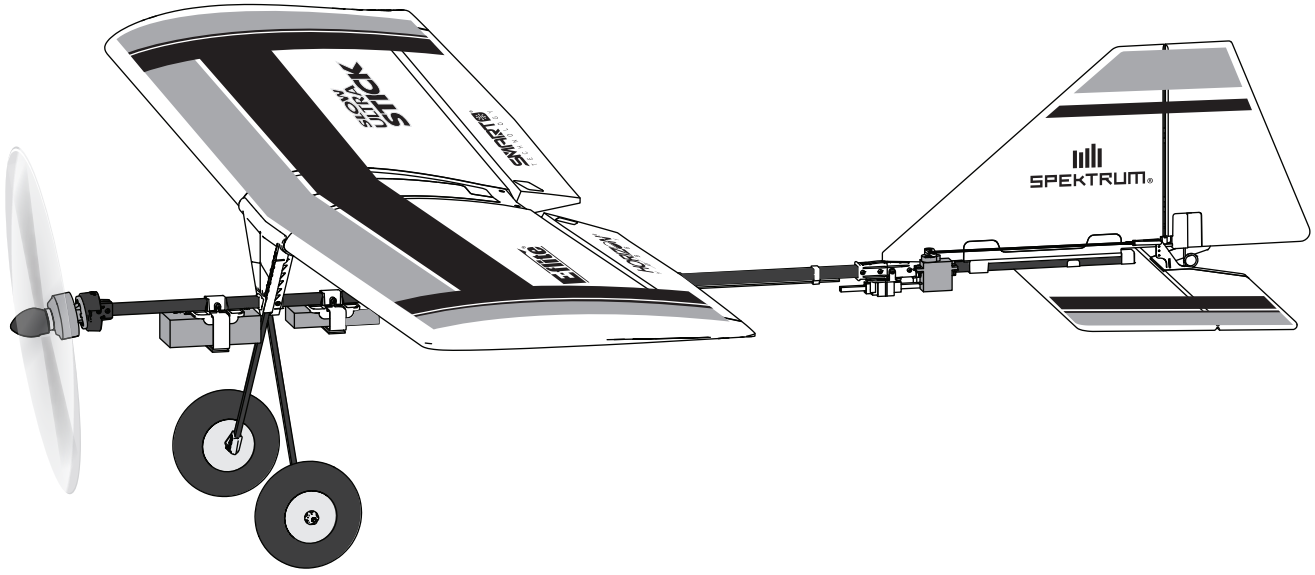
E-flite®
ADVANCING ELECTRIC FLIGHT

Slow Ultra Stick 1.2m



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

Scan the QR code and select the Manuals and Support quick links from the product page for the most up-to-date manual information.

Scannen Sie den QR-Code und wählen Sie auf der Produktseite die Quicklinks Handbücher und Unterstützung, um die aktuellsten Informationen zu Handbücher.

Scannez le code QR et sélectionnez les liens rapides Manuals and Support sur la page du produit pour obtenir les informations les plus récentes sur le manuel.

Scannerizzare il codice QR e selezionare i Link veloci Manuali e Supporto dalla pagina del prodotto per le informazioni manuali più aggiornate.

BNF® BASIC

EFL0350

267459.1 Created 01/23

HORIZON® HOBBY

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 horizonhobby.com or towerhobbies.com and click on the support or resources 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.

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

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.

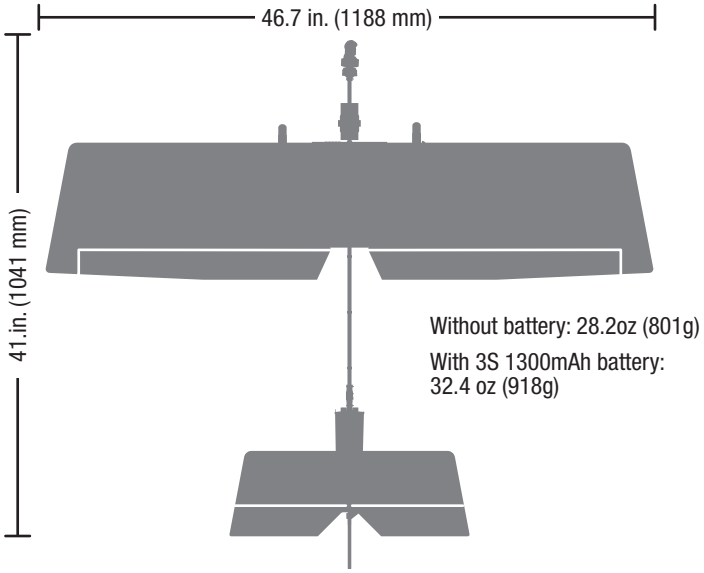
WARNING AGAINST COUNTERFEIT PRODUCTS: If you ever need to replace your Spektrum receiver found in a Horizon Hobby product, always purchase from Horizon Hobby, LLC or a Horizon Hobby authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, LLC disclaims all support and warranty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

Included / Recommended Equipment

	BNF BASIC
MOTOR: 3513-1100Kv Outrunner Motor, 14 pole (SPMXAM2800)	**Included**
ESC: Avian 30-Amp Brushless Smart Lite ESC; 3S-4S, IC3 (SPMXAE30D)	**Installed**
Servos: A345SL 9g Sub-Micro Digital Servo: 60mm Lead (SPMSA345SL) Aileron: (1) Rudder: (1) Elevator: (1)	**Installed**
Receiver: AR630 DSMX 6-Channel AS3X & SAFE Receiver (SPMAR630)	**Installed**
Recommended Battery*: 3S 1300mAh 30C Li-Po (SPMX133S30)	**Required**
Recommended Battery Charger: S155 3-cell Li-Po battery charger (SPMCXC2050)	**Required**
Recommended Transmitter: Full range 4+ channel 2.4GHz with Spektrum DSMX®/DSM2 technology with adjustable Dual Rates.	**Required**

*battery range: 2S-3S 1300-2200mAh LiPo battery

Specifications



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, please visit https://faadronezone-access.faa.gov/#/. For additional assistance on regulations and guidance on UAS usage, visit knowbeforeyoufly.org/.

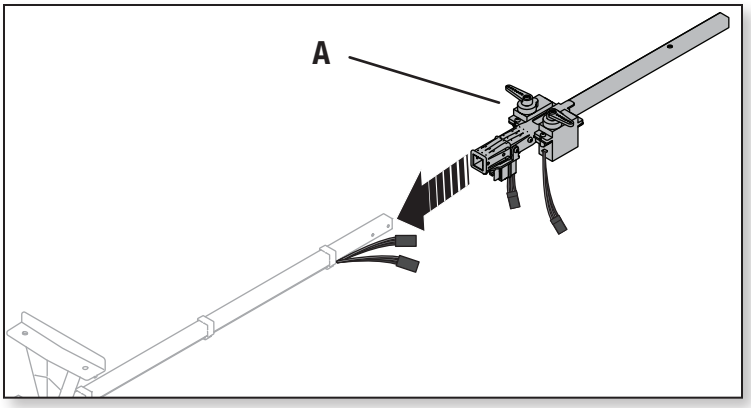
Table of Contents

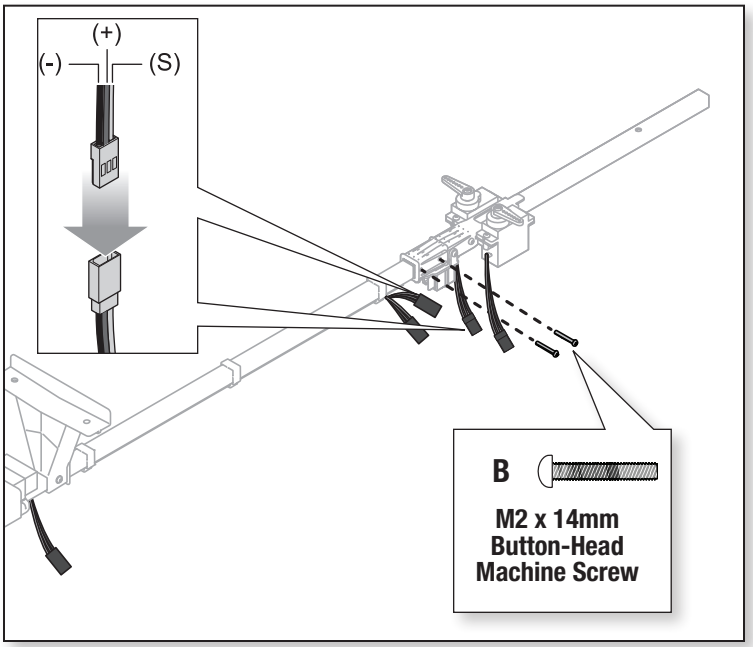
Model Assembly

Rear Fuselage Section Installation

1. Slide the two fuselage sections together until they click, connecting the front and rear fuselage sections.
2. Secure the sections together with the two included M2 x 14mm button head screws. (Use a #1 Phillips screwdriver)
3. The elevator servo plugs have a silver identifying mark. Align these marks and connect the elevator servo plug to the extension from the receiver. The wire colors will also align, ensuring correct polarity.
4. Connect the rudder servo plug to the extension from the receiver. These plugs have no silver mark, use the wire color to align them correctly.
5. Stack the connected plugs and insert them into the retainer.

Disassemble in reverse order.

