V1200 1.2m

Scan the QR code and select the Manuals and Support quick links from the product page for the most up-to-date manual information.
Scannen Sie den QR-Code und wählen Sie auf der Produktseite die Quicklinks Handbücher und Unterstützung, um die aktuellsten Informationen zu Handbücher.
Scannez le code QR et sélectionnez les liens rapides Manuals and Support sur la page du produit pour obtenir les informations les plus récentes sur le manuel.
Scannerizzare il codice QR e selezionare i Link veloci Manuali e Supporto dalla pagina del prodotto per le informazioni manuali più aggiornate.

BNF BASIC

PNP PLUG-N-PLAY

EFL120050   EFL120075

HORIZON HOBBY

MEANING OF SPECIAL LANGUAGE

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

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

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

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

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

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, LLC. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

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

Safety Precautions and Warnings

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

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.

- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Always ensure failsafe is properly set before flying.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

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

Registration

Register your product today to join our mailing list and keep up to date with product updates, offers and E-flite® news.

Table of Contents

Specifications

Specifications	
Wingspan	47.4" (1204mm)
Length	43" (1091mm)
Weight	Without Battery: 72.2 oz (2048g) With Recommended 6S 5000mAh Battery: 99.4 oz (2818g)

Included Equipment

Included Equipment	
Receiver	AR637+ DSMX 6-Channel AS3X+ & SAFE Receiver (SPM-1032) (BNF Only)
ESC	Avian™ 100-Amp Smart Brushless ESC, 3S–6S with IC5® Connector (SPMXAE1100)
Motor	5065-800Kv Outrunner Brushless Motor, 14-Pole (SPMXAM4250)
Servos	(4) A370 9g Metal-Geared Aircraft Servo (SPMSA370)

Recommended Equipment

Recommended Equipment	
Transmitter	NX7e+ 14-Channel Transmitter Only (SPMR7110)
Battery	SPMX56S30 5000mAh 6S 22.2V Smart G2 LiPo 30C; IC5
Battery Charger	SPMXC2020 Smart S1200 G2 AC Charger; 1x200W
Receiver	SPM-1032 AR637T+ 6 Channel AS3X+ & SAFE Telemetry Receiver (PNP Only)

Required Tools

Phillips Screwdriver (PH#1)

SAFE® Select Technology (*BNF*)

The BNF Basic version of this airplane includes SAFE Select technology which can offer an extra level of protection in flight. Use the following instructions to make the SAFE Select system active and assign it to a switch. When enabled, SAFE Select prevents the airplane from banking or pitching past predetermined limits, and automatic self-leveling keeps the airplane flying in a straight and level attitude when the aileron, elevator and rudder sticks are at neutral.
SAFE Select is enabled or disabled during the bind process. When the airplane is bound with SAFE Select enabled, a switch can be assigned to toggle between SAFE Select mode and AS3X+ mode. AS3X+ technology remains active with no bank angle limits or self leveling any time SAFE Select is disabled or OFF.

SAFE Select can be configured three ways;
• SAFE Select Off: Always in AS3X+ mode
• SAFE Select On with no switch assigned: Always in SAFE Select mode
• SAFE Select On with a switch assigned: Switch toggles between SAFE Select mode and AS3X+ mode

Smart Transmitter Setup (*BNF*)

The receiver installed in the aircraft contains an AS3X+/SAFE setup file developed specifically for this aircraft. This Smart Transmitter File (STF) allows you to quickly import the transmitter settings 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 current model settings. If this is a new blank model, the file populates the transmitter parameters into the active model and renames it V1200 EFL120050.

NOTICE: Confirming will override any previously saved transmitter setups.

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 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.

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: EFL120050　　　　　　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

Manual Transmitter Setup

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 5000mAh battery. Adjust the time after the initial flight.

