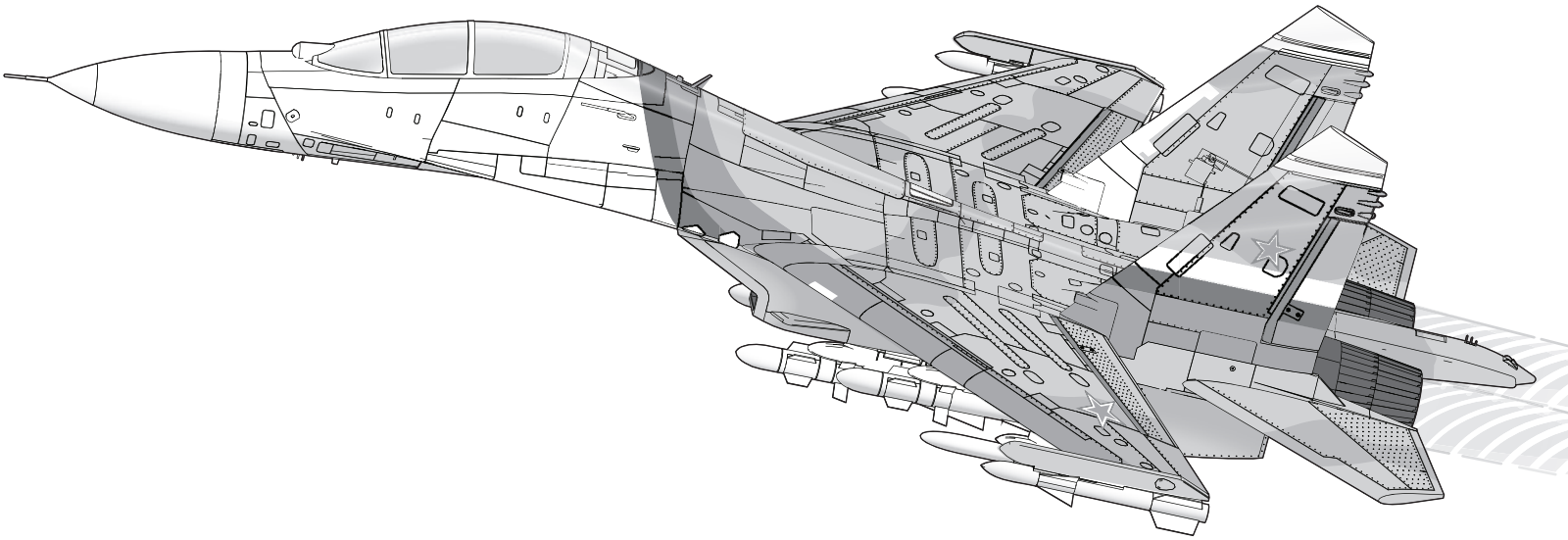
HORIZON HOBBY

E-flite
ADVANCING ELECTRIC FLIGHT

Su-30

70mm Twin EDF



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

SAFE®

SAFE® Select Technology, Optional Flight Envelope Protection

Plug-N-Play®

BNF® BASIC

NOTICE

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

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

Safety Precautions and Warnings

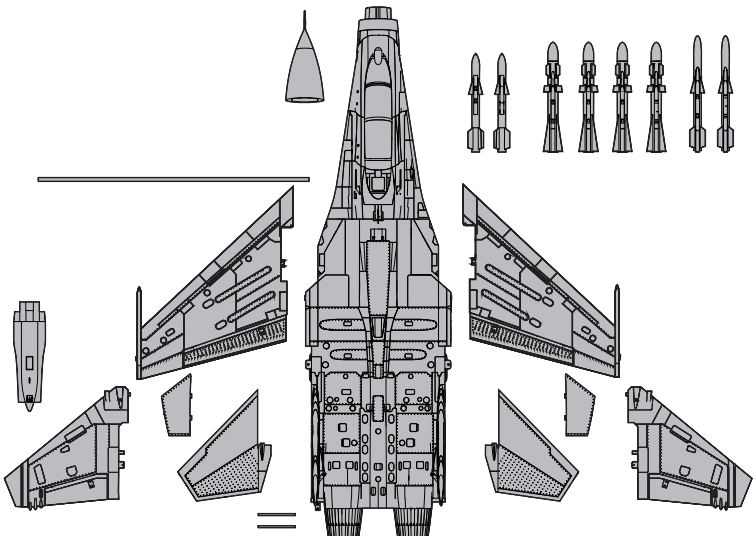
As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

- 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.

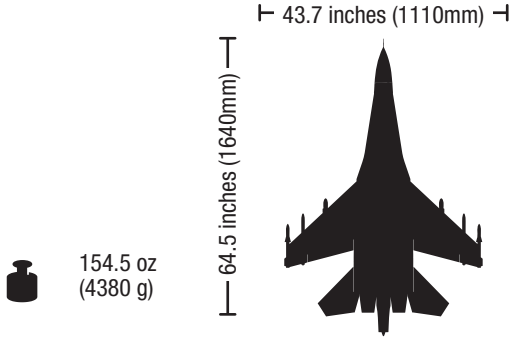
Quick Start Information			
Transmitter Setup	1. Blank (Acro) Model		
	2. Wing Type: 1 Aileron, 1 Flap		
	3. Servo Reversing: Flaps Reversed, All Others Normal		
	4. Travel Adjust (All Surfaces): 100%		
Dual Rates		**High Rate**	
	Aileron	▲ = 15mm ▼ = 15mm	
	Elevator	▲ = 40mm ▼ = 34mm	
	Rudder	▶ = 28mm ◀ = 28mm	
EXPO (Soft center)		**High Rate**	**Low Rate**
	Aileron	10%	5%
	Elevator	10%	5%
	Rudder	10%	5%
Center of Gravity (CG)	115–150mm back from the leading edge, measured at the wing root		
Flight Timer Setting	3.5 minutes		

Box Contents



Specifications

	BNF BASIC	PNP PLUG-N-PLAY
Motor: 2860-1850Kv Brushless motor (EFL1850)	**Included**	**Included**
Fan Unit: (2) 70mm Ducted Fan Unit (EFLA7012DF)	**Installed**	**Installed**
ESC: 80-A Brushless ESC Opto (No BEC) (EFLA1070EC5)	**Installed**	**Installed**
Servos: 9g Servo Metal Gear (SPMA380) 9g Servo Metal Gear Reverse (SPMA380R) 13g Servo Metal Gear (SPMSA450) 13g Servo analog Metal Gear Reverse (SPMSA450R)	**Installed**	**Installed**
Retracts: Nose Gear (EFLG321N), Main Gear Left (EFLG321L) and Main Gear Right (EFLG321R)	**Installed**	**Installed**
Receiver: Spektrum™ 6-Channel Sport Receiver (SPMAR636)	**Installed**	**Required to Complete**
Recommended Battery: 5000mAh 22.2V 6S Smart IC3™ 50C Li-Po (SPMX50006S50)	**Required to Complete**	**Required to Complete**
Recommended Battery Charger: 6-cell Li-Po battery balancing charger	**Required to Complete**	**Required to Complete**
Recommended Transmitter: Full-Range 2.4GHz with Spektrum™ DSM2®/DSMX® technology with programmable mixing and adjustable dual rates	**Required to Complete**	**Required to Complete**



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

RECEIVER BIND INFORMATION	
Channels	6
Frequency	2404 – 2476 MHz
Compatibility	DSM2 and DSMX

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Transmitter Setup (BNF)

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

If your transmitter allows it, enable the throttle cut feature. Always engage throttle cut before approaching the aircraft.

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.

Expo

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

Computerized Transmitter Setup (DX6i, DX6e‡, DX6‡, DX7, DX7S, DX8, DX9, DX10t, DX18, DX20 and iX12)	
Start all transmitter programming with a blank ACRO model (do a model reset), then name the model.	
Set Dual Rates to:	HIGH 100%
	LOW 70%
Set Servo Travel to:	100%
DX6i	1. Go to the SETUP LIST MENU
	2. Set MODEL TYPE: ACRO
	3. Go to ADJUST LIST MENU
	4. Set FLAPS: Norm ↑100 Flap* LAND ↓ 50 Flap*
DX7S DX8	1. Go to the SYSTEM SETUP
	2. Set MODEL TYPE: AIRPLANE
	3. Set WING TYPE: 1 AIL 1 FLAP
	4. Go to the FUNCTION LIST
	5. Set SERVO SETUP: Reverse Flap
	6. Set FLAP SYSTEM: Choose Flap NORM: 100% FLAP* MID: 0% FLAP* LAND: –100% FLAP*
DX6e‡ DX6 (Gen2)‡ DX7 (Gen2) DX8 (Gen2) DX9 DX10t DX18 DX20 iX12†	1. Go to the SYSTEM SETUP (Model Utilities)†
	2. Set MODEL TYPE: AIRPLANE
	3. Set AIRCRAFT TYPE (Model Setup, Aircraft Type)†: WING: 1 AIL 1 FLAP
	4. Go to the FUNCTION LIST (Model Adjust)†
	5. Set SERVO SETUP: Reverse Flap
	6. Set FLAP SYSTEM: SELECT SWITCH D: POS 0: 100% FLAP* POS 1: 0% FLAP* POS 2: -100% FLAP*

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

‡ The settings provided above for the DX6 and DX6e do not allow for the use of a SAFE Select switch. To use a SAFE Select switch on these systems see the section below for transmitter setup and operation information.

