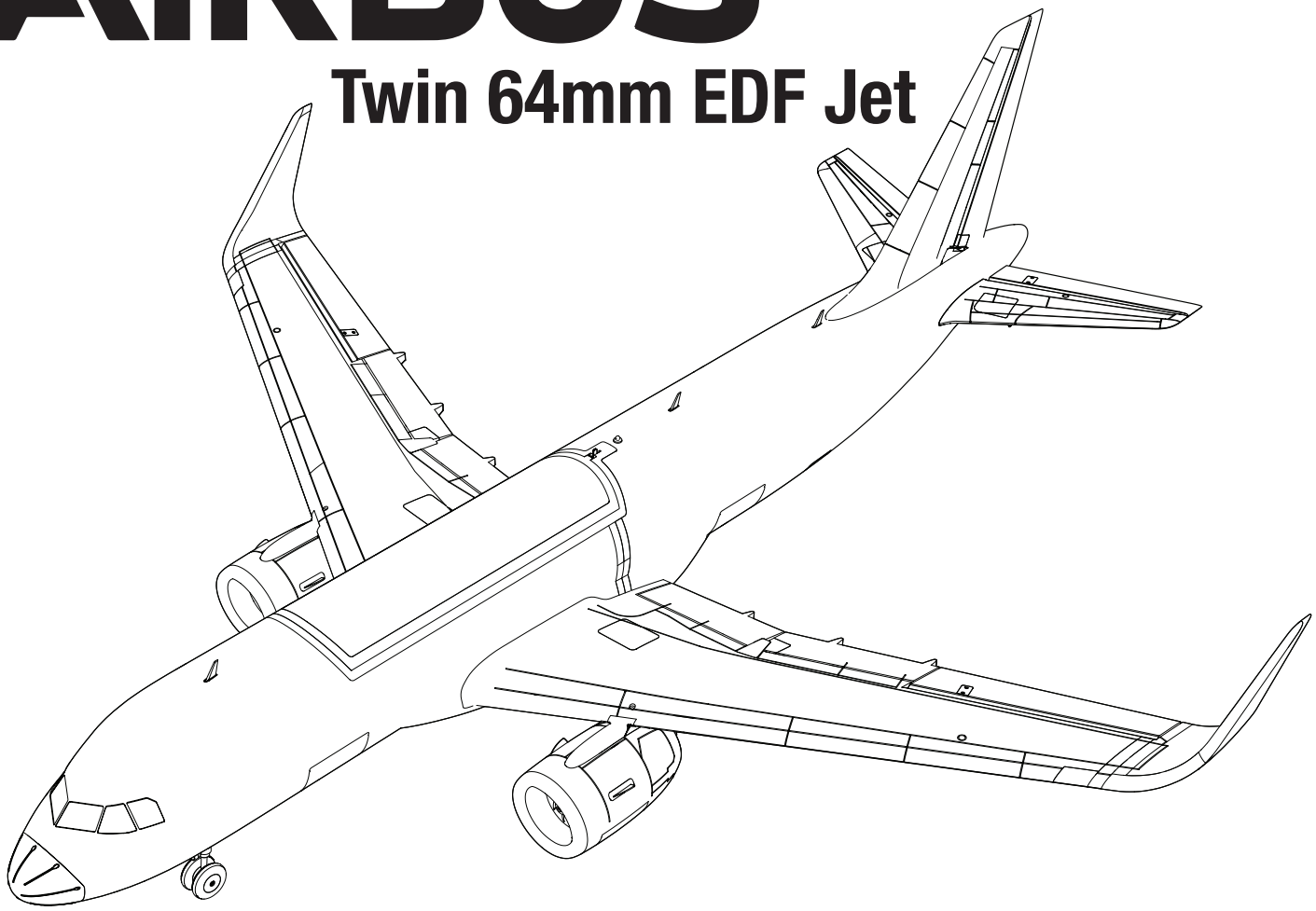
E-flite®
ADVANCING ELECTRIC FLIGHT

OFFICIAL LICENSED PRODUCT
AIRBUS

AIRBUS A320 neo

Twin 64mm EDF Jet



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

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

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

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

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

PNP PLUG-N-PLAY®
EFL-1492

BNF® BASIC
EFL-1493

BNF® BASIC
EFL-1495 (White)

756085
Created 06/25

HORIZON® HOBBY

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, LLC. For up-to-date product literature, visit horizonhobby.com or towerhobbies.com and click on the support or resources tab for this product.

MEANING OF SPECIAL LANGUAGE

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:
WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.
CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.
NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND little or no possibility of injury.

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

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

Safety Precautions and Warnings

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

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Always ensure failsafe is properly set before flying.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

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

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

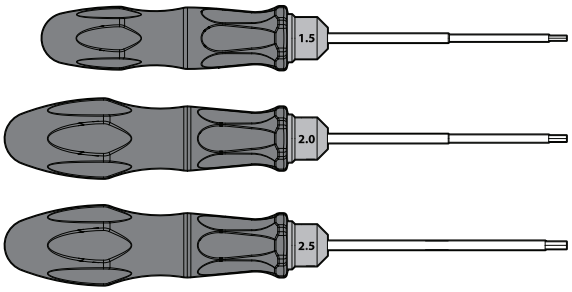
Specifications	
Wingspan	59.9 in. (1522mm)
Length	62.6 in. (1590mm)
Weight	Without Battery: 104.2oz (2954g) With Recommended 6S 5000mAh Battery: 130oz (3685g)

Included Equipment	
Receiver	AR637TA+ DSMX 6-Channel AS3X+ & SAFE Telemetry Receiver (SPM-1032A) (BNF Only)
ESC	Avian™ 40-Amp Dual Smart Lite Brushless ESC, 3S–6S with IC5 Connector (SPMXAE1240A)
Motor	Brushless Outrunner Motor, 2840–1900Kv 14-pole (SPMXAM3900)
Servos	**(5) Left Elevator, Left and Right Flap, and Left and Right Aileron:** A347 Sub-Micro Metal-Geared Digital 13g Servo (SPMSA347) **(1) Rudder:** A347 Sub-Micro Metal-Geared Digital 13g Servo (SPMSA347) **(1) Nose Gear Steering:** A347 Sub-Micro Metal-Geared Digital 13g Servo (SPMSA347) **(1) Right Elevator:** A347R Sub-Micro Metal-Geared Digital 13g Servo, Reverse (SPMSA347R)

Required Equipment	
Transmitter	Full Range 5+Channel 2.4GHz w/ Spektrum DSM2/DSMX® Technology
Battery	6S 22.2V 5000mAh LiPo with IC5® Connector (SPMX56S50)
Battery Charger	S1200 G2 AC 1x200W Smart Charger LiPo Battery Balancing Charger (SPMXC2020)
Receiver	6+ Channel (AR637T+ Recommended) (PNP Only) (SPM-1032)

Required Tools

Philips Screwdriver (#1)

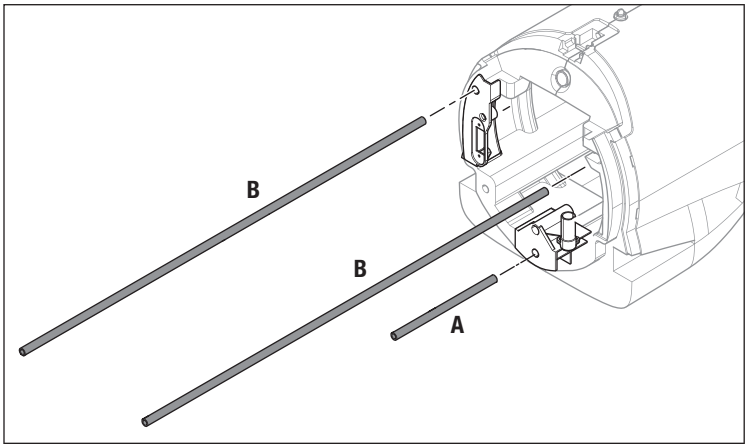


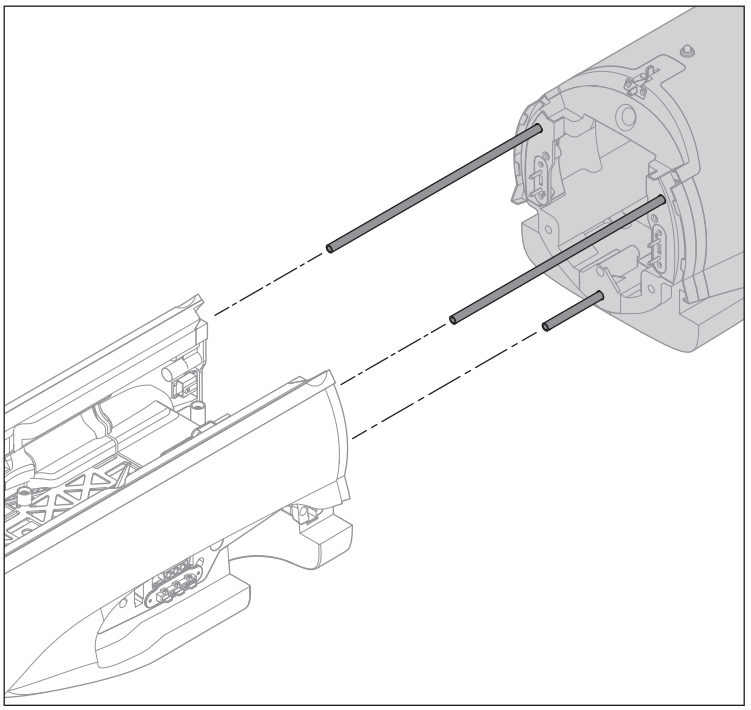
Hex Wrenches (1.5mm, 2.0mm, 2.5mm)