NX Series Transmitter Setup

1. Power ON your transmitter, click on scroll wheel, roll to **System Setup** and click the scroll wheel. Select *YES*.
2. Go to **Model Select** and choose *Add New Model* near the bottom of the list. Select *Airplane Model Type* by choosing airplane image, select *Create*.
3. Set **Model Name:** Input a name for your model file.
4. Go to **Aircraft Type** and scroll to the wing selection, choose **Wing:** *1 Ail 1 Flap* **Tail:** *Normal*
5. Select **Main Screen**, Click the scroll wheel to enter the **Function List**.
6. Go to **D/R (Dual Rate) and Expo** menu to set **D/R** and **Expo**.
7. Set **Rates and Expo:** *Aileron*
   Set **Switch:** *Switch F*
   Set **High Rates:** *100%,* Expo *10%* — **Low Rates:** *70%,* Expo *5%*
8. Set **Rates and Expo:** *Elevator*
   Set **Switch:** *Switch C*
   High Rates: *100%,* Expo *10%* — **Low Rates** *70%,* Expo *5%*
9. Set **D/R (Dual Rate) and Expo:** *Rudder*
   Set **Switch**: *Switch G*
   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   15% Elevator
    Set **Pos 2:**   −100% Flap   25% 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. Select *YES*.
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 **Wing:** *1 Ail 1 Flap* **Tail:** *Normal*
6. Select **Main Screen**, Click the scroll wheel to enter the **Function List**.
7. Set **D/R (Dual Rate) and Expo:** *Aileron*
   Set **Switch:** *Switch F*
   Set **High Rates:** *100%,* Expo *10%* — **Low Rates:** *70%,* Expo *5%*
8. Set **D/R (Dual Rate) and Expo:** *Elevator*
   Set **Switch**: *Switch C*
   High Rates: *100%,* Expo *10%* — **Low Rates** *70%,* Expo *5%*
9. Set **D/R (Dual Rate) and Expo:** *Rudder*
   Set **Switch**: *Switch G*
   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   15% Elevator
    Set **Pos 2:**   −100% Flap   25% Elevator
    Set **Speed:**   2.0s

‡ 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 *SAFE Select Switch Designation* section for transmitter setup and operation information.

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.

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 screen's upper left corner, 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. Select **Model Option**, choose *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 back arrow icon in the upper left corner of the screen to return to the main screen.
6. Go to 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 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. Set **Dual Rates and Expo:** Select *Aileron*
   Set **Switch:** *Switch F*
   Set **High Rates:** *100%,* Expo *10%* — **Low Rates:** *70%,* Expo *5%*
10. Set **Dual Rates and Expo:** Select *Elevator*
    Set **Switch:** *Switch C*
    High Rates: *100%,* Expo *10%* — **Low Rates** *70%,* Expo *5%*
11. Set **D/R (Dual Rate) and Expo:** *Rudder*
    Set **Switch**: *Switch G*
    High Rates: *100%,* Expo *10%* — **Low Rates** *70%,* Expo *5%*
12. Set **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   15% Elevator
    Set **Pos 2:**   −100% Flap   25% Elevator
    Set **Speed:**   2.0s

Model Assembly

Horizontal Stabilizer Installation

1. Insert the carbon horizontal stabilizer tube **(A)** through the hole in the fuselage.
2. Slide one side of the horizontal stabilizer halves onto the tube.
3. Using a #1 Phillips screwdriver, secure the horizontal stabilizer to the fuselage with an M2 x 10mm screw **(B)**.
4. Snap the ball link **(C)** onto the pre-installed ball **(D)** on the elevator control horn.
5. Repeat steps 2-4 for the other horizontal stabilizer half.
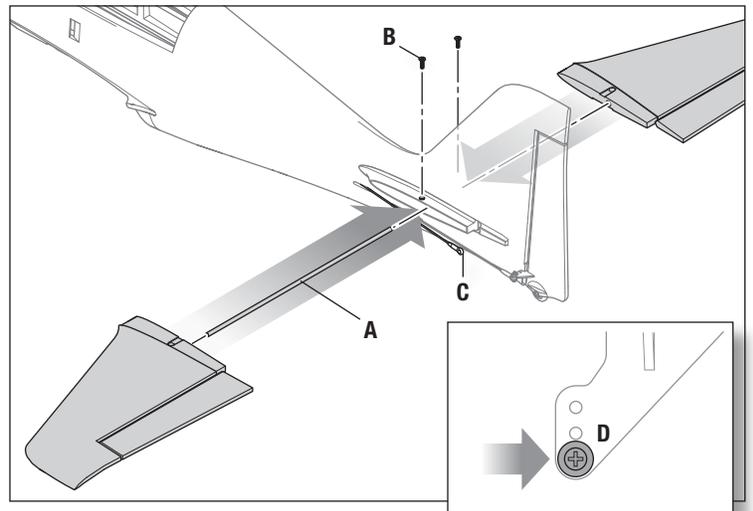
Wing Installation

1. Press the wing into the fuselage, ensuring the pins in the wing servo connector plate align with the corresponding holes in the fuselage plate **(A)**.

⚠ **CAUTION:** The wing servo connections should fit easily into the fuselage. Do not force the connections together. If resistance is encountered in the connection, check the alignment of the pins and connectors and try again.