SAFE® Select Switch Designation

SAFE® Select technology can be easily assigned to any open switch (2 or 3 position) on your transmitter. With this feature, you have the flexibility to enable or disable the technology while in flight.

IMPORTANT: Before assigning your desired switch, ensure that the travel for that channel is set at 100% in both directions and the aileron, elevator, rudder and throttle are all on high rate with the travel at 100%. Turn throttle hold OFF if it is programmed in the transmitter.

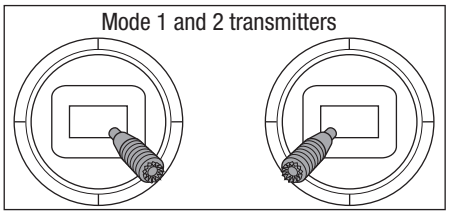
⚠ **CAUTION:** Keep all body parts well clear of the rotor, intakes and exhaust tube and keep the aircraft securely restrained in case of accidental throttle activation.

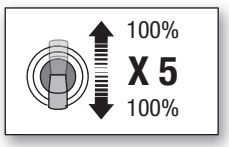
Assigning a switch

1. Bind the aircraft correctly to activate SAFE Select. This will allow the system to be assigned to a switch.
2. Hold both transmitter sticks to the inside bottom corners and toggle the desired switch 5 times (1 toggle = full up and down) to assign that switch. 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 if desired.

TIP: SAFE Select is assignable on any unused Channels 5–9.





Using SAFE® Select With the DX6 and DX6e Transmitters With a 6 Channel Aircraft

The SAFE Select switch must be assigned to the Flap switch (switch D) BEFORE proceeding to the Transmitter Setup and should start from a blank (reset) model. Failure to assign the SAFE switch prior to programming the other model functions may prevent the SAFE switch from assigning correctly. Users of the DX6 and DX6e will have the SAFE Select functionality linked to the flaps. The values given in the Transmitter Setup table turn SAFE on when the speed brake is fully deployed. SAFE is off when the speed brake is not fully deployed.

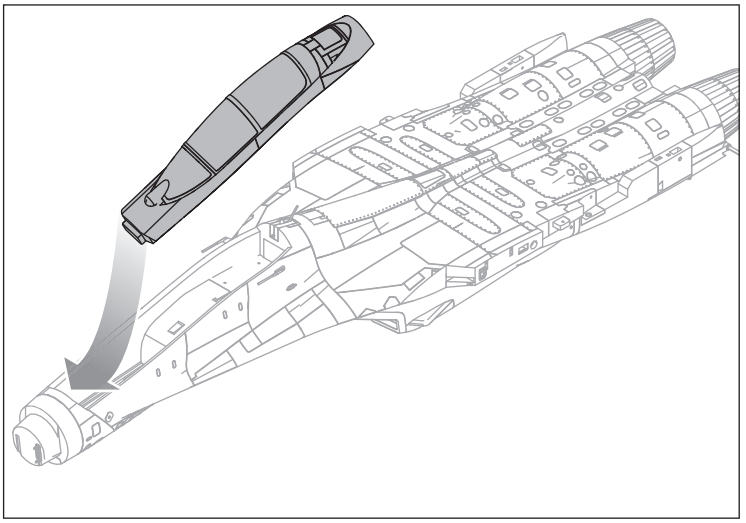
IMPORTANT: When programming the Flap System function in the transmitter setup of the DX6 and DX6e, set the Speed value to Norm. Adding any delay to the deployment of the flaps will also delay the activation of SAFE.

DX6 and DX6e Transmitter Setup for SAFE® Select Operation	
Start all transmitter programming with a blank ACRO model (do a model reset), then name the model.	
Set Dual Rates to:	HIGH 100%
	LOW 70%
Set Servo Travel to:	100%
DX6e DX6 (Gen2)	1. Go to the SYSTEM SETUP
	2. Set MODEL TYPE: AIRPLANE
	3. Set AIRCRAFT TYPE: WING: 1 AIL 1 FLAP
	4. Go to the FUNCTION LIST
	5. Set SERVO SETUP: Reverse Flap
	See the SAFE® Select Switch Designation section BEFORE setting the flap values. 6. Set FLAP SYSTEM: SELECT SWITCH D: POS 0: 100% FLAP* POS 1: 0% FLAP* POS 2: -100% FLAP*

Model Assembly

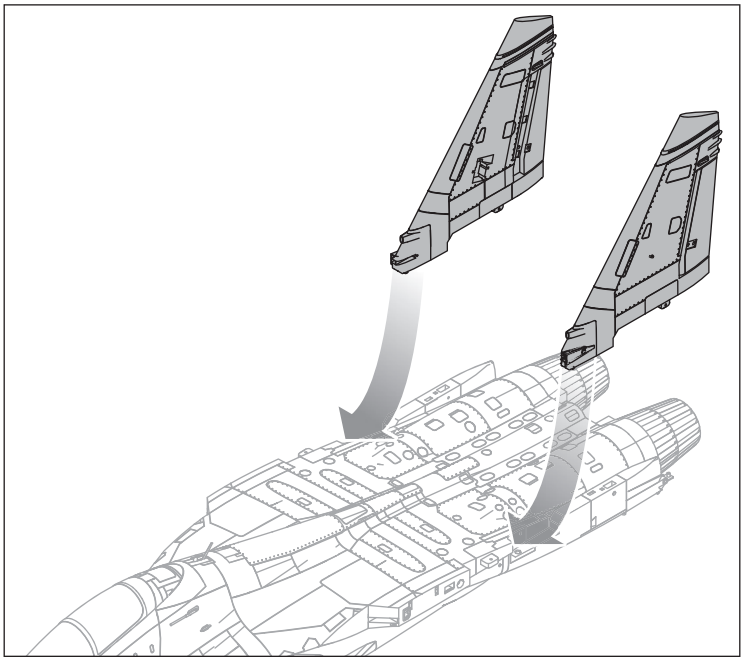
Canopy Installation

1. Slide the front of canopy into the canopy pocket.
2. Press the backside of the canopy down until it clicks into place.



Vertical Fin Installation

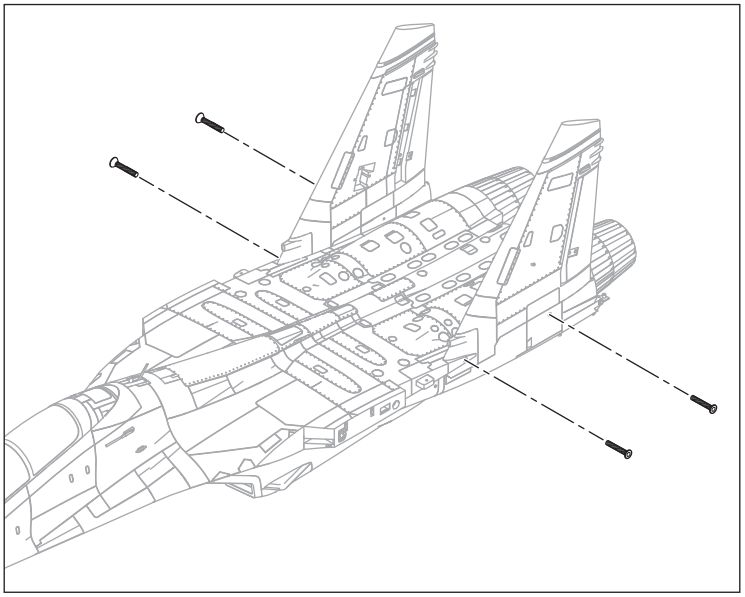
1. Connect the rudder servo connector to the extension in the fuselage labeled RUDD. Secure the connection with a servo connector clip (SPMA3054, not included) or wrap with tape. Feed the excess servo wire into the fuselage.
2. Insert the fronts of the vertical fins into the holes in the fuselage and rotate the fins down until it they are fully seated on the fuselage.
3. Secure each fin with two M3 x 16 mm flathead screws through rear fin braces, as shown. Do not over tighten the screws.



Model Assembly (Continued)

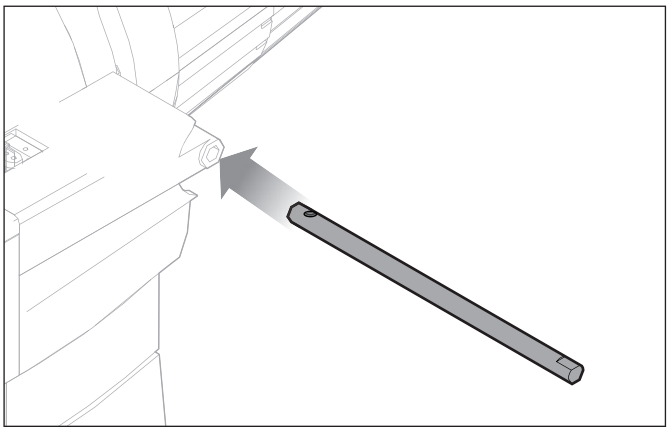
Vertical Fin Installation (Continued)

1. Secure each fin with two M3 x 16 mm flathead screws through rear fin braces, as shown. Do not over tighten the screws.