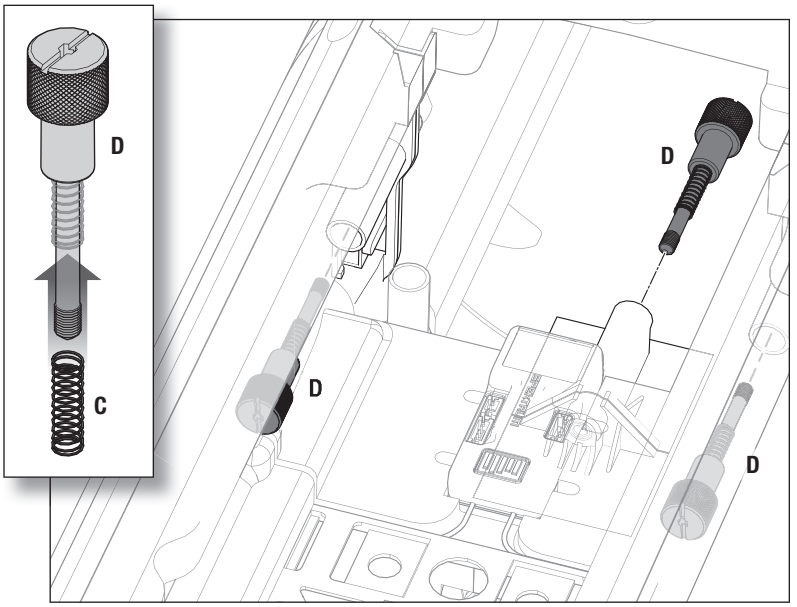
Model Assembly

Fuselage Assembly

1. Insert the short, bottom carbon fiber joiner tube (**A**) (6mm x 100mm) into the bottom position of the rear fuselage section.
2. Insert the two longer top carbon fiber joiner tubes (**B**) (6mm x 400mm) into the top positions on the sides of the rear fuselage section.
3. Slide the fuselage sections together, and ensure the hands-free connectors align.
4. Install the screw springs (**C**) on the thumb screws (**D**).
5. Using a 2.5mm ball driver, align, depress, and tighten the front two, red thumb screws (**D**) to secure the front fuselage section to the rear fuselage section.
6. Using a 2.5mm ball driver, align, depress, and tighten the rear red thumb screw (**D**) to secure the rear fuselage section to the front fuselage section.

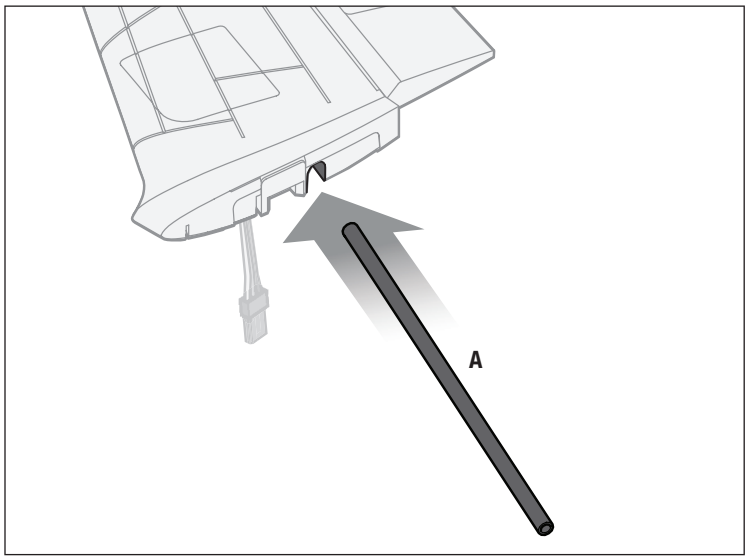


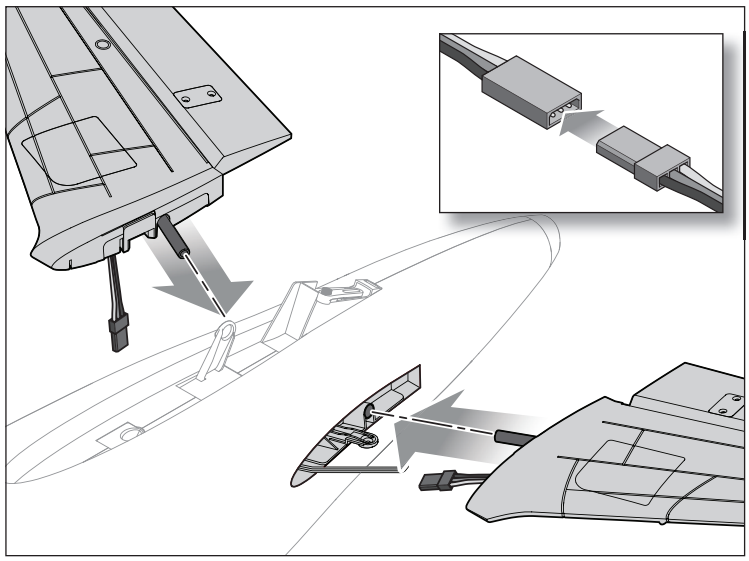


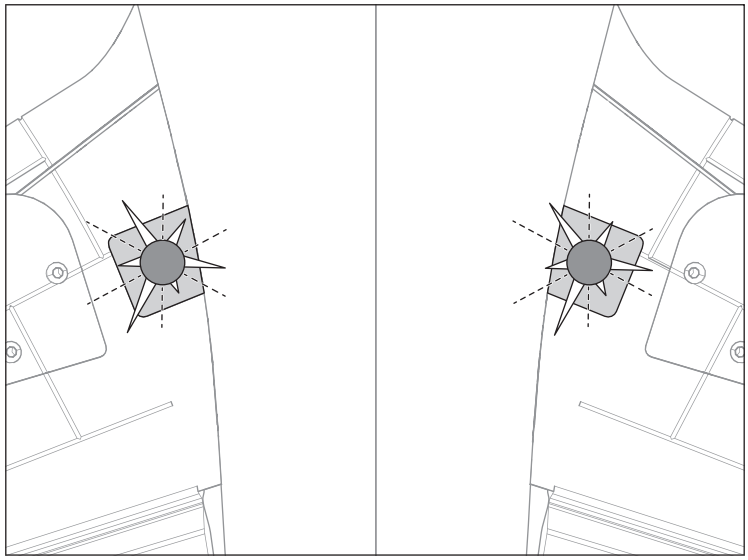


Horizontal Stabilizer Installation

1. Install the horizontal stabilizer joiner tubes (**A**) (6mm x 182mm) into each horizontal stabilizer.
2. Connect the elevator servo leads to the servo extension in the fuselage.
3. Align the joiner tube with the fuselage tube socket.
4. Slide the horizontal stabilizer into the joiner tube socket in the fuselage until it fully seats in the fuselage stabilizer pocket.
5. Ensure the retaining tab snaps into place.
6. Carefully pull each stabilizer to confirm they are locked in place.

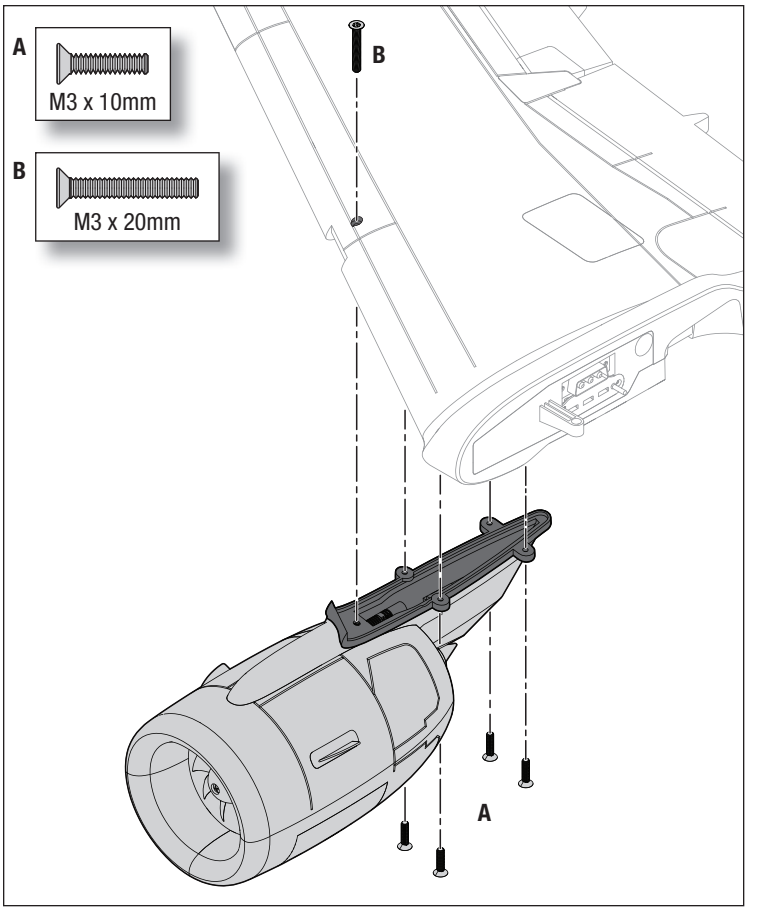






Nacelle Installation

1. Identify the right nacelle, noting the angle of the mounting plate.
2. Connect the yellow 3-pin nacelle connector to the right wing 3-pin connector.
3. Tuck the wires into the wing, and place the 3-pin connector into the nacelle pylon channel.
4. Fit the nacelle to the base of the wing. Using a 2.0mm hex wrench, secure the nacelle with four flat head screws (**A**) (M3 x 10mm) on the bottom and one flat head screw (**B**) (M3 x 20mm) on the top.
5. Repeat steps 1–4 on the left wing.