2. Using a #1 Phillips screwdriver, install two M4 x 45mm screws **(B)** in the rear wing holes. Do not overtighten.

IMPORTANT: Make sure the screws do not extend beyond the top of the blind nuts inside the fuselage when tightened. Allowing the screws to extend beyond the blind nuts into the battery compartment could cause damage to the battery.

3. Install two M4 x 30mm screws **(C)** in the front wing holes. Do not overtighten.
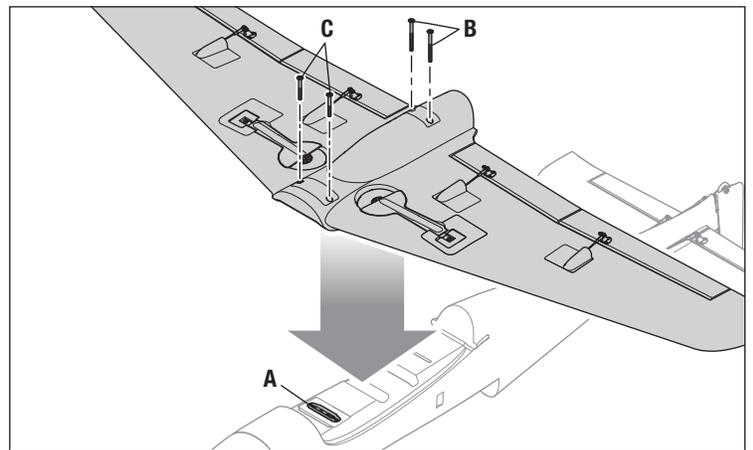
Control Horn and Servo Arm Settings

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.

	Horns	Arms
Elevator		
Ailerons		
Rudder		
Flaps		

Receiver Installation (*PNP*)

⚠ **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 wing 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 toward the bottom of the aircraft, and the servo ports toward the front.

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

2. Connect the control surface servo leads to the their respective ports on the receiver using the table at the right as a reference.

3. Route the antenna into the antenna tube.

AR637T+ Port Assignments
Bnd/Prg/SRXL2= Bind
1 = Throttle
2 = Ailerons
3 = Elevator
4 = Rudder
5 = Gear
6 = Flaps
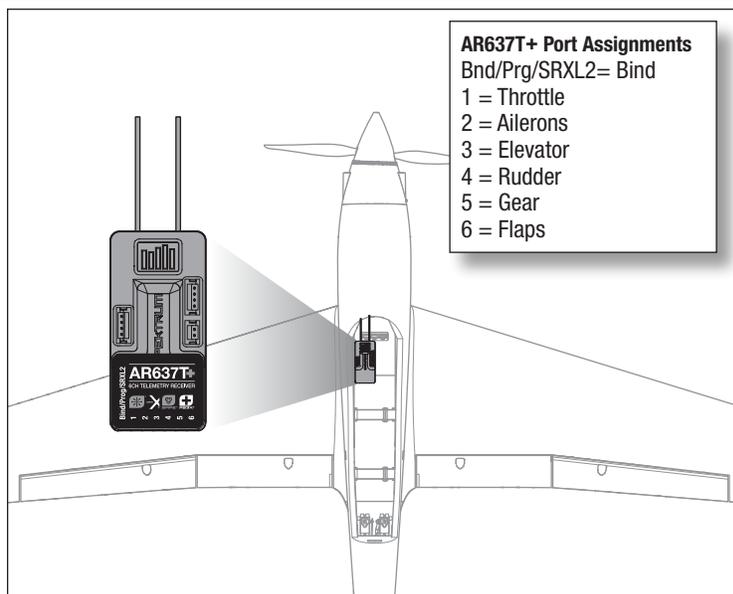
Battery Installation and ESC Arming

The Spektrum™ Smart 5000mAh 6S 30C Li-Po battery (SPMX56S30) is recommended for best performance.
Refer to the Optional Parts List for other recommended batteries. If using a battery other than those listed, the battery should be within the range of capacity, dimensions and weight of the Spektrum Li-Po battery pack to fit in the fuselage. Be sure the model balances at the recommended CG before flying.

⚠ **WARNING:** Always keep hands away from the propeller. When armed, the motor will turn the propeller in response to any throttle movement. If your transmitter supports it, always engage throttle cut before approaching the aircraft any time a battery is connected.