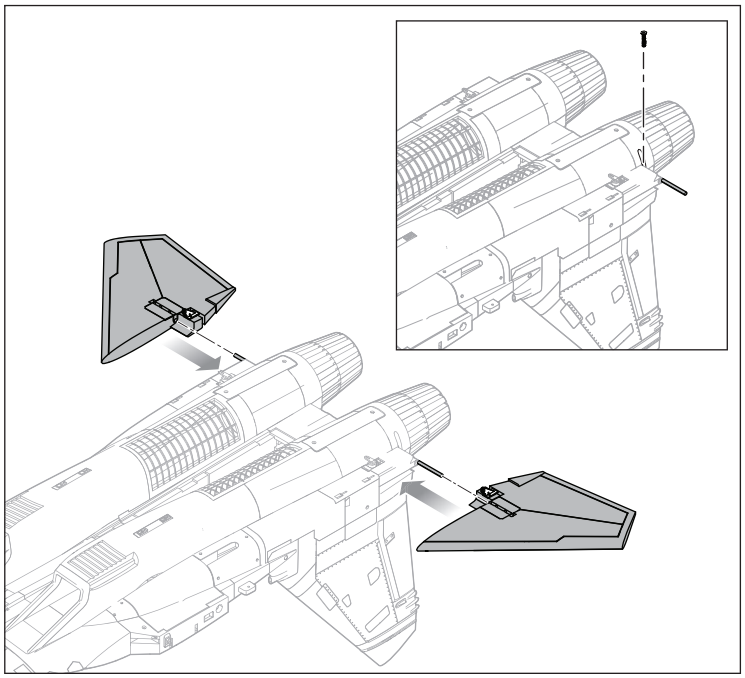


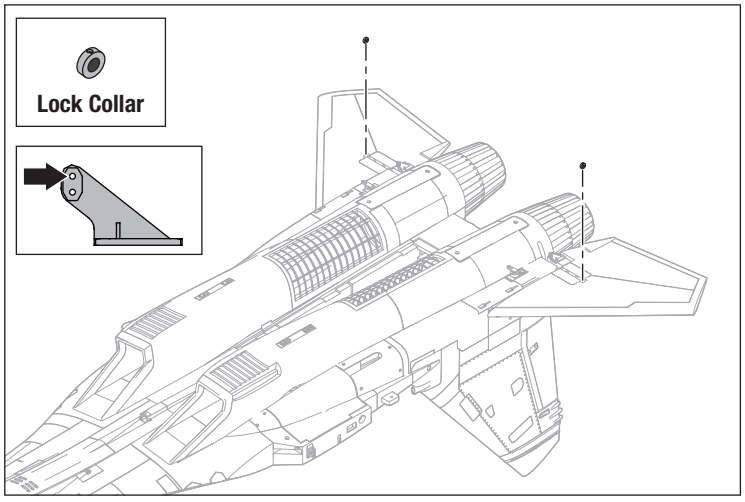
Horizontal Tail Installation

1. With the bottom of the fuselage facing up, slide the threaded hole end of the torque rod into the hole at the rear of the fuselage. Ensure the flat spot on the opposite end of the torque rod is facing up.



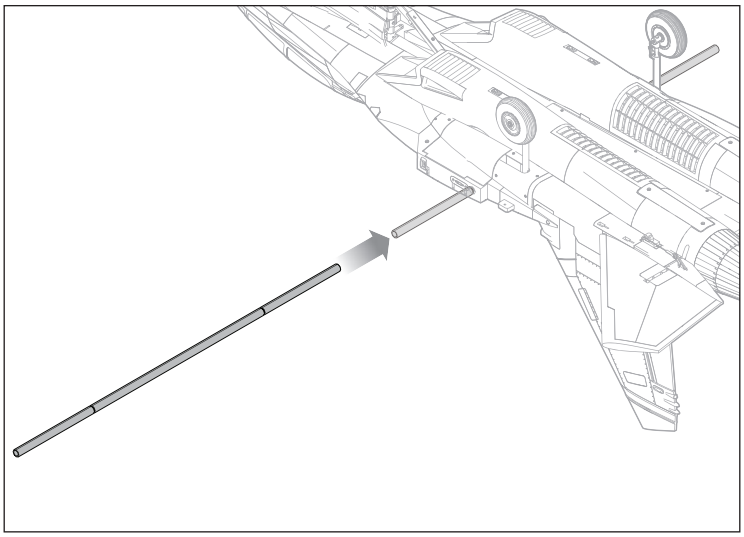
2. Secure the torque rod to the fuselage with a M3 x 10 mm flathead screw.
3. Slide the right horizontal stabilizer over the torque rod. Ensure the stabilizer is on the correct side. Do not fully seat the stabilizer to the fuselage, leave about one inch of space from the fuselage.
4. Place a lock collar in the pocket on the bottom side of horizontal stabilizer. Ensure that the set screw is facing up.
5. Now, fully seat the horizontal stabilizer onto the torque rod. This will allow the lock collar to slide onto the end of the torque rod.
6. Secure the horizontal stabilizer's into place by tightening the lock collar's set screw.
7. Repeat steps 1-4 for the left horizontal stabilizer.
8. Connect the servo linkage to outermost hole on the control horn for the left and right horizontal stabilizers.

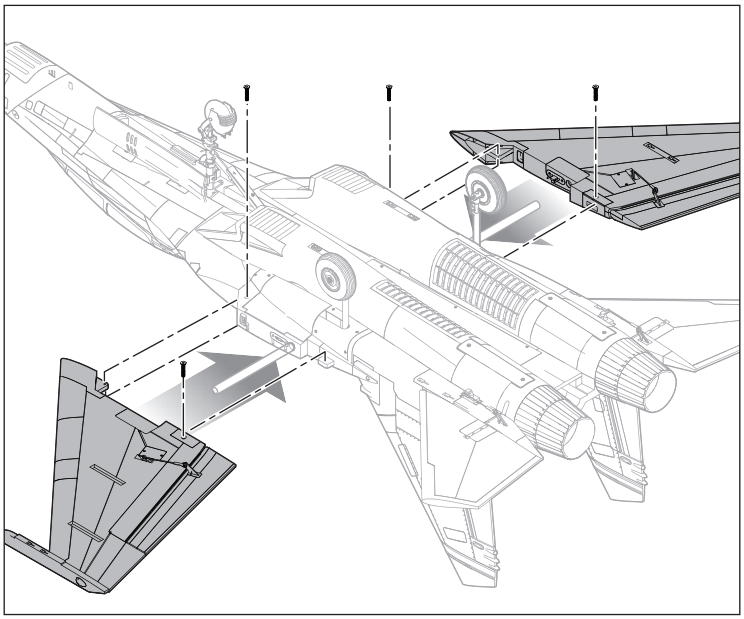




Wing Installation

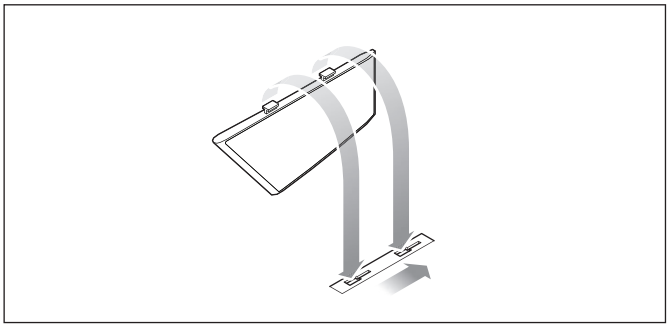
1. Center the wing tube in the tube socket in the fuselage.
2. Slide the right wing over the tube, ensuring the tube slides fully into the wing socket.
3. Align the servo connectors at the rear of the wing with the connectors in the fuselage, and ensure the fuselage alignment pins slide into the holes in the wing.
4. When fully seated against the fuselage, secure the wing with two M3 x 16mm flathead screws through the bottom of the wing, into the fuselage alignment pins.
5. Repeat steps 2-4 for the left wing.





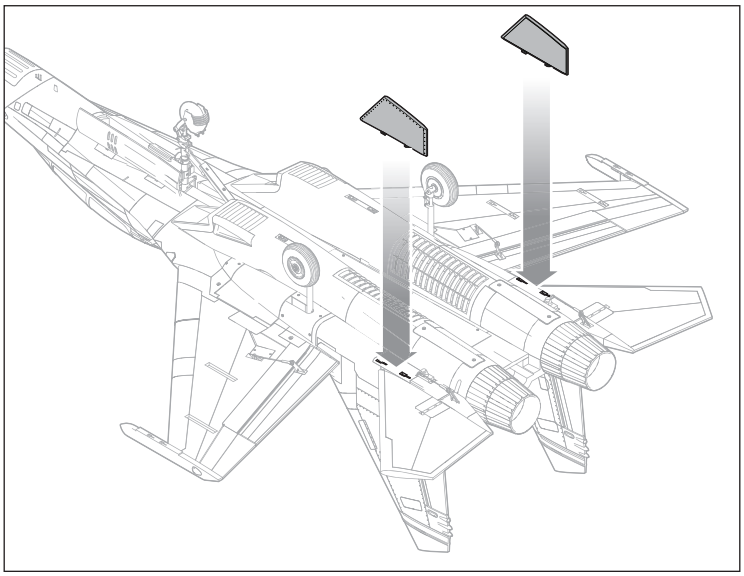
Ventral Fin Installation

1. Insert the tabs of the ventral fins in the enlarged end of the mounting point slots. Ensure the plastic side of the ventral fin face out.



