control horn.

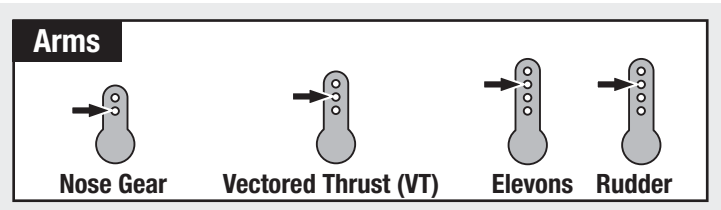
2 Adjusting a Ball link

- Connect the ball link to the ball installed on the control horn using pliers or ball link pliers.
- Install the linkage in a hole in the servo arm using a link cover.



Factory Settings

Fly the model at factory settings before making changes. For pilots who wish for more control throw, adjust the position of linkages on servo arms and control horns for increased travel.



Transmitter Setup

CAUTION: For safe operation, always re-bind the airplane after setup is complete to ensure the failsafe is updated with the latest setup.

A DSM2/DSMX six-channel (or better) computerized transmitter with adjustable dual rates, expo, delta/elevon mixing and programmable mixing for vector thrust is recommended for flying the E-flite Scimitar. DX6i, DX7s, DX8, 9503, 11X or 12X transmitters may be used.

Flying wings are controlled by elevons (moveable surfaces on the wing). Elevons take the aileron control (move opposite directions), and elevator control (move up/down same direction) and mixes them together electronically through the transmitter. Make sure both elevons move up and down (travel) the same amount. This model tracks well when the left and right elevons travel the same amount in response to the control stick.

Differential

This model requires differential. Differential is important for good axial roll. Set the differential in your transmitter to reach the recommended throw for the Scimitar elevons (described in control throws as Aileron/Elevator).

Vectored Thrust (VT) Mixing

Make sure the VT servo is connected to the Aux 1 port of the receiver. Set up a programmable mix of Rudder to Aux 1 (channel 6). Use linear mixing and adjust the mix to reach maximum travel of the VT unit. (See next page for adjustment of maximum throws.) Select a switch to power on and off this mix. Use this switch to help you get familiar with the VT.

Make sure the vectored thrust (VT) is at neutral when mixing is on or off. Make sure both rudders are perfectly neutral.

Aileron Trim or Throttle to Aileron Mixing

Due to the high torque required to support the Scimitar flight envelope, the torque effect tends to make the model roll left as power is increased. It is recommended before takeoff to adjust the aileron trim to compensate for this torque. After the Scimitar's ailerons are centered, add between **1** and **1.5mm** of right aileron trim to your transmitter. On the Spektrum DX8, this translates to approximately 8 clicks of right aileron trim when using the default trim rate. Download Quique's DX8 program, which includes throttle to aileron mix in order to compensate for the torque (letting you keep aileron trim at the neutral position).

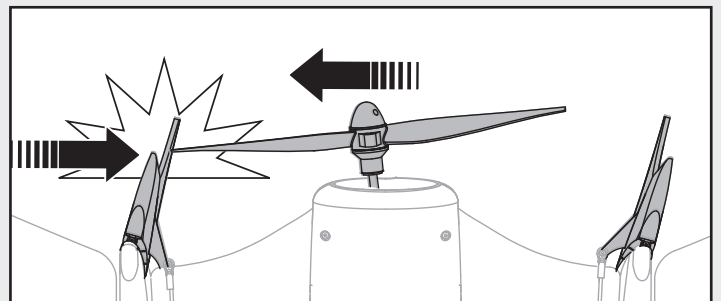


ONLINE

For more information, Videos and advanced settings including Quique explaining how to fly the Scimitar, operate VT and doing aerobatic maneuvers, visit www.E-fliteRC.com/Carbon-Z. Also available for download is Quique's DX8 program.

Transmitter Setup Checklist

✓ Transmitter Setup Checklist	
Before binding:	
1.	Choose a blank model memory with only default (zero) settings (including trim and sub-trim).
2.	Choose Wing Type as Delta Wing or Elevons.
3.	Set servo reversing (as recommended on this page for your transmitter).
After binding:	
1.	Check and adjust the servos so each arm's neutral position is perpendicular or as close to 90° as possible (loosen and adjust the servo arm splines on the servo only when needed). Use sub-trim to make fine adjustments.
2.	Adjust linkage lengths so the control surfaces center when the servo arm is perpendicular.
3.	Set rates in the transmitter as recommended by measuring the control surfaces and Vectored Thrust (VT).
4.	Set the Differential (as recommended by measuring travel for both ailerons).



CAUTION: Make sure the rudder and VT travel in the same direction. If the VT unit and rudder travel in opposite directions, the propeller will touch the rudders and damage them, causing the airplane to crash.

We recommend this setup for servo channel reversing for the DX7, DX7S and DX8 transmitters (Same for JR9303/9503, 11X and 12X):

Throttle: Normal	Aileron: Reverse
Elevator: Reverse	Rudder: Normal

For the DX6i, we recommend this setup for servo channel reversing:

Throttle: Normal	Aileron: Reverse
Elevator: Normal	Rudder: Normal

NOTICE: When setting up the model for control using a Spektrum DX6i transmitter, swap servo connections between the aileron and elevator ports on the receiver (from factory settings). Do a control test to make sure the model operates correctly.

Model Setup-Control Throws

Rudders

Measure from the center line (A) of the sub-fin to the rear lower tip of a rudder (B) to calculate the distance from the center of travel for the rudders.

Vectored-Thrust (VT) Unit

Remove the motor hatch and look at the VT unit when adjusting mixes or travel for the AUX1 channel in your transmitter. Start with 100% Aux 1 servo travel, but a low % value in your programmable mixing (for example, 80%). With the mix on and the rudder set to high rate, move the rudder stick to one of the extreme positions. While holding the rudder at that position, increase the mix % until you see the VT unit reach its limit. Move the rudder stick to the other extreme and increase the mix % until you see the VT unit reach its limit. This sets maximum throw in both directions. Adjust servo travel so that you do not make the servo turn more than the VT unit can move in the fuselage.

CAUTION: Never exceed the maximum servo travel values listed in the manual. Doing so could cause servo failure or battery drain and a crash, resulting in damage to property and injury.

VIDEO

For more information, visit www.E-fliteRC.com/Carbon-Z to see Quique explain the basics on how to maneuver with the vectored thrust.

