

Pilatus PC-21 1.3m

Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

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EFL14950



EFL14975

NOTICE

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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.



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Registration

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Specifications

Wingspan	51.97" (1320mm)
Length	57" (1448mm)
Weight	Without Battery: 102.19oz (2897g) With Recommended 6S 5000mAh Battery: 127.59oz (3617g)

Included Equipment

Receiver	AR637TA+ DSMX 6-Channel AS3X+ & SAFE Telemetry Receiver (SPM-1032) (BNF Only)
ESC	Avian® 100Amp Brushless Smart ESC, 3-6S Ver. D (SPMXAE1100D)
Motor	5065-470Kv Brushless Motor, 14-Pole (SPMXAM3600)
Servos	(7) A332 14g Sub-Micro Metal-Geared Servo (SPMSA332)

Required Equipment

Transmitter	Full range 6+ Channel 2.4GHz w/ Spektrum DSM2/DSMX® Technology
Battery	6S 4000-7000mAh 30C or higher with IC5® connector
Battery Charger	6-Cell Li-Po Battery Balancing Charger
Receiver	6+ Channel (AR637+ Recommended) (PNP Only)

Required Tools



Phillips Screwdriver (PH#1)



2mm Hex Driver



10mm Wrench
(or Adjustable Wrench)

SAFE® Select Technology (BNF Basic)

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

Expand the advantage of what SAFE Select technology offers by assigning it to a switch. No transmitter programming is required and you'll be able to turn the system ON and OFF with the flip of a switch. Turn it OFF in flight for unrestricted aerobatic performance, and turn it back ON when a buddy wants to try out your cool aircraft. Turn SAFE Select ON for landings. It will help keep the correct pitch attitude and wings level during the final approach. Whether you're a beginner or an expert, SAFE Select can make your flights a great experience. When the normal bind process is followed, the SAFE Select system is disabled, leaving specially tuned AS3X+® technology in place to deliver a pure, unrestricted flight experience.

Smart Transmitter File (STF) Loading Option

The receiver installed in the aircraft contains a transmitter setup file developed specifically for this aircraft. This Smart Transmitter File (STF) allows you to quickly import the transmitter settings for NX or iX series radios directly from the receiver during the binding process.

To load the Smart Transmitter File:

1. Turn on the transmitter.
2. Create a new blank model file on the transmitter.
3. Power on the receiver.
4. Press the bind button on the receiver.
5. Put the transmitter into bind mode: the model will bind normally.
6. Once the bind is complete, the download screen appears:
7. Select **LOAD** to continue.

The following screen is a warning that downloading overwrites all settings of the currently selected model. If this is a new blank model, the file populates the transmitter parameters into the active model and renames it Pilatus PC-21 1.3m.

NOTICE: Confirming will override any previously saved transmitter setups for the current model.

8. Press **CONFIRM** to continue.

The file is installed on the transmitter and the telemetry information loads automatically when the download is complete. The radio returns to the home screen, and the new model name is displayed.

The transmitter setup is now complete, and the aircraft is ready to fly.

Important Notes

Flight Modes

The STF has flight modes enabled. Flight modes are separate from AS3X+ and SAFE Select, allowing for in-flight trimming of the aileron, elevator and rudder channels separately for each flap position (0, 1, 2) as controlled by switch D. This is beneficial because it allows you to trim the aircraft for level flight when the flaps are retracted (normal mode), partially deployed (take off flaps), or fully deployed (landing flaps). Once trimmed for each flight mode flap position, trimming the aircraft should not be required in the future.

Supported Transmitters, and firmware requirements, include the following:

- All NX Radios (with firmware version 4.0.11+)
- iX14 (with app version 2.0.9+)
- iX20 (with app version 2.0.9+)
- iX12 and DX radios do not currently support Smart Transmitter File transfers.

Smart Transmitter File

The receiver contains a pre-loaded Smart Transmitter file.

RX Version: EFL14950

1.0.0

Do you want to the load the file from the receiver

SKIP

LOAD

NOTICE

This WILL overwrite ALL current model settings.

If stock BNF model hardware has changed, the receiver's file may not work properly- Do not use without checking everything.

Do you want to the load the file from the receiver

BACK

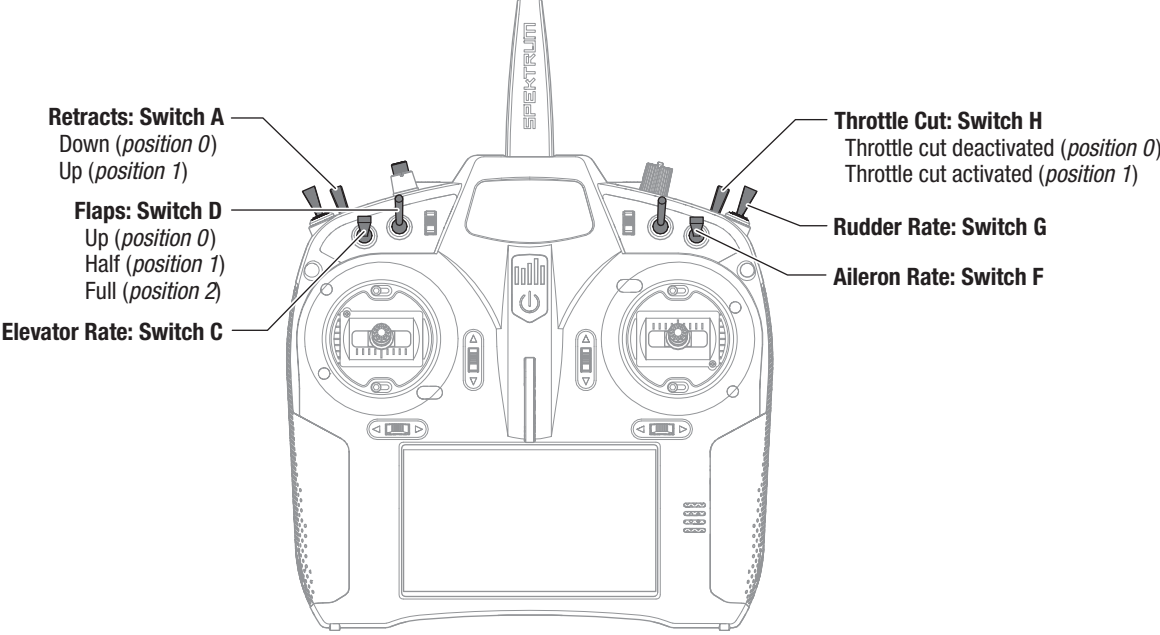
CONFIRM

Flight Timer

The STF does not populate a flight timer in the transmitter. The voltage monitor provides transmitter alerts when battery voltage drops to just above the LVC, indicating it is time to land. The transmitter alert is set so there is time to land before the ESC begins to surge (pulse) when LVC is reached. This method takes flying style and throttle use into account and is more precise than a timer alone. If you are not using the STF, set a timer for 3.5 minutes when using the recommended battery. Monitor the battery usage and adjust the timer after the initial flights to best suit your flying style.

STF and Manual Transmitter Setup Switch Layout

The following illustration shows the switch layout and functions on a typical Spektrum transmitter when programmed per the manual transmitter setup tables or utilizing the Smart transmitter file installed on the aircraft receiver.



Manual Transmitter Setup/Programming Option

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

For the first flight, set the flight timer to 3.5 minutes when using a 6S 4000-7000mAh battery. Adjust the time after the initial flight.

Telemetry Settings	
Rx V : Min Rx V	4.2V
Smart ESC : Low Voltage Alarm	3.4V
Smart Battery : Startup Volt Minimum	4.0V
Motor Pole Count	14

Dual Rates

Attempt your first flights in low rate. For landings, use high rate elevator.