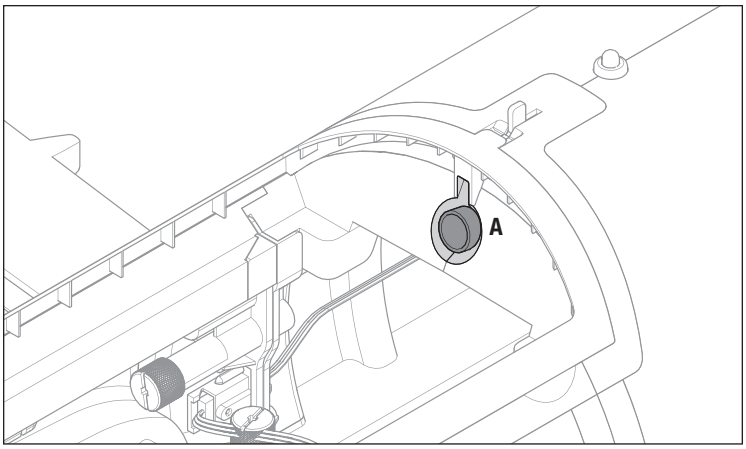
Wing Installation

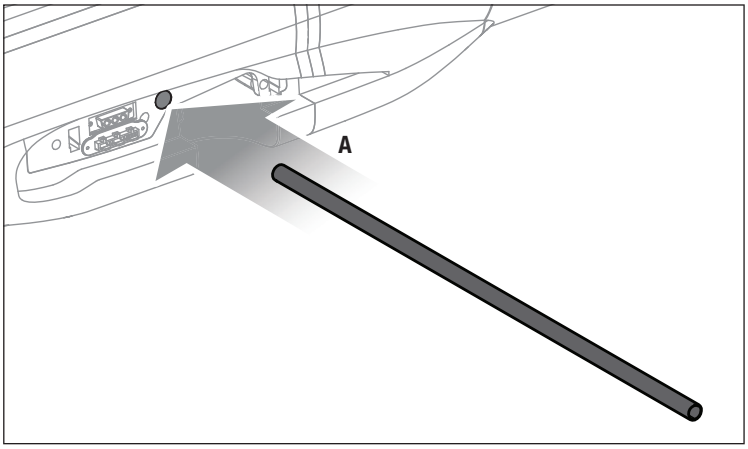
1. Insert the wing joiner tube, stored in position (**A**) (12mm x 498mm) into the fuselage wing tube socket.
2. Slide the left and right wing panels onto the wing joiner tube, and press it firmly into the wing pocket of the fuselage.

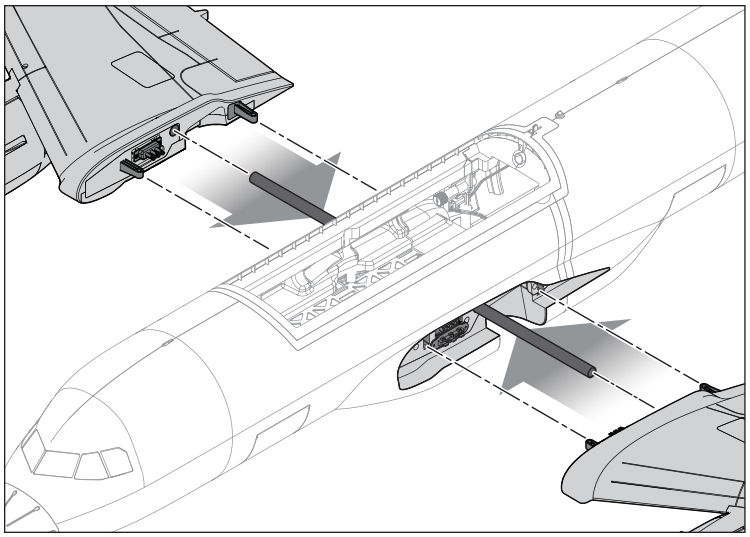
IMPORTANT: Ensure the servo hands-free and power hands-free connectors align and fully seat.

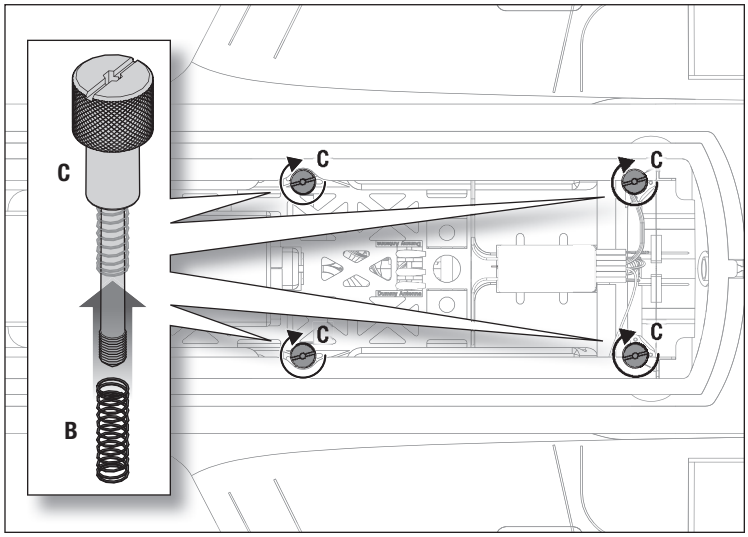
3. Install the screw springs (**B**) on the four thumb screws (**C**).
4. From inside the fuselage, use a 2.5mm ball driver to align, depress, and tighten the four red thumb screws.

TIP: If the wing does not fully seat into the fuselage pocket, slide the wing out, loosen the fuselage hands-free power connector, and press the wing into place. Once aligned, carefully slide the wing back again, and carefully retighten the hands-free connector while holding it in place.



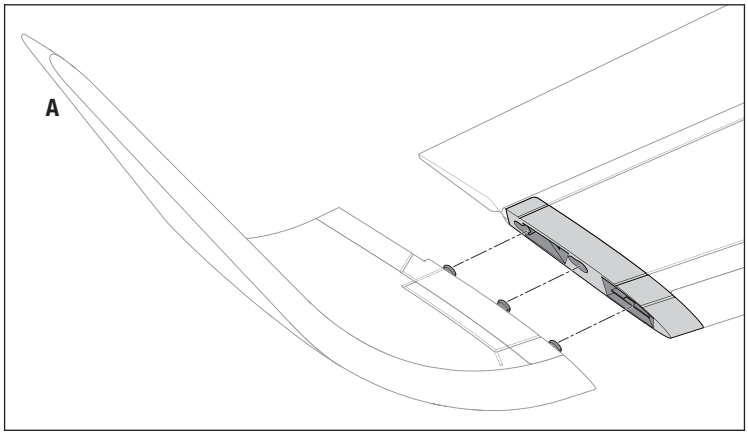






Sharklet® Installation

1. Fit the right Sharklet onto the right wing tip (**A**) on the connection pins.
2. Slide the Sharklet aft until it is fully engaged.
3. Repeat Steps 1 and 2 for the left Sharklet.

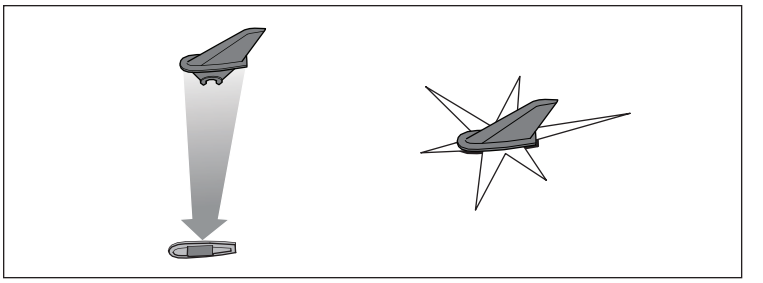


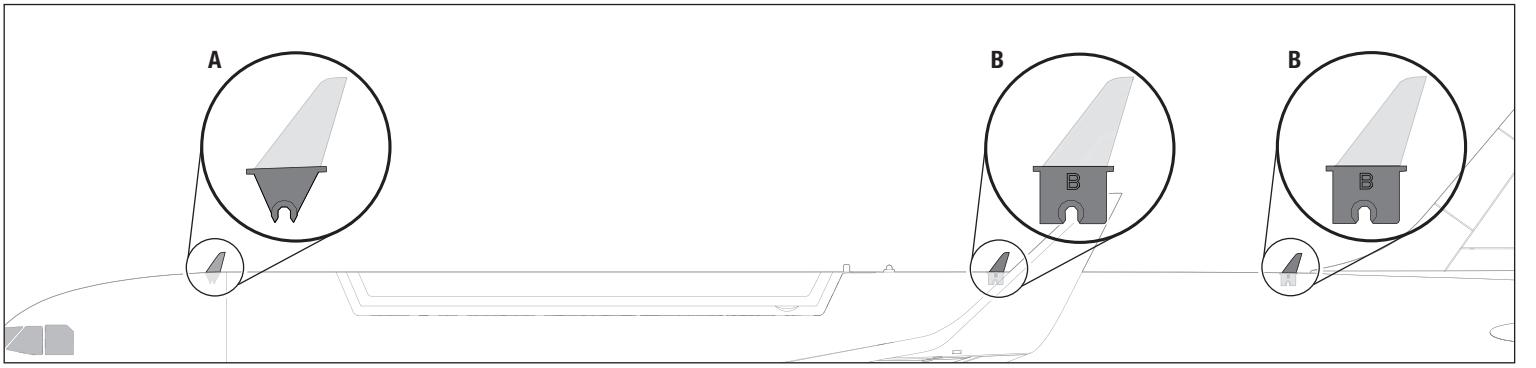
Dummy Antenna Installation

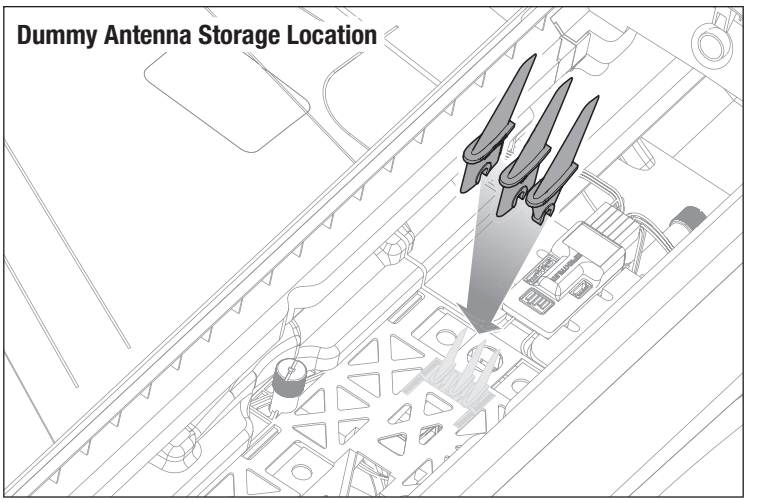
Install the dummy antennas as shown in the illustration below.

1. To install the dummy antenna, insert the dummy antenna into the open slot, and snap it firmly into place (**A, B**).
2. To remove the antenna, grip the dummy antenna and pull it up.