1. Lower the throttle and throttle trim to the lowest settings. Power on the transmitter, then wait 5 seconds.
2. Firmly grip the rear of the fuselage and pull the rear of the hatch **(A)** up to remove the hatch from the fuselage.
3. Install the fully charged battery (**B**) in the middle of the battery compartment, as shown. Secure using the two included hook and loop straps (**C**).
4. Connect the battery to the ESC (the ESC is now armed).
5. Keep the aircraft immobile and away from wind or the system will not initialize.
   • The ESC will sound a series of tones.
   • An LED will light on the receiver.
   • If the ESC sounds a continuous double beep after the flight battery is connected, recharge or replace the battery.
6. Reinstall the canopy hatch.
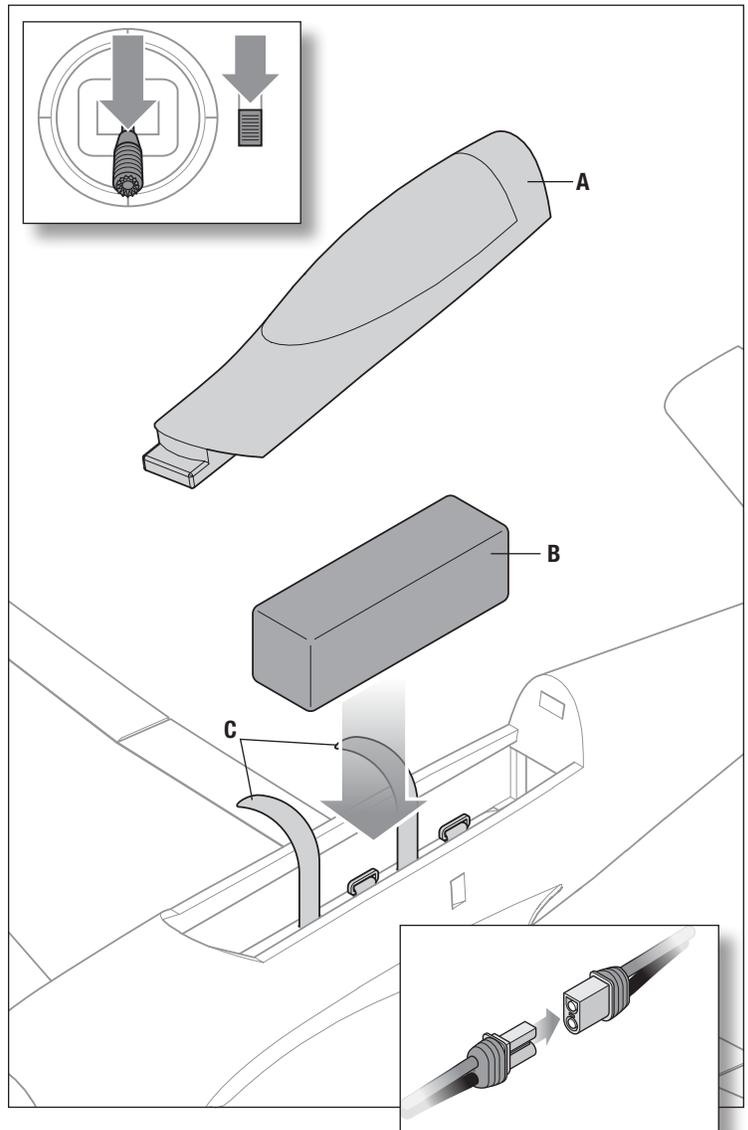
Center of Gravity (CG)

The CG location is measured 120mm (+/− 5mm) back from the leading edge of the wing at the wing fuselage. This CG location has been determined with the recommended Li-Po battery (SPMX56S30).

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

TIP: Measure the CG with the aircraft inverted.

120mm (+/− 5mm) back from the leading edge of the wing at the fuselage
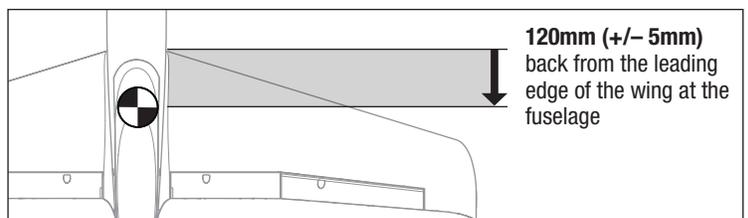
General Binding Tips and Failsafe (*BNF*)

- 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 (*BNF*)

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.
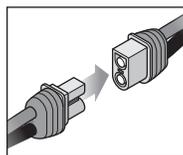
SAFE Select can also be enabled via Forward Programming.

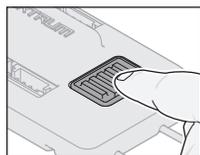## Using The Bind Button...