NOTICE: To ensure AS3X+ technology functions properly, do not lower rate values below 50%. If less control deflection is 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.

Exponential

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

NX Series Transmitter Setup	
1. Power ON your transmitter, click on scroll wheel, roll to System Setup and click the scroll wheel. The transmitter will display RF will be disabled! Scroll to Yes and click the scroll wheel.	
2. Go to Model Select and choose <Add New Model> near the bottom of the list.	
3. Select Model Type click the airplane image, Select Create and click the scroll wheel. At the Data Reset screen, scroll to YES and click the scroll wheel.	
4. Select Model Name: Input a name for your model file	
5. Select Aircraft Type and scroll to the wing selection, choose 1 Ail 1 Flap	
6. Select <Main Screen> , Click the scroll wheel to enter the Function List	
7. Select Rates and Expo: Aileron Set Switch: Switch F Set High Rates: 100%, Expo 10% - Low Rates: 70%, Expo 5%	
8. Select Rates and Expo: Elevator Set Switch: Switch C Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
9. Select Rates and Expo: Rudder Set Switch: Switch G Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
10. Select Throttle Cut: Switch: Switch H, Position: -100%	
11. Select Flap System Scroll to and select Inhibit , and then scroll to select Switch D Set Pos 0: -100% Flap 0% Elevator Set Pos 1: 0% Flap 0% Elevator Set Pos 2: 100% Flap 0% Elevator Set Speed: 2.0s	

DX Series Transmitter Setup	
1. Power ON your transmitter, click on scroll wheel, roll to System Setup and click the scroll wheel. The transmitter will display RF will be disabled! Scroll to Yes and click the scroll wheel.	
2. Go to Model Select and choose <Add New Model> at the bottom of the list. The system asks if you want to create a new model, select Create	
3. Set Model Type: Select Airplane Model Type by choosing the airplane. The system asks you to confirm model type, data will be reset. Select YES	
4. Set Model Name: Input a name for your model file	
5. Go to Aircraft Type and scroll to the wing selection, choose 1 Ail 1 Flap	
6. Select <Main Screen> , Click the scroll wheel to enter the Function List	
7. Select Rates and Expo: Aileron Set Switch: Switch F Set High Rates: 100%, Expo 10% - Low Rates: 70%, Expo 5%	
8. Select Rates and Expo: Elevator Set Switch: Switch C Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
9. Select Rates and Expo: Rudder Set Switch: Switch G Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
10. Set Throttle Cut: Switch: Switch H, Position: -100%	
11. Select Flap System Scroll to and select Inhibit , and then scroll to select Switch D Set Pos 0: -100% Flap 0% Elevator Set Pos 1: 0% Flap 0% Elevator Set Pos 2: 100% Flap 0% Elevator Set Speed: 2.0s	

iX Series Transmitter Setup	
1. Power ON your transmitter and begin once the Spektrum Airware app is open. Select the orange pen icon in the upper left corner of the screen, the system asks for permission to Turn Off RF , select PROCEED	
2. Select the three dots in the upper right corner of the screen, select Add a New Model	
3. From the Model Option screen, select DEFAULT , select Airplane . The system asks if you want to create a new acro model, select Create	
4. Select the last model on the list, named Acro . Tap on the word Acro and rename the file to a name of your choice	
5. Press and hold the orange back arrow icon in the upper left corner of the screen to return to the main screen	
6. Select the Model Setup menu. Select Aircraft Type The system asks for permission to Turn Off RF , select PROCEED . Touch the screen to select wing. Select 1 Ail 1 Flap .	
7. Press and hold the orange back arrow icon in the upper left corner of the screen to return to the main screen	
8. Go to the Model Adjust menu.	
9. Select Dual Rates and Expo: Select Aileron Set Switch: Switch F Set High Rates: 100%, Expo 10% - Low Rates: 70%, Expo 5%	
10. Select Dual Rates and Expo: Select Elevator Set Switch: Switch C Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
11. Select Dual Rates and Expo: Select Rudder Set Switch: Switch G Set High Rates: 100%, Expo 10% - Low Rates 70%, Expo 5%	
12. Select Throttle Cut: Switch: Switch H, Position: -100%	
13. Select Flap System Touch inhibit, select Switch D Set Pos 0: -100% Flap 0% Elevator Set Pos 1: 0% Flap 0% Elevator Set Pos 2: 100% Flap 0% Elevator Set Speed: 2.0s	

Model Assembly

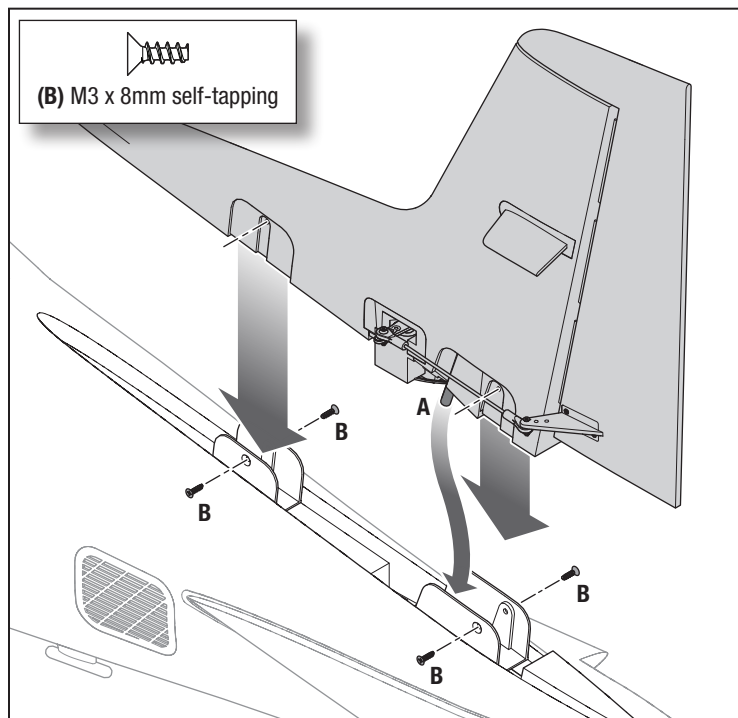
Install the Vertical Stabilizer

1. Guide the carbon fiber tube **(A)** into the mounting base and insert the vertical stabilizer and rudder assembly into the top of the rear fuselage, as shown.

IMPORTANT: Ensure the connector for the rudder servo aligns with the port in the fuselage.

2. Secure the vertical stabilizer assembly using a 2mm hex driver and four M3 X 8mm self-tapping screws **(B)** in the left and right sides of the vertical stabilizer.

IMPORTANT: Do not over-tighten the screws.