When the aircraft is not being flown, remove the dummy antennas and store them in the battery tray storage location.





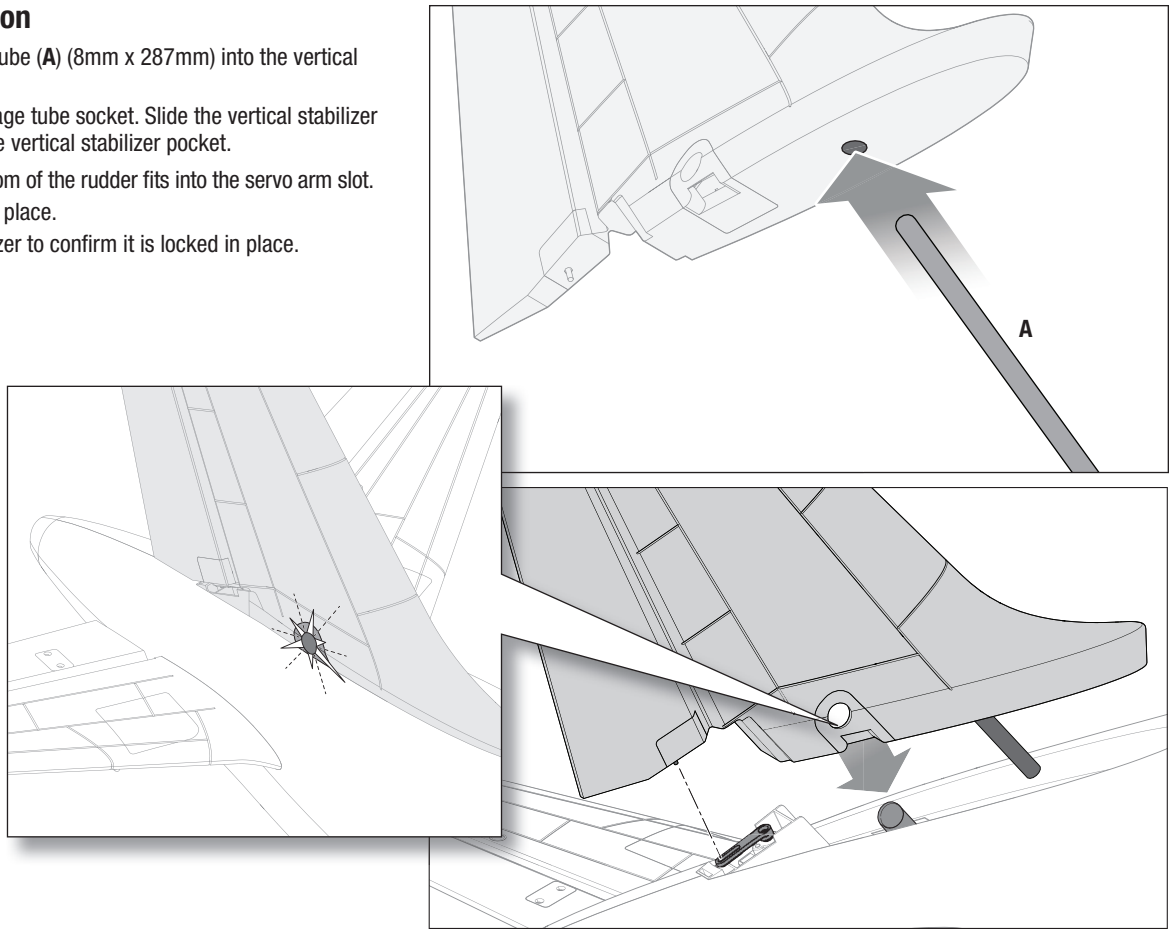


Vertical Stabilizer Installation

1. Install the vertical stabilizer joiner tube (**A**) (8mm x 287mm) into the vertical stabilizer.
2. Align the joiner tube with the fuselage tube socket. Slide the vertical stabilizer down until it seats into the fuselage vertical stabilizer pocket.

TIP: Ensure the rudder pin on the bottom of the rudder fits into the servo arm slot.

3. Ensure the retaining tab snaps into place.
4. Carefully pull on the vertical stabilizer to confirm it is locked in place.



Receiver Installation PNP

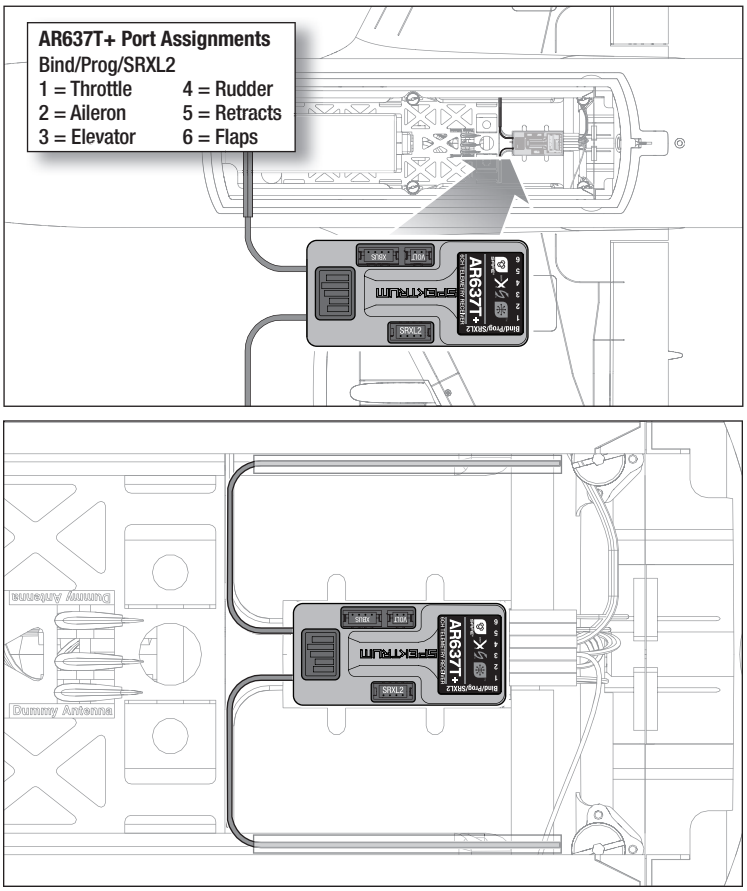
We recommend the Spektrum AR637T+ receiver (SPM-1032) for this airplane. If you choose to install another receiver, ensure that it is at least a 6-channel full range receiver. Refer to the receiver manual for installation and operation instructions.

Installation (AR637T+ shown)

1. Mount the receiver parallel to the length of the fuselage as shown. Use heavy duty double-sided servo tape.

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

2. Attach the appropriate control surfaces to the their respective ports on the receiver using the chart in the illustration.
3. Route the receiver antenna, as shown.



Auto Transmitter Setup

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 of the Airbus A320neo 64mm into the active model and renames it Airbus A320neo 64mm.

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.

Smart Transmitter File	
The receiver contains a pre-loaded Smart Transmitter file. RX Version: EFL-1493/EFL-1495 (Firmware version) 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**

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 4 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.

Manual Transmitter Setup

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

SAFE Select is best enabled via Forward Programming. SAFE® Select technology can be assigned to any open switch (2 or 3 position) controlling a channel (5–9) on your transmitter. Refer to the safe select designation section of this manual to assign safe select to your desired transmitter switch.

To use the Flap channel for the SAFE Select switch the values must be set to +100 and -100 and the speed set to 0 temporarily to assign the safe switch in the flap system menu. Then change the flap systems values back to the listing in the transmitter setup. See the SAFE Select Switch Designation section of this manual to assign the switch for SAFE Select.

For the first flight, set the flight timer to 4 minutes when using a 22.2V 5000mAh 6S 50C Smart G2 LiPo Battery with IC5 connector (SPMX56S50). Adjust the time after the initial flight.

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. 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**
    Set **Switch: *Switch D***
    Set **Flaps: POS 0: 100%, POS 1: 0%, POS 2: -100%**
    Set **Elev: POS 0: 0%, POS 1: 4%, POS 2: 6%**
    Set **Speed: 2.0**

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 **Flaps**
    Set **Switch**: ***Switch D***
    Set **Flaps: POS 0: 100%, POS 1: 0%, POS 2: -100%**
    Set **Elev: POS 0: 0%, POS 1: 4%, POS 2: 6%**
    Set **Speed: 2.0**

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.

iX Series Transmitter Setup

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. Select **Flap System**
    Set **Switch: *Switch D***
    Set **Flaps: POS 0: 100%, POS 1: 0%, POS 2: -100%**
    Set **Elev: POS 0: 0%, POS 1: 4%, POS 2: 6%**
    Set **Speed: 2.0**
13. Set **Throttle Cut**; **Switch: *Switch H*, Position: *-100%***

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.

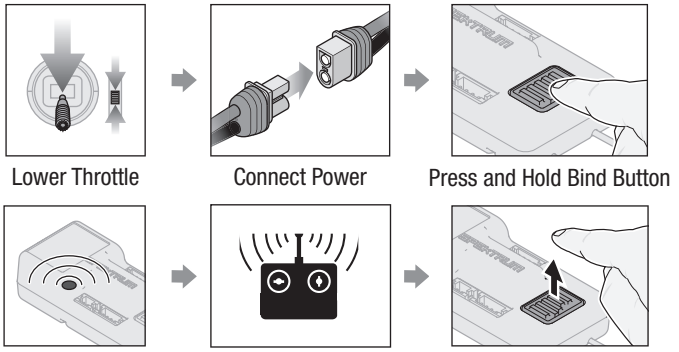
IMPORTANT: Move the transmitter flight controls (rudder, elevators, and ailerons) and the throttle trim to neutral. Move the throttle to low before and during binding. This process defines the failsafe settings.

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.