	High Rate	Low Rate	Expo
Rudder	80mm left/right	50mm left/right	High-30%, Low-10%

Elevons

Before making measurements, mark a horizontal line from the center of the screw (C) in the vertical fin to the bevel between the vertical fin and the rudder.

1 Up Elevon:

Measure from the line (C) marked at the bevel between the vertical fin and the rudder to an imaginary line (D) even with the inside corner at the top of the elevon.

2 Down Elevon:

Measure from the line (C) marked at the bevel between the vertical fin and the rudder to an imaginary line (E) even with the inside corner on the bottom of the elevon.

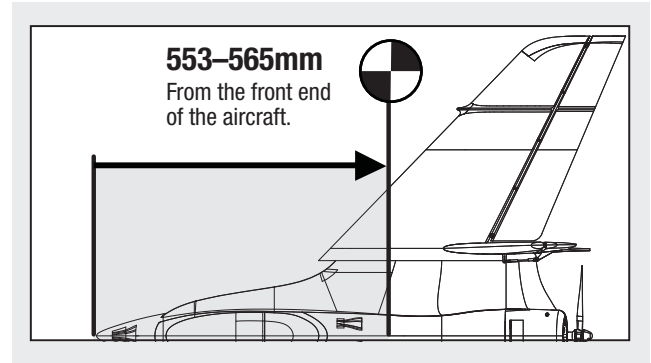
The elevons function as elevators; both sides must travel equally up and down. If they do not, the plane will not track straight in loops or corners.

	High Rate	Low Rate	Expo
Aileron right/left	One aileron down 21mm the opposite aileron up 38mm while stick is held to full right or left position.	One aileron down 17mm the opposite aileron up 34mm while stick is held to full right or left position.	High-45%, Low-35%
Elevator up/down	44mm/36mm	25mm/17mm	High-55%, Low-20%

Center of Gravity (CG)

CG is generally located at **553mm to 565mm** from the front end of the aircraft. Flying wings like the Scimitar are more sensitive to changes in CG. Not using the recommended CG position may result in a variable or overall poor performance in some areas of the flight envelope.

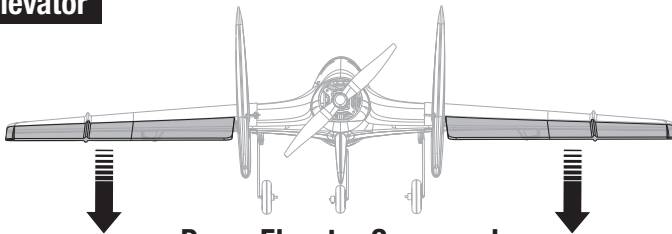
To start, place the recommended 3200mAh battery all the way forward in the fuselage. Hold the battery in place using the front and middle hook and loop straps. Adjust the battery's position as needed to stay in the recommended measurement range for CG.



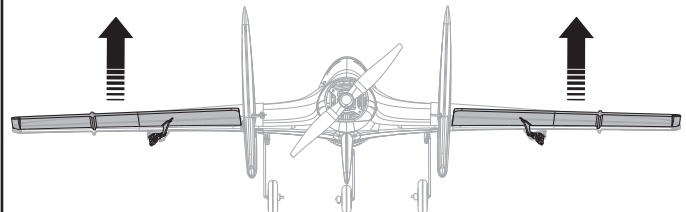
Control Direction Test

Bind your aircraft and transmitter before doing these tests. Move the controls on the transmitter to make sure the aircraft control surfaces move correctly. After doing the Control Test, correctly set failsafes. Make sure transmitter controls are at neutral and the throttle and throttle trim are in the low position, then rebind the model to your transmitter. If the receiver loses its link to the transmitter, the failsafe makes the controls and throttle revert to the settings made at binding.

Elevator

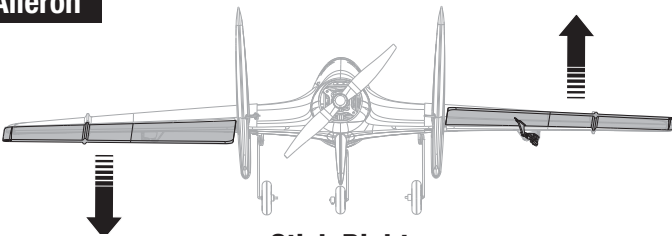


Down Elevator Command

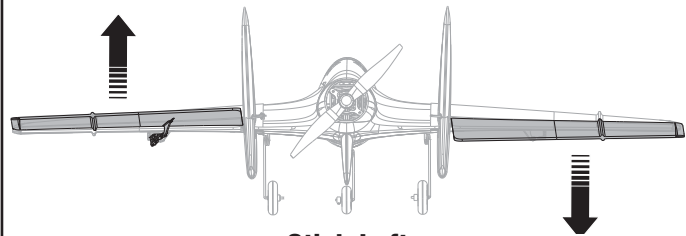


UP Elevator Command

Aileron

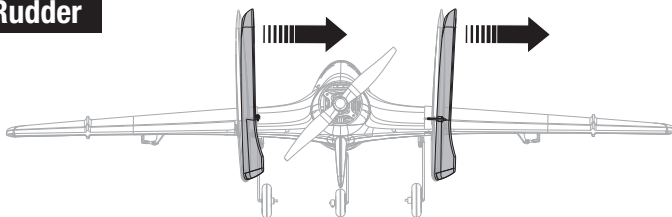


Stick Right

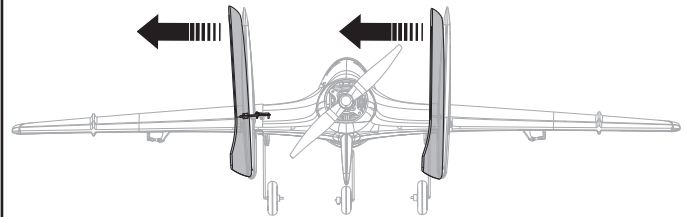


Stick Left

Rudder



Stick Right

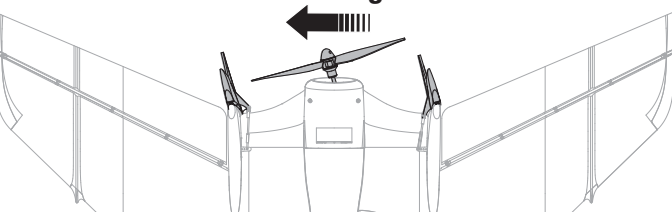


Stick Left

Vectored Thrust

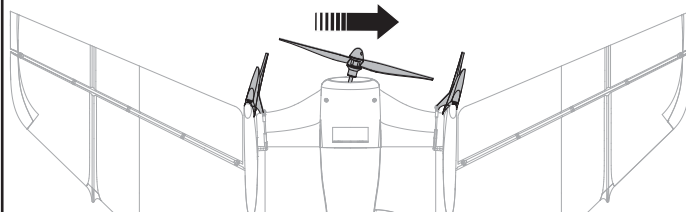
Stick Right

Looking from top down



Stick Left

Looking from top down



Preflight Checklist

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

✓	
	5. Adjust flight controls and transmitter.
	6. Perform a radio system Range Check.
	7. Find a safe and open area.
	8. Plan flight for flying field conditions.