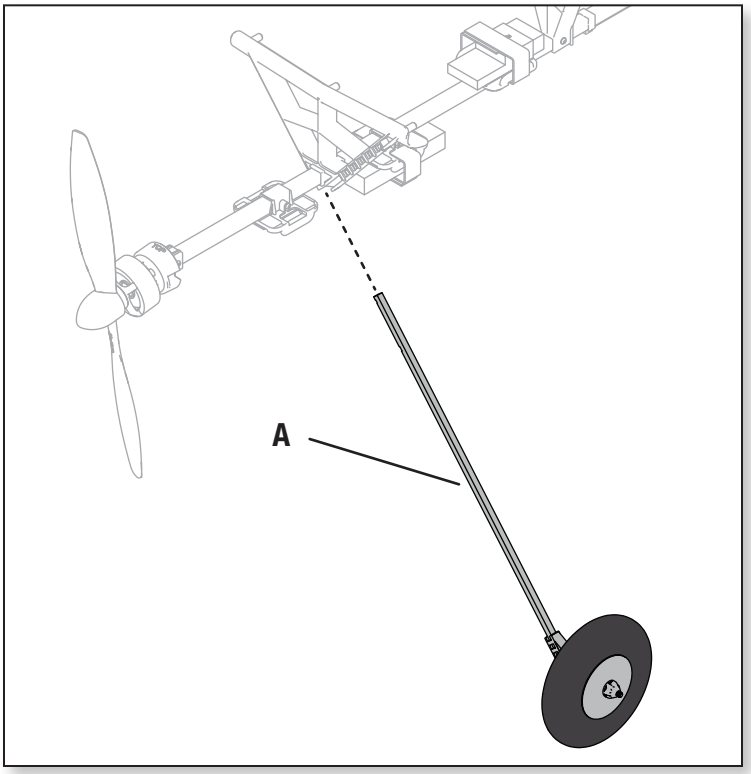


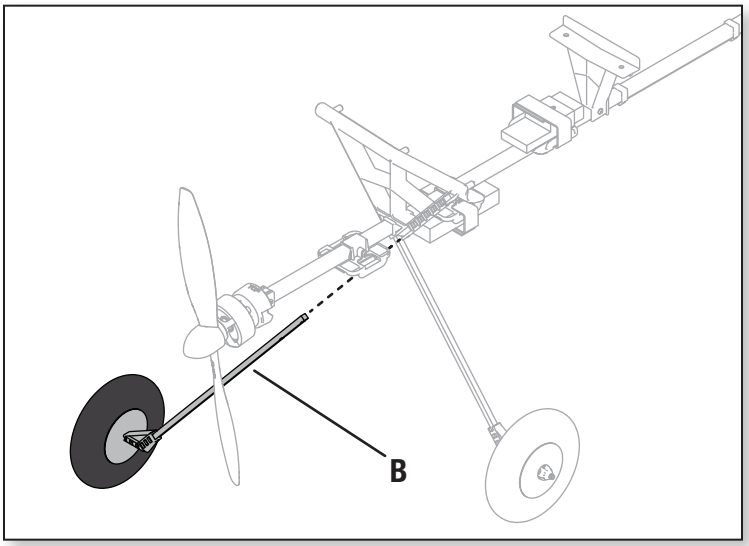


Main Gear Installation

1. Slide one main gear strut **(A)** into the slot until it engages the retaining latch. Firm pressure is required to engage the retention latch.
2. Slide the remaining main gear strut **(B)** into the opposite slot until it latchs.

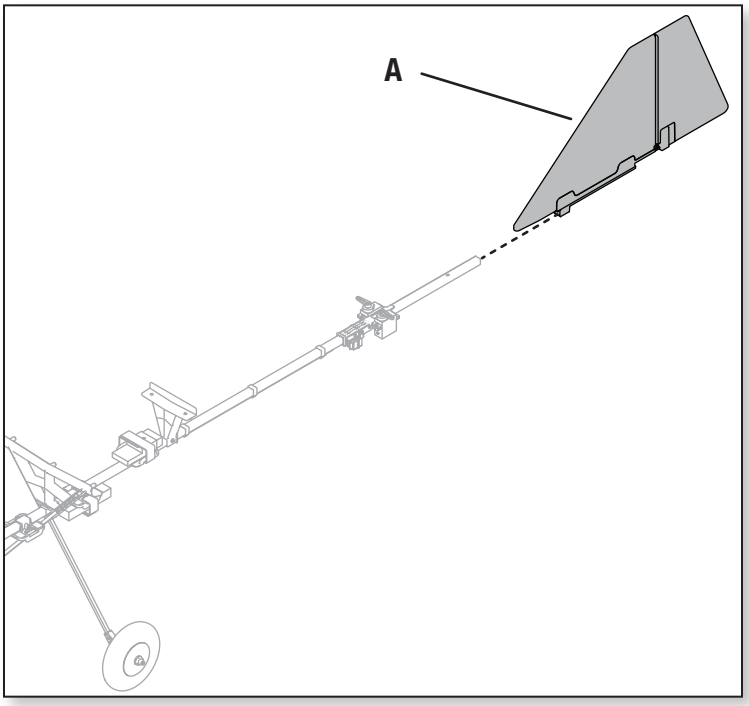
Disassemble in reverse order, using a tool such as a flat screwdriver to release the retention latch.

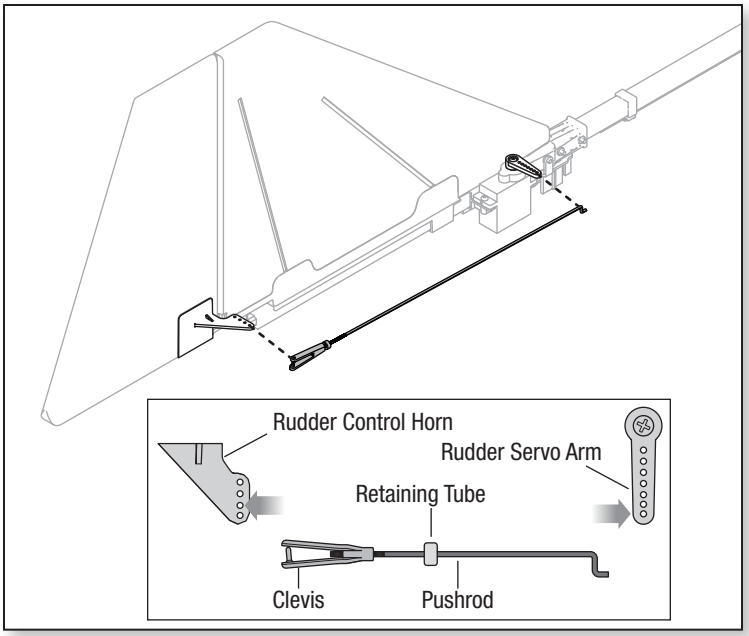




Vertical Stabilizer Installation

1. Slide the vertical stabilizer **(A)** on the rear fuselage tube until the holes align.
2. There are two pushrods in the parts bag for the rudder and elevator. Choose longer one and use it for the rudder.
3. Connect the 193mm rudder pushrod z-bend to the outermost hole in the servo arm.
4. Attach the clevis to the third outermost hole of the rudder control horn (see instructions for clevis connection).