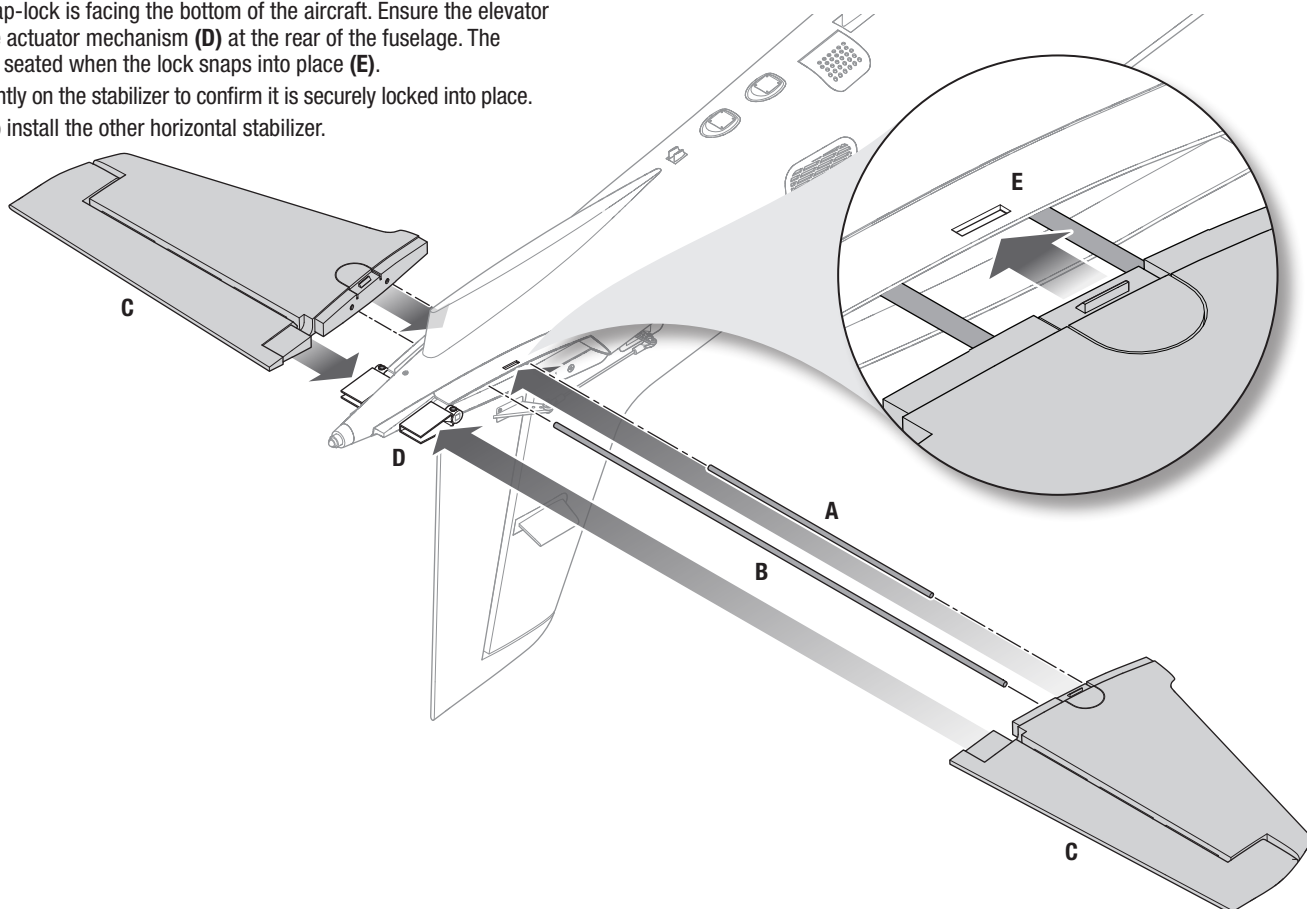


Install the Horizontal Stabilizers

1. Insert the short (220mm) carbon rod **(A)** through the front hole in the rear of the fuselage.
2. Insert the long (445mm) carbon rod **(B)** through the back hole in the rear of the fuselage.
3. Slide one of the horizontal stabilizer assemblies **(C)** onto the carbon rods, ensuring the snap-lock is facing the bottom of the aircraft. Ensure the elevator fully seats in the actuator mechanism **(D)** at the rear of the fuselage. The stabilizer is fully seated when the lock snaps into place **(E)**.

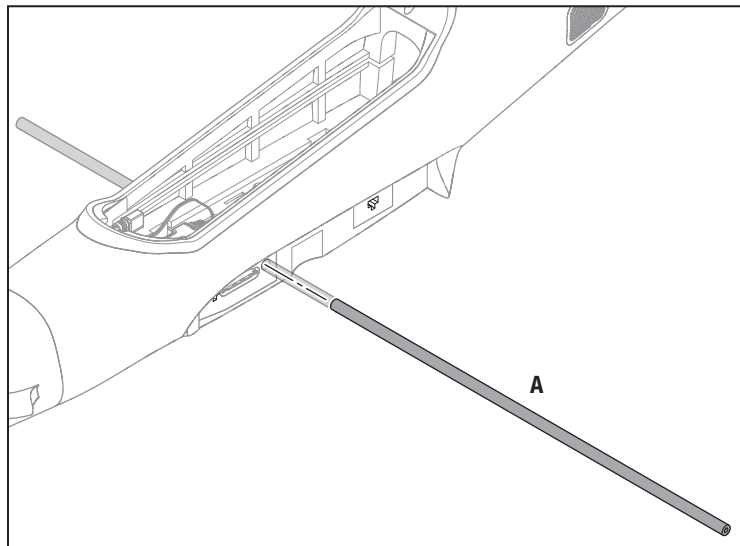
TIP: Pull out slightly on the stabilizer to confirm it is securely locked into place.

4. Repeat step 3 to install the other horizontal stabilizer.

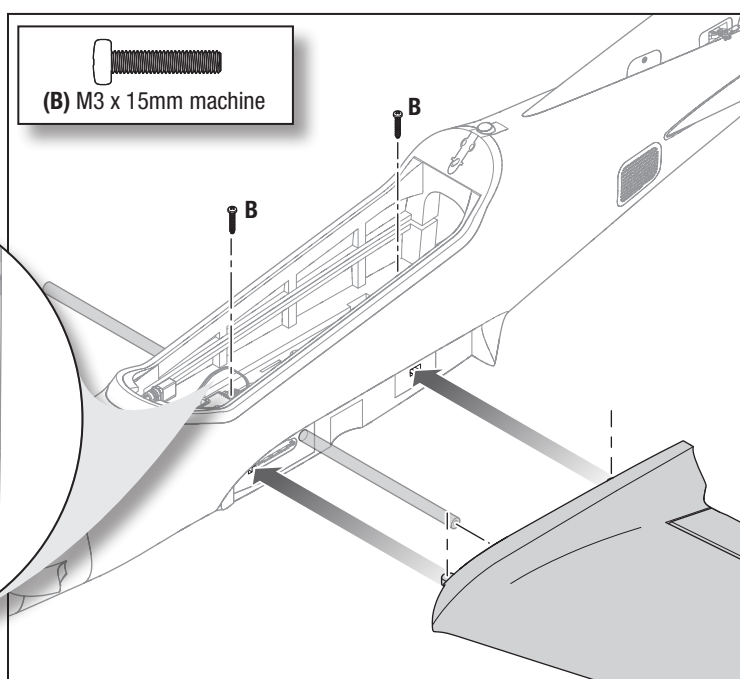
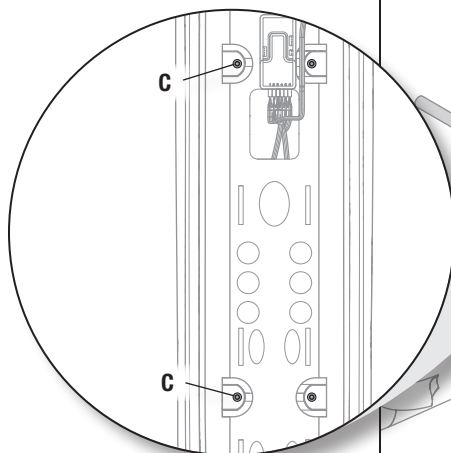


Install the Wings

1. Insert the carbon wing tube (555mm) **(A)** into the fuselage.



2. Slide a wing panel onto the wingtube, lining up the wing with the opening in the fuselage. Ensure the wing servo quick connectors properly align with the fuselage ports.
3. With the wing fully seated in the fuselage, secure the wing to the fuselage using a 2mm hex driver and two M3 X 15mm machine screws **(B)** in the bottom of the battery compartment **(C)**, inserted from the top, as shown.
4. Repeat steps 2 and 3 to install the opposite wing panel.
5. Go to the Decal Placement section for information on installing optional supplemental decals.