Flying Tips

Range Check your Radio System

After final assembly, range check the radio system with the E-flite Scimitar. Refer to your specific transmitter instruction manual for range test information.

Launching

CAUTION: The Scimitar is designed for use with landing gear. Do not hand launch this model or attempt to fly without installing landing gear. Damage or injury could result.

Always inspect and repair your model before flying. Any damage or loose linkages can decrease control in high-speed flight. Always take off into the wind, but also be aware of cross winds on the runway. Take off in low rate without use of mix that enables Vectored Thrust (VT).

Flying

The Scimitar is intended for intermediate pilots when VT is not used or the VT lock is installed. VT on the Scimitar is intended for use only by intermediate-to-advanced pilots.

The Scimitar is a powerful aircraft with a wide range of air speeds and a wide aerobatic envelope. This model is equipped with VT and, because of this feature, you must handle the airplane with respect until you develop experience with maneuvering with VT.

At first flight, fly the model in low rate. The first time you use high rate, fly at low to medium speed. Begin using VT only at a high altitude so there is room to maneuver.

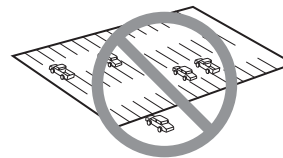
Tip: Before takeoff set elevator trim up 2–3mm to provide the proper reflex for best trim pitch.

VT increases yaw. Using the twin rudders, VT can put the airplane into a flat spin, pin wheel or other aerobatic maneuvers at a surprisingly high rotational speed. Perform these maneuvers only at altitudes that will give you room to recover full control.

The VT works based on thrust (motor rpm); the higher the rpm, the higher the thrust. The greater the angle the VT unit deflects, the greater the yaw authority will be, as well as the rotational speed. Remember that recovering the airplane from a flat spin to forward flight requires the VT to be turned in the opposite direction of the spin, without decreasing power to the motor. Once you see the rotation stop, reduce power to get the nose down and fly out.

NOTICE: Horizon Hobby does not warranty the airplane for crash damage, with or without use of the VT feature.

Always choose a wide-open space for flying your E-flite Scimitar. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, 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.



Landing

For your first flights, set your transmitter timer to 4 1/2 minutes. Adjust your timer for longer or shorter flights once you have flown the model. At high rate, fly the airplane down to the ground using 1/4 –1/3 throttle to keep enough energy for a proper flare. Before the model touches down, always fully decrease throttle to avoid damage to propeller, motor, ESC or other components.

Repairs

Thanks to the Carbon-Z™ construction of the Scimitar, repairs to the Z-Foam™ can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc). When parts are not repairable, see the Replacement Parts List for ordering by item number.

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

NOTICE: When finished flying, never keep the airplane in the sun. Do not store the aircraft in a hot, enclosed area such as a car. Doing so can damage the foam.

Post Flight Checklist

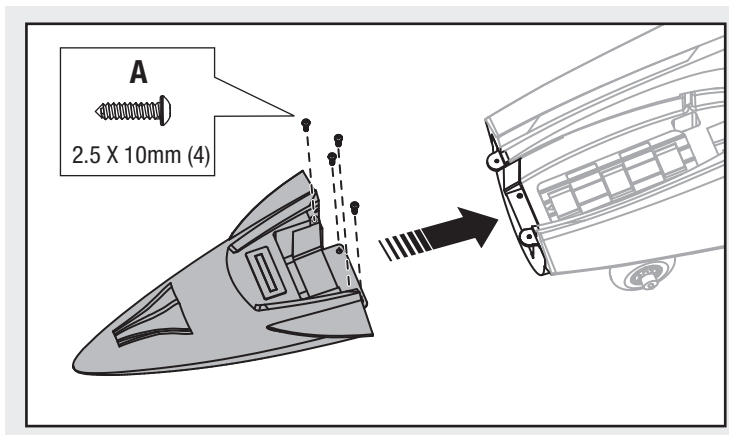
✓	After Flying Check List
	1. Disconnect flight battery from ESC (Required for Safety and battery life).
	2. Power off transmitter.
	3. Remove flight battery from aircraft.
	4. Recharge flight battery.

✓	After Flying Check List
	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.

Fuselage Nose Service

MAINTENANCE

1. Remove the canopy and battery from the fuselage.
2. Remove four screws (A), two in the plate in the bottom of the battery compartment and two on the left and right sides inside the fuselage.
3. A small amount of glue holds the nose on the fuselage, take care in removing it from the fuselage.
4. Replace nose using the four screws and a small amount of CA.