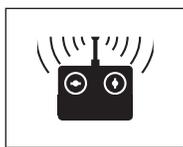### To Enable SAFE Select
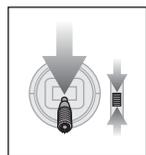
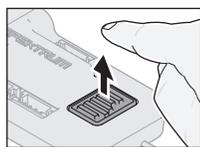Lower Throttle   Connect Power   Press and hold Bind Button
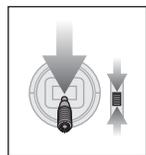
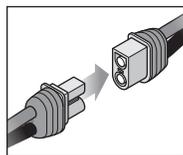Orange Flashing LED   Bind Tx to Rx   Release Bind Button

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.
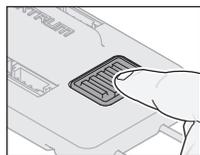
To Disable SAFE Select
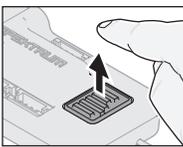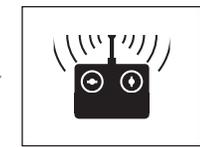

Lower Throttle   Connect Power   Press and hold Bind Button
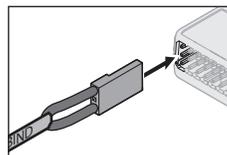
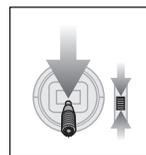Orange Flashing LED   Release Bind Button   Bind Tx to Rx

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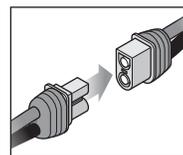
Using The Bind Plug...

To Enable SAFE Select

Install Bind Plug   Lower Throttle   Connect Power

Orange Flashing LED   Remove Bind Plug   Bind Tx to Rx
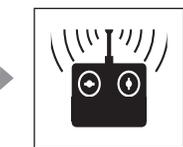
SAFE SELECT ENABLED: The control surfaces cycle back and forth **twice** with a slight pause at neutral position every time the receiver is powered on.
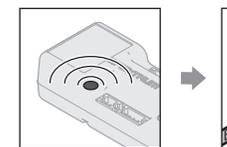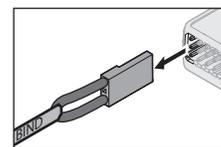
To Disable SAFE Select
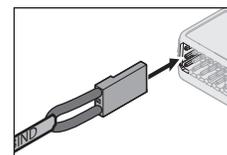
Install Bind Plug   Lower Throttle   Connect Power
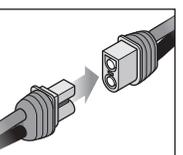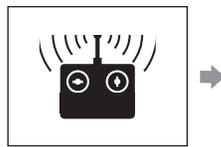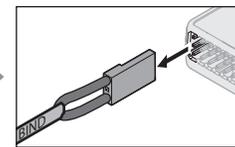
Orange Flashing LED   Bind Tx to Rx   Remove Bind Plug

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

SAFE® Select Switch Designation *(BNF)*

SAFE Select is best enabled via Forward Programming 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 propeller, 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: If a SAFE Select switch is desired for this 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.

Mode 1 and 2 transmitters

100%
X 5
100%
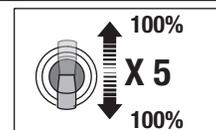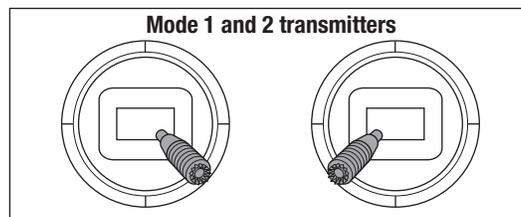
Forward Programming

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

1. For more information about setting SAFE Select and using Forward Programming, please refer to the following link for a detailed video:
2. https://www.youtube.com/watch?v=o-46P066cik

Forward Programming SAFE Select Setup	
DX series, NX series, iX series	1. Begin with the transmitter bound to the receiver.
	2. Power ON the transmitter.
	3. Assign a switch for SAFE Select that is not already in use for another function. Use any open channel between 7 and 20.
	4. Set switch H (throttle cut) to prevent accidental motor operation.
	5. Power ON the aircraft. A signal bar appears on your transmitter's main screen when the telemetry information is being received.
	6. Go to the FUNCTION LIST (Model Setup)
	7. Select Forward Programming; Select Gyro Settings, Choose SAFE Select to enter the menu.
	8. Set SAFE Select Ch: to the channel you have chosen for SAFE Select.
	9. Set AS3X+ and SAFE on or off as desired for each switch position.