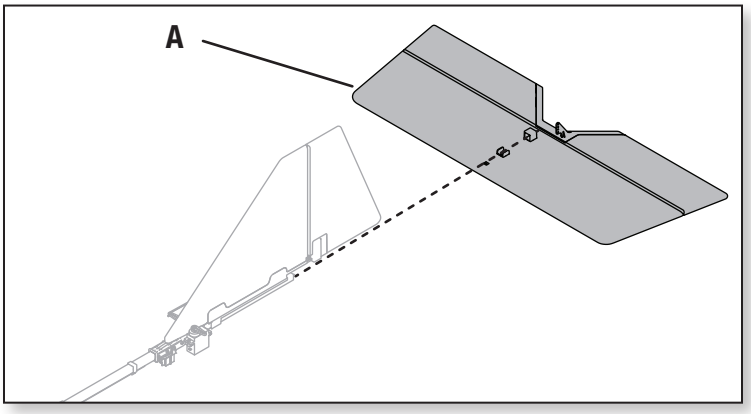


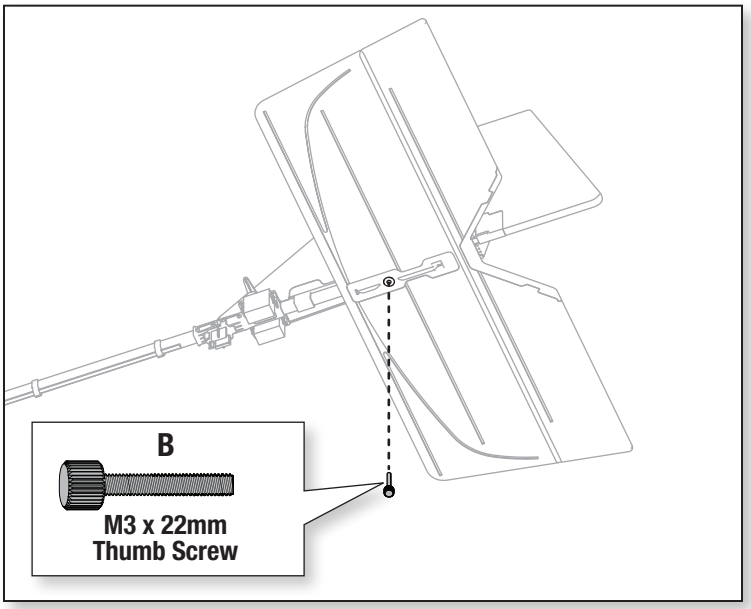


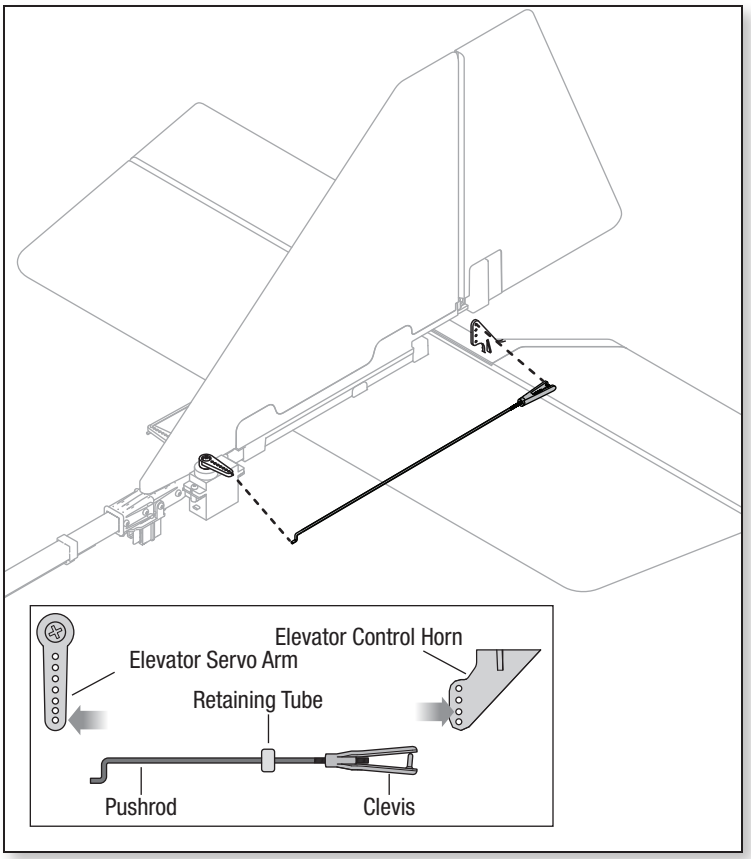
Horizontal Stabilizer Installation

1. Ensure the control horn is facing up, then slide the horizontal stabilizer **(A)** on the rear fuselage tube until the bottom screw holes align.
2. Secure the vertical and horizontal stabilizers using the included M3 x 22mm thumb screw **(B)**.
3. Connect the 180mm elevator pushrod z-bend to the outermost hole in the servo arm.
4. Attach the clevis to the third outermost hole of the elevator control horn (see instructions for clevis connection).

Disassemble in reverse order.



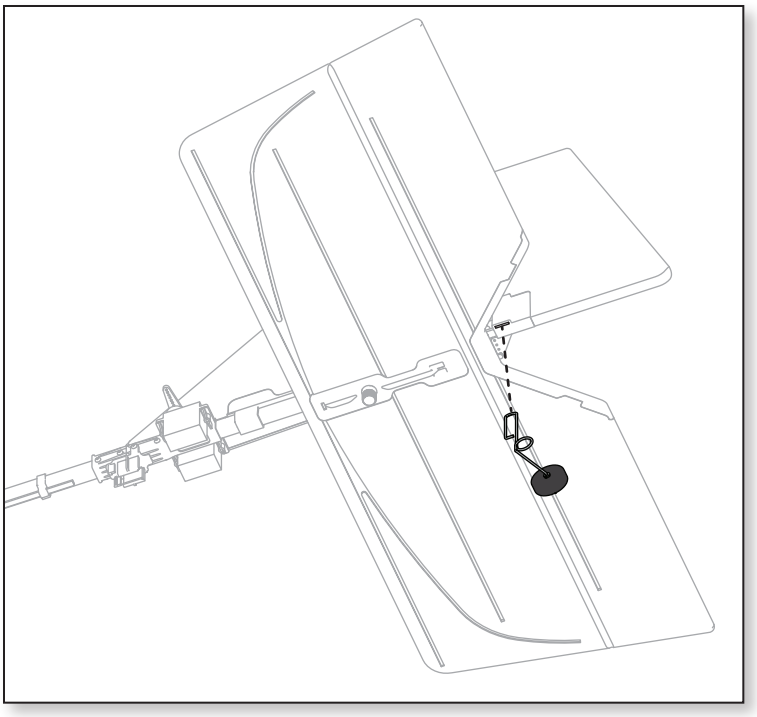




Tail Wheel Installation

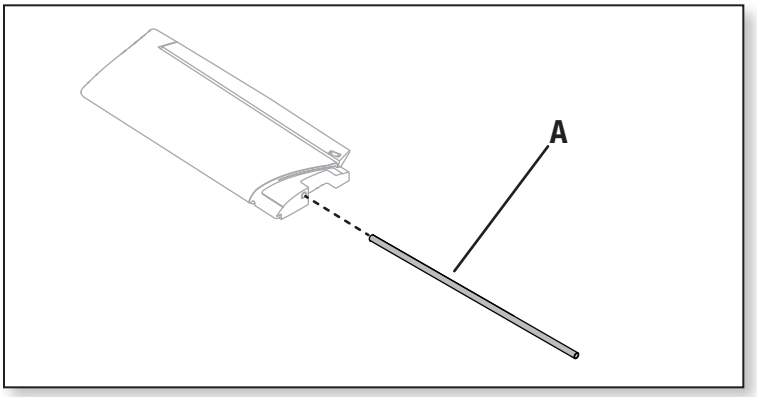
1. Align the tail wheel wire with the recess in the bottom of the rudder.
2. Press the tail wheel wire into the recess until the wire clicks into place.

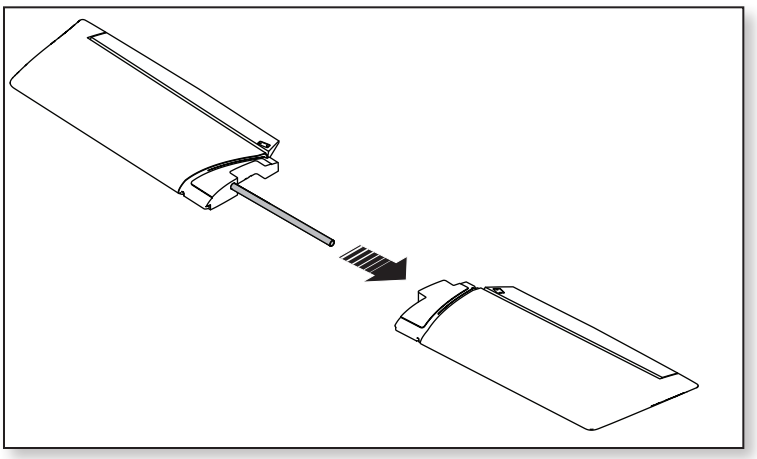
Disassemble in reverse order.