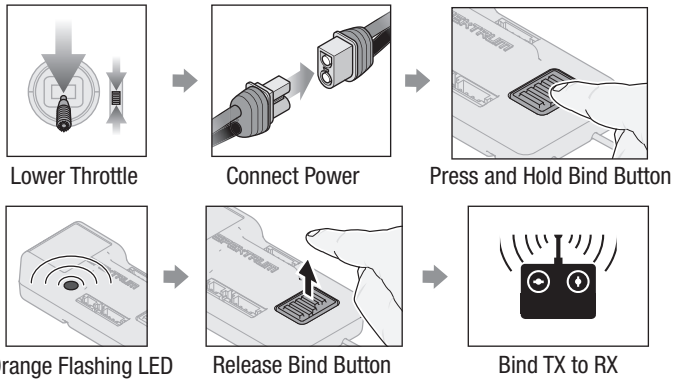
Using The Bind Button...

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.

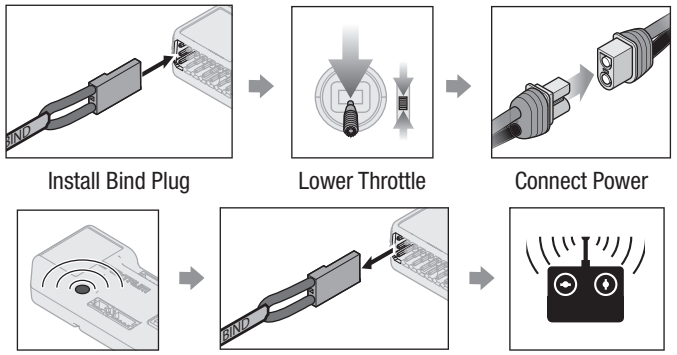
To Disable SAFE Select



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

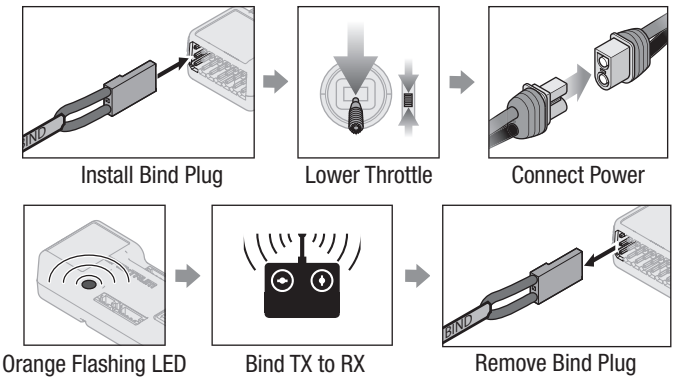
Using The Bind Plug...

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.

SAFE® Select Technology

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

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

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

Differences Between SAFE and AS3X+ Modes

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

		SAFE Select	AS3X+
Control Input	Control stick is neutralized	Aircraft will self level	Aircraft will continue to fly at its present attitude
	Holding minimal 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

SAFE® Select technology can be assigned to any open switch (2 or 3 position) controlling a channel (5–9) on your transmitter. Once assigned to a switch, SAFE select ON gives you the flexibility to choose SAFE technology or AS3X+ mode while in flight. If the aircraft is bound with SAFE select OFF, the aircraft will be in AS3X+ mode exclusively.

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%.

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

TIP: SAFE Select is assignable on any unused channels 5–9. See your transmitter manual for more information about assigning a switch to a channel.

TIP: Use your radio channel monitor to confirm that the four primary channels are showing 100% travel while assigning the switch.

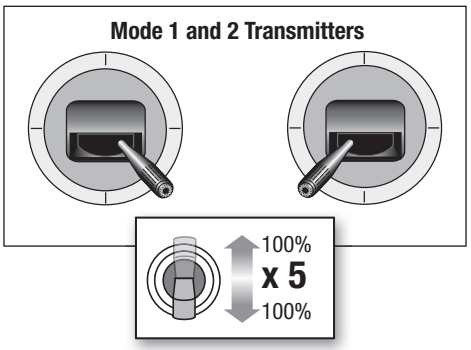
TIP: Use the channel monitor to make sure the switch you are assigning for SAFE Select is active and driving a channel between 5-9 and that it is traveling 100% in each direction.

TIP: Make sure your four primary channels are not reversed if you are having trouble assigning a SAFE Select switch.

Assigning a Switch

1. Bind the aircraft to choose SAFE Select ON. 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.



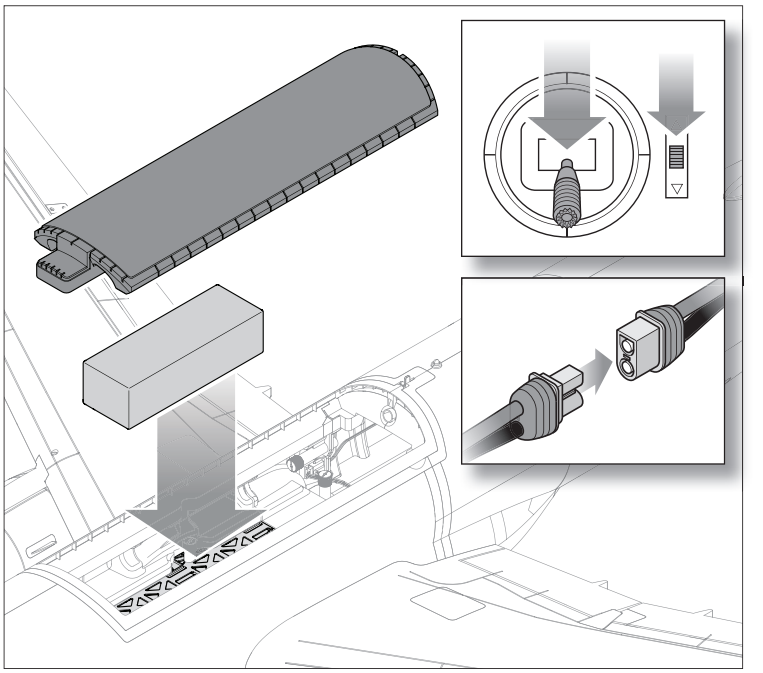
Battery Installation and ESC Arming

We recommend a 6S 5000mAh 50C LiPo battery with IC5 connector (SPMX56S50). If you select a different battery, verify it is of similar capacity, dimension and weight to fit in the fuselage. Always balance the aircraft at the recommended CG with the chosen battery.

1. Apply the loop side (soft side) of the hook and loop tape to the bottom of the battery.
2. Slide the hatch latch back, and lift the hatch to remove it.
3. Lower the throttle to the lowest setting.
4. Power ON the transmitter and wait 5 seconds.
5. Install the fully charged battery in the battery compartment as shown. See **Adjusting the Center of Gravity** for more information.
6. Secure the flight battery with the hook and loop strap.
7. Connect the ESC to the battery power lead IC5 connector, noting the correct polarity. The ESC emits a tone.
   - The first set of tones = 1 beep for each cell in the connected LiPo battery pack.
   - The arming tone = a rising beep.

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

8. The ESC is now ready for use.
9. Reinstall the battery hatch by sliding the hatch pin latch back on the fuselage. Ensure the hatch pin engages.



Low Voltage Cutoff (LVC)

When a LiPo 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 LiPo battery from the aircraft after each flight. Charge your LiPo 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 minutes. Adjust your timer for longer or shorter flights once you have flown the model.

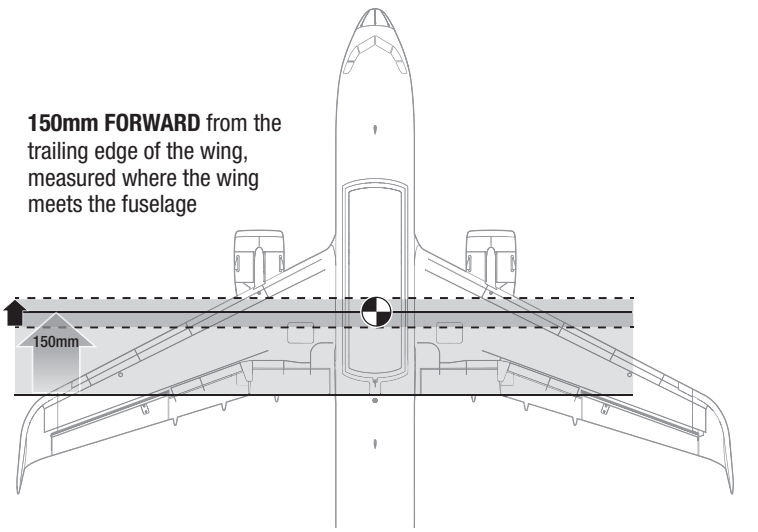
NOTICE: Repeated flying to LVC will damage the battery.

Center of Gravity

WARNING: Install the battery but do not connect it to the ESC while checking the CG. Personal injury may result.

The recommended CG is 150mm, with a range of 140–170mm measured **FORWARD** of the trailing edge of the wing, where the wing meets the fuselage.

The CG location is adjusted by moving the battery pack forward or backward in the battery compartment.

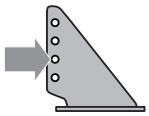
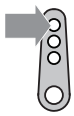
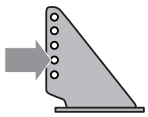
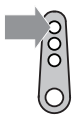
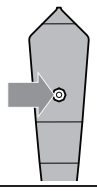
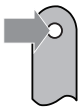
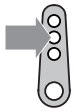


Control Horn and Servo Arm Settings

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

NOTICE: If control throws are changed from the factory settings, the gain values may need to be adjusted. Refer to the Spektrum AR637T+/AR637TA+ manual for adjustment of gain values.

After flying, you may choose to adjust the linkage positions for the desired control response. See the table to the right.

Factory Setting	Control Horns	Servo Arms
Aileron		
Elevator		
Rudder		
Flaps		
Nose Wheel Steering		

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.

CAUTION: If belly landing is necessary, do not use flaps when the landing gear is retracted. Damage to the flaps and/or the flap servos may result.

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

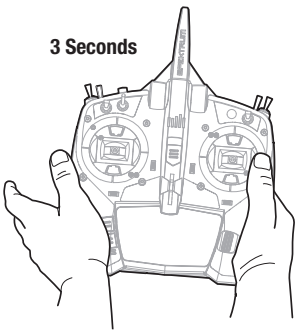
	Low Rate	High Rate
Aileron	▲ = 12mm ▼ = 12mm	▲ = 16mm ▼ = 16mm
Elevator	▲ = 15mm ▼ = 15mm	▲ = 19mm ▼ = 19mm
Rudder	▶ = 16mm ◀ = 16mm	▶ = 23mm ◀ = 23mm
Flap Travel	Mid ▼ = 16mm Elevator Compensation = 4%	Landing ▼ = 37mm Elevator Compensation = 6%

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.