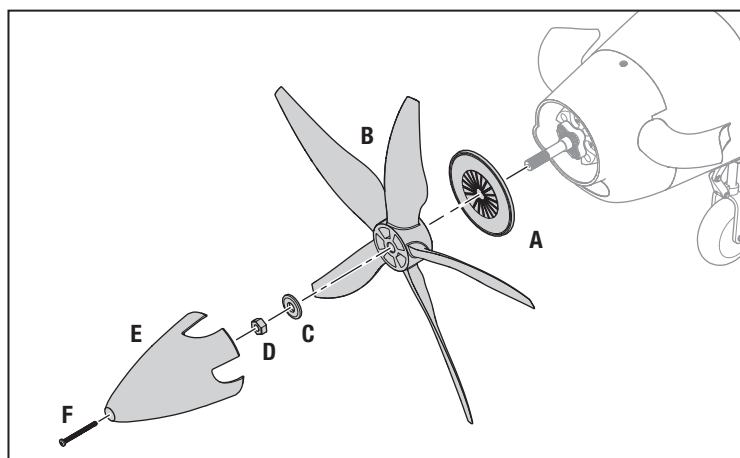


Install the Propeller

The aircraft includes a 12 X 12 5-blade propeller and spinner as well as a 2-blade compatible spinner for use with an optional 12 X 12 2-blade propeller (not included). The following instructions and accompanying illustration show the included 5-blade propeller installation.

1. Install the spinner backplate **(A)** onto the propeller adapter.
2. Install the included 5-blade propeller **(B)**.
3. Install the 8mm prop washer **(C)**.
4. Using a 10mm box end or an adjustable wrench, install the M8 propeller nut **(D)** and tighten securely.
5. Install the spinner **(E)** over the propeller, ensuring the lip at the base fully seats into the spinner backplate.

IMPORTANT: Ensure the spinner does not contact the propeller blades.
6. Using a 2mm hex driver, install the M3 X 15mm spinner screw **(F)** through the spinner, into the propeller adapter, and tighten securely.



PNP Receiver Installation

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

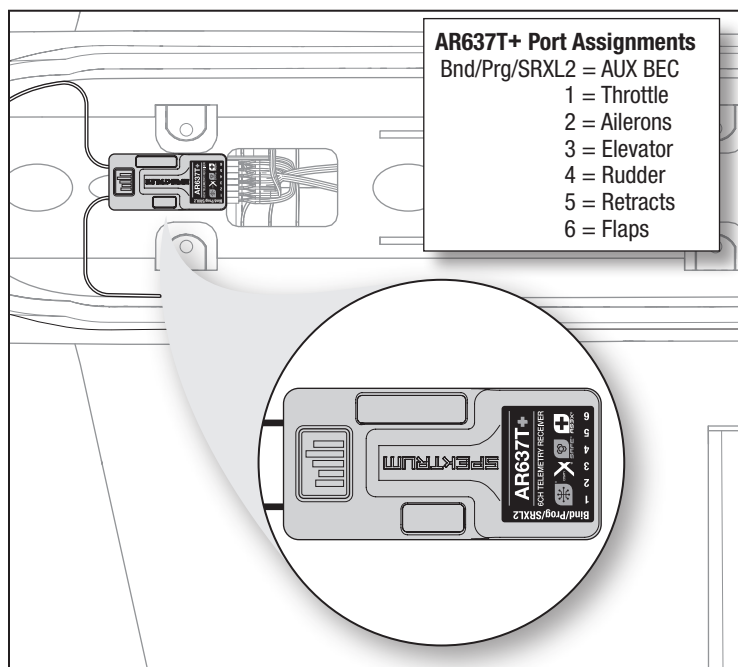
The recommended receiver for this aircraft is the Spektrum AR637T+. If you choose to install a different receiver, ensure that it is at least a 6-channel full range receiver. Refer to the manual of your chosen receiver for correct installation and operation instructions.

AR637T+ Installation

1. With the battery hatch removed from the fuselage, mount the receiver using double sided tape in the location and orientation shown. The receiver should be mounted parallel to the length of the fuselage, with the label facing the rear and top of the aircraft, and the servo ports toward the rear.

IMPORTANT: The orientation of the receiver is critical for all AS3X+ and SAFE technology setups.

2. Connect the control surface servo leads to their respective ports on the receiver using the table at the right as a reference.
3. Route the antenna into the antenna tubes on the left and right sides of the fuselage.

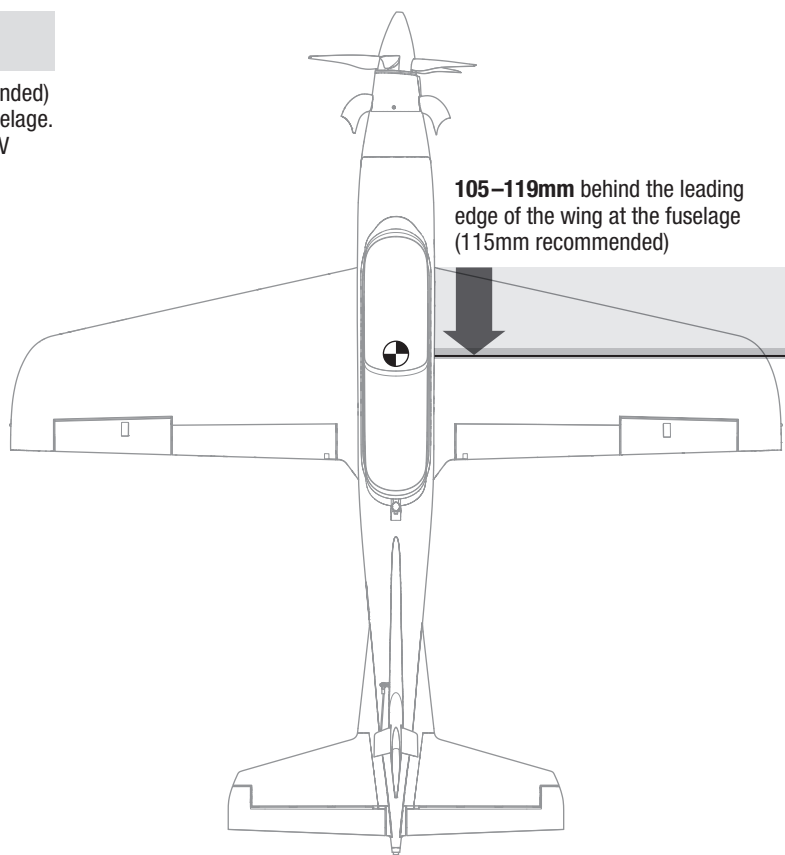


Center of Gravity (CG)

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

The preferred range for the CG is between 105mm to 119mm (115mm recommended) back from the leading edge of the wing, measured where the wing meets the fuselage. This CG location has been determined with the recommended 5000mAh 6S 22.2V Smart G2 30C LiPo battery (SPMX56S30).

Check the CG with the model inverted and the landing gear retracted. Adjust the battery forward or aft as needed to achieve the proper CG location.



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 red 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 / Enable or Disable 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.

Thanks to SAFE Select technology, this aircraft can be configured for full-time SAFE mode, full-time AS3X+ mode, or mode selection can be assigned to a switch.

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.