2. Slide toward the back of the aircraft to lock the tabs in the slots.

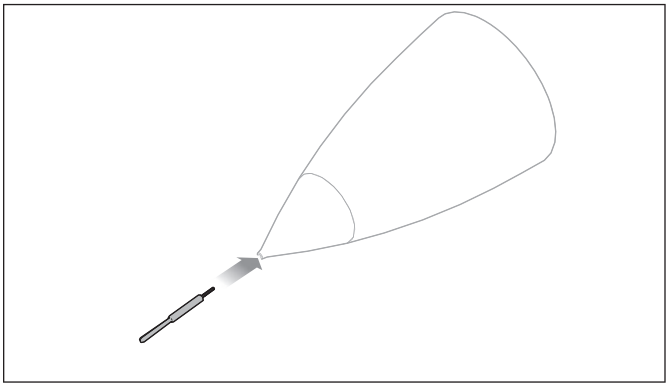
To remove the ventral fins, slide forward and pull the tabs out of the mounting slots.

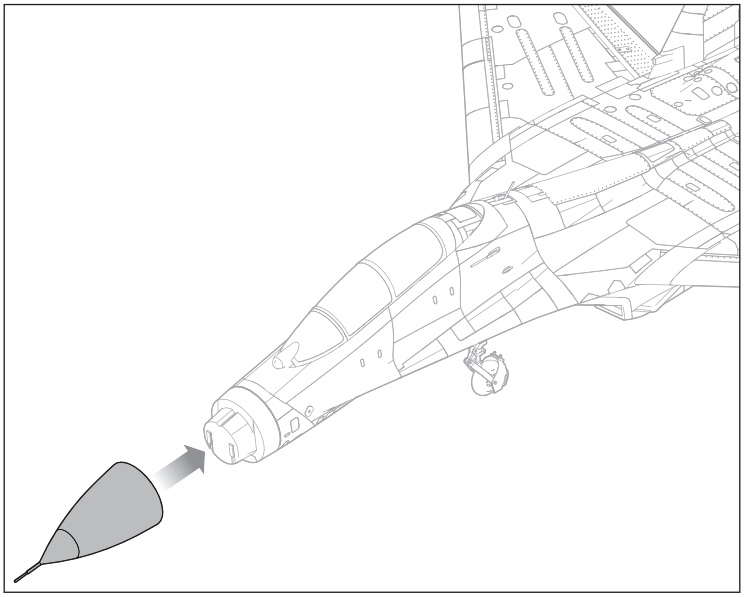


Nose Cone Installation

1. Align the nose cone with the front of the fuselage and slide the nose cone into place. Magnets will secure the nose cone to the fuselage.

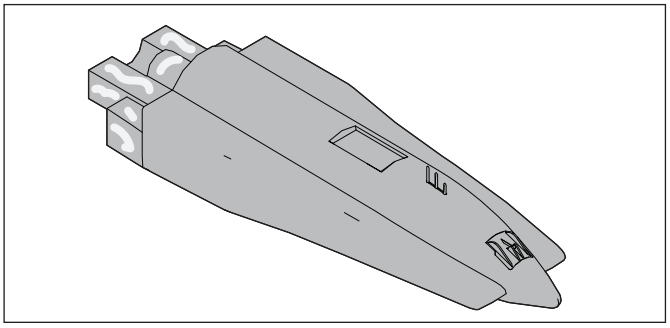
TIP: The pitot tube on the nose cone can be easily removed if desired, simply twist and un-thread until removed.



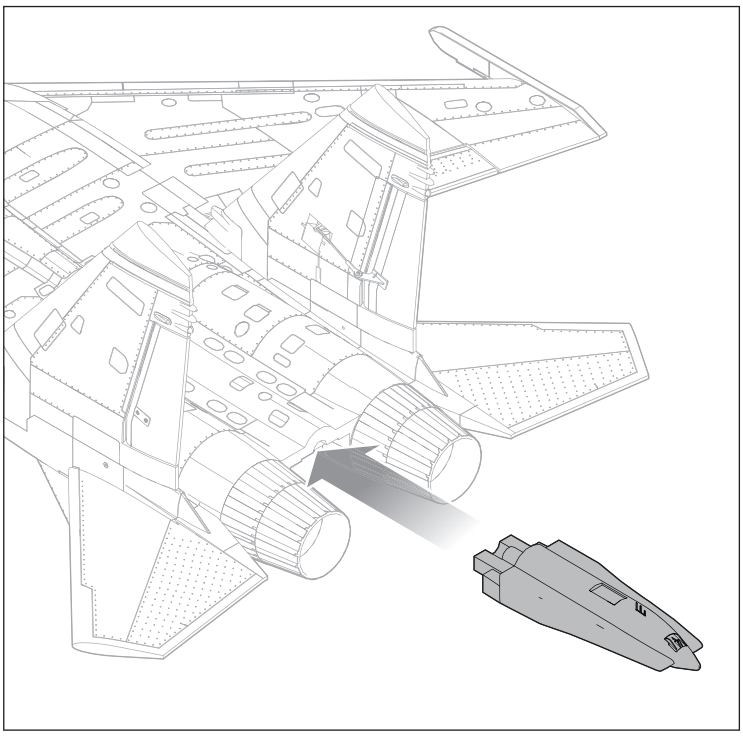


Tail Cone Installation

1. Carefully apply thin CA to the tail cone.



2. Align the tail cone with the tail of the fuselage and slide the tail cone into position.



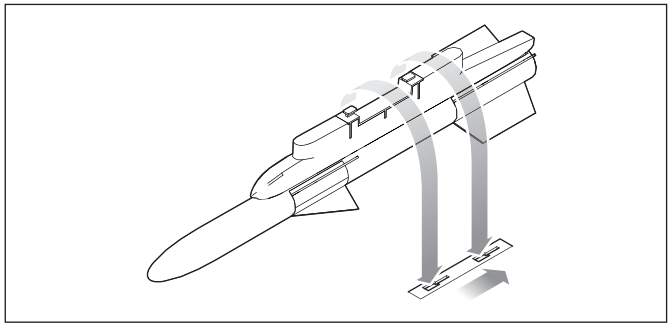
Optional Scale Missiles Installation

The included optional scale missiles are easily installed and removed without the use of tools.

- The missile are installed on the inner wing and fuselage mounting points.

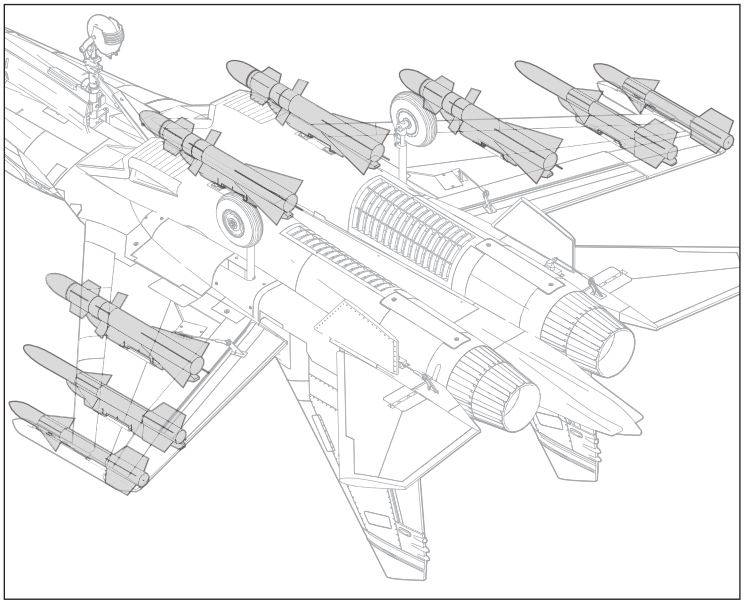
To install the missiles:

1. Insert the tabs of the missiles in the enlarged end of the mounting point slots.



2. Slide toward the back of the aircraft to lock the tabs in the slots.

To remove the missiles, slide them forward and pull the tabs out of the mounting slots.



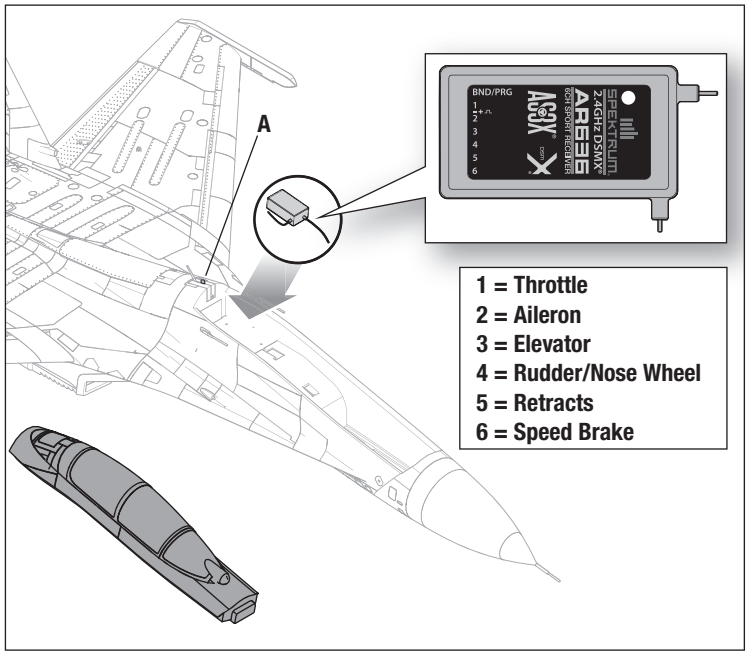
PNP Receiver Selection and Installation

The recommended receiver for this aircraft is the Spektrum AR636. If you choose to install a different receiver, ensure that it is at least a 6-channel full range (sport) receiver. Refer to the manual of your chosen receiver for correct installation and operation instructions.