Control Surface Service

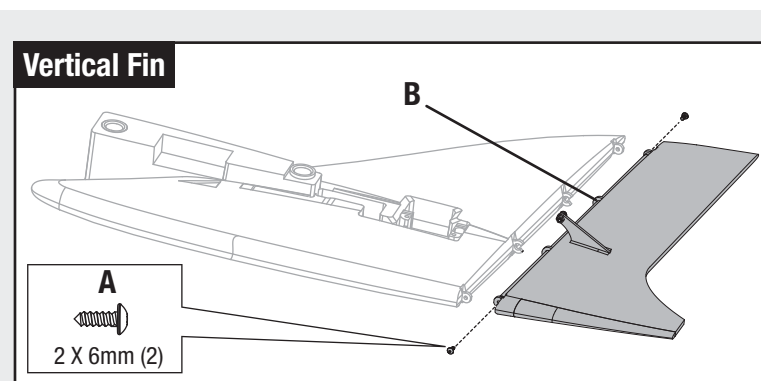
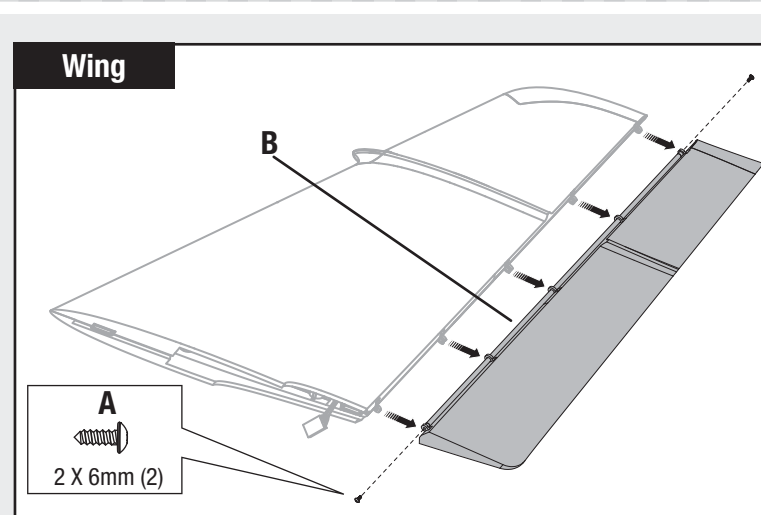
MAINTENANCE

1. Before disassembling a control surface, remove the wing or vertical fin from the fuselage.
2. Disconnect the linkage from the control horn.
3. Remove a screw (A) from each end of the control surface hinge (B).
4. Carefully pull the control surface hinge pin and control surface from the main body of the control surface.
5. Install the control surface by carefully aligning and pushing the hinge pin in the clamps in the main body of the wing or vertical fin.
6. Apply a small amount of threadlock to the screws and install in each end of the hinge pin.

CAUTION: Tighten the screw on each end of the hinge until it is flush with the outer face of the hinge surface. Tightening the screw too much prevents the control from moving freely on the hinge, which can result in a crash, damage or injury.

7. Connect the servo linkage to the control horn.
8. Install the wing or vertical fin to the fuselage and center the control surface.

CAUTION: After replacing a control surface, always ensure the control surface is centered. If you adjust a control surface's center, always do a control test and rebind the model to your transmitter to correctly set the failsafe.



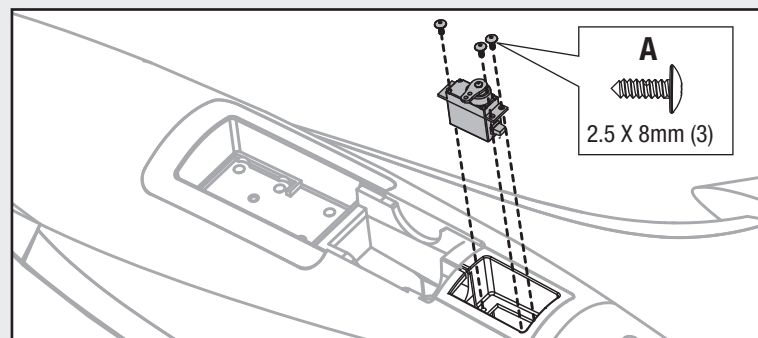
Servo Service

MAINTENANCE

Nose Gear

1. Remove the three screws (A) from the steering servo.
2. Remove the steering linkage from the servo arm.
3. Remove the servo from the fuselage
4. Disconnect the servo connector from the servo extension in the fuselage.

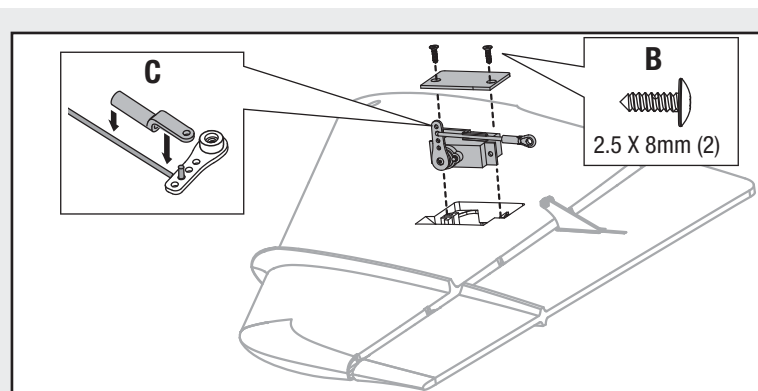
Assemble in reverse order.



Wing

1. Remove the wing from the model.
2. Remove the two screws (B) and aileron servo cover from the wing.
3. Remove the linkage (C) from the servo arm.
4. Remove the servo from the wing (the servo connector goes through a channel in the wing to the fuselage).

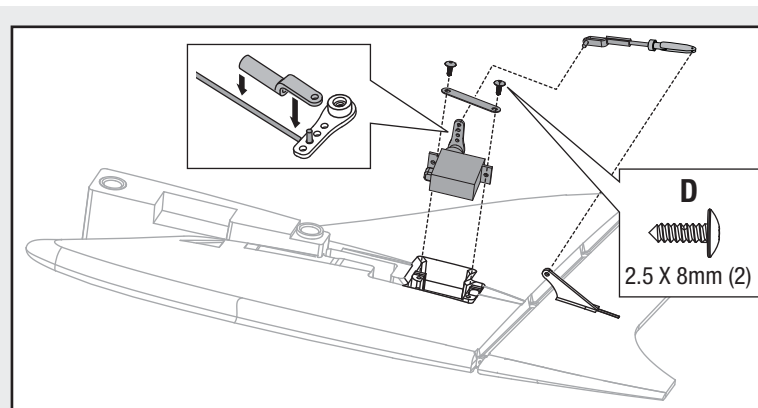
Assemble in reverse order.



Vertical Fins

1. Remove the wing and vertical fin from the model.
2. Remove the two screws (D) and retainer plate from the vertical fin.
3. Remove the linkage from the servo arm.
4. Remove the servo from the vertical fin.