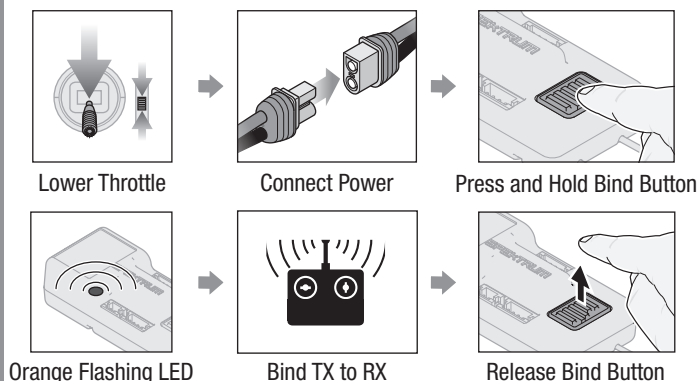
IMPORTANT: Move the transmitter flight controls (rudder, elevators, and ailerons) and the throttle trim to neutral. Move the throttle to low before and during binding. This process defines the failsafe settings.

You can use either the **bind button** on the receiver case **OR** a conventional **bind plug** to complete the binding and SAFE Select process.

SAFE Select can also be enabled via Forward Programming.

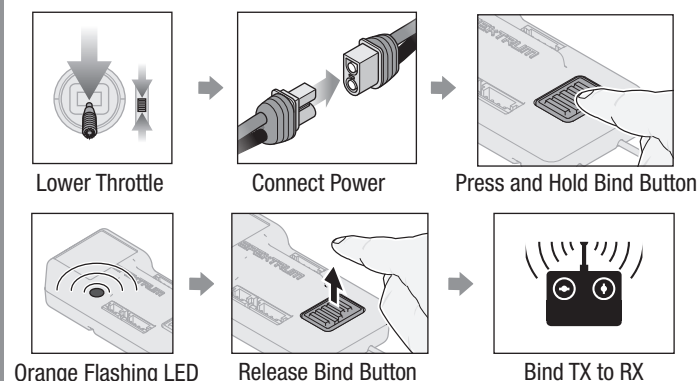
Using The Bind Button...

To Enable SAFE Select



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.

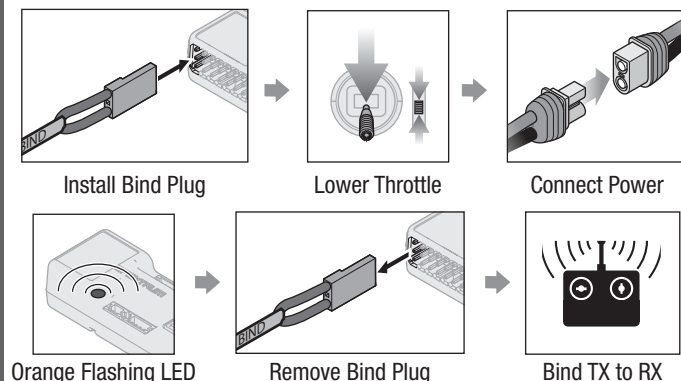
To Disable SAFE Select



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

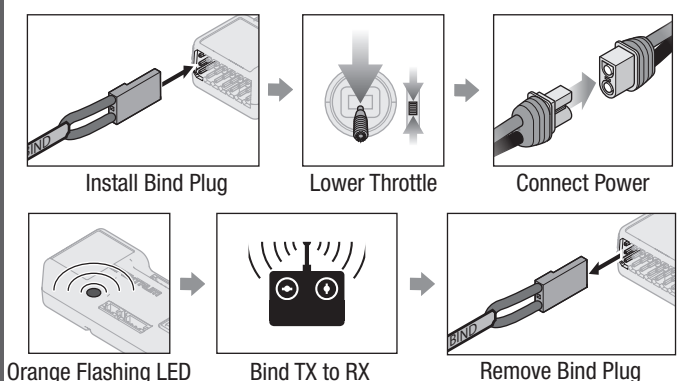
Using The Bind Plug...

To Enable SAFE Select



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.

To Disable SAFE Select



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

Differences Between SAFE and AS3X+ Modes

This information does not take into account flight speed, battery charge status, and other limiting factors.

Control Input	SAFE Select	AS3X+
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 limits and maintain the attitude	Aircraft will continue to roll or pitch rapidly

SAFE® Select Switch Designation (BNF)

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 open channel between 5 and 20 may be used. 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 20 (Gear, Aux1-15), 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.

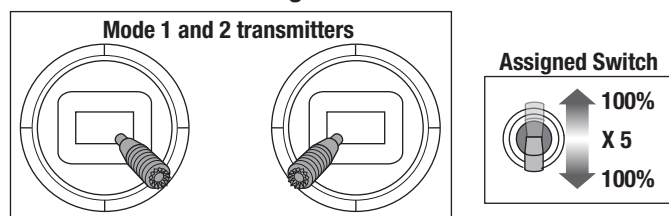
TIP: If a SAFE Select switch is desired for your 6-function aircraft, and you are using a 6 channel transmitter, the SAFE Select switch channel will have to be shared with either channel 5 or 6 of the transmitter.

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.

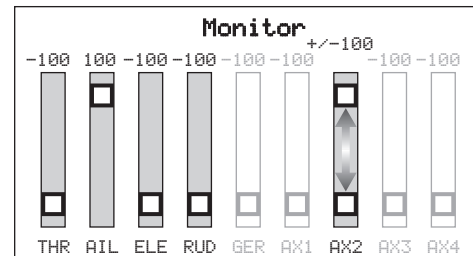
Repeat the process to assign a different switch or to deactivate the current switch.

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, NX, and 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 20 (Gear, Aux1-15).
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.

Install the Flight Battery

Battery Selection

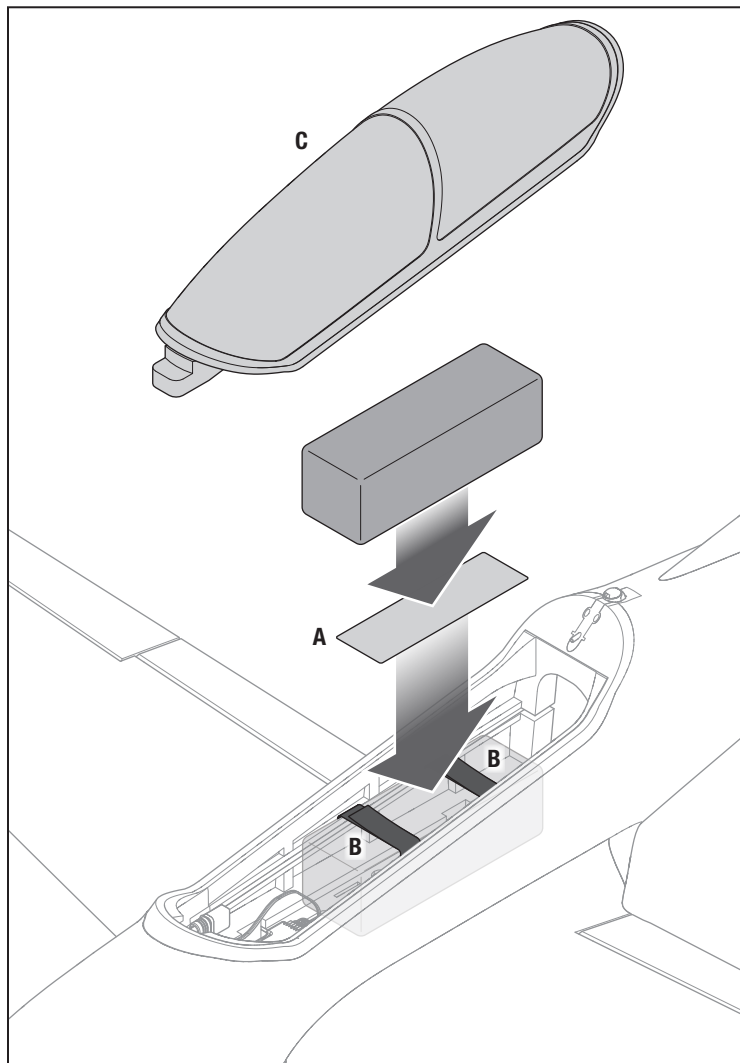
We recommend the Spektrum 30C 5000mAh 6S 22.2V Smart G2 LiPo battery (SPMX56S30). Refer to the Optional Parts List for other suitable batteries. If using a battery other than those listed, the battery should be within the range of capacity, dimensions and weight of the Spektrum LiPo battery packs to fit in the fuselage. Be sure the model balances at the recommended CG.