AR636 Installation

1. Slide the canopy latch (**A**) back and lift the back of the canopy to remove the canopy from the fuselage.
2. Attach the appropriate control surfaces to the their respective ports on the receiver using the table at the right.
3. Using double-sided servo tape,(not included) mount the receiver to the flat area behind the battery compartment, as shown. The receiver should be mounted in the orientation shown, parallel to the length of the fuselage, with the label facing up and the servo ports facing the rear of the aircraft. The orientation of the receiver is critical for all AS3X® and SAFE® technology setups.

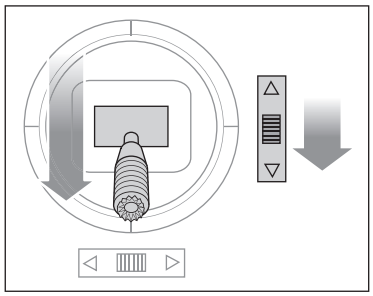
CAUTION: Incorrect installation of the receiver could cause a crash.

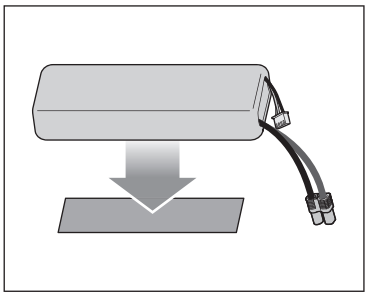


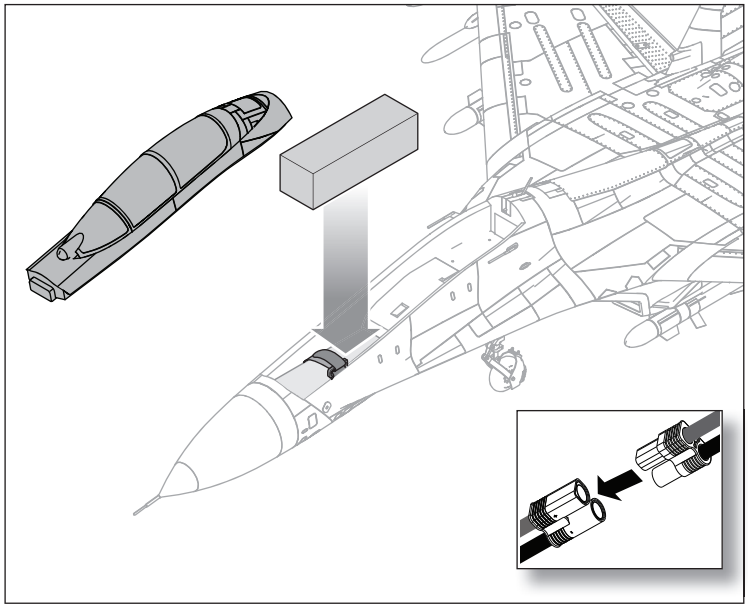
Battery Installation and ESC Arming

Battery Selection

We recommend a 22.2V 5000–7000mAh 30–100C 6S LiPo battery with EC5™ or IC5™ connector for standard operation. If using a different battery, the battery should be of similar capacity, dimensions and weight to fit in the fuselage. Always be sure the model balances at the recommended CG with the battery chosen.







1. Lower the throttle to the lowest setting.
2. Power on the transmitter and wait 5 seconds.
3. Apply the loop side (soft side) of the hook and loop tape to the bottom of your battery.
4. Slide the canopy latch back and lift the back of the canopy to remove.
5. Install the fully charged battery in the battery compartment as shown. See the Adjusting the Center of Gravity instructions for more information.
6. Secure the flight battery with the hook and loop strap.
7. Connect the ESC to the battery power lead EC5™ or IC5™ connector, noting the correct polarity. The ESC will emit two sets of audible tones in succession indicating the programming status.
   - The first set of tones indicates the number of cells in the connected LiPo battery pack.

     6 rapid tones = 6
   - The second set of tones indicates the brake status. One tone indicates brake "ON" and two tones indicates brake "OFF".

NOTICE: Connecting the battery to the ESC with incorrect polarity will damage the ESC and void the warranty.

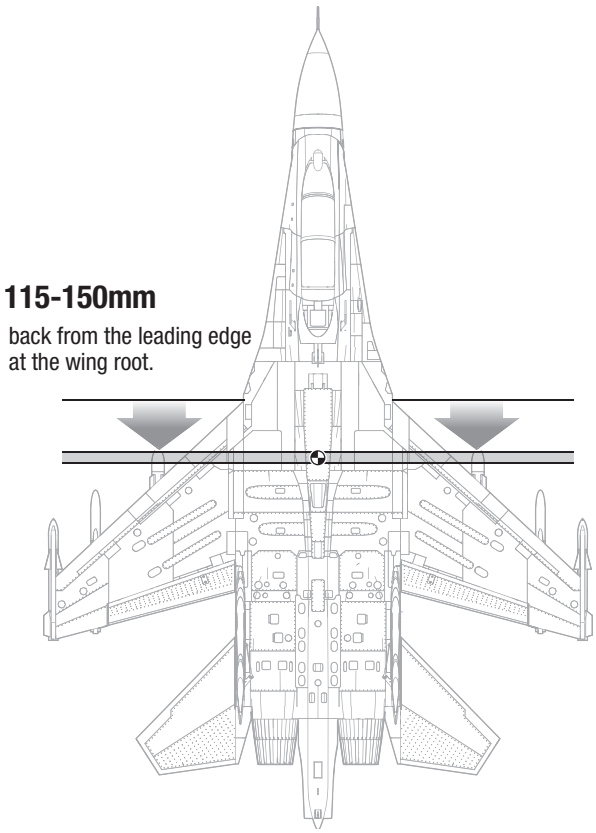
8. The ESC is now ready for use.*
9. Reinstall the canopy hatch.

* While additional programming of the ESC is not necessary to operate your aircraft, programming options are available. Visit www.horizonhobby.com for complete instructions on programming the included ESC.

Center of Gravity (CG)

The center of gravity location is measured from the leading edge of the wing at the root with the landing gear down. The CG location is adjusted by moving the battery pack forward or backward in the battery compartment.

NOTICE: Install the battery in the aircraft, but do not arm the ESC while checking the CG. Personal injury may result.

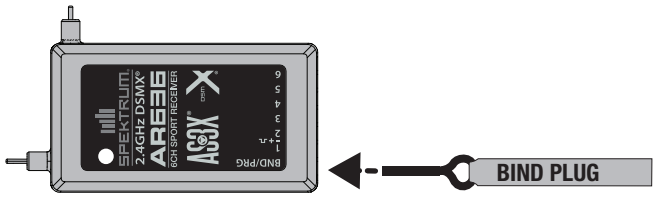


Battery Installation and ESC Arming

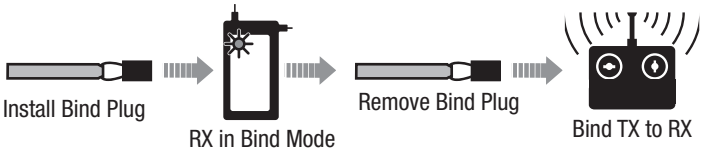
This product requires an approved Spektrum™ DSM2®/DSMX® compatible transmitter. Visit www.bindnfly.com for a complete list of approved transmitters. The aircraft has an optional SAFE Select feature, which can be switched ON or OFF easily by binding in a specific manner as described below.

IMPORTANT: Before binding a transmitter, read the Transmitter Setup section of this manual to ensure that your transmitter is properly programmed for this aircraft.

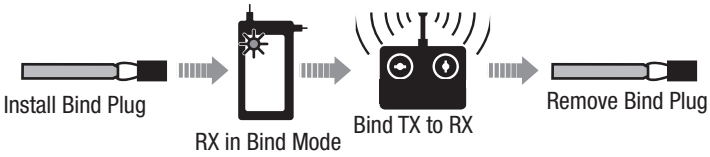
Bind Plug Installation



Switching ON SAFE Select Binding Sequence



Switching OFF SAFE Select Binding Sequence



Binding Procedure / Switching ON SAFE Select

IMPORTANT: The included AR636 receiver has been programmed for operation specifically for this aircraft. Refer to the receiver manual for correct setup if the receiver is replaced or is used in another aircraft.

⚠ **CAUTION:** When using a Futaba® transmitter with a Spektrum DSM® module, you must reverse the throttle channel and rebind. Refer to your Spektrum module manual for binding and failsafe instructions. Refer to your Futaba transmitter manual for instructions on reversing the throttle channel.