Integrated ESC Telemetry

BNF: This aircraft includes telemetry between the ESC and receiver, which provides information including RPM, voltage, throttle setting (%), and FET (speed controller) temperature.
PNP: The ESC in this aircraft delivers telemetry information over the throttle connection when paired with a Smart compatible Spektrum telemetry receiver. It functions with a normal PWM servo signal for common radio control systems.
For more information about compatible transmitters, firmware updates, and how to use the telemetry technology on your transmitter, visit www.SpektrumRC.com.

Telemetry Settings	
Rx V : Min Rx V	4.2V
Smart ESC : Low Voltage Alarm	3.44V
Smart Battery : Startup Volt Minimum	4.0V
Motor Pole Count	14
Warning Reports	10 seconds

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.
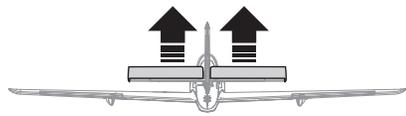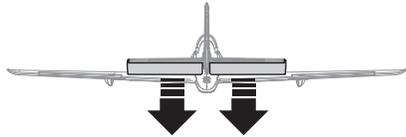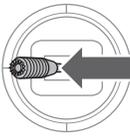
Elevator

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	
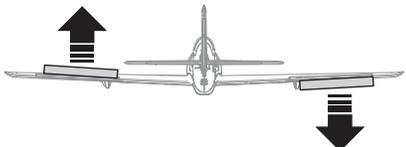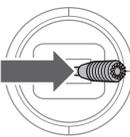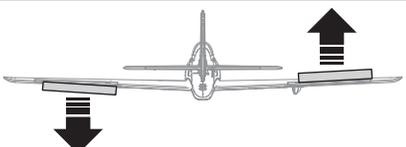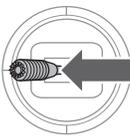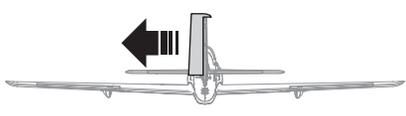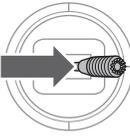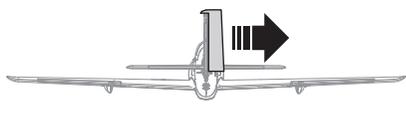
Control Surface Centering

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 clevis on the linkage to change the length of the linkage between the servo arm and the control horn.

After binding a transmitter to the aircraft receiver, set the trims and sub-trims to 0, then adjust the linkages to center the control surfaces.
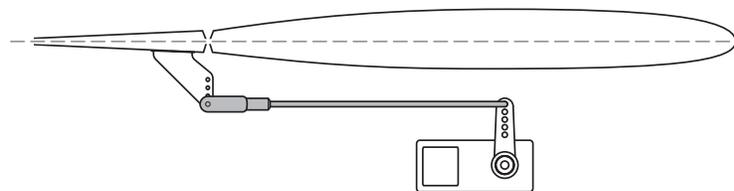
Dual Rates and Control Throws

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 (at root)	▲ = 8mm ▼ = 8mm	▲ = 12mm ▼ = 12mm
Elevator (at tip)	▲ = 6mm ▼ = 6mm	▲ = 8mm ▼ = 8mm
Rudder (at top)	▶ = 6mm ◀ = 6mm	▶ = 10mm ◀ = 10mm
Flap	Half ▼ = 13mm	Full ▼ = 22mm

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.

AS3X+ Response Test (*BNF*)

⚠ **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
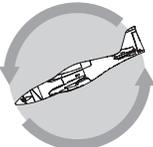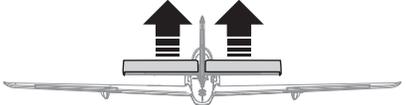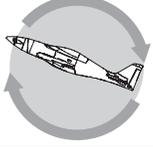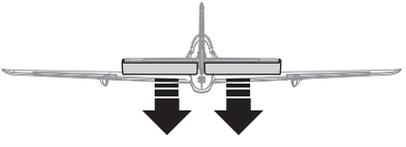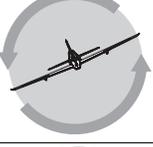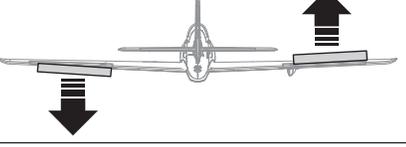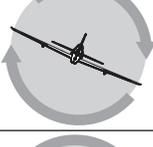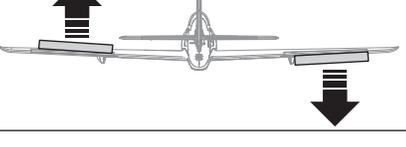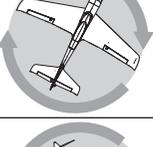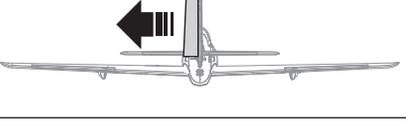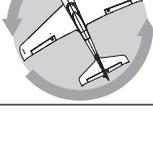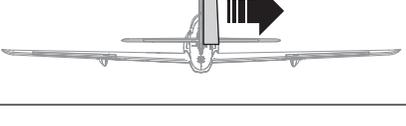
In-Flight Trimming