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

1. Lower the throttle to the lowest setting. Power on the transmitter, then wait 5 seconds.
2. Activate Throttle Hold on the transmitter (switch H, position 1).
3. Apply the soft loop portion of adhesive hook and loop tape **(A)** to the bottom of the battery and the hook material to the wooden battery tray.
4. Install the fully charged battery in the battery compartment as shown.
See the Adjusting the Center of Gravity instructions for more information.
5. Secure the flight battery with the hook and loop straps **(B)**.
6. Connect the battery IC5 power lead to the IC5 ESC connector.
7. Keep the aircraft level on its wheels, immobile and away from wind or the system will not initialize.

Once armed:

- The ESC will sound a series of tones (number of tones depend on the cell count of the battery).
 - The control surfaces will cycle once for AS3X+, or twice for SAFE technology if it is turned ON.
 - An LED will light on the receiver.
8. Install the battery hatch **(C)**.



Control Horn and Servo Arm Settings

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

Increasing control throws beyond these values should be done with caution. Larger control surface movements can result in unpredictable or erratic flight performance, and may result in a crash.

Control Surface	Servo Arms	Control Horns
Aileron		
Elevator		
Rudder		
Flap		
Nose Wheel Steering		

Control Surface Direction Test

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

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 left. The left aileron should move up and the right aileron down, 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.

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.

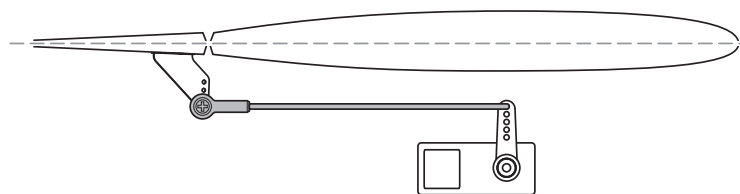
	Transmitter command	Control Surface Response (viewed from the rear)
Elevator		
Aileron		
Rudder		

Control Surface Centering

After assembly and transmitter setup, confirm that the control surfaces are centered. If the control surfaces are not centered, mechanically center the control surfaces by adjusting the linkages.

If adjustment is required, turn the ball link on the linkage to change the length of the linkage between the servo arm and the control horn. Ball link pliers are recommended for removal and replacement of ball links.

After binding a transmitter to the aircraft receiver, set the trims and sub-trims to 0, then adjust the ball links to center the control surfaces.



Dual Rates and Control Throws

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

Increasing control throws beyond these values should be done with caution. Larger control surface movements can result in unpredictable or erratic flight performance, and may result in a crash.

	Low Rate	High Rate
Aileron	▲ = 15mm ▼ = 15mm	▲ = 21mm ▼ = 21mm
Elevator	▲ = 11mm ▼ = 13mm	▲ = 16mm ▼ = 18mm
Rudder	► = 23mm ◄ = 23mm	► = 33mm ◄ = 33mm
Flaps	Mid	▼ = 23mm
	Full	▼ = 44mm

AS3X+ Response Test

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

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+.
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 may be 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		

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The aircraft's ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Once the battery discharges to 3V per cell, the LVC will reduce the power to the motor in order to leave adequate power to the receiver and servos to land the airplane.

When the motor power decreases, land the aircraft immediately and replace or recharge the flight battery.

Always disconnect and remove the Li-Po battery from the aircraft after each flight. Charge your Li-Po battery to about half capacity before storage. Make sure the battery charge does not fall below 3V per cell. Failure to unplug a connected battery will result in trickle discharge.

For your first flights, set your transmitter timer or a stopwatch to 3.5 minutes. Adjust your timer for longer or shorter flights once you have flown the model.

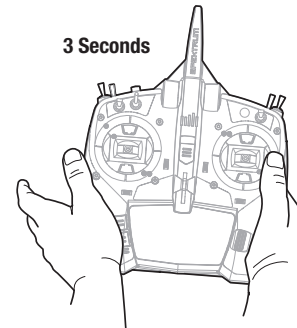
NOTICE: Repeated flying to LVC will damage the battery.

In-Flight Trimming

During your first flight, trim the aircraft for level flight. Make small trim adjustments with your transmitter's trim switches to straighten the aircraft's flight path.

After adjusting the 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.



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.

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.

Takeoff

Put the aircraft on the runway, pointed into the wind. For a shorter takeoff roll, partially extend the flaps if desired. Gradually increase the throttle. Use the rudder/nose wheel to keep the aircraft pointed straight down the runway. Allow the aircraft to accelerate to flying speed, then pull back gently on the elevator and climb to a comfortable altitude. Retract the landing gear. Retract the flaps when the aircraft reaches a sufficient airspeed.

Flying

Always choose a wide-open space for flying. It is ideal to fly at a designated RC flying field. Always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are people, such as busy parks, schoolyards, or soccer fields.

For your first few flights with the recommended battery pack, set your transmitter timer or a stopwatch to 3.5 minutes, 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.

NOTICE: If a crash is imminent, reduce the throttle fully. Failure to do so could result in greater 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.

Landing

This aircraft requires a higher landing speed than many other aircraft. The landing process should be broken down into the following elements:

Approach

Set up to land as directly into the wind as possible. As you turn onto final, reduce the throttle and extend the flaps. Maintain a shallow, steady descent. Set the angle of attack slightly nose up and use power to maintain the descent, staying on glidepath.

IMPORTANT: Maintain air speed. DO NOT allow the model to get too slow, or the wing may drop suddenly.

Throttle Management

Maintain 20–25% throttle until the aircraft is just a few inches off the ground. In the last few inches before touchdown, smoothly ease the throttle down towards idle.

Touchdown

Fly the aircraft all the way down onto the runway. DO NOT flare aggressively or try to hold the model off the runway. Let the main gear settle onto the runway.

TIP: Do not cut the throttle early and try to glide the aircraft in to land. This aircraft needs to be flown down to the runway under control, with power on, then the power reduced to idle as the aircraft touches down.

IMPORTANT: Allow the aircraft components to cool between flights.

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.

Post Flight

Disconnect the flight battery from the ESC (required for safety and battery life).
Power OFF the transmitter.
Remove the flight battery from the aircraft.
Recharge the flight battery to storage voltage level.

Repair or replace all damaged parts.

Store the flight battery apart from the aircraft and monitor the battery charge.