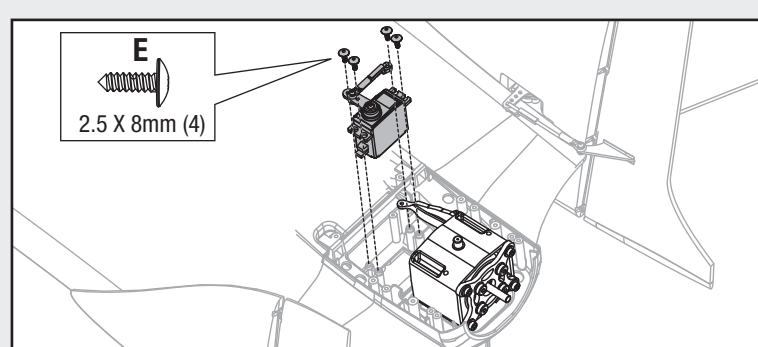
Assemble in reverse order.



Vectored Thrust

1. Open the fuselage to gain access to the vectored thrust servo.
2. Remove the four screws (E) from the servo.
3. Remove the linkage from the servo arm.
4. Disconnect the servo connector from the AUX1 servo extension in the fuselage.

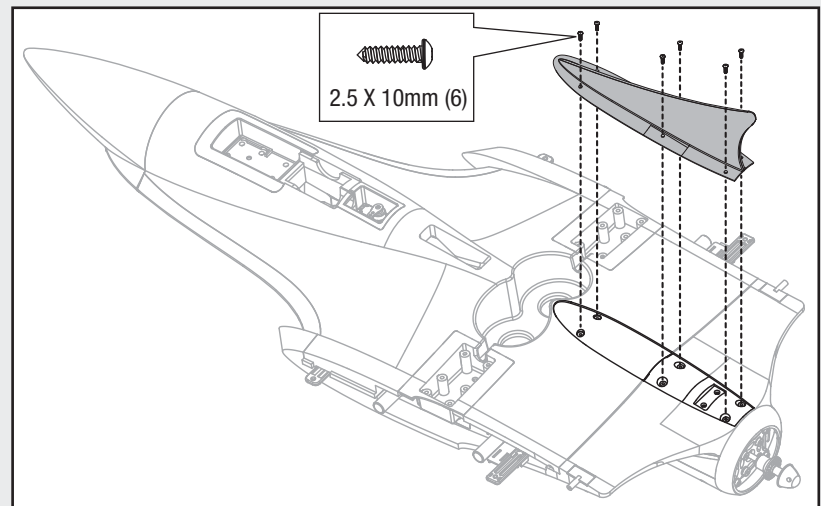
Assemble in reverse order.



Sub-Fin Service

MAINTENANCE

1. Turn over the model so the bottom faces up.
2. Remove the six screws and sub-fin from the fuselage. Assemble in reverse order.



Motor and Vectored-Thrust Service

MAINTENANCE

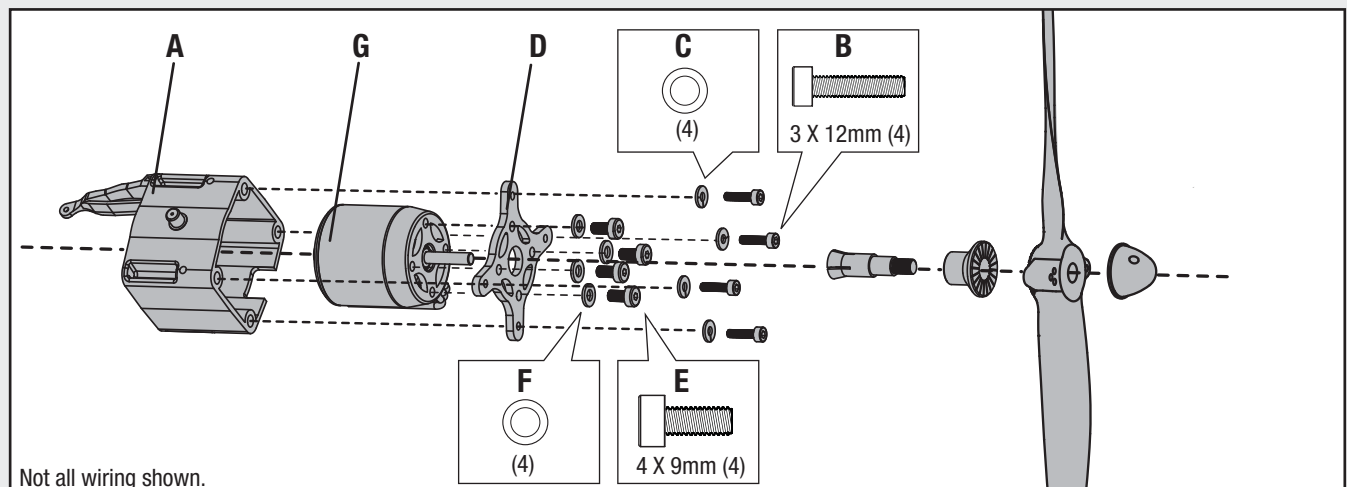
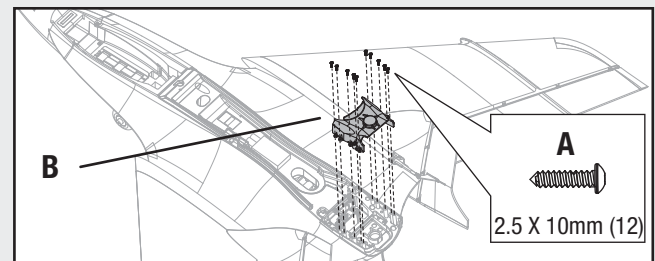
Disassembly

1. Open the fuselage.
2. Remove the 12 screws (A) and upper motor housing (B) from the model.
3. Disconnect the motor wires from the ESC.
4. Disconnect the ball link from the arm of the vector-thrust servo or disconnect the vector-thrust unit's arm from the lock to the fuselage, by removing the screw.
5. Remove the upper housing from the fuselage. The upper and lower bearings may block easy removal of the housing and the vector-thrust unit from the fuselage.
6. Remove the vector-thrust unit (A) from the fuselage.
7. Remove the four screws (B), washers (C) and X-mount (D) from the vector-thrust unit.
8. Remove four screws (E) and washers (F) from the X-mount and motor (G).

Assembly

Assemble in reverse order, aligning wire colors of the motor with the ESC for correct operation. Remember to use threadlock.

NOTICE: Make sure the propeller side with the numbers for diameter and pitch (for example, 10 x 8) faces forward towards the front of the plane. A tool is required to tighten the spinner nut on the collet.



Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle is not at idle and/or throttle trim is too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle servo travel is lower than 100%	Make sure throttle servo travel is 100% or greater
	Throttle channel is reversed	Reverse throttle channel on transmitter
Extra propeller noise or extra vibration	Damaged propeller and spinner, collet or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller is installed backwards	Install propeller with numbers facing forward towards the front of the aircraft
	Flight battery is damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity may be too low for flight conditions	Replace battery or use a larger capacity battery
Aircraft will not Bind (during binding) to transmitter	Transmitter is too near aircraft during binding process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft or transmitter is too close to large metal object	Move aircraft or transmitter away from large metal object
	Bind plug is not installed correctly in bind port extension	Install bind plug in bind port extension and bind aircraft to transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	ESC switch is off	Power on ESC switch
Aircraft will not link (after binding) to transmitter	Transmitter is too near aircraft during linking process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft or transmitter is too close to large metal object	Move aircraft or transmitter away from large metal object
	Bind plug is left installed in bind port extension	Rebind transmitter to aircraft and remove bind plug before cycling power
	Aircraft bound to different model memory (ModelMatch™ radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound to a different model (using different DSM Protocol)	Bind aircraft to transmitter
	ESC switch is off	Power on ESC switch
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire is damaged or connections are loose	Do a check of wires and connections, connect or replace as needed
	Transmitter is not bound correctly or the incorrect model was selected	Re-bind or select correct model in transmitter
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
	ESC switch is off	Power on ESC switch
Controls reversed	Transmitter settings are reversed	Do the Control Direction Test and adjust controls on transmitter appropriately
Motor power pulses then motor loses power	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
	Weather conditions might be too cold	Postpone flight until weather is warmer
	Battery is old, worn out or damaged	Replace battery
	Battery C rating might be too small	Use recommended 25C battery

AMA National Model Aircraft Safety Code

Effective January 1, 2011

A. GENERAL

A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
 - (a) In a careless or reckless manner.
 - (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
 - (a) Yield the right of way to all man carrying aircraft.
 - (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D-See and Avoid Guidance.)
 - (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
 - (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
 - (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Aircraft program. (AMA Document 520-A)
 - (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors).
 - (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
 - (h) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
 - (i) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

Exceptions:

 - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
 - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
 - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).
 - (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A).
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
 - (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
 - (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. At all flying sites a safety line(s) must be established in front of which all flying takes place (AMA Document #706-Recommended Field Layout):
 - (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
 - (b) At air shows or demonstrations, a straight safety line must be established.
 - (c) An area away from the safety line must be maintained for spectators.
 - (d) Intentional flying behind the safety line is prohibited.
4. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
5. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)
6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
7. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.
9. The pilot of a RC model aircraft shall:
 - (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
 - (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

Please see your local or regional modeling association's guidelines for proper, safe operation of your model aircraft.

Limited Warranty

What this Warranty Covers

Horizon Hobby, Inc. ("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, or (v) Products not purchased from an authorized Horizon dealer.

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 direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at www.horizonhobby.com

Inspection or Services

If this Product needs to be inspected or serviced, 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 www.horizonhobby.com under the Support tab. 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 cashiers 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 www.horizonhobby.com/Service/Request/.

Contact Information

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of America	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 Online Repair Request: visit www.horizonhobby.com/service
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 productsupport@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 66 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

Compliance Information for the European Union

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011093002

Product(s): Carbon-Z Scimitar BNF
Item Number(s): EFL10180
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC and EMC Directive 2004/108/EC:

EN 301 489-1 V1.7.1: 2006
EN 301 489-17 V1.3.2: 2008

EN55022: 2010
EN55024: 2010



Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Sep. 30, 2011

Steven A. Hall
Vice President
International Operations and
Risk Management
Horizon Hobby, Inc.

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011093001

Product(s): Carbon-Z Scimitar PNP
Item Number(s): EFL10175
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the EMC Directive 2004/108/EC

EN55022: 2010
EN55024: 2010



Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Sep. 30, 2011

Steven A. Hall
Vice President
International Operations and
Risk Management
Horizon Hobby, Inc.

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 ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Parts Contact Information • Kontaktinformationen für Ersatzteile
• Coordonnés pour obtenir de pièces détachées • Recapiti per i ricambi

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of America	Sales	4105 Fieldstone Rd Champaign, Illinois 61822 USA	800-338-4639 Sales@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Hobby GmbH	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 60 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