Control Direction Test

WARNING: Do not perform this or any other equipment test without turning on throttle cut. Serious injury or property damage could result from the motor starting inadvertently.

If the control surfaces do not respond as shown, **DO NOT FLY.** Refer to the *Troubleshooting Guide* for more information. If you need more assistance, contact the appropriate Horizon Hobby Product Support department.

1. Power on the transmitter.
2. Enable throttle cut.
3. Connect the battery.
4. Use the transmitter to operate the aileron, elevator and rudder controls.

NOTICE: View the aircraft from the rear when checking the control directions.

Ailerons

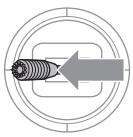
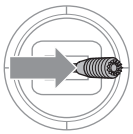
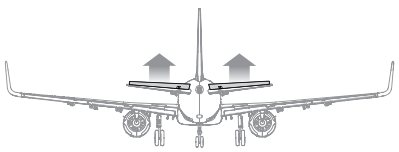
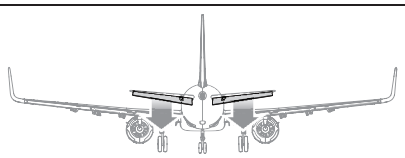
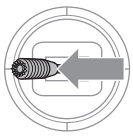
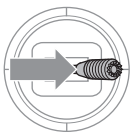
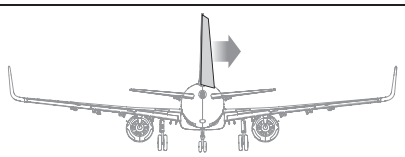
1. Move the aileron stick to the left. The left aileron should move up and the right aileron down, which will cause the aircraft to bank left.
2. Move the aileron stick to the right. The right aileron should move up and the left aileron down, which will cause the aircraft to bank right.

Elevators

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

Rudder

5. Move the rudder stick to the left. The rudder should move to the left, which will cause the aircraft to yaw left.
6. 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 (rear view)
Aileron		
		
Elevator		
		
Rudder		
		

AS3X+ Response Test

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

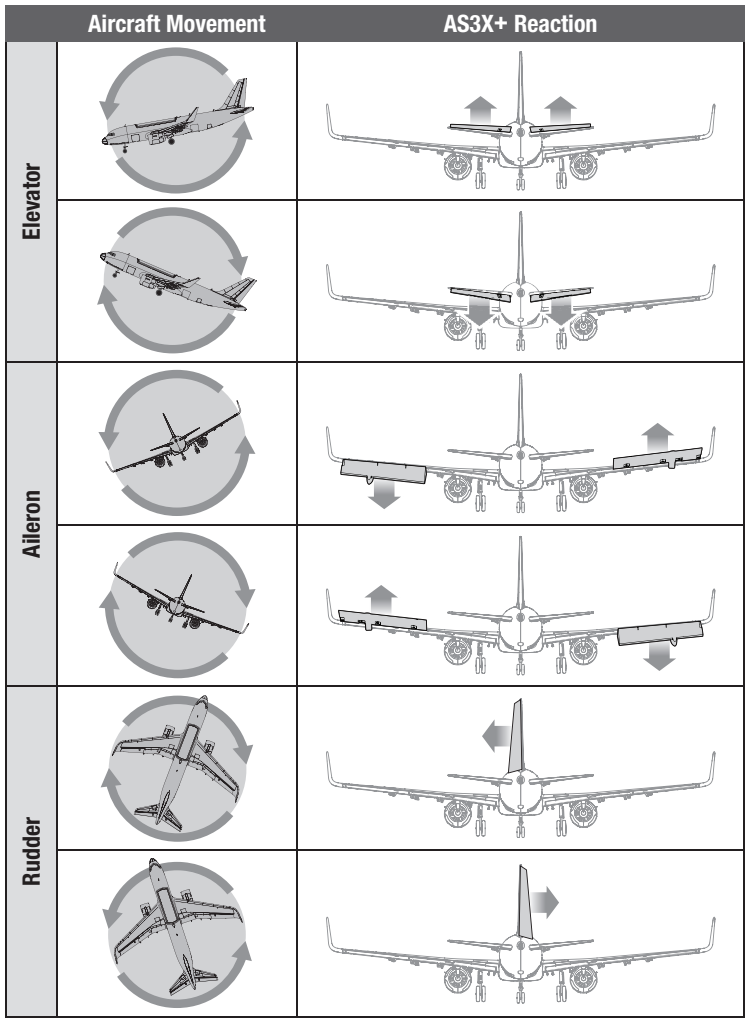
1. Raise the throttle just above 25%, then lower the throttle to activate AS3X+.

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

2. Move the entire aircraft as shown and ensure the control surfaces move in the direction indicated in the graphic. If the control surfaces do not respond as shown, do not fly the aircraft. Refer to the receiver manual for more information.

Once the AS3X+ system is active, control surfaces may move rapidly. This is normal. AS3X+ remains active until the battery is disconnected.

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

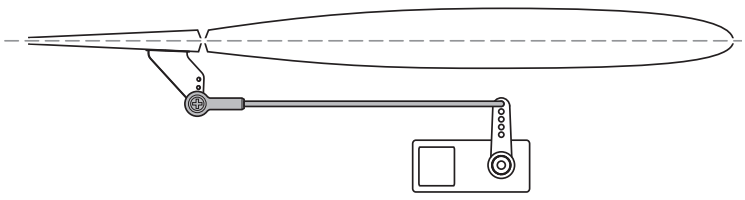


Control Surface Centering

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.



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 System Installation and Service

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

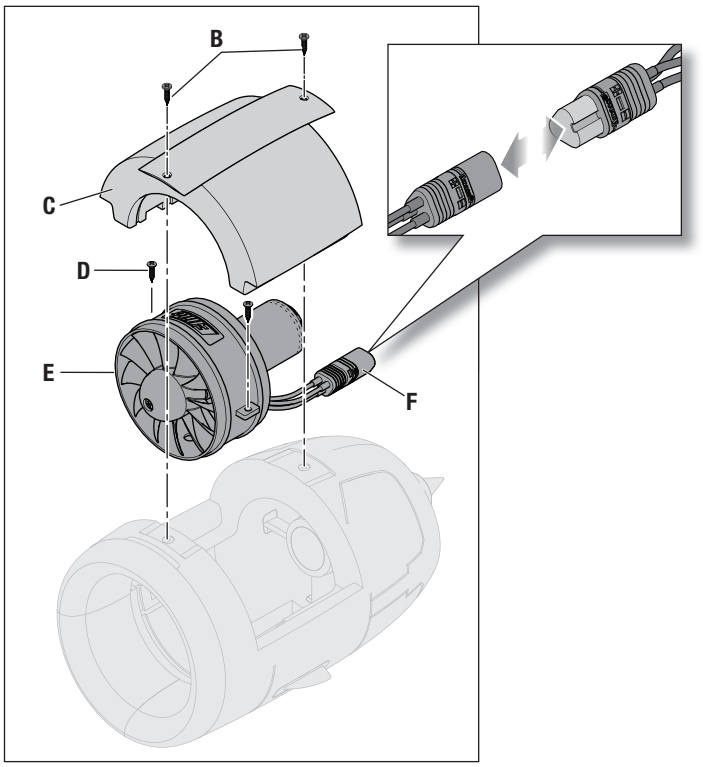
Disassembly

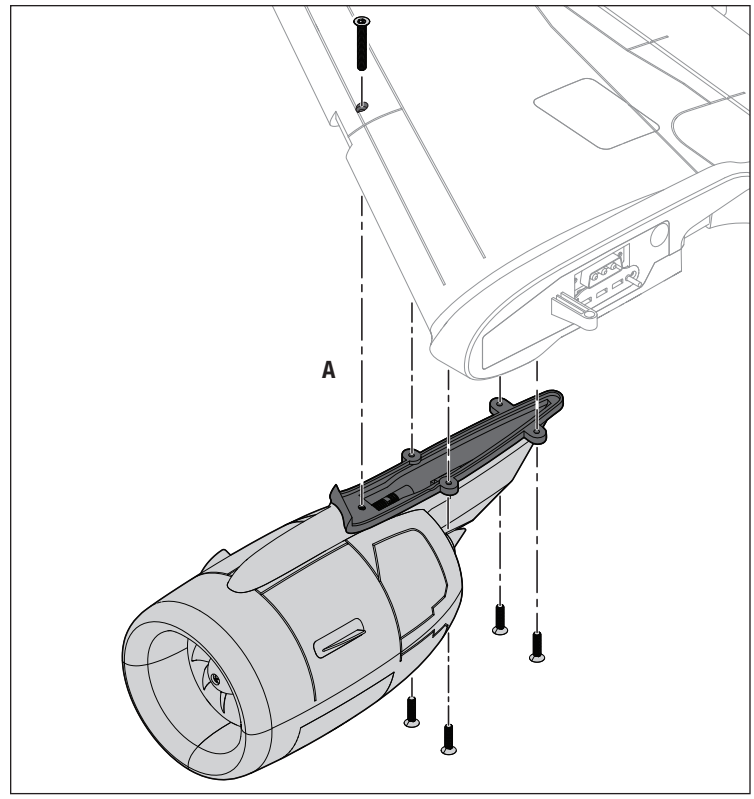
1. Remove the nacelle from the wing (**A**).
2. Remove the two self-tapping nacelle EDF cover screws (M3 x 10mm) (**B**), and remove the cover (**C**) from the nacelle bottom.
3. Remove the two Phillips self-tapping screws (M3 x 10mm) (**D**) from the fan unit tabs.
4. Remove the fan unit (**E**) from the nacelle, and disconnect the motor connector from the wing connector (**F**).
5. Remove the Phillips machine screw (M3 x 9mm) (**G**), and remove the rotor (**H**) from the motor shaft adapter.
6. Remove the four Phillips machine screws (M2.5 x 8mm) (**I**) to remove the motor from the fan shroud (**J**).
7. Remove two set screws (M3 x 3mm) (**K**) and remove the motor shaft adapter (**L**) from the motor (**M**).