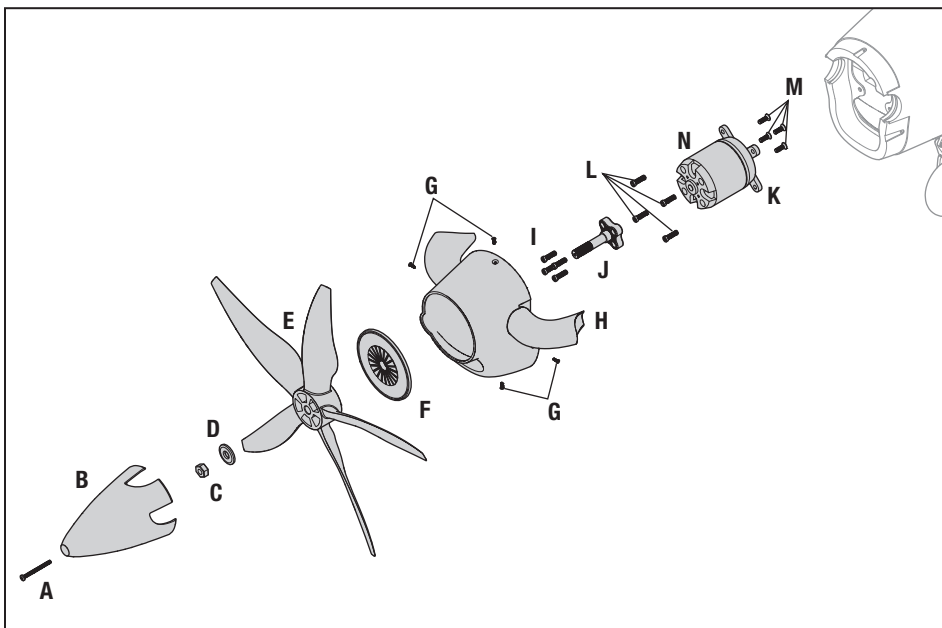
Make note of the flight conditions and flight plan results, planning for future flights.

Power Components Service

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

Disassembly

1. Remove the M3 X 15mm spinner screw (A).
2. Remove the spinner (B).
3. Use a 10mm wrench to remove the M8 propeller nut (C) and M8 washer (D).
4. Remove the propeller (E) and spinner backplate (F).
5. Remove four M2 X 8mm flat head self-tapping screws (G) from the cowl (H), and remove the cowl from the fuselage.
6. Remove four M3 x 10mm machine screws (I) to remove the propeller adapter (J) from the motor (K).
7. Remove four M4 x 25mm machine screws (L) to remove the motor (K) and mount assembly from the fuselage. Disconnect the motor leads from the ESC.
8. Remove four M3 x 7mm flat head machine screws (M) from the rear of the motor mount (K) to remove the mount from the motor (N).



Assemble in reverse order.

- Correctly align and connect the motor wire colors with the ESC wires.
- Ensure no wiring is pinched by any of the power components.
- Ensure the propeller is installed with the size numbers facing forwards.
- Ensure the propeller nut (C) and spinner cone screw (A) is fully secured for safe operation.

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, linkage, 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. 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
Extra propeller noise or extra vibration	Damaged propeller, collet or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
	Propeller nut is loose	Tighten the propeller 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 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™ transmitters 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 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 Number	Description
EFL14951	Fuselage: Pilatus PC-21 1.3m
EFL14952	Wing Set: Pilatus PC-21 1.3m
EFL14953	Horizontal Stabilizer Set: Pilatus PC-21 1.3m
EFL14954	Vertical Stabilizer: Pilatus PC-21 1.3m
EFL14955	Canopy Hatch: Pilatus PC-21 1.3m
EFL14956	Flap Hinge Set: Pilatus PC-21 1.3m
EFL14957	Aileron Servo Covers: Pilatus PC-21 1.3m
EFL14958	Cowling: Pilatus PC-21 1.3m
EFL14959	Landing Gear Doors: Pilatus PC-21 1.3m
EFL14960	Spinner (5-Blade): Pilatus PC-21 1.3m
EFL14961	Spinner (2-Blade): Pilatus PC-21 1.3m
EFL14962	Lighting Set: Pilatus PC-21 1.3m
EFL14963	Hatch Latch: Pilatus PC-21 1.3m
EFL14964	Right Landing Gear Strut: Pilatus PC-21 1.3m
EFL14965	Left Landing Gear Strut: Pilatus PC-21 1.3m
EFL14966	Nose Landing Gear Strut: Pilatus PC-21 1.3m
EFL14967	Dummy Exhaust Set: Pilatus PC-21 1.3m
EFL14968	Control Horn Set: Pilatus PC-21 1.3m

Part Number	Description
EFL14969	Servo Arm Set: Pilatus PC-21 1.3m
EFL14970	Pushrod Set: Pilatus PC-21 1.3m
EFL14971	Wheel Set: Pilatus PC-21 1.3m
EFL14972	Axle Set: Pilatus PC-21 1.3m
EFL14973	Screw Set: Pilatus PC-21 1.3m
EFL14974	Wing Joiner: Pilatus PC-21 1.3m
EFL14976	Stabilizer Joiner Set: Pilatus PC-21 1.3m
EFL14977	Prop Adapter: Pilatus PC-21 1.3m
EFL14978	Landing Gear Strut Pin Set: Pilatus PC-21 1.3m
EFL14979	Motor Mount: Pilatus PC-21 1.3m
EFL14980	Decal Set: Pilatus PC-21 1.3m
SPMSA332	Servo: A332 Pilatus PC-21 1.3m
SPMXAM3600	Motor: 5065-470Kv Brushless Motor
EFL-4737	Main Gear Electric Retract
EFL-3981	Nose Gear Electric Retract
SPMXAE1100D	100A Avian Smart Brushless ESC, 3S-6S
EFLP12125BL	Propeller: 5-Blade 12 x 12 Electric

Recommended Completion Items

Part Number	Description
SPMX56S30	5000mAh 6S 22.2V Smart G2 LiPo 30C; IC5
SPMXC2080	Smart S1100 AC Charger, 1x100W

Part Number	Description
SPMR7110	NX7e+ 7 Channel Transmitter Only
SPM-1032	AR637T+ DSMX 6-Channel AS3X+ & SAFE Telemetry Receiver

Optional Parts

Part Number	Description
BLH100	Deluxe Ball Link Pliers: All
DYN2834	Startup Tool Set: Metric
SPM6730	Smart Charger Case
SPMR8210	NX8+ 20 Channel DSMX Transmitter Only
SPMX-1070	Smart Pro Series Air 6S 22.2V 6000mAh G2 LiPo 120C IC5
SPMX56S100	5000mAh 6S 22.2V Smart G2 LiPo 100C; IC5

Part Number	Description
SPMX76S30	7000mAh 6S 22.2V Smart G2 LiPo 30C; IC5
SPMXBC200	XBC200 Smart Battery Checker & Servo Tester
SPMXC2000	Smart S2100 G2 AC Charger, 2x100W
SPMXC2050	S155 55W AC G2 Smart Charger
SPMXCA300	Smart Lipo Bag, 16 x7.5 x 6.5 cm

ESC Specifications and Settings

Specifications	
Throttle Lead	275mm 3-wire
Power Lead	320mm 12AWG wires
Power Connector	IC5
Motor Leads	120mm 12AWG wires
Motor Connectors	4mm bullet
Input Voltage	3S - 6S LiPo Battery
Max Continuous Current	100A
Max Burst Current	120A
BEC Type	Switching
BEC Voltage	6V/7.4V/8.4V adjustable
BEC Continuous Current	8A
BEC Max Burst Current	25A
Firmware Version	04.0.27-TS

Parameter Settings	
Flight Mode	Fixed Wing
Brake	Disabled
Brake Force	0
Cutoff Type	Surge SW
LiPo Cells	Auto Calc
Cutoff Voltage	3.4V
BEC Voltage	6.0V
Startup Time	Soft
Timing	5
Motor Rotation	CW
Activate FW	Disabled
Thrust Reverse	CH7

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.



According to FAA regulation, all unmanned aircraft over .55lbs (250 grams) flying in United States airspace are required to either fly within an FAA-Recognized Identification Area (FRIA) or continually transmit an FAA-registered remote identification from a Remote ID broadcast module, such as the Spektrum™ Sky™ Remote ID module (SPMA9500). Use the QR code to learn more about the FAA Remote ID regulations.

AMA 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 aircraft using 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.