Replacement Parts • Ersatzteile • Pièces de rechange • Pezzi di ricambio

Part # Nummer Numéro Codice	Description	Beschreibung	Description	Descrizione
EFL1018017	Nose Strut Retract: C-Z Scimitar	Einziehbares Bugstrebenfahrwerk: C-Z Scimitar	Jambe du nez rétractable : C-Z Scimitar	Elemento retrattile della gamba ammortizzatrice in punta: C-Z Scimitar
EFLP1008E	10 X 8 Electric Propeller: C-Z Scimitar	10 X 8 elektrischer Propeller: C-Z Scimitar	Hélice électrique 10 x 8 : C-Z Scimitar	Elica elettrica 10 x 8: C-Z Scimitar
EFLR7145	26 g Digital MG Mini Servo	Digitale MG-Miniservo 26 g	Servo miniature MG numérique 26 g	Mini servo MG digitale 26 g
EFLR71451	Gear Set: 26 g Digital MG Mini Servo	Fahrgestellsatz: Digitaler MG-Miniservo 26 g	Jeu de train : servo miniature MG numérique 26 g	Set carrello: mini servo MG digitale 26 g
EFLR71452	Case Set: 26 g Digital MG Mini Servo	Gehäusesatz: Digitaler MG-Miniservo 26 g	Jeu de boîtiers : servo miniature MG numérique 26 g	Set alloggiamento: mini servo MG digitale 26 g
EFLR71453	Aluminum Servo Arm: 26 g Digital MG Mini Servo	Aluminium-Servoarm: Digitaler MG-Miniservo 26 g	Bras de servo en aluminium : servo miniature MG numérique 26 g	Braccio servo in alluminio: mini servo MG digitale 26 g
EFLR71454	Plastic Servo Arm: 26 g MG Mini Servo	Plastikservoarm: MG-Miniservo 26 g	Bras de servo plastique : servo miniature MG 26 g	Braccio servo in plastica: mini servo MG 26 g
EFL1018030	Nose Protector: C-Z Scimitar	Nasenschutz: C-Z Scimitar	Protecteur de nez : C-Z Scimitar	Protezione punta: C-Z Scimitar
EFL1018031	Complete Screw Set: C-Z Scimitar	Kompletter Schraubensatz: C-Z Scimitar	Jeu de vis complet : C-Z Scimitar	Set viti completo: C-Z Scimitar
EFLM7402	Prop Adapter with Cone: C-Z Scimitar	Propelleradapter mit Kegel: C-Z Scimitar	Adaptateur d'hélice avec cône : C-Z Scimitar	Adattatore elica con cono: C-Z Scimitar
EFLM7400	BL32 Brushless Outrunner Motor, 1010 Kv	BL32 Bürstenloser Außenläufermotor, 1010 kV	Moteur sans balai à cage-tournante BL32, 1 010 Kv	Motore outrunner brushless BL32, 1010 Kv
EFLM7401	Motor Shaft: BL32 Outrunner	Motorwelle: BL32-Außenläufer	Arbre de moteur : cage-tournante BL32	Albero motore: outrunner BL32
EFL1018024	Motor Mount with Screws: C-Z Scimitar	Motorbefestigung mit Schrauben: C-Z Scimitar	Support moteur avec des vis : C-Z Scimitar	Supporto motore con viti: C-Z Scimitar
EFL1018021	Vector-Thrust Servo Arm & Pushrod: C-Z Scimitar	Vektorschub-Servoarm und Schubstange: C-Z Scimitar	Biellette mécanique et bras de servo de poussée vectorielle : C-Z Scimitar	Asta di spinta e braccio del servo della spinta vettoriale: C-Z Scimitar
EFL1018022	Decal Sheet: C-Z Scimitar	Dekorbogen: C-Z Scimitar	Planche de décalcomanies : C-Z Scimitar	Foglio con decalcomanie: C-Z Scimitar
EFL1018023	Servo Extension Set: C-Z Scimitar	Servoerweiterungssatz: C-Z Scimitar	Jeu de rallonges servo : C-Z Scimitar	Set estensione servo: C-Z Scimitar
EFL1018001	Wing Panel, Right: C-Z Scimitar	Flügelfläche, rechts: C-Z Scimitar	Panneau d'aile, droite : C-Z Scimitar	Pannello ala, destro: C-Z Scimitar
EFL1018002	Wing Panel, Left: C-Z Scimitar	Flügelfläche, links: C-Z Scimitar	Panneau d'aile, gauche : C-Z Scimitar	Pannello ala, sinistro: C-Z Scimitar
EFL1018012	Wing Tube Front & Rear: C-Z Scimitar	Flügelrohr vorn und hinten: C-Z Scimitar	Tube d'aile avant et arrière : C-Z Scimitar	Tubo ala anteriore e posteriore: C-Z Scimitar
EFL1018026	Vector-Thrust Complete Unit: C-Z Scimitar	Komplette Vektorschubeinheit: C-Z Scimitar	Unité complète de poussée vectorielle : C-Z Scimitar	Unità della spinta vettoriale completa: C-Z Scimitar
EFL1018027	Motor Hatch: C-Z Scimitar	Motorabdeckung: C-Z Scimitar	Capot du moteur : C-Z Scimitar	Portello motore: C-Z Scimitar
EFL1018008	Radio Hatch: C-Z Scimitar	Funkabdeckung: C-Z Scimitar	Capot de la radio : C-Z Scimitar	Portello radio: C-Z Scimitar
EFL1018025	Wing & Rudder Screw Set: C-Z Scimitar	Schraubensatz Flügel und Seitenruder: C-Z Scimitar	Jeu de vis pour gouverne de direction et aile : C-Z Scimitar	Set viti per ala e timone: C-Z Scimitar
EFL1018006	Vertical Fin Left: C-Z Scimitar	Seitenleitwerk links: C-Z Scimitar	Dérive verticale gauche : C-Z Scimitar	Deriva verticale sinistra: C-Z Scimitar
EFL1018011	Complete Pushrod Set: C-Z Scimitar	Kompletter Schubstangensatz: C-Z Scimitar	Jeu complet de biellettes mécaniques : C-Z Scimitar	Set asta di spinta completo: C-Z Scimitar
EFL1018029	Vector-Thrust Locker: C-Z Scimitar	Vektorschubsperrung: C-Z Scimitar	Verrou de poussée vectorielle : C-Z Scimitar	Blocco spinta vettoriale: C-Z Scimitar
EFL1018015	Vertical Fin Bottom: C-Z Scimitar	Seitenleitwerk unten: C-Z Scimitar	Dérive verticale basse : C-Z Scimitar	Parte inferiore della deriva verticale: C-Z Scimitar
EFL1018005	Fuselage with Hatches: C-Z Scimitar	Rumpf mit Abdeckungen: C-Z Scimitar	Fuselage avec capots : C-Z Scimitar	Fusoliera con portelli: C-Z Scimitar
EFL1018007	Vertical Fin Right: C-Z Scimitar	Seitenleitwerk rechts: C-Z Scimitar	Dérive verticale droite : C-Z Scimitar	Deriva verticale destra: C-Z Scimitar
EFL1018009	Complete Canopy & Pilot: C-Z Scimitar	Komplette Kabinenhaube mit Pilot: C-Z Scimitar	Verrière complète et pilote : C-Z Scimitar	Calotta completa e pilota: C-Z Scimitar
EFL1018014	Nose Gear & Mount: C-Z Scimitar	Bugfahrwerk und Halterung: C-Z Scimitar	Roulette de nez et support : C-Z Scimitar	Ruota in punta e supporto: C-Z Scimitar
EFL1018010	Nose & Screws: C-Z Scimitar	Nase und Schrauben: C-Z Scimitar	Nez et vis : C-Z Scimitar	Punta e viti: C-Z Scimitar
EFL1008018	Wheel Set: C-Z Scimitar	Radsatz: C-Z Scimitar	Jeu de roues : C-Z Scimitar	Set ruota: C-Z Scimitar
EFL1018016	Main Landing Gear & Mount: C-Z Scimitar	Hauptfahrwerk und Halterung: C-Z Scimitar	Train d'atterrissage principal et support : C-Z Scimitar	Carrello di atterraggio principale e supporto: C-Z Scimitar