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.

3 Seconds
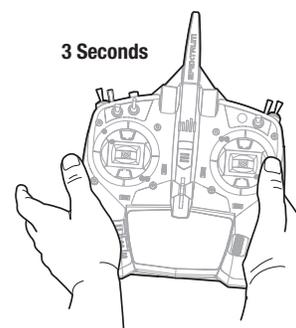
Flying Tips and Repairs

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.

Oscillation

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

Takeoff

Place the aircraft facing into the wind. Set your transmitter in low rate and use your flaps switch to drop the flaps to takeoff or "half position". Gradually increase the throttle to ¾ and steer with the rudder. Flaps make takeoffs shorter. As the tail comes off the ground, pull back gently on the elevator. When airborne, flip your gear switch to raise your landing gear. Climb to a comfortable altitude and then flip your flaps switch to level the flaps.

Flying

For your first flights with the recommended battery pack (SPMX50006S30), set your transmitter timer or a stopwatch to 3.5 minutes, land the aircraft. Adjust your timer for longer or shorter flights once you have flown the model. If at any time the motor power reduces, land the aircraft immediately to recharge the flight battery. See the Low Voltage Cutoff (LVC) section for more details on maximizing battery health and run time.

Landing

Land the aircraft into the wind. Use high rate elevator for landings. Use a small amount of throttle for the entire descent. Lower the throttle to ¼ and select your flap switch to deploy the flaps to the landing, or full down position. Flaps will make the landing approach steeper and slower, and allow for a smoother landing. Flip your gear switch to lower your landing gear. This will slow the aircraft further. Keep the throttle on until the aircraft is ready to flare. During flare, keep the wings level and the aircraft pointed into the wind. Gently lower the throttle while pulling back on the elevator to bring the aircraft down on its wheels.

If landing on grass, it is best to hold full up elevator after touchdown and when taxiing to prevent nosing over.
Once on the ground, avoid sharp turns until the plane has slowed enough to prevent scraping the wingtips.

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 reduces, 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 (SPMXBC200, sold separately).

Repairs

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

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

Differences Between SAFE and AS3X+ Modes

This section is generally accurate but 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

Post Flight

Disconnect the flight battery from the ESC (required for safety and battery life).	Repair or replace all damaged parts.
Power OFF the transmitter.	Store the flight battery apart from the aircraft and monitor the battery charge.
Remove the flight battery from the aircraft.	Make note of the flight conditions and flight plan results, planning for future flights.
Recharge the flight battery to storage voltage level.	

Power Components Service

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

Disassembly

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

Assembly

Assemble in reverse order.
- Correctly align and connect the motor wire colors with the ESC wires.
- Install the propeller with the size numbers facing forward. The propeller may require balancing.

NOTICE: If the propeller is not balanced, the aircraft may vibrate, causing the stabilization system to not operate correctly and/or decrease the life of the servos.

For more information, view our propeller balancing video on Horizon Hobby's YouTube channel:
https://www.youtube.com/watch?v=0XuNnYQO2s4
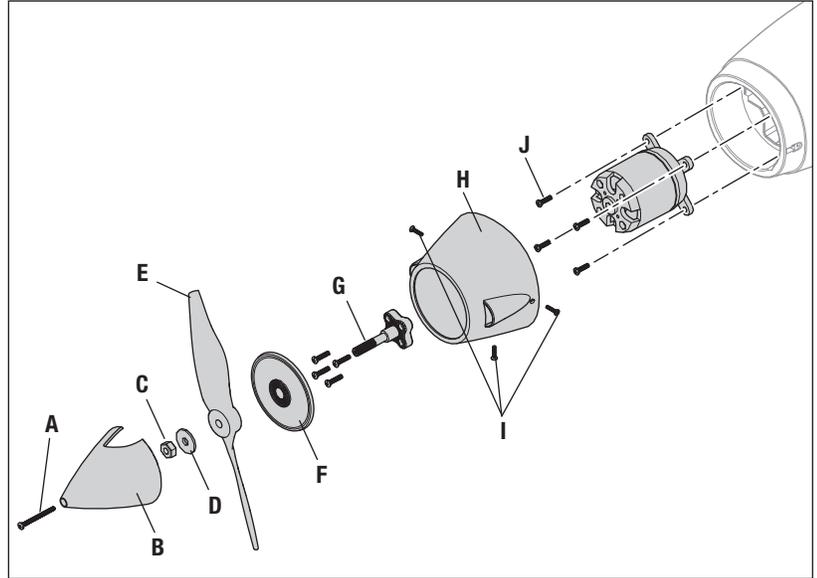
Troubleshooting Guide AS3X+ (*BNF*)