10/15

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



Contains: FCC ID: BRWTIARLGTNG1
Supplier's Declaration of Conformity
E-flite Pilatus PC-21 1.3m BNF-Basic (EFL14950) and
E-flite Pilatus PC-21 1.3m PNP (EFL14975)

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

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

Contains: IC: 6157A-TIARLGTNG1

This device contains license-exempt transmitter(s)/receiver(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:

E-flite Pilatus PC-21 1.3m BNF-Basic (EFL14950): 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.

E-flite Pilatus PC-21 1.3m PNP (EFL14975): Hereby, Horizon Hobby, LLC declares that the device is in compliance with the following: EU EMC Directive 2014/30/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
 19.95dBm

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

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.

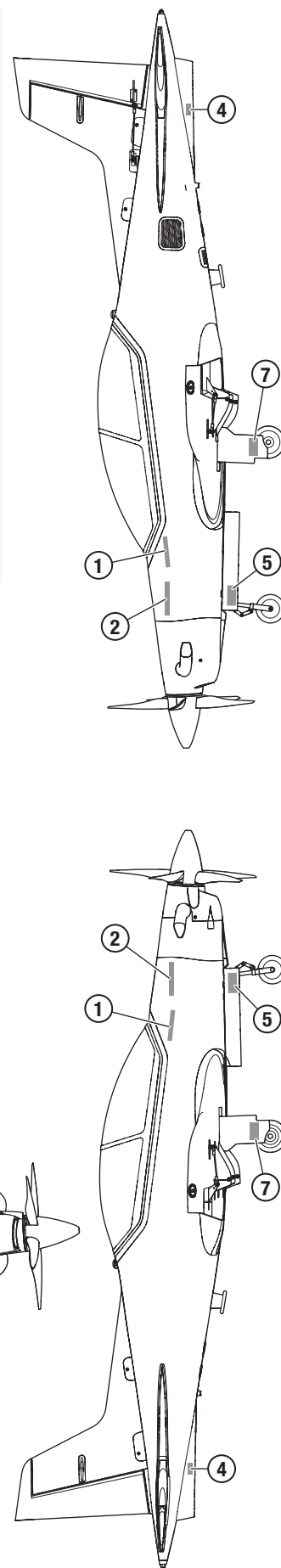
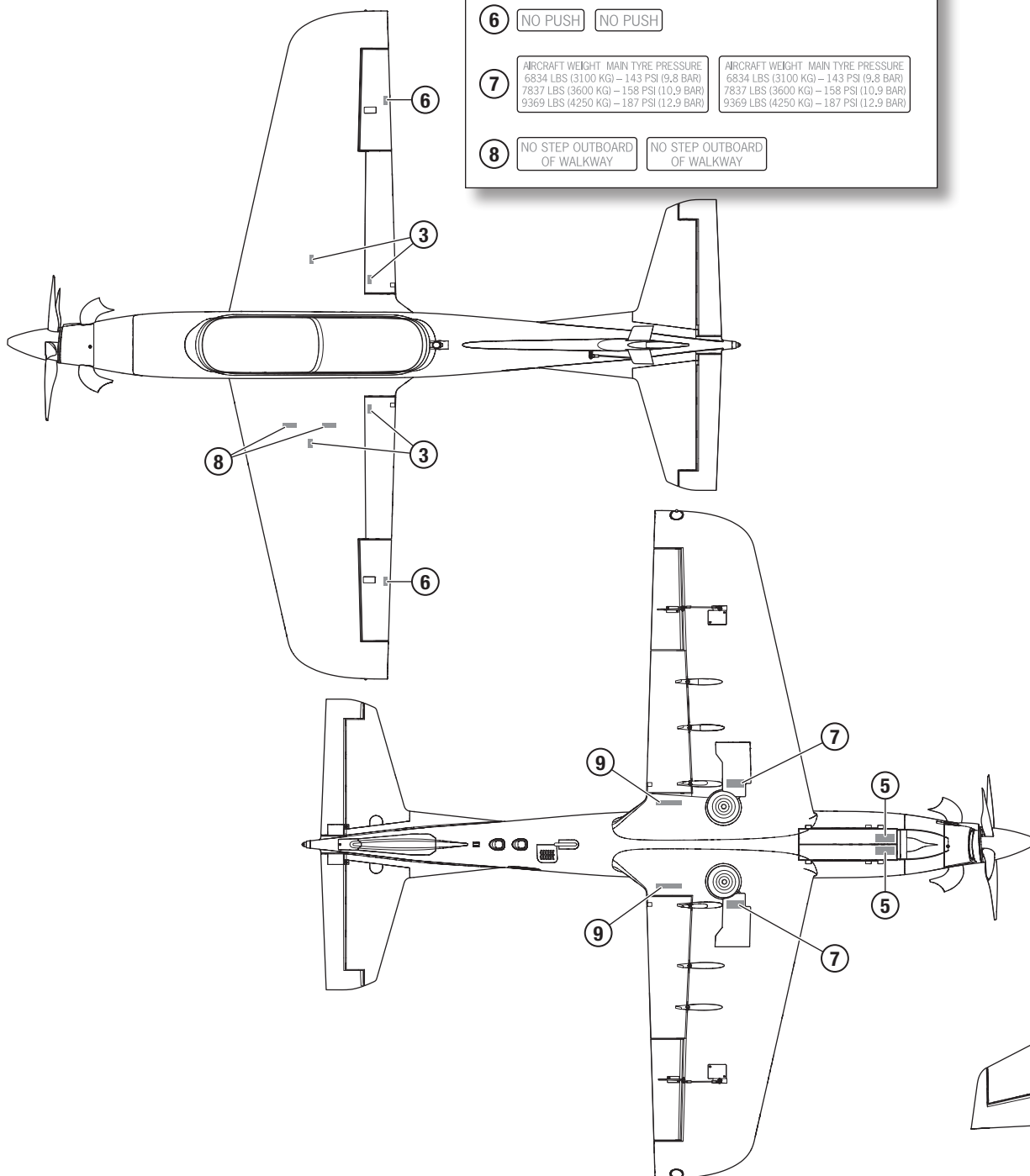
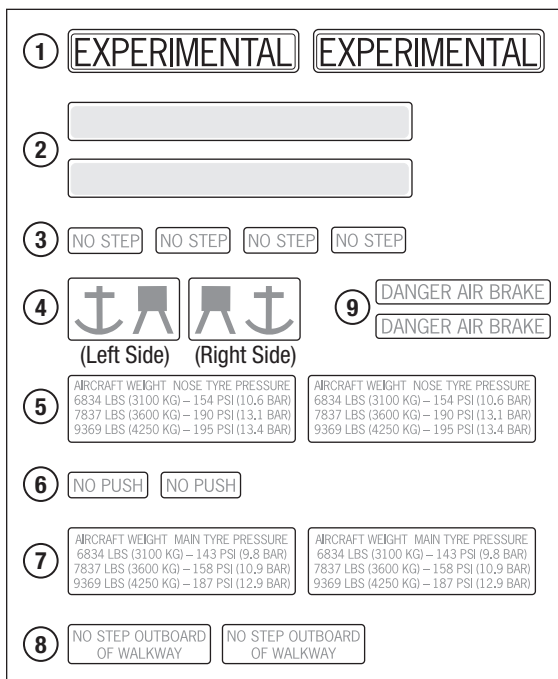


Decal Placement

Supplemental Water Transfer Decals

To apply the water transfer decals:

1. For proper adhesion clean the surface where the decal will be applied.
2. Cut out the decal, leaving a small border around the shape.
3. Soak the decal in warm water for about 15 seconds until it slides easily on the backing paper.
4. Position the decal on the surface and gently slide backing out from under the decal.
5. Use a soft cloth to remove excess water and air bubbles from the decals.
6. Allow the decals to dry for 24hrs before use.





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