Optional Parts • Optionale Bauteile • Pièces optionnelles • Pezzi opzionali

Part # Nummer Numéro Codice	Description	Beschreibung	Description	Descrizione
EFLG110	10 - 15 Size Tricycle Electric Retracts by E-flite	Elektrisch einziehbares dreirädriges Fahrwerk von E-flite, Größe 10-15	Trains rétractables électriques tricycles de taille 10 à 15 par E-flite	Elementi retrattili elettrici triciclici, formato 10 - 15, di E-flite
EFLA261	Micro/Mini Heli Tool Assortment	Micro/Mini-Helikopter-Werkzeugsatz	Assortiment d'outils micro / mini pour hélicoptère	Assortimento utensili per micro/mini elicotteri
EFLAEC302	EC3 Battery Connector, Female (2)	EC3-Akkubuchse (2)	Connecteur de batterie EC3, femelle (2)	Connettore batteria EC3, femmina (2)
EFLB40004S30	4000mAh 4S 14.8V 30C Li-Po, 12AWG EC3	4000mAh-4S-14,8V-30C-Li-Po, 12AWG EC3	Li-Po 4 000 mAh 4S 14,8 V 30C, 12AWG EC3	4000 mAh 4S 14,8 V 30 C Li-Po, 12 AWG EC3
EFLAEC303	EC3 Device/Battery Connector, Male/Female	EC3-Geräte-/Akkubuchse/-stecker	Connecteur pour équipement / batterie EC3, mâle / femelle	Connettore dispositivo/batteria EC3, maschio/femmina
EFLC3025	Celectra 80W AC/DC Multi-Chemistry Battery Charger by "E-flite	Celectra-80W-Gleichstrom/Wechselstrom-Akkuladegerät für unterschiedliche Akkutypen von E-flite	Chargeur de batterie à plusieurs produits chimiques Celectra 80 W AC/CC par E-flite	Caricabatteria Celectra Multi-Chemistry da 80 W CA/CC di "E-flite
EFL1008021	Servo Arm: Yak 54 C-Z	Servoarm: Yak 54 C-Z	Bras de servo : Yak 54 C-Z	Braccio del servo: Yak 54 C-Z
SPMAR600	AR600 6-Channel Sport DSM2/DSMX Receiver	AR600-6-Kanal-xDSM2/DSMX-Sportempfänger	Récepteur AR600 sport 6 voies DSM2 / DSMX	Ricevitore AR600 Sport DSM2/DSMX a 6 canali
SPMR6610	DX6i DSMX Transmitter Only Mode 2	DX6i-DSMX-Sender Mode 2 (nur Sender)	Émetteur DX6i DSMX uniquement Mode 2	Solo trasmettitore DX6i DSMX Modalità 2
SPMR66101	DX6i DSMX Transmitter Only Mode 1	DX6i-DSMX-Sender Mode 1 (nur Sender)	Émetteur DX6i DSMX uniquement Mode 1	Solo trasmettitore DX6i DSMX Modalità 1
SPMR6610E	DX6i DSMX Transmitter Only Mode 2 Int'l	DX6i-DSMX-Sender (nur Sender) Mode 2 international	Émetteur DX6i DSMX uniquement Mode 2 International	Solo trasmettitore DX6i DSMX Modalità 2 Int'l
SPMR66101E	DX6i DSMX Transmitter Only Mode 1 Int'l	DX6i-DSMX-Sender (nur Sender) Mode 1 international	Émetteur DX6i DSMX uniquement Mode 1 International	Solo trasmettitore DX6i DSMX Modalità 1 Int'l
SPM7800	DX7s 7 Ch with AR8000 NO SX's Mode 2	DX7s-7-Kanal mit AR8000 NO SX's Mode 2	DX7s 7 voies avec AR8000 aucun servo Mode 2	DX7s a 7 canali con AR8000 NO SX's Modalità 2
SPM7800EU	DX7s 7 Ch with AR8000 NO SX's Mode 2 Int'l	DX7s-7-Kanal mit AR8000 NO SX's Mode 2 international	DX7s 7 voies avec AR8000 aucun servo Mode 2 International	DX7s a 7 canali con AR8000 NO SX's Modalità 2 Int'l
SPM7801AU	DX7s 7 Ch with AR8000 NO SX's Mode 1 AU	DX7s-7-Kanal mit AR8000 NO SX's Mode 1 AU	DX7s 7 voies avec AR8000 aucun servo Mode 1 AU	DX7s a 7 canali con AR8000 NO SX's Modalità 1 AU
SPM7801EU	DX7s 7 Ch with AR8000 NO SX's Mode 1 Int'l	DX7s-7-Kanal mit AR8000 NO SX's Mode 1 international	DX7s 7 voies avec AR8000 aucun servo Mode 1 International	DX7s a 7 canali con AR8000 NO SX's Modalità 1 Int'l
*SPMR8800	DX8 DSMX Transmitter Only Mode 2	DX8-DSMX-Sender (nur Sender) Mode 2	Émetteur DX8 DSMX uniquement Mode 2	Solo trasmettitore DX8 DSMX Modalità 2
*SPMR8800EU	DX8 DSMX Transmitter Only Mode 2 Int'l	DX8-DSMX-Sender (nur Sender) Mode 2 international	Émetteur DX8 DSMX uniquement Mode 2 International	Solo trasmettitore DX8 DSMX Modalità 2 Int'l
*SPMR88001EU	DX8 DSMX Transmitter Only Mode 1 Int'l	DX8-DSMX-Sender (nur Sender) Mode 1 international	Émetteur DX8 DSMX uniquement Mode 1 International	Solo trasmettitore DX8 DSMX Modalità 1 Int'l
*SPMR88001AU	DX8 DSMX Transmitter Only Mode 1 AU	DX8-DSMX-Sender (nur Sender) Mode 1 AU	Émetteur DX8 DSMX uniquement Mode 1 AU	Solo trasmettitore DX8 DSMX Modalità 1 AU

* All Spektrum DX8 transmitters can be set up for modes 1-4.

* Alle Spektrum DX8 Sender können für Mode 1 - 4 eingestellt werden

* Tous les émetteurs Spektrum DX8 peuvent être paramétrés dans les 4 modes

* Tutti i trasmettitori Spektrum DX8 possono essere configurati per le modalità 1 - 4

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Patents Pending

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