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
APC10080E	Electric Propeller, 10 x 8
EFL-3496	Landing Gear Wire: V1200 V2
EFL12363	Motor Mount: V1200
EFL-3453	Fuselage: V1200 v2
EFL-3457	Cowl: V1200 v2
EFL-3454	Wing: V1200 v2
EFL-3455	Horizontal Stabilizer w/tail tube: V1200 v2
EFL-3456	90-Degree Main Retract Unit: V1200 v2
EFL-3458	Decal Sheet: V1200 v2
EFL-3459	Landing Gear Doors: V1200 v2
EFL-3620	Wheel Axle Circlips and Washers: V1200 V2
EFL12354	Battery Hatch: V1200

Part Number	Description
EFL12357	Prop Adapter: V1200
EFL12358	Servo Covers: V1200
EFL12360	Wheel Set: V1200
EFL12361	Pushrod Set: V1200
EFL12362	Hardware Set: V1200
EFLSP250U	2.50 Aluminum Spinner Ultimate Style
SPMXAE1100	Avian 100 Amp Brushless Smart ESC 3S-6S
SPM-1032	AR637T+ 6 Channel AS3X+ & SAFE Telemetry Receiver
SPMSA370	9 Gram Metal Gear Servo
SPMXAM4250	5065-800Kv 14-Pole Brushless Outrunner Motor: V1200 V2 1.2m

Recommended Completion Items

Part Number	Description
SPMR7110	NX7e+ 7 Channel Transmitter Only
SPMXC2020	Smart S1200 G2 AC Charger; 1x200W
SPMX56S30	5000mAh 6S 22.2V Smart LiPo 30C; IC5

Optional Parts

Part Number	Description
SPMA95871	GPS Telemetry Sensor Spektrum
SPMXGPS100	GNSS Wireless GPS Speed Meter and Data Logger Spektrum Accessories
DYN4403	Passport GPS Speed Meter 2.0 Dynamite
SPMR8210	NX8+ 20 Channel DSMX Transmitter Only
SPMX50004S30	14.8V 5000mAh 4S 30C Smart LiPo Battery: IC5 Spektrum Accessories
SPMX50006S30	5000mAh 6S 22.2V Smart G2 LiPo 30C; IC5
SPMXC2080	Smart S1100 AC Charger, 1x100W
SPMXCA508	Adapter: IC5 Battery / IC3 Device

Part Number	Description
SPMX40004S30	4000mAh 4S 14.8V Smart LiPo Battery 30C; IC3
SPMX32004S30	3200mAh 4S 14.8V Smart LiPo Battery 30C; IC3
BLH100	Deluxe Ball Link Pliers: All
SPM6730	Smart Charger Case
ONXT1000	Ultimate Air/Surface Startup Tool Set
SPMXCA200	Avian and Firma Smart ESCs Programming Update Box
SPMXBC200	XBC200 Smart Battery Checker & Servo Tester
SPMXCA300	Smart Lipo Bag, 16 x7.5 x 6.5 cm
SPMX76S30	22.2V 7000mAh 6S 30C Smart G2 Lipo Battery: IC5

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.

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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.de	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
EFL V-1200 1.2m BNF-Basic (EFL12350) and
EFL V-1200 1.2m PNP (EFL12375)

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

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Compliance Information for the European Union

EU Compliance Statement:
EFL V-1200 1.2m PNP (EFL120075): 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

EFL V-1200 1.2m BNF-Basic (EFL120050): Hereby, Horizon Hobby, LLC declares that the device is in compliance with the following: EU Radio Equipment Directive 2014/53/EU, RoHS 2 Directive 2011/65/EU, RoHS 3 Directive - Amending 2011/65/EU Annex II 2015/863.

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

Wireless Frequency Range and Wireless Output Power:
2402-2478MHz
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.