1. Make sure the transmitter is powered off.
2. Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) or to low positions (throttle, throttle trim).*
3. Install a bind plug in the receiver bind port.
4. Place the aircraft level on its wheels, then connect the flight battery to the ESC. The ESC will produce a series of sounds. Six flat tones followed immediately by two ascending tones confirm that the LVC is set correctly for the ESC. The orange bind LED on the receiver will begin to flash rapidly.
5. **Remove the bind plug from the bind port.**
6. Take three steps away from the aircraft /receiver and then power ON the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for specific binding instructions.
   IMPORTANT: Do not to point the transmitter's antenna directly at the receiver while binding.
   IMPORTANT: Keep away from large metal objects while binding.
7. The receiver is bound to the transmitter when the orange bind light on the receiver stays orange. The ESC will produce a series of sounds. Six flat tones followed immediately by two ascending tones. The tones indicate the ESC is armed, provided the throttle stick and throttle trim are low enough to trigger arming.

IMPORTANT: Once bound, the receiver will retain its bind settings for that transmitter until it has been intentionally changed, even when power is cycled ON and OFF. Repeat the binding process as necessary.

SAFE Select ON Indication

Every time the receiver is powered ON the surfaces will cycle back and forth **twice** with a slight pause at neutral position to indicate that SAFE Select is switched ON.

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

Binding Procedure / Switching OFF SAFE Select

IMPORTANT: The included AR636 receiver has been programmed for operation specifically for this aircraft. Refer to the receiver manual for correct setup if the receiver is replaced or is used in another aircraft.

⚠ **CAUTION:** When using a Futaba® transmitter with a Spektrum DSM® module, you must reverse the throttle channel and rebind. Refer to your Spektrum module manual for binding and failsafe instructions. Refer to your Futaba transmitter manual for instructions on reversing the throttle channel.

1. Make sure the transmitter is powered off.
2. Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) or to low positions (throttle, throttle trim). *
3. Install a bind plug in the receiver bind port.
4. Place the aircraft level on its wheels, then connect the flight battery to the ESC. The ESC will produce a series of sounds. Six flat tones followed immediately by two ascending tones confirm that the LVC is set correctly for the ESC.
   The orange bind LED on the receiver will begin to flash rapidly. DO NOT remove the bind plug at this time.
5. Take three steps away from the aircraft /receiver and then power ON the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for specific binding instructions.
   IMPORTANT: Do not to point the transmitter's antenna directly at the receiver while binding.
   IMPORTANT: Keep away from large metal objects while binding.
6. The receiver is bound to the transmitter when the orange bind light on the receiver stays orange. The ESC will produce a series of sounds. Six flat tones followed immediately by two ascending tones. The tones indicate the ESC is armed, provided the throttle stick and throttle trim are low enough to trigger arming.
7. **Remove the bind plug from the bind port.**

IMPORTANT: Once bound, the receiver will retain its bind settings for that transmitter until it has been intentionally changed, even when power is cycled ON and OFF. Repeat the binding process as necessary.

SAFE Select OFF Indication

Every time the receiver is powered ON the surfaces will cycle back and forth **once** to indicate that SAFE Select has been switched OFF.

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

***Failsafe**

If the receiver loses transmitter communication, the failsafe will activate. When activated, failsafe moves the throttle channel to its preset failsafe position (low throttle) that was set during binding. All other channels move collectively and actively to place the aircraft in a slow descending left turn.

Dual Rates and Controls Throws

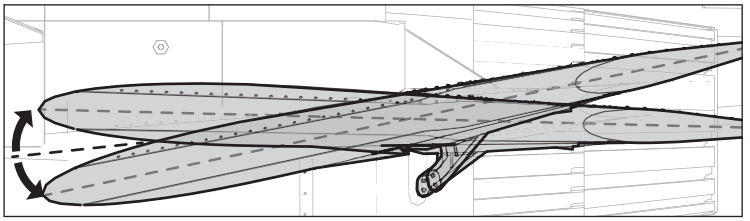
Program your transmitter to set the rates and control throws to the values given. These values have been tested and are a good starting point to achieve successful flight.

After flying, you may choose to adjust the values for the desired control response.

	High Rate
Aileron	▲ = 15mm ▼ = 15mm
Elevator	▲ = 40mm ▼ = 34mm
Rudder	▶ = 28mm ◀ = 28mm

Full Flying Stabilizer Control Throw Measurement

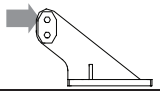
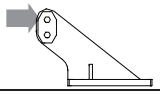
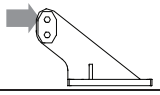
Measure the control throw for the full flying stabilizer at the leading edge of the stabilizer along the fuselage.



Control Horn and Servo arm Settings

The table to the right shows the factory settings for the control horns and servo arms. These settings, in conjunction with the low rate transmitter settings, are intended for the first time electric ducted fan (EDF) jet pilot through the intermediate level pilot to help ensure a successful flight.

Fly the aircraft at these factory settings before making changes.

	Horns	Arms
Aileron		
Elevator		
Rudder		
Nose Wheel		

Control Surface Centering

After assembly and transmitter setup, confirm that the control surfaces are centered.

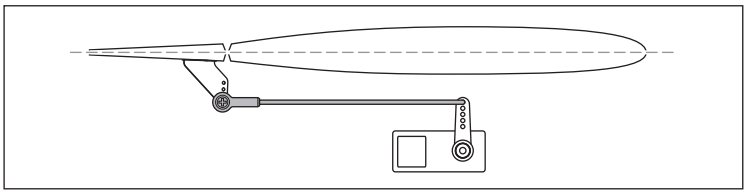
NOTICE: The model must be powered up and bound to the transmitter in AS3X mode, with the throttle left at zero. When enabled, SAFE mode is active at power up. AS3X mode is activated when the throttle is raised above 25% for the first time after being powered on.

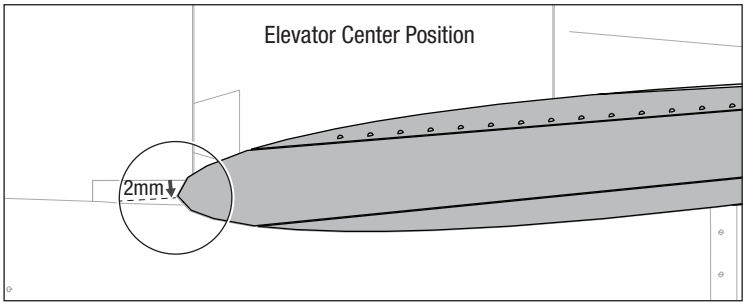
It is normal for the control surfaces to respond to aircraft movement if the aircraft is in AS3X or SAFE modes.

1. Verify the trims and subtrims on your transmitter are zero
2. Power up the model in AS3X mode and leave the throttle at zero

NOTICE: Be aware of the pushrod bottoming out in the ball linkage. Do not thread the pushrod too far into the ball link or the pushrod will damage the ball link and protrude into the area needed for the control ball.

3. Center the rudders with the tops of the vertical stabilizers. If adjustment is required, turn the ball link on the linkage to change the length between the servo arm and the control horn until the rudders are straight.
4. Center the ailerons by aligning the inboard end of the aileron with the trailing edge of the wing. Adjust the linkage length as in step 3 as necessary.
5. The full flying stabilizers need to be even with each other and centered. At neutral the leading edge of the full flying stabilizers should be aligned 2mm below the panel line in the fuselage as shown.





Control Direction Test

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

Ailerons

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

2. 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.

Elevators

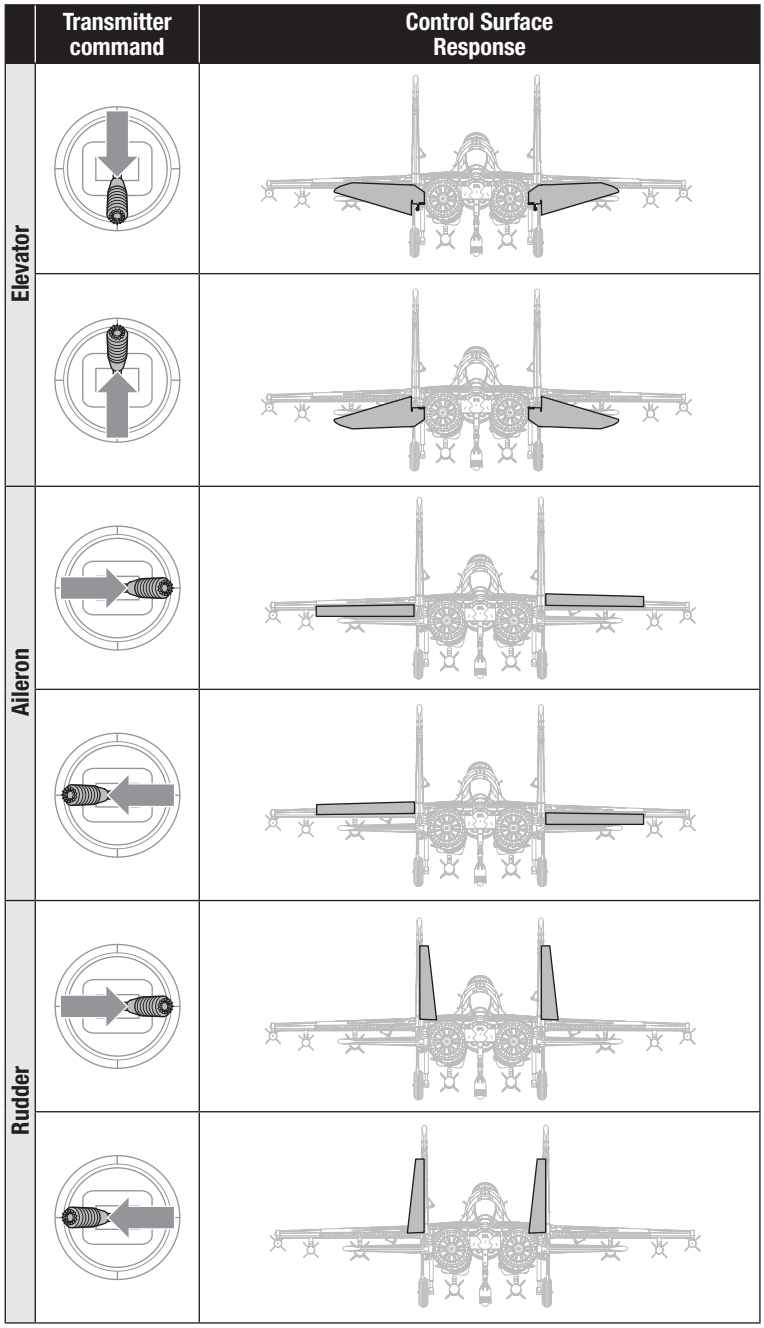
1. Pull the elevator stick back. The elevators should move up, which will cause the aircraft to pitch up.