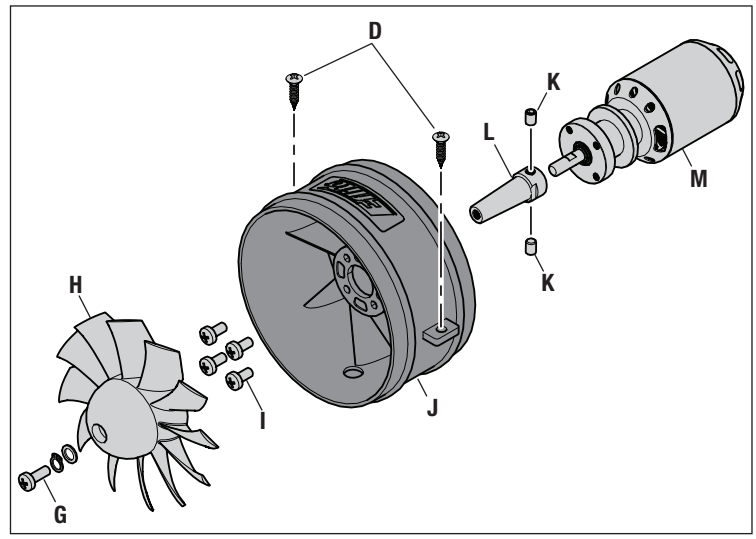
Assembly

Assemble in reverse order.

IMPORTANT: Allow the aircraft components to cool before performing maintenance.







Thrust Reversing *(Optional)*

The Avian™ Smart Lite ESC in this aircraft is equipped with thrust reversing, but it must be enabled before it will function. Reversing the motors can be helpful when taxiing or for shortening ground roll after a landing. Flipping the designated switch reverses motor rotation, throttle will still control motor speed.

⚠ **WARNING:** Never attempt to use thrust reversing in flight. Applying reverse thrust while in flight will result in loss of control and possibly a crash. Crash damage is not covered under warranty.

IMPORTANT: The motor will draw more current in reverse as the rotor becomes less efficient and creates more drag. This can reduce flight time.

IMPORTANT: Thrust reversing requires a Spektrum receiver with Smart Throttle and a Spektrum transmitter with a minimum of 7 channels. The Avian ESC is also backwards compatible with conventional receivers (PWM output signal) for normal operation, but reversing functions are only available with Smart Throttle technology.

Thrust Reversing Setup

Transmitter

On the transmitter, select an open channel (not already in use), and assign it to an open switch. Use a different channel for thrust reversing and SAFE Select. Motor reversing is assigned to Aux 2/Channel 7, by default, in the Smart ESC. If SAFE Select and the ESC are assigned to the same channel, the motor will reverse in flight.

⚠ **WARNING:** Do not assign thrust reversing and SAFE Select to the same channel. Doing so will reverse the motor when SAFE Select is enabled during flight, resulting in a crash.

ESC

Set up the transmitter according to the setup chart, and bind your transmitter to the airplane. The airplane must be powered on and bound to the transmitter to access the Smart ESC programming.

As an alternative, it is possible to program the ESC with the Smart ESC Programming Box (SPMXCA200, optional, not included).

ESC Reversing Setup	
DX series, NX series, iX series	1. Begin with the transmitter bound to the receiver.
	2. Power ON the transmitter.
	3. Set switch H (throttle cut) to prevent accidental motor operation.
	4. Set elevator and aileron to high rate.
	5. Set Flight Mode to AS3X (The menu will not open if the Flight Mode is set to SAFE).
	6. Power ON the aircraft. A signal bar appears on the transmitter main screen when the telemetry information is being received.
	7. From the main screen navigate to the last screen past the telemetry screens, the Avian Programming menu (Avian Prog).
	8. All configuration in the Avian Programming menu is done by moving the elevator and aileron stick. Follow the on-screen prompts to access the menu. Move the stick up or down to move the cursor, left or right to select a value or return to the cursor, and up or down to change a value when it is selected.
	9. Set BRAKE TYPE: Reverse
	10. Set BRAKE FORCE: 7
	11. Set THRUST REV: Select the channel you designated for thrust reversing in your transmitter. CH7 is the selection by default, but do not use this default option if you are using Aux2/Ch7 for SAFE Select.
	12. Select EXIT W/ SAVE to save your selections

Troubleshooting Guide AS3X+

Problem	Possible Cause	Solution
Oscillation	Damaged rotor	Replace rotor
	Imbalanced rotor	Balance the rotor
	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 rotor noise or extra vibration	Damaged rotor, adapter or motor	Replace damaged parts
	Rotor is out of balance	Balance or replace rotor
	Rotor screw is loose	Tighten the rotor screw
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 might be too cold	Postpone flight until weather is warmer
	Battery is old, worn out, or damaged	Replace battery
	Battery C rating might be too low	Use recommended battery

Replacement Parts

Part Number	Description
EFL-2537	Wing Panel, RH
EFL-2538	Wing Panel, LH
EFL-2539	Fuselage, Front
EFL-2540	Fuselage, Rear
EFL-2540W	Fuselage, Rear (White)
EFL-2541	Fuselage Hatch
EFL-2542	Vertical Stabilizer
EFL-2542W	Vertical Stabilizer (White)
EFL-2543	Horizontal Stabilizer Set
EFL-2544	Right Motor Nacelle
EFL-2545	Left Motor Nacelle
EFL-2546	Sharklet® Wingtips
EFL-2547	Linkage Set
EFL-2548	Control Horn Set
EFL-2549	Wheel Set
EFL-2550	Screw Set
EFL-2551	Servo Arm Set
EFL-2552	Hatch Latch Pin
EFL-2553	Decal Set
EFL-2554	Gear Door Set
EFL-2555	Wing and Stabilizer Tubes

Part Number	Description
EFL-2556	Fuselage and Vertical Stabilizer Tubes
EFL-2557	Hands-Free Power Connector, Fuselage Side
EFL-2558	Hands-Free Power Connector, Wing Side
EFL-2559	Lighting Set
EFL-2560	Wing Landing Light Set
EFL-2564	Nose Gear Retract Unit
EFL-2565	Main Gear Retract Unit
EFL-2566	Nose Landing Gear Strut
EFL-2567	Main Landing Gear Struts
EFL-2568	Retract Strut Pins
EFL-2569	Landing Gear Axle Set
EFL-2570	Scale Features
EFLA6412DF	Ducted Fan Unit
EFLA6412R	Ducted Fan Rotor
EFLA6412D	Ducted Fan Duct
SPM-1032	AR637T+ DSMX 6-Channel SAFE and AS3X+ Telemetry Receiver
SPMSA347	A347 13g Sub-Micro Metal-Geared Digital Servo
SPMSA347R	A347R 13g Sub-Micro Metal-Geared Digital Servo (Reverse)
SPMXAE1240A	Avian 40-Amp Dual Smart Lite Brushless ESC, 3S-6S: IC5
SPMXAM3900	2840-1900Kv Brushless Outunner Motor, 14-Pole

Recommended Parts

Part Number	Description
SPMR7110	NX7e+ 14-Channel Transmitter Only
SPMX56S50	22.2V 5000mAh 6S 50C Smart G2 LiPo Battery: IC5

Part Number	Description
SPMXC2020	S1200 G2 AC 1 x 200W Smart Charger
SPMX-1070	22.2V 6S 6000mAh 120C Smart G2 Pro Air LiPo Battery: IC5

Optional Parts

Part Number	Description
BLH100	Deluxe Ball Link Pliers
ONXT1000	Ultimate Air/Surface Startup Tool Set
SPM6730	Smart Charger Case
SPMR8210	NX8+ 20-Channel DSMX Transmitter Only
SPMX56S30	22.2V 6S 5000mAh 30C Smart G2 LiPo Battery: IC5

Part Number	Description
SPMX70006S30	22.2V 7000mAh 6S 30C Smart LiPo Battery: IC5
SPMXBC100	XBC100 Smart Battery Checker & Servo Driver
SPMXCA200	Avian and Firma Smart ESCs Programming Update Box
SPMXCA300	Smart Lipo Bag, 16 x 7.5 x 6.5 cm

Hardware

Item	Description	Quantity
Wing Securing Screw	Red Anodized Thumb Screw	4
Fuselage Assembly Screw	Red Anodized Thumb Screw	3
Elevator Servo Cover Securing Screw	M2.5 x 10mm Hex Flat Head Self-Tapping Screw	6
Wing/Fuselage Hands-Free Connector Screw	M2 x 8mm Phillips Flat Head Self-Tapping Screw	16
Nose Gear Strut Securing Set Screw	M4 x 3mm Set Screw	4
Nose Gear Strut Bearing Securing Set Screw	M3 x 4mm Set Screw	1
Main Gear Strut Securing Set Screw	M4 x 3mm Set Screw	4
Main Gear Door Securing Screw	M3 x 10mm Machine Screw	2
Retract Mounting Screw	M3 x 16mm Phillips Self-Tapping Screw	12
Nose Gear Steering Servo Mounting Screw	M2 x 8mm Phillips Flat Head Self-Tapping Screw	2
Main Gear Axle	36mm (L) x 3mm (D)	2
Nose Gear Axle	31mm (L) x 3mm (D)	1
Axle Securing Set Screw	M3 x 3mm Set Screw	3
Wheel Retaining E-Clip: Axle	2.5mm E-Clip	3
Main Wheels – Rubber Tire (Dia x Width x Axle)	61mm x 13.5mm x 3mm	4
Nose Wheel – Rubber Tire (Dia x Width x Axle)	42mm x 10mm x 3mm	2
Ball Link (Ball Size) Ail/Flp/Ele/Rud	4mm Ball Joint	12
Ball Link Retaining Nut Ail/Flp/Ele/Control Horn/ Servo Arm	M2 Locknut	12
Elevator Servo Arm Securing Screw	M2 x 12mm Phillips Machine Screw	1
Servo Arm Ball Link Securing Nut	M2 x 4.5mm Machine Screw	1
Motor Securing Screw	M2.5 x 8mm Phillips Head Machine Screw	4
EDF Unit Securing Screw	M3 x 10mm Phillips Head Self-Tapping Screw	4
Rotor Adapter Securing Set Screw	M3 x 3mm Set Screw	2
Rotor Cone Securing Screw	M3 x 9mm Phillips Head Machine Screw	2
Nacelle EDF Cover Securing Screw	M3 x 10mm Phillips Head Self-Tapping Screw	4
Hands-Free Power Fuselage/Wing	M3 x 10mm Hex Self-Tapping Screw	8
Nose Gear Door Actuator Arm Base	M2 x 8mm Phillips Self-Tapping Screw	2