Wing Installation

1. Slide the wing tube **(A)** into the wing.
2. Slide the two wing halves together.

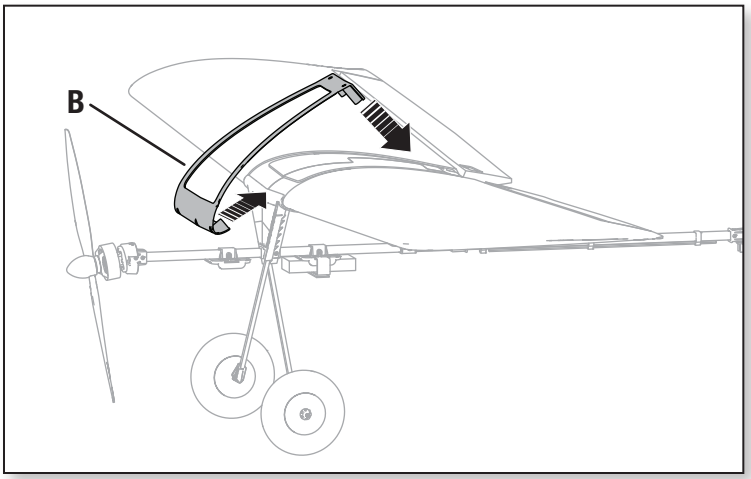


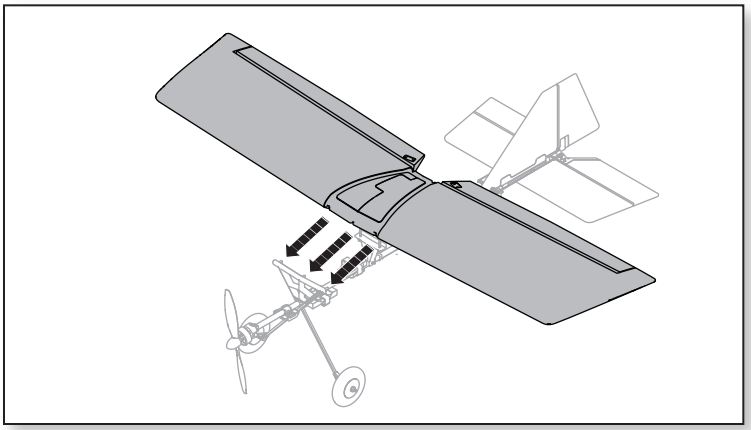


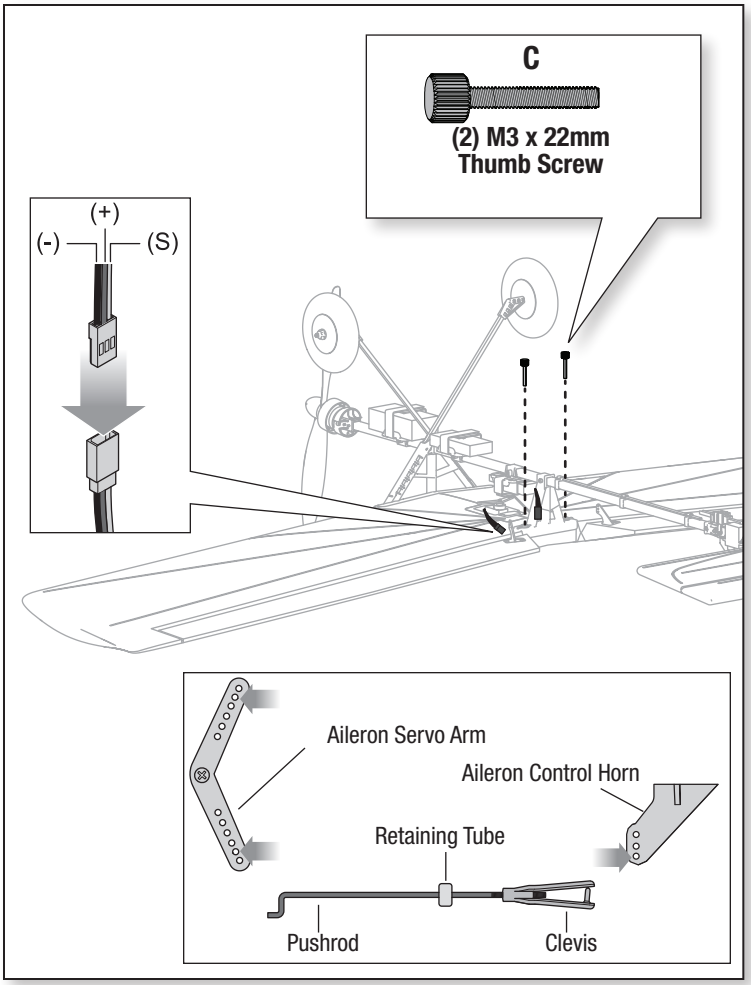
Wing Installation

1. Align and place the wing retainer **(B)** on top of the wing.
2. Align the wing with the three pins on the front wing mount, then slide the wing forward into place.
3. Secure the wing to mounts with two included M3 x 22mm thumb screws **(C)**
4. Connect the aileron servo connector to the servo extension from the receiver.
5. Connect the aileron pushrods to the control horns in the indicated locations

Disassemble in reverse order.







Transmitter Setup

⚠ **WARNING**: Enable the throttle cut feature. Always engage throttle cut before approaching the aircraft.

⚠ **WARNING**: Never assign Aux 2 to SAFE Select during transmitter setup with any model transmitter. If SAFE Select is assigned to Aux 2, the throttle channel/motor will reverse in flight once SAFE is enabled. Motor reversing is assigned to Aux 2/channel 7 by default in the Smart ESC.

IMPORTANT: After you set up your model, always rebind the transmitter and receiver to set the desired failsafe positions.

IMPORTANT: The included receiver has been programmed specifically for operation in this aircraft.

† Some of the terminology and function locations used in the iX12, iX14 and iX20 programming may be slightly different than other Spektrum AirWare™ radios. The names given in parentheses correspond to the iX12, iX14 and iX20 programming terminology. Consult your transmitter manual for specific information about programming your transmitter.

Pre-Programmed Transmitter Setup Files

To save time when setting up your transmitter for this model, visit www.SpektrumRC.com to download the latest pre-programmed transmitter setup files. Locate the file for this model using the item number. Download the correct model file and install it in your transmitter using an SD card.

1. Go to SpektrumRC.com
2. Hover over Support and click on Support Hub from the menu that appears.
3. Scroll and select your transmitter from the list.
4. Scroll to Quick Links and click on Manuals & Support.
5. Click on the Transmitter Preset Download link.
6. Follow preset model files import instruction for the preset model files.

Dual Rates

Low rate is recommended for the initial flights.

NOTICE: To ensure AS3X® technology functions properly, do not lower rate values below 50%. If lower rates are desired, manually adjust the position of the pushrods on the servo arm.

NOTICE: If oscillation occurs at high speed, refer to the Troubleshooting Guide for more information.

Computerized Transmitter Setup		
Start all transmitter programming with a blank ACRO model (perform a model reset), then name the model.		
Set Dual Rates to	2 Position switch	3 Position switch
	HIGH 100%	HIGH 100%
		MID 70%
	LOW 70%	LOW 50%
Set Servo Travel to	100%	
Set Throttle Cut to	-100%	
DX6e ‡ DX6 ‡ (Gen2) DX7‡ (Gen2) NX6‡ DX8e DX8 (Gen2) DX9 DX10t DX18 DX20 iX12 † iX20 † NX6 NX8 NX10	1. Go to the SYSTEM SETUP (Model Utilities)† 2. Set MODEL TYPE: AIRPLANE 3. Set AIRCRAFT TYPE: (Model Setup, Aircraft Type)†: WING: Normal	

Exponential

After first flights, you may adjust exponential in your transmitter.

Transmitter Telemetry Setup

If the transmitter that you intend to use with this aircraft is not displaying telemetry data, visit www.SpektrumRC.com and update your firmware. With the latest firmware installed on your transmitter the telemetry option should now be functional on your transmitter.

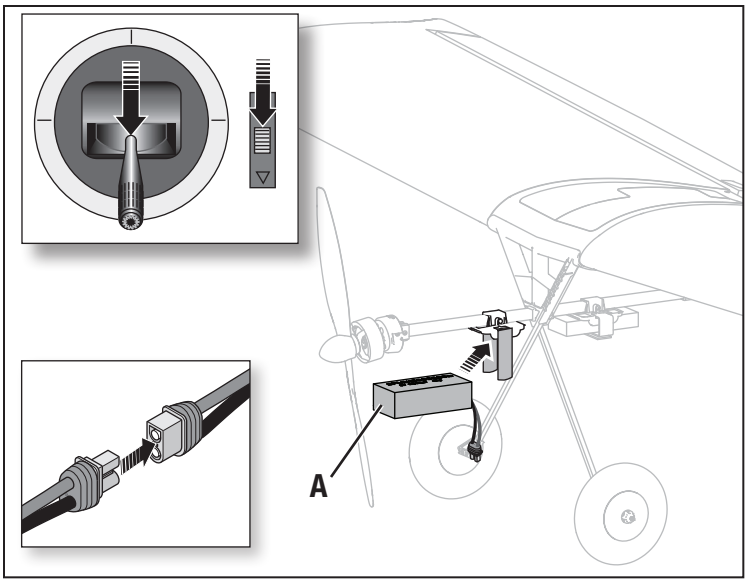
Battery Installation and ESC Arming

Battery Selection

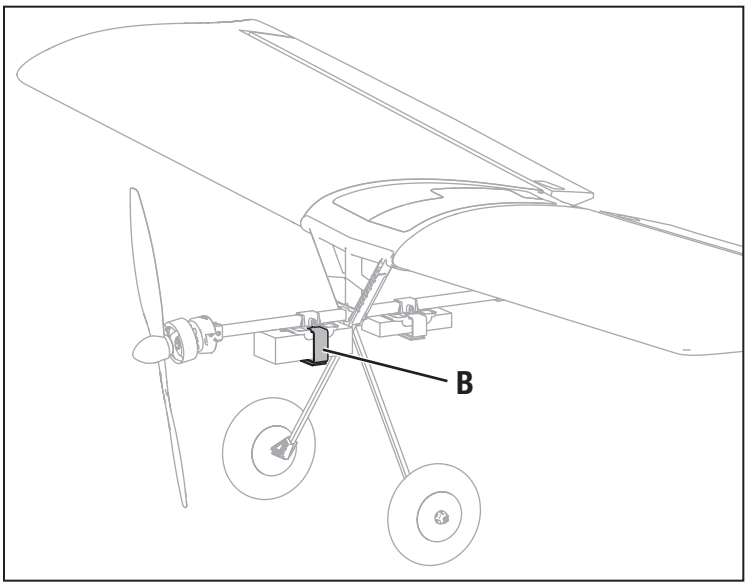
We recommend the 3S 1300mAh 30C Smart Li-Po Battery. Refer to the Optional Parts List for other recommended batteries. If using a battery other than those listed, the battery should be within the range of capacity, dimensions and weight of the Spektrum Li-Po battery packs to fit in the fuselage.

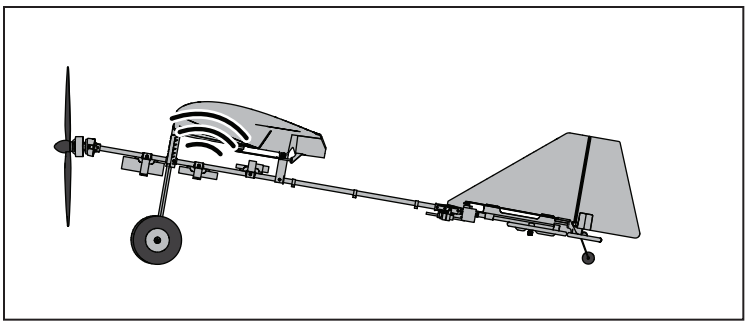
1. Lower the throttle and throttle trim to the lowest settings. Power on the transmitter, then wait 5 seconds.
2. Install a fully charged battery **(A)** in the battery tray as shown and secure it using the hook and loop straps **(B)**.
3. Connect the battery to the ESC.
4. Keep the aircraft immobile and away from wind or the system will not initialize.

- The ESC will sound a series of tones (refer to step 6 of the binding instructions for more information).
- An LED will light on the receiver.



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





Binding

General Binding Tips and Failsafe

- The included receiver has been specifically programmed for operation of this aircraft. Refer to the receiver manual for correct setup if the receiver is replaced.
- Keep away from large metal objects while binding.
- Do not point the transmitter's antenna directly at the receiver while binding.
- The orange LED on the receiver will flash rapidly when the receiver enters bind mode.
- Once bound, the receiver will retain its bind settings for that transmitter until you re-bind.
- If the receiver loses transmitter communication, the failsafe will activate. Failsafe moves the throttle channel to low throttle. Pitch and roll channels move to actively stabilize the aircraft in a descending turn.
- If problems occur, refer to the troubleshooting guide or if needed, contact the appropriate Horizon Product Support office.

Transmitter and Receiver Binding / Enabling SAFE Select

The BNF Basic version of this airplane includes SAFE Select technology, enabling you to choose the level of flight protection. SAFE mode includes angle limits and automatic self leveling. AS3X mode provides the pilot with a direct response to the control sticks. SAFE Select is enabled or disabled during the bind process.

With SAFE Select disabled the aircraft is always in AS3X mode. With SAFE Select enabled the aircraft will be in SAFE Select mode all the time, or you can assign a switch to toggle between SAFE Select and AS3X modes.

IMPORTANT: Before binding, read the transmitter setup section in this manual and complete the transmitter setup table to ensure your transmitter is properly programmed for this aircraft.

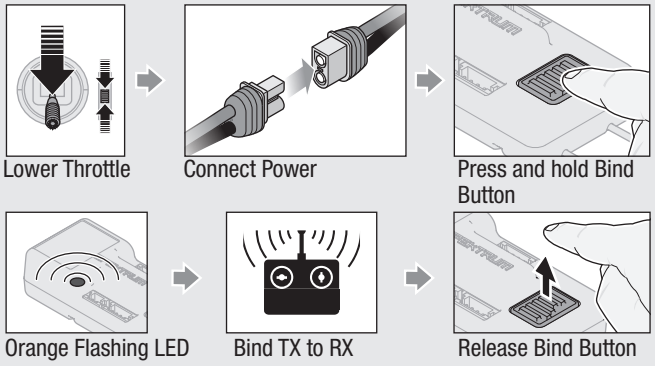
IMPORTANT: Move the transmitter flight controls (rudder, elevators, and ailerons) and the throttle trims to neutral. Move the throttle to low before and during binding.

You can use either the bind button on the receiver or the conventional bind plug to complete the binding process.

A bind plug extension has been provided in BNF Basic version models. It will be labeled and located in the battery or radio compartment for easy access.

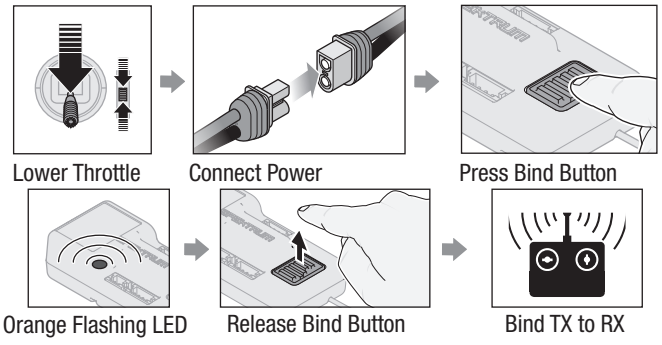
Using Bind Button

SAFE Select Enabled



SAFE Select Enabled: The control surfaces cycle back and forth **twice** with a slight pause at neutral position every time the receiver is powered on.

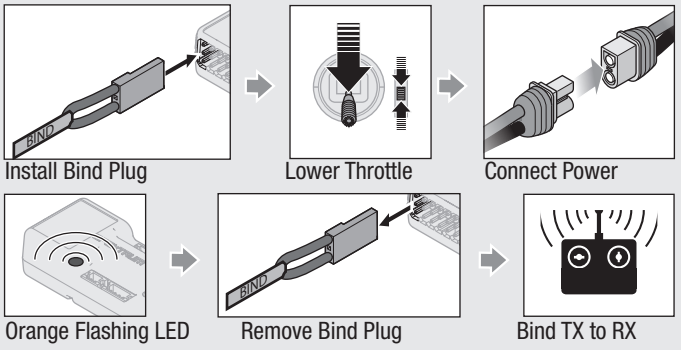
SAFE Select Disabled



SAFE Select Disabled: The control surfaces cycle back and forth **once** every time the receiver is powered on.

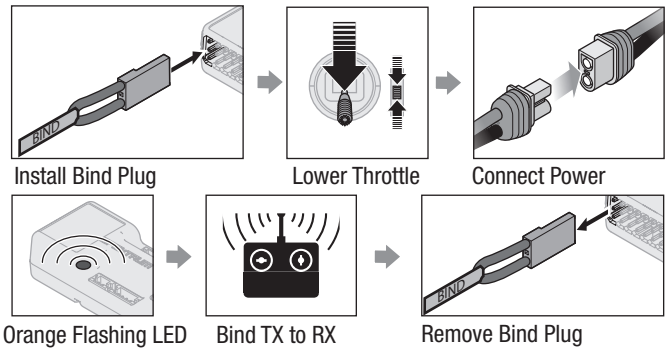
Using Bind Plug

SAFE Select Enabled



SAFE Select Enabled: The control surfaces cycle back and forth **twice** with a slight pause at neutral position every time the receiver is powered on.

SAFE Select Disabled



SAFE Select Disabled: The control surfaces cycle back and forth **once** every time the receiver is powered on.

SAFE Select can also be activated via Forward Programming in compatible transmitters.

SAFE® Select Switch Designation

Stick Inputs

Once SAFE Select is enabled, you can choose to fly in SAFE mode full-time, or assign a switch. Any switch on any channel between 5 and 9 can be used on your transmitter.

If the aircraft is bound with SAFE Select disabled, the aircraft will be in AS3X mode exclusively.

⚠ **CAUTION:** Keep all body parts well clear of the propeller and keep the aircraft securely restrained in case of accidental throttle activation.

IMPORTANT: To be able to assign a switch, first verify:

- The aircraft was bound with SAFE Select enabled.
- Your choice for the SAFE Select switch is assigned to a channel between 5 and 9 (Gear, Aux1-4), and travel is set at 100% in each direction.
- The aileron, elevator, rudder and throttle direction are set to normal, not reverse.
- The aileron, elevator, rudder and throttle are set to 100% travel. If dual rates are in use, the switches need to be in the 100% position.

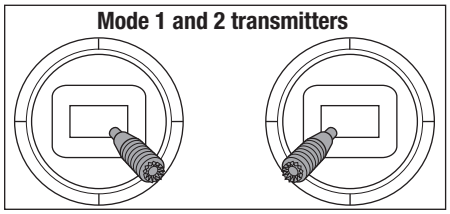
See your transmitter manual for more information about assigning a switch to a channel.

Assigning a Switch

1. Power on the transmitter.
2. Power on the aircraft.
3. Hold both transmitter sticks to the inside bottom corners, and toggle the desired switch 5 times quickly (1 toggle = full up and down).
4. The control surfaces of the aircraft will move, indicating the switch has been selected.

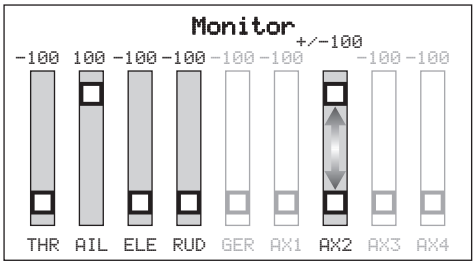
Repeat the process to assign a different switch or to deactivate the current switch.

SAFE Select Switch Assignment Stick Positions



TIP: Use the channel monitor to verify channel movement.

This example of the channel monitor shows the stick positions for assigning a switch, the switch selection on Aux2, and +/- 100% travel on the switch.



Forward Programming

Assign the SAFE Select channel through forward programming on your compatible Spektrum transmitter.

For more information about setting SAFE Select and using Forward Programming, please refer to the following link for a detailed video:

https://www.youtube.com/watch?v=o-46P066cik

Forward Programming SAFE Select Setup	
DX series, NX series, iX series	1. Begin with the transmitter bound to the receiver.
	2. Power ON the transmitter.
	3. Assign a switch for SAFE Select that is not already in use for another function. Use any open channel between 5 and 9 (Gear, Aux1-4).
	4. Set switch H (throttle cut) to prevent accidental motor operation.
	5. Power ON the aircraft. A signal bar appears on your transmitter's main screen when the telemetry information is being received.
	6. Go to the FUNCTION LIST (Model Setup)
	7. Select Forward Programming; Select Gyro Settings, Choose SAFE Select to enter the menu.
	8. Set SAFE Select Ch: To the channel you have chosen for SAFE Select.
	9. Set AS3X and SAFE On or Off as desired for each switch position.

Integrated ESC Telemetry

This aircraft includes telemetry between the ESC and receiver, which can provide information including RPM, voltage, motor current, throttle setting (%), and FET (speed controller) temperature.

For more information about compatible transmitters, firmware updates, and how to use the telemetry technology on your transmitter, visit www.SpektrumRC.com.

Telemetry Setup	
DX series, NX series, iX series	1. Begin with the transmitter bound to the receiver.
	2. Power ON the transmitter.
	3. Set switch H (throttle cut) to prevent accidental motor operation.
	4. Power ON the aircraft. A signal bar appears on your transmitter's main screen when the telemetry information is being received.
	5. Go to the FUNCTION LIST (Model Setup)
	6. Select TELEMETRY; Smart ESC
	7. Set Total Cells: 3
	8. Set LVC Alarm: 3.4V Set Alarm; Voice/Vibe
	9. Set pole count; 14 pole

Control Direction Test

Switch on the transmitter and connect the battery. Use the transmitter to operate the aileron, elevator and rudder controls. View the aircraft from the rear when checking the control directions.

This model has a built in aileron to rudder mix, when the ailerons are deflected the rudder will move.

Elevator

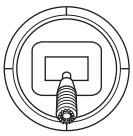
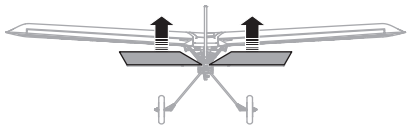
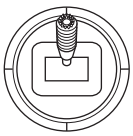
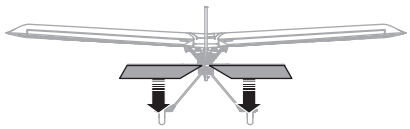
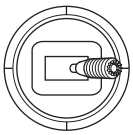
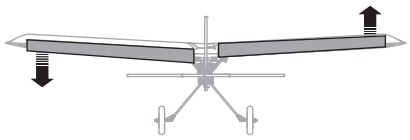
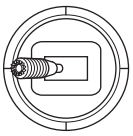
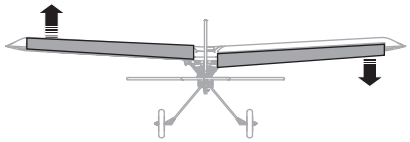
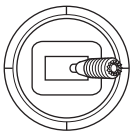
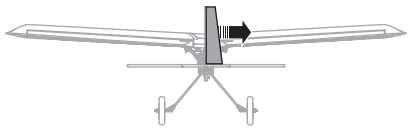
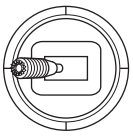
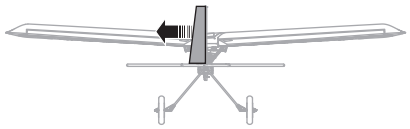
1. Pull the elevator stick back. The elevators should move up, which will cause the aircraft to pitch up.
2. Push the elevator stick forward. The elevators should move down, which will cause the aircraft to pitch down.

Ailerons

1. Move the aileron stick to the right. The right aileron should move up and the left aileron down, which will cause the aircraft to bank right.
2. Move the aileron stick to the left. The left aileron should move up and the right aileron down, which will cause the aircraft to bank left.

Rudder

1. Move the rudder stick to the right. The rudder should move to the right, which will cause the aircraft to yaw right.
2. Move the rudder stick to the left. The rudder should move to the left, which will cause the aircraft to yaw left.

	Transmitter Command	Control SurfaceResponse
Elevator		
		
Aileron		
		
Rudder		
		

AS3X Response 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.

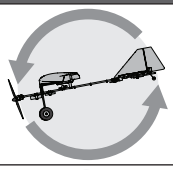
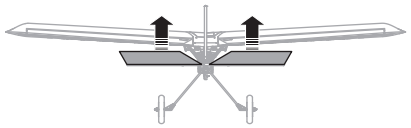
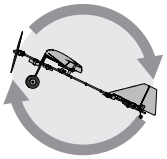
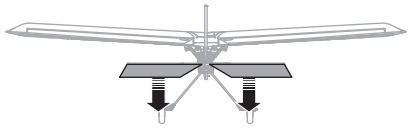
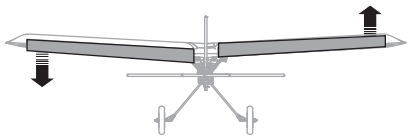
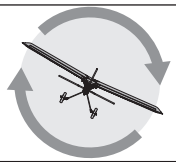
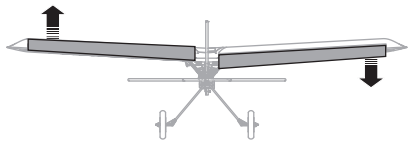
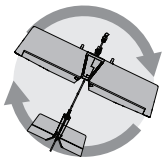
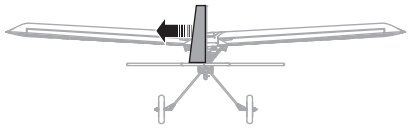
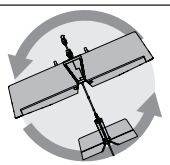
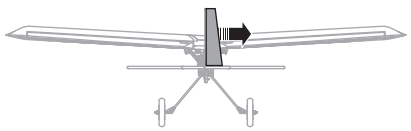
1. Raise the throttle just above 25%, then lower the throttle to activate AS3X.

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.

Due to different effects of torque, lift, and drag some aircraft require trim changes with different speeds and throttle settings. Mixes are preloaded into the receiver to compensate for these changes. The mixes become active the first time the throttle is raised above 25%. The control surfaces may be offset slightly at different throttle settings after the first time throttle is raised. Trimming the plane in flight should be done at 80-100% throttle for best results.

	Aircraft movement	AS3X Reaction
Elevator		
		
Aileron		
		
Rudder		
		

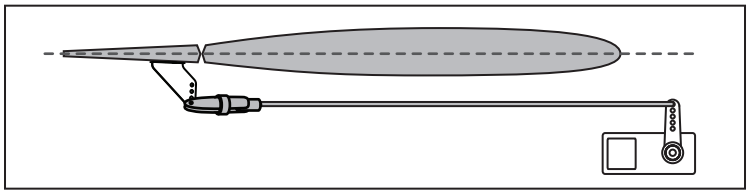
Control Surface Centering and Adjusting a Clevis

IMPORTANT: Perform the Control Direction Test before performing control surface centering.

While SAFE is inactive, mechanically center the control surfaces.

IMPORTANT: Correct operation of the SAFE system requires sub-trim and trim at 0.

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



Remove the clevis

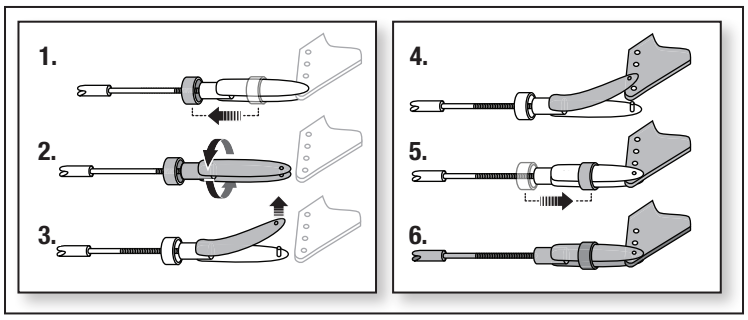
1. Slide the retaining tube off the clevis.
2. Carefully spread the clevis and remove the clevis pin from the control horn.

Adjust the clevis

3. Turn the clevis to adjust the length of the pushrod.

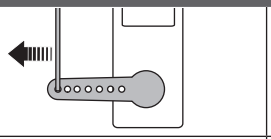
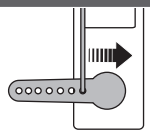
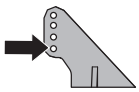
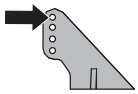
Re-install the clevis

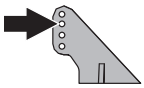
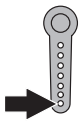
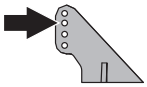
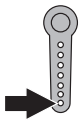
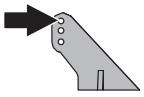
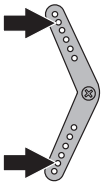
4. Carefully spread the clevis, then insert the clevis pin into the specified hole in the control horn.
5. Move the retaining tube to secure the clevis on the control horn.



Control Horn and Servo Arm Factory Settings

The table to the right shows the factory settings for the control horns and servo arms. Fly the aircraft at factory settings before making changes.

More control throw	Less control throw
	
	

	Control Horns	Servo Arms
Elevator		
Rudder		
Ailerons		

Dual Rates and Control Throws

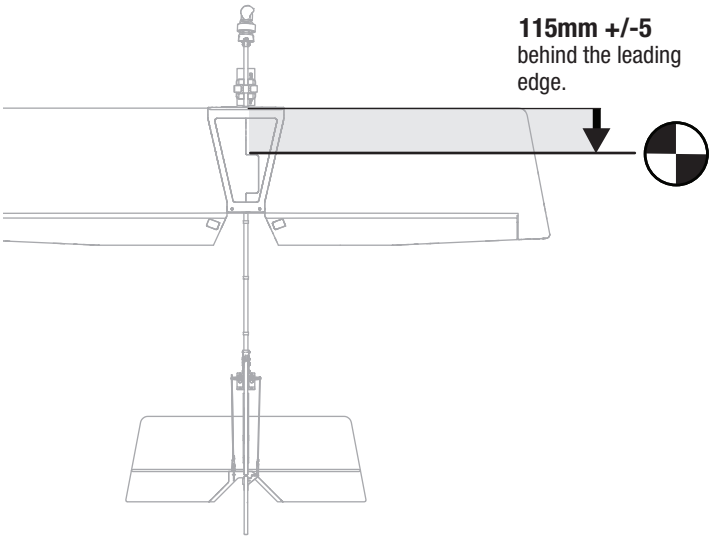
Program your transmitter to set the rates and control throws to the values given. These values have been tested and are a good starting point to achieve successful flight.

	High Rate	Low Rate
Aileron	▲ = 12mm ▼ = 12mm	▲ = 8mm ▼ = 8mm
Elevator	▲ = 15mm ▼ = 15mm	▲ = 11mm ▼ = 11mm
Rudder	▶ = 25mm ◀ = 25mm	▶ = 15mm ◀ = 15mm

Center of Gravity (CG)

The CG location is measured from the leading edge of the wing. This CG location has been determined with the recommended 3S 1300mAh Li-Po battery (SPMX133S30) installed to the front edge of the battery tray. Adjust the battery forward or aft as needed to achieve the proper CG location.

CAUTION: Install the battery but do not arm the ESC while checking the CG. Personal injury may result.



SAFE Select Flying Tips

When flying in SAFE Select mode the aircraft will return to level flight any time the aileron and elevator controls are at neutral. Applying aileron or elevator control will cause the airplane to bank, climb or dive. The amount the stick is moved will determine the attitude the airplane flies. Holding full control will push the aircraft to the pre-determined bank and roll limits, but it will not go past those angles.

When flying with SAFE Select, it is normal to hold the control stick deflected with moderate aileron input when flying through a turn. To fly smoothly with SAFE Select, avoid making frequent control changes and don't attempt to correct for minor deviations. Holding deliberate control inputs will command the aircraft to fly at a specific angle, and the model will make all corrections to maintain that flight attitude.

When flying with SAFE Select, throttle will make the aircraft climb or descend. Full throttle will cause the aircraft to pitch up and climb slightly. Mid throttle will keep the airplane flying level. Low throttle will cause the airplane to descend slightly nose-down.

Return the elevator and aileron controls to neutral before switching from SAFE Select mode to AS3X mode. If you do not neutralize controls when switching into AS3X mode, the control inputs used for SAFE Select mode will be excessive for AS3X mode and the aircraft will react immediately.

Differences between SAFE Select and AS3X modes

This section is generally accurate but does not take into account flight speed, battery charge status, and other limiting factors.

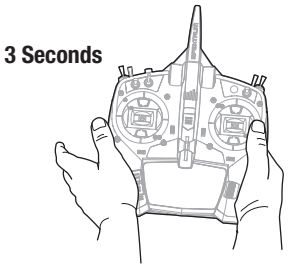
		SAFE Select	AS3X
Control Input	Control stick is neutralized	Aircraft will self level	Aircraft will continue to fly at its present attitude
	Holding a small amount of control	Aircraft will bank or pitch to a moderate angle and maintain the attitude	Aircraft will continue to pitch or roll slowly
	Holding full control	Aircraft will bank or pitch to the predetermined angle limits and maintain the attitude	Aircraft will continue to roll or pitch rapidly
	Throttle	Full throttle: Climb Neutral: Level flight Low throttle: Descend	Throttle will not affect flight response.

In-Flight Trimming

During your first flight, trim the aircraft for level flight at 80-100% throttle. Make small trim adjustments with your transmitter's trim switches to achieve straight and level flight.

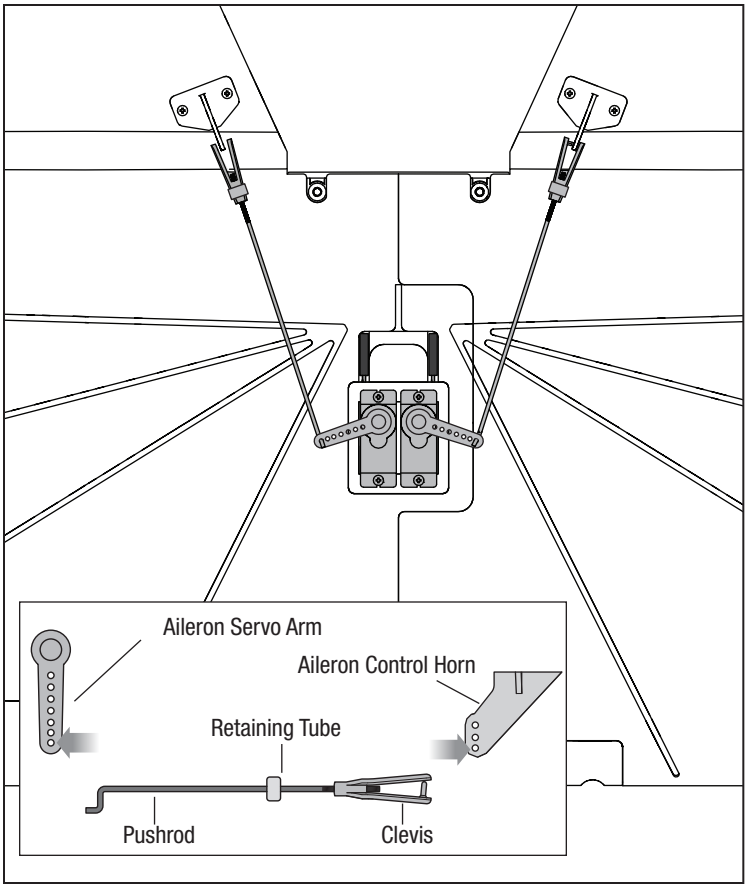
After adjusting trim do not touch the control sticks for 3 seconds. This allows the receiver to learn the correct settings to optimize AS3X performance.

Failure to do so could affect flight performance.



Optional Two-Servo Aileron Setup

1. Remove the wing from the aircraft.
2. Remove the servo arm screw and the installed servo arm.
3. Removed the servo arm from the z-bend of each pushrod.
4. Remove the 2 screws securing the servo to the wing.
5. Reposition the servo to the left of the servo pocket, aligning it with the left position screw holes.
6. Route the servo wire and connector out of the servo pocket and secure the servo with the 2 screws.
7. Install a second aileron servo (SPMSA345SL, not included) in the right servo position in the servo pocket.
8. Route the servo plug and connector in the right channel exiting the servo pocket and align the screws with screw holes and secure in place.
9. Connect the right servo into channel 2 and the left servo into channel 6 of the receiver.
10. In your transmitter System Setup change Aircraft Type to Dual Aileron.
11. Connect a battery to the aircraft and power ON the aircraft to center the servos.
12. Connect the z-bend of the control linkages to the outermost hole of the new servo horn (EFL0370, required and not included). Repeat for the other servo horn.
13. Install the servo horn on the servo as close to 90 degrees as possible and secure with screw.
14. Install the clevis end of the new linkage to outermost hole of the aileron control horn.
15. Ensure the aileron control surfaces are centered, if necessary adjust the pushrod mechanically to center the aileron.
16. Install the wing on the fuselage.



Computerized Transmitter Setup		
Start all transmitter programming with a blank ACRO model (perform a model reset), then name the model.		
Set Dual Rates to	2 Position switch	3 Position switch
	HIGH 100%	HIGH 100%
		MID 70%
	LOW 70%	LOW 50%
Set Servo Travel to	100%	
Set Throttle Cut to	-100%	
DX6e ‡ DX6 ‡(Gen2) DX7‡ (Gen2) NX6‡ DX8e DX8 (Gen2) DX9 DX10t DX18 DX20 iX12 † iX20 † NX6 NX8 NX10	1. Go to the SYSTEM SETUP (Model Utilities)† 2. Set MODEL TYPE: AIRPLANE 3. Set AIRCRAFT TYPE: (Model Setup, Aircraft Type)†: WING: Dual Aileron	

Post Flight

1. Disconnect the flight battery from the ESC (required for safety and battery life).
2. Power OFF the transmitter.
3. Remove the flight battery from the aircraft.
4. Repair or replace all damaged parts.
5. Store the flight battery apart from the aircraft and monitor the battery charge.
6. Make note of the flight conditions and flight results, planning for future flights.

Motor Service

CAUTION: Always disconnect the flight battery before performing motor service.

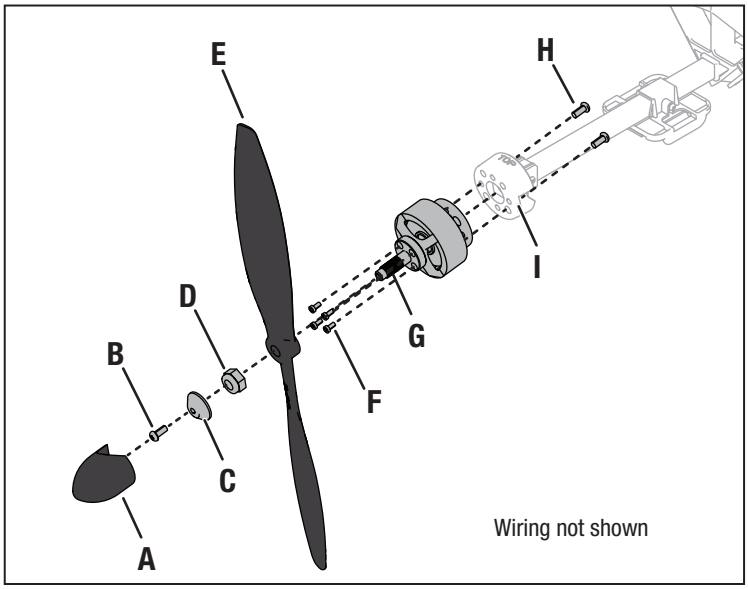
Disassembly

1. Remove the spinner **(A)**, screw **(B),** spinner retainer **(C)**, propeller nut **(D)** and propeller **(E).**
2. Remove the 4 screws **(F)** from the propeller shaft **(G)**.
3. Remove the propeller shaft from the prop adapter.
4. Remove the 2 screws **(H)** from the motor mount **(I)** and the fuselage.
5. Disconnect the motor wires from the ESC wires.

Assembly

Assemble in reverse order.

- Correctly align and connect the motor wire colors with the ESC wires.
- Install the propeller with the size numbers (11 x 5.5) facing forward.
- Tighten the propeller nut using a 10mm wrench.
- Push the rubber spinner back on to the plastic spinner retainer.