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

Rudder

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

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



AS3X Control Direction Test

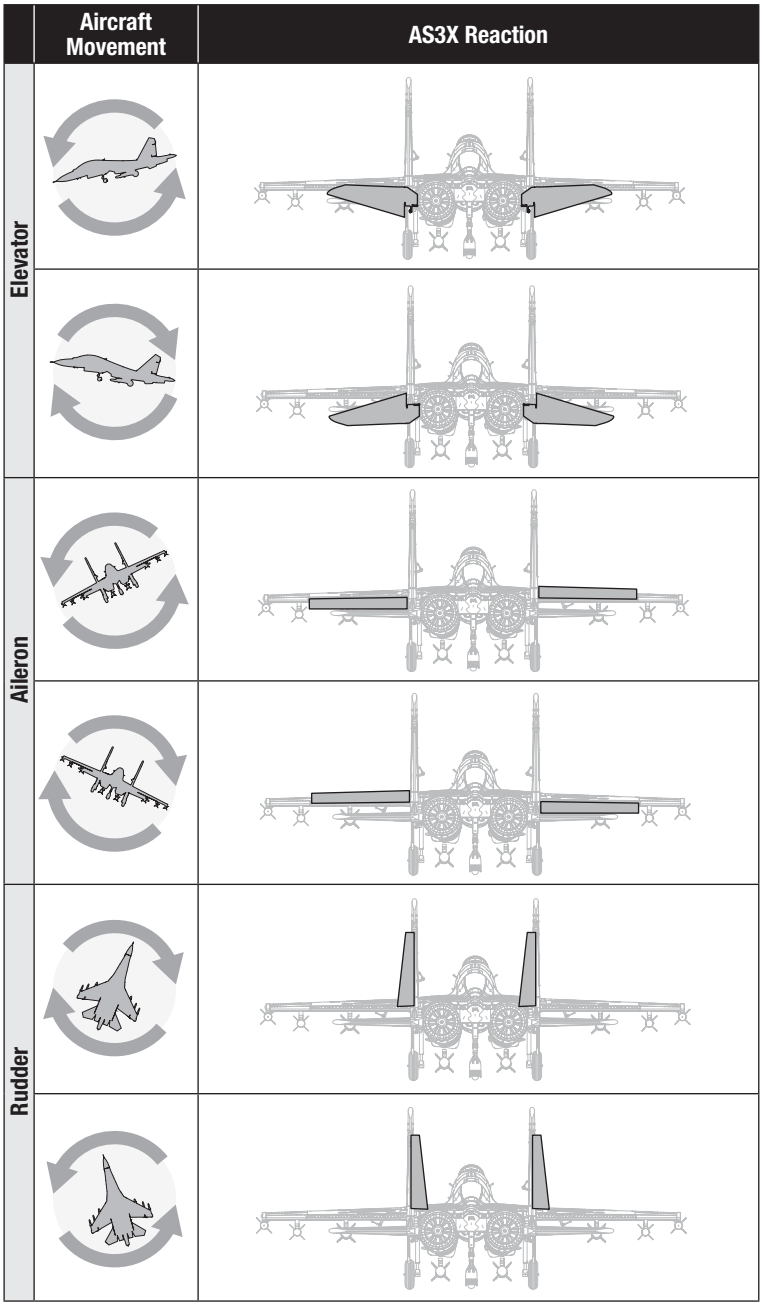
This test ensures that the AS3X® control system is functioning properly. Assemble the aircraft and bind your transmitter to the receiver before performing this test.

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

CAUTION: Keep all body parts, hair and loose clothing away from the fan intake, 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.



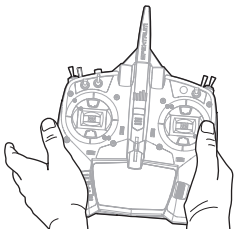
In Flight Trimming

During your first flight, trim the aircraft for level flight at 3/4 throttle with the gear up. Make small trim adjustments with your transmitter's trim switches to straighten the aircraft's flight path.

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.

After landing, adjust the linkages mechanically to account for trim changes and then reset the trims to neutral. Ensure the aircraft will fly straight and level with no trim or sub-trim.



3 Seconds

Flying Tips and Repairs

Consult local laws and ordinances before choosing a flying location.

Range Check your Radio System

Before you fly, range check the radio system. Refer to your specific transmitter instruction manual for range test information.

Takeoff

Place the aircraft in position for takeoff (facing into the wind). Select low rates for first takeoff and gradually increase the throttle to full and steer with the nose wheel. Allow the model to accelerate to flying speed, then pull back gently on the elevator and climb to a comfortable altitude.

Flying

Always choose a wide-open space for flying. Due to the higher speeds of this aircraft, it does require more room to fly than average foam models. 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.

Landing

For your first few flights with the recommended battery pack (SPMX50006S50), set your transmitter timer or a stopwatch to 3 minutes, 30 seconds (3:30), then land. Adjust your timer for longer or shorter flights once you have flown the model.

If at any time the motor pulses, land the aircraft immediately and recharge the flight battery. See the Low Voltage Cutoff (LVC) section for more details on maximizing battery health and run time.

Turn the aircraft into the wind, reduce the throttle and extend the landing gear. Elevator trim may be necessary to maintain level flight with the use of the speed brake. Use the throttle during the landing approach to control the rate of descent. Keep the wings level and the aircraft pointed into the wind. As you approach the threshold of the runway and approximately 1 meter altitude, decrease the throttle and begin your flare by easing back on the elevator. Continue back pressure on the elevator to bring the aircraft down gently on the runway.

NOTICE: If a crash is imminent, reduce the throttle and trim fully. Failure to do so could result in extra damage to the airframe, as well as damage to the ESC and motor.

NOTICE: After any impact, always ensure the receiver is secure in the fuselage. If you replace the receiver, install the new receiver in the same orientation as the original receiver or damage may result.

NOTICE: Crash damage is not covered under warranty.

NOTICE: When you are finished flying, never leave the aircraft in direct sunlight or in a hot, enclosed area such as a car. Doing so can damage the aircraft.

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.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Charge your Li-Po battery to about half capacity before storage.

During storage, make sure the battery charge does not fall below 3V per cell. LVC does not prevent the battery from over-discharge during storage.

NOTICE: Repeated flying to LVC will damage the battery.

Tip: Monitor your aircraft battery's voltage before and after flying by using a Li-Po cell voltage checker (XBC100 Smart Battery Checker & Servo Driver (SPMXBC100), sold separately).

Oscillation

Once the AS3X system is active (after advancing the throttle for the first time), the control surfaces will react to aircraft movement. In some flight conditions oscillation may occur (the aircraft rocks back and forth on one axis due to overcontrol). If oscillation occurs, refer to the Troubleshooting Guide for more information.

Repairs

Thanks to the EPO foam material in this aircraft, repairs to the 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 accelerator on your aircraft can damage paint. DO NOT handle the aircraft until accelerator fully dries.

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, and 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. With SAFE Select, 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.

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 many other limiting factors.

- In SAFE Select mode the aircraft will self level when the control stick is neutralized. In AS3X mode the aircraft will continue to fly at its present attitude when the control stick is neutralized.
- In SAFE Select mode holding a small amount of control will result in the model banking or pitching to a moderate angle and remaining at that angle as long as the control stick doesn't move. In AS3X mode holding a small amount of control will result in the model continuing to pitch or roll at a slow rate as long as the control stick doesn't move.
- In SAFE Select mode holding full control will result in the airplane banking or pitching to the predetermined limits and the aircraft will keep flying at that attitude as long as the control stick is fully deflected. In AS3X mode holding full control will result in the aircraft pitching or rolling as fast as possible, and it will continue to rapidly change attitude as long as the control stick is fully deflected.

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	Recharge the flight battery.
5	Repair or replace all damaged parts.
6	Store the flight battery apart from the aircraft and monitor the battery charge.
7	Make note of the flight conditions and flight plan results, planning for future flights.