Item	Description	Quantity
Landing Gear Strut Retaining Screw	M3 x 8mm Stainless Steel Machine Screw	3
Rudder Servo Securing Screw	M2 x 8mm Round Head Hex Self-Tapping Screw	2
Hatch Latch Securing Screw	M2 x 8mm Phillips Flat Head Self-Tapping Screw	2
Hands-Free Connector Lead Screw	M1.6 x 4mm Phillips Flat Head Self-Tapping Screw	10
Aileron Servo Cover Securing Screw	M2.5 x 10mm Hex Flat Head Self-Tapping Screw	6
Flap Servo Cover Securing Screw	M2.5 x 10mm Hex Flat Head Self-Tapping Screw	6
Flap Hinge Securing Screw	M2 x 6mm Flat Head Machine Screw	10
Nacelle Mounting Screw (bottom)	M3 x 10mm Flat Head Machine Screw	8
Nacelle Mounting Screw (top)	M3 x 20mm Flat Head Machine Screw	2
Wingtip Mounting Base Screw	M2.5 x 10mm Round Head Self-Tapping Screw	4
Nose Gear Steering Servo EZ Connector Screw	M3 x 3mm Hex Set Screw	1
Nose Gear Steering Pushrod Guide Screw	M2 x 8mm Machine Screw	1
Wing Tube (Length x Dia x Wall Thickness)	498mm x 12mm x 1mm	1
Horizontal Stabilizer Tube (Length x Dia x Wall Thickness)	182mm x 6mm x 1mm	2
Vertical Stabilizer Tube (Length x Dia x Wall Thickness)	287mm x 8mm x 1mm	1
Upper Fuselage Tube (Length x Dia x Wall Thickness)	400mm x 6mm x 1mm	2
Lower Fuselage Tube (Length x Dia x Wall Thickness)	100mm x 6mm x 1mm	1
Aileron Pushrod(Length x Dia)	M2 x 35 Steel Wire-Threaded Both Ends	2
Elevator Pushrod (Length x Dia)	M2 x 55.4 Steel Wire-Threaded Both Ends	2
Flap Pushrod (Length x Dia)	M2 x 75.5 Steel Wire-Threaded Both Ends	2
Nose Gear Steering Pushrod (Length x Dia)	M2 x 55.7 Steel Wire-Threaded Both Ends	1
Main Gear Axle Washer	3mm Flat Washer	4
Nose Gear Axle Washer	3mm Flat Washer	2
Aileron Control Horn Securing Screw	M2 x 8mm Phillips Flat Head Self-Tapping Screw	4
Elevator Control Horn Securing Screw	M2 x 8mm Phillips Flat Head Self-Tapping Screw	4

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

Contact Information

Country of Purchase	Horizon Hobby	Contact Information	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	2904 Research Rd. Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 800-338-4639	
	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
EFL Airbus A320neo Twin 64mm EDF Jet PNP (EFL-1492) and EFL Airbus A320neo Twin 64mm EDF Jet BNF-Basic (EFL-1493, EFL-1495):
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 Airbus A320neo Twin 64mm EDF Jet PNP (EFL-1492): 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 Airbus A320neo Twin 64mm EDF Jet BNF-Basic (EFL-1493, EFL-1495):
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

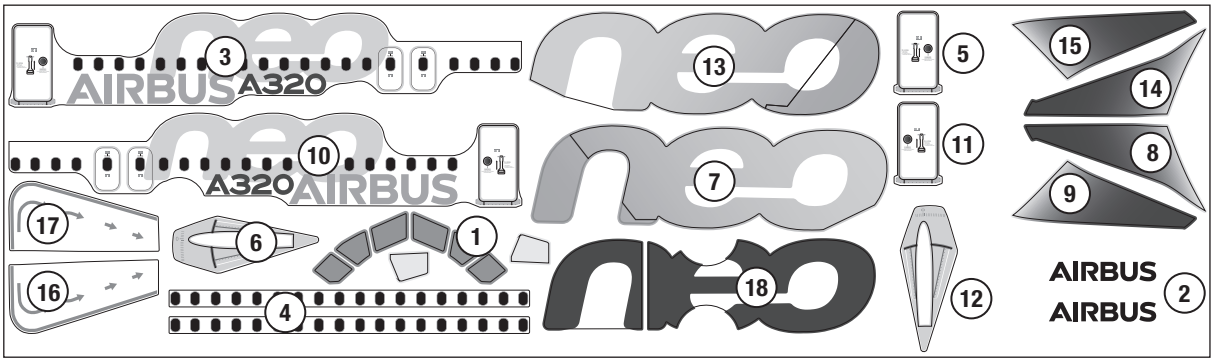
EU Manufacturer of Record:
Horizon Hobby, LLC
2904 Research Road
Champaign, IL 61822 USA

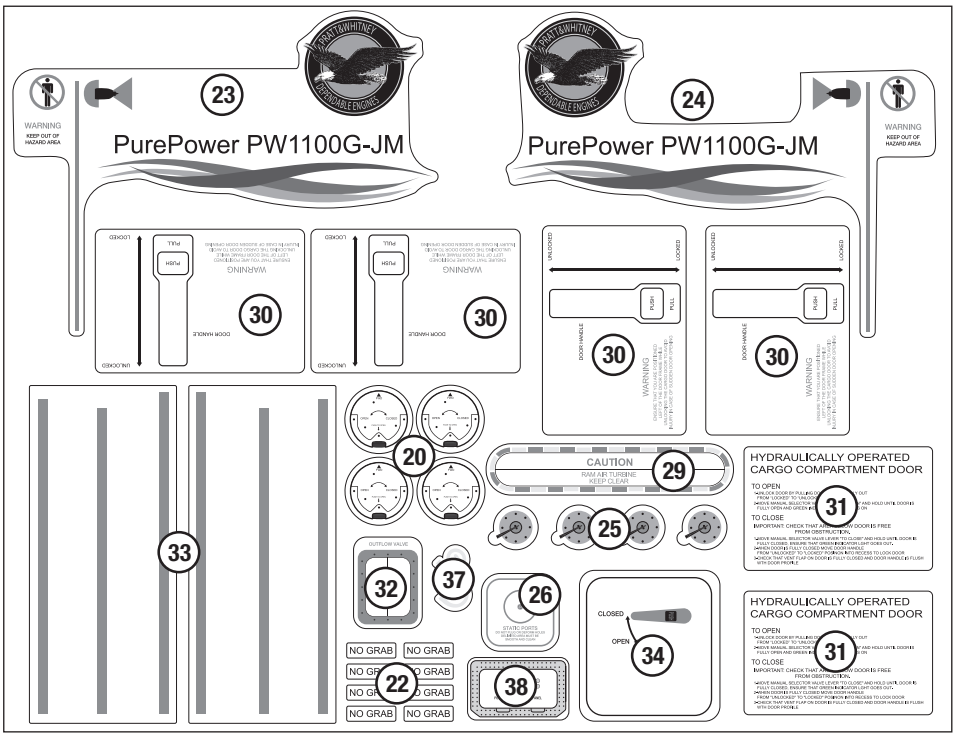
EU Importer of Record:
Horizon Hobby, GmbH
Hanskampring 9
22885 Barsbüttel Germany

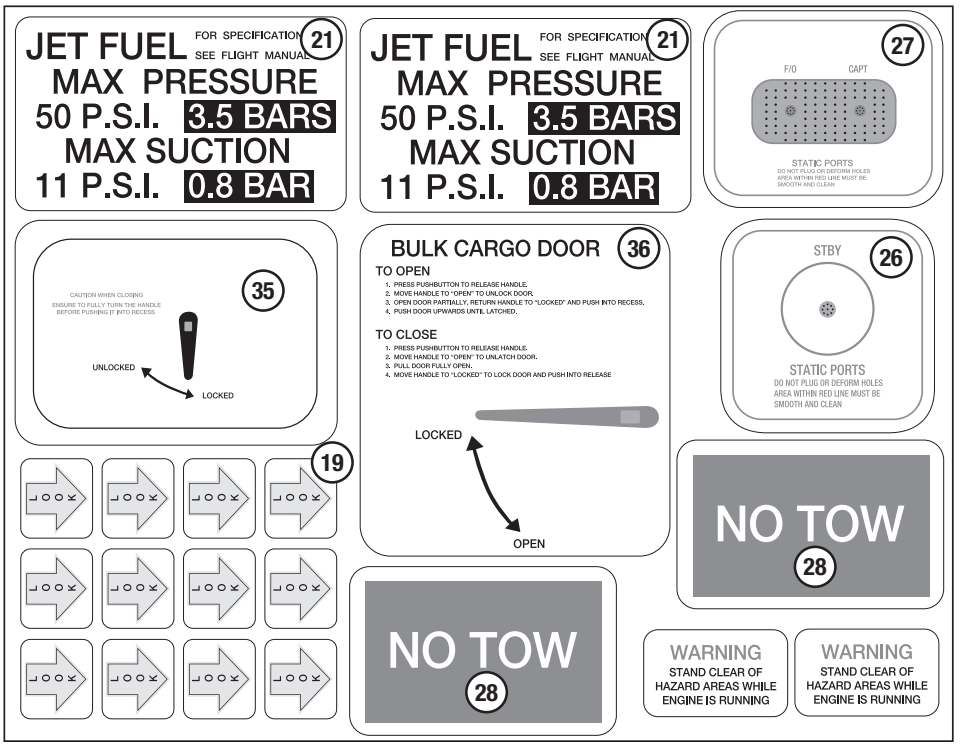
WEEE NOTICE:
This appliance is labeled in accordance with European Directive 2012/19/EU concerning waste of electrical and electronic equipment (WEEE). This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery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

E328

Decal Placement / Platzierung Aufklebern / Placement des autocollants / Collocamento decalcomanie







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