Servo Service

Control Surface	Replacement Servo	Description
Aileron (1)	SPMSA345SL	A345SL 9g Sub-Micro Digital Servo
Elevator (1)		
Rudder (1)		

Troubleshooting Guide AS3X

Problem	Possible Cause	Solution
Oscillation	Damaged propeller or spinner	Replace propeller or spinner
	Imbalanced propeller	Balance the propeller.
	Motor vibration	Replace parts or correctly align all parts and tighten fasteners as needed
	Loose receiver	Align and secure receiver in fuselage
	Loose aircraft controls	Tighten or otherwise secure parts (servo, arm, clevis, horn and control surface)
	Worn parts	Replace worn parts (especially propeller, spinner or servo)
	Irregular servo movement	Replace servo
Inconsistent flight performance	Trim is not at neutral	If you adjust trim more than 8 clicks, adjust the clevis to remove trim
	Sub-Trim is not at neutral	No Sub-Trim is allowed. Adjust the servo linkage
	Aircraft was not kept immobile for 5 seconds after battery connection	With the throttle stick in lowest position. Disconnect battery, then reconnect battery and keep the aircraft still for 5 seconds
Incorrect response to the AS3X Control Direction Test	Incorrect direction settings in the receiver, which can cause a crash	DO NOT fly. Contact Product Support for a solution.
Aircraft will not respond to throttle but responds to other controls	Throttle not at idle and/or throttle trim 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
	Motor disconnected from ESC	Make sure motor is connected to the ESC

Troubleshooting Guide

Problem	Possible Cause	Solution
Extra propeller noise or extra vibration	Damaged propeller and spinner, prob adapter or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
	Prop nut is too loose	Tighten the prop nut
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
Aircraft will not Bind (during binding) to transmitter	Transmitter 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, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt binding again
	The bind plug is not installed correctly in the bind port	Install bind plug in bind port and bind the aircraft to the transmitter
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
	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
Aircraft will not connect (after binding) to transmitter	Transmitter too near aircraft during connecting 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, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt connecting again
	Bind plug left installed in bind port	Rebind transmitter to the aircraft and remove the 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 aircraft using different DSM protocol	Bind aircraft to transmitter
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
	Transmitter is not bound correctly or the incorrect airplanes was selected	Re-bind or select correct airplanes in transmitter
	Flight battery charge is low	Fully recharge flight battery
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
Controls reversed	Transmitter settings are reversed	Perform the Control Direction Test and adjust the controls on transmitter appropriately
Motor 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 low	Use recommended battery

Replacement Parts

Part #	Description
EFL0351	Right Wing: Slow Ultra Stick
EFL0352	Left Wing: Slow Ultra Stick
EFL0353	Wing Joiner: Slow Ultra Stick
EFL0354	Wing Tube: Slow Ultra Stick
EFL0355	Thumb Screw Set: Slow Ultra Stick
EFL0356	Front Wing Support: Slow Ultra Stick
EFL0357	Rear Wing Support: Slow Ultra Stick
EFL0358	Mounting Tray: Slow Ultra Stick
EFL0359	Motor Mount: Slow Ultra Stick
EFL0360	Rubber Spinner: Slow Ultra Stick
EFL0361	Propeller Adapter: Slow Ultra Stick
EFL0362	Landing Gear Set: Slow Ultra Stick
EFL0363	Control Horn Set: Slow Ultra Stick
EFL0364	Control Link Set: Slow Ultra Stick
EFL0365	Wire Retainer Set:: Slow Ultra Stick
EFL0366	Fuselage: Slow Ultra Stick
EFL0367	Fuselage Joiner: Slow Ultra Stick
EFL0368	Vertical Stabilizer: Slow Ultra Stick
EFL0369	Horizontal Stabilizer: Slow Ultra Stick
EFL0370	Servo Arm Set: Slow Ultra Stick
EFL0371	Decal Sheet: Slow Ultra Stick
EFL0372	Hardware Set: Slow Ultra Stick
EFLP1155	Propeller: 11 X 5.5
SPMSA345SL	A345SL 9g Sub-Micro Servo; 60mm L
SPMXAE30D	Avian 30A Brushless Smart Lite ESC
SPMXAM2800	Brushless Motor: 3513-1100Kv, 14-Pole
SPMAR630	AR630 DSMX 6-Channel AS3X & SAFE Receiver

Recommended Items

Part #	Description
SPMR6655	DX6e 6 Ch Transmitter Only
SPMX133S30	1300mAh 3S 11.1V Smart G2 30C;
SPMXC2050	Smart S155 G2 AC 1x55W Charger

Optional Parts

Part #	Description
SPMR8105	DX8e 8 Ch Transmitter Only
SPMR6775	NX6 6 Ch Transmitter Only
SPMR8200	NX8 8 Ch Transmitter Only
SPMXC2080	Smart S1100 G2 AC Charger, 1x100W
SPMX22003S30	2200mAh 3S 11.1V Smart 30C; IC3
SPMX223S30	2200mAh 3S 11.1V Smart G2 30C;
APC11055E	Electric Propeller, 11 x 5.5E
SPMSA345SL	A345 9g Sub-Micro Digital Servo; 60mm Lead
EFL0370	Servo Arm Set: Slow Ultra Stick

Hardware

Quantity	Item	Use
4	M3 x 6mm machine screw	To secure the motor to the motor mount
1	M2 x 6mm machine screw	To secure the ESC mount to the fuselage
1	M3 x 22mm thumb screw	To secure the horizontal stablizer to the fuselage
3	2.3 x 4.5mm self-tapping screw	To secure servo arm to servo
4	2 x 8mm self-tapping screw	To secure control horn to control surface
2	M3 x 22mm machine thumb screw	To secure wing to fuselage
1	M3 x 6mm machine screw	To secure spinner retaining washer
1	M6 propeller screw nut	To secure the propeller to propeller shaft
4	M2 x 7mm machine screw	To secure the propeller adapter to the motor
1	M2 x 14mm machine screw	To secure the motor mount to the fuselage
1	M2 x 14mm machine screw	To secure the battery mount to the fuselage
1	M2 x 14mm machine screw	To secure the wing front mount to the fuselage
1	M2 x 14mm machine screw	To secure the wing rear mount to the fuselage
1	M2 x 6mm machine screw	To secure the receiver mount to the fuselage
6	2 x 8mm self-tapping screw	To secure the servos to the fuselage
4	M2 x 14mm machine screw	To secure the two halves of the fuselage together
1	12.8mm x 500mm	Wing tube
2	Diameter 85mm, Width 17mm, Axle 3mm	Main wheel
1	Diameter 21mm, Width 7mm, Axle 1.3mm	Tail wheel

Important Federal Aviation Administration (FAA) Information

Use the QR code below to learn more about the **Recreational UAS Safety Test (TRUST),** as was introduced by the 2018 FAA Reauthorization Bill. This free test is required by the FAA for all recreational flyers in the United States. The completed certificate must be presented upon request by any FAA or law enforcement official.

If your model aircraft weighs more than .55lbs or 250 grams, you are required by the FAA to register as a recreational flyer and apply your registration number to the outside of your aircraft. To learn more about registering with the FAA, use the QR code below.

AMA National Model Aircraft Safety Code

Academy of Model Aeronautics
National Model Aircraft Safety Code

Effective January 1, 2018
A model aircraft is a non-human-carrying device capable of sustained flight within visual line of sight of the pilot or spotter(s). It may not exceed limitations of this code and is intended exclusively for sport, recreation, education and/or competition. All model flights must be conducted in accordance with this safety code and related AMA guidelines, any additional rules specific to the flying site, as well as all applicable laws and regulations.
As an AMA member I agree:

- I will not fly a model aircraft in a careless or reckless manner.
- I will not interfere with and will yield the right of way to all human-carrying aircraftusing AMA's See and Avoid Guidance and a spotter when appropriate.
- I will not operate any model aircraft while I am under the influence of alcohol or any drug that could adversely affect my ability to safely control the model.
- I will avoid flying directly over unprotected people, moving vehicles, and occupied structures.
- I will fly Free Flight (FF) and Control Line (CL) models in compliance with AMA's safety programming.
- I will maintain visual contact of an RC model aircraft without enhancement other than corrective lenses prescribed to me. When using an advanced flight system, such as an autopilot, or flying First-Person View (FPV), I will comply with AMA's Advanced Flight System programming.
- I will only fly models weighing more than 55 pounds, including fuel, if certified through AMA's Large Model Airplane Program.
- I will only fly a turbine-powered model aircraft in compliance with AMA's Gas Turbine Program.
- I will not fly a powered model outdoors closer than 25 feet to any individual, except for myself or my helper(s) located at the flightline, unless I am taking off and landing, or as otherwise provided in AMA's Competition Regulation.
- I will use an established safety line to separate all model aircraft operations from spectators and bystanders.

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, (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/	2904 Research 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.de	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

FCC Information

FCC ID: BRWSPMAR630

Supplier's Declaration of Conformity

EFL Slow Ultra Stick Manual 1.2M BNF Basic(EFL0350)

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.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to 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 into 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.

Horizon Hobby, LLC
2904 Research Rd.,
Champaign, IL 61822
Email: compliance@horizonhobby.com
Web: HorizonHobby.com

IC Information

IC: 6157A-SPMAR630
CAN ICES-3 (B)/NMB-3(B)

This device contains license-exempt transmitter(s)/receivers(s) that comply with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following 2 conditions:

1. This device may not cause interference.
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:
EFL Slow Ultra Stick Manual 1.2M BNF Basic (EFL0350); Hereby, Horizon Hobby, LLC declares that the device is in compliance with the following: EU Radio Equipment Directive 2014/53/EU, RoHS 2 Directive 2011/65/EU, RoHS 3 Directive - Amending 2011/65/EU Annex II 2015/863

The full text of the EU declaration of conformity is available at the following internet address: https://www.horizonhobby.com/content/support-render-compliance.

Wireless Frequency Range and Wireless Output Power:
2402-2478MHz
4.65dBm

WEEE NOTICE:

This appliance is labeled in accordance with European Directive 2012/19/EU concerning waste of electrical and electronic equipment (WEEE). This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

EU Manufacturer of Record:
Horizon Hobby, LLC
2904 Research Road
Champaign, IL 61822 USA

EU Importer of Record:
Horizon Hobby, GmbH
Hanskampring 9
22885 Barsbüttel Germany

Australia/New Zealand:

E328

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