Power Components Service

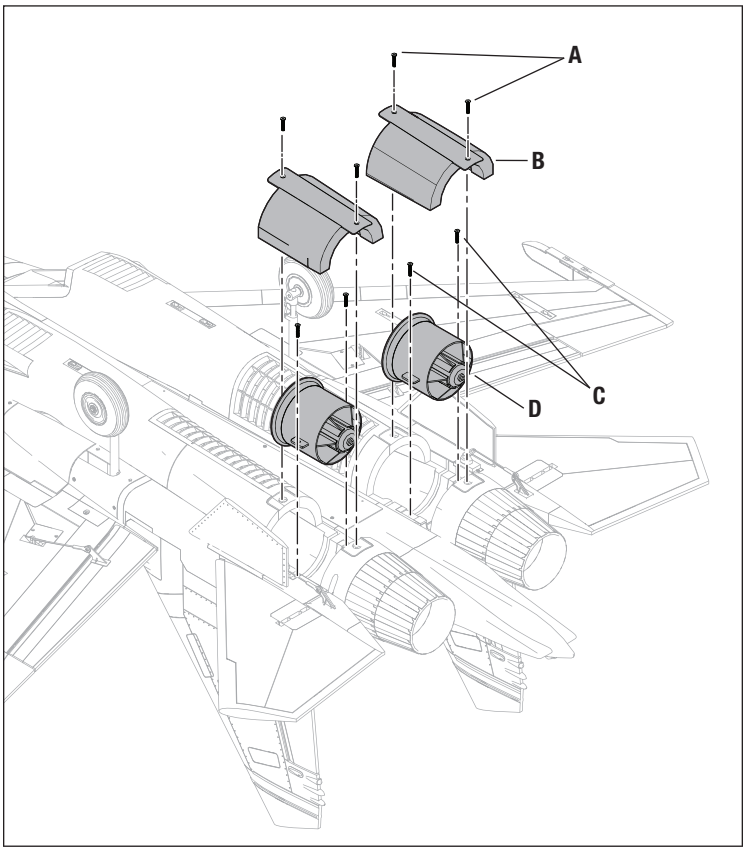
CAUTION: Always disconnect the flight battery before performing service on any of the power system components.

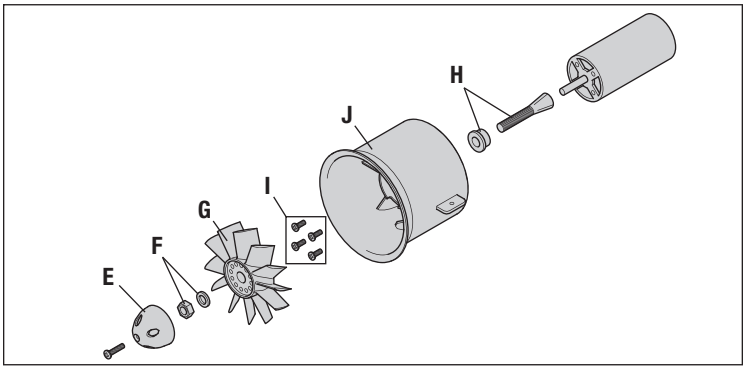
Disassembly

1. Remove the two screws (**A**) from the fan unit cover (**B**) and pull the cover out of the fuselage.
2. Remove the four screws (**C**) from the fan unit tabs.
3. Pull the fan unit (**D**) out of the fuselage and disconnect the motor leads from the ESC.
4. Remove the spinner (**E**) from the fan by removing the screw from the motor shaft adapter.
5. Remove the nut and washer (**F**) to remove the fan (**G**) and motor shaft adapter (**H**).
6. Remove the four screws (**I**) to remove the motor from the fan shroud (**J**).
7. Disconnect the ESC from the throttle channel of the receiver.
8. The ESC is held in place by friction between the plate above the fan unit and the top of the fuselage. Remove the ESC by carefully pulling the ESC by the motor connection wires, through the fan unit opening.

Assembly

- Assemble in reverse order.
- Correctly align and connect the motor wire colors with the ESC wires.
- Ensure the front of the rotor is installed facing the nose of the aircraft.
- A tool is required to tighten the nut on the rotor and collet.
- Ensure the spinner is fully connected for safe operation.
- Ensure no wiring is pinched by any of the power components.





AS3X® System Trouble Shooting Guide

Problem	Possible Cause	Solution
Oscillation	Damaged rotor or nose cone	Replace rotor or nose cone
	Imbalanced rotor	Balance the rotor
	Motor vibration	Replace parts or correctly align fan unit or other parts and tighten fasteners as needed
	Loose receiver	Align and secure receiver in fuselage
	Loose aircraft controls	Tighten or otherwise secure parts (servo, arm, linkage, horn and control surface)
	Worn parts	Replace worn parts (especially rotor, nose cone, 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 ball link 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. Correct the direction settings (refer to the receiver manual), then fly

Troubleshooting Guide

Problem	Possible Cause	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
Excessive rotor noise or Excessive vibration	Damaged rotor, nose cone, collet or motor	Replace damaged parts
	Rotor is out of balance	Balance or replace rotor
	Rotor nut is too loose	Tighten the rotor nut
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Flight battery damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is not cold before use (Do not apply heat to the battery)
	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 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 battery

Replacement Parts

Part #	Description
EFL01076	Wing Set: Su-30 70mm EDF
EFL01077	Fuselage: Su-30 70mm EDF
EFL01078	Horizontal Stab Set: Su-30 EDF
EFL01079	Vertical Stab Set: Su-30 70mm EDF
EFL01080	Canopy: Su-30 70mm EDF
EFL01081	Nose Cone: Su-30 70mm EDF
EFL01082	Nose Gear Doors: Su-30 70mm EDF
EFL01083	Main Gear Doors: Su-30 70mm EDF
EFL01084	Linkages: Su-30 70mm EDF
EFL01085	Wheel Set: Su-30 70mm EDF
EFL01086	Wing Tube: Su-30 70mm EDF
EFL01087	Screw Set: Su-30 70mm EDF
EFL01088	Horn Set: Su-30 70mm EDF
EFL01089	Missile Set: Su-30 70mm EDF
EFL01091	Pilot: Su-30 70mm EDF
EFL01092	Decals: Su-30 70mm EDF
EFL01098	Nose Gear Strut: Su-30 70mm EDF
EFL01099	Main Gear Strut: Su-30 70mm EDF
EFL01100	Brushless Motor: 2860-1850kV
EFLA0880EC5	80A- Brushless ESC Opto (No BEC)
EFLA420	8A Switching BEC (5.5V)
EFLA7012DF	70mm Ducted Fan
EFLG321L	Retract:Main Gear Su-30 70mm EDF
EFLG321N	Retract: Nose Su-30 70mm EDF
EFLG321R	Retract:Main Gear Su-30 70mm EDF
SPMA380	9 Gram Servo Metal Gear
SPMA380R	9 Gram Servo Metal Gear Reverse
SPMSA450	Servo: 13g Metal Gear
SPMSA450R	Servo:13g Analog Metal Gear REV
SPMAR636	Receiver: Spektrum AR636 6-Channel AS3X Sport Receiver

Recommended Parts

SPMR1000	DXe Transmitter Only
SPMR8000	DX8 Transmitter Only MD2
SPMR9910	DX9 Black Transmitter Only MD2
SPMX50006S50	5000mAh 6S 22.2V Smart 50C; IC3
SPMXC1010	Smart S2100 AC Charger, 2X100W

Optional Parts

Part #	Description
EFLA111	LiPo Cell Voltage Checker
SPMX50006S30	5000mAh 6S 22.2V Smart 30C; IC3
SPMX70006S30	7000mAh 6S 22.2V Smart 30C; IC3
SPM6716	Spektrum DSMR Transmitter Case
SPM6722	Spektrum Single Aircraft TX Case
SPMR12000	iX12 12 Channel Transmitter Only
SPMR8000	DX8 Transmitter Only MD2
SPMR9910	DX9 Black Transmitter Only MD2
SPMX32003S30	3200mah 3S 11.1V Smart 30C; IC3
SPMXBC100	SMART Battery & Servo Tester
SPMXC1000	Smart S1200 DC Charger, 1x200W
SPMXC1010	Smart S2100 AC Charger, 2X100W
SPMXC10201	30A 540W Power Supply

AMA National Model Aircraft Safety Code

Effective January 1, 2014

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, education 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.)
   (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.)
   (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 and #923.)
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.
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. Hand-held illumination systems are inadequate for night flying operations.
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.
   (c) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.

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, 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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Warranty and Service 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, IL 61822
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 877-504-0233	
	Sales	websales@horizonhobby.com 800-338-4639	
European Union	Horizon Technischer Service	service@horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

FCC Information

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. This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

Supplier's Declaration of Conformity

EFL Su-30 BNF BASIC AND PNP (EFL01050 and EFL01075)

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

CAN ICES-3 (B)/NMB-3(B)

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

Compliance Information for the European Union

EU Compliance Statement:

EFL Su-30 BNF Basic (EFL01050)

Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED and EMC Directives.

A copy of the EU Declaration of Conformity is available online at:
http://www.horizonhobby.com/content/support-render-compliance.

Frequency Band: 2404-2476 MHz

Max EIRP: 3dBm

EFL Su-30 PNP (EFL01075)

Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive.

A copy of the EU Declaration of Conformity is available online at:
http://www.horizonhobby.com/content/support-render-compliance.

Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and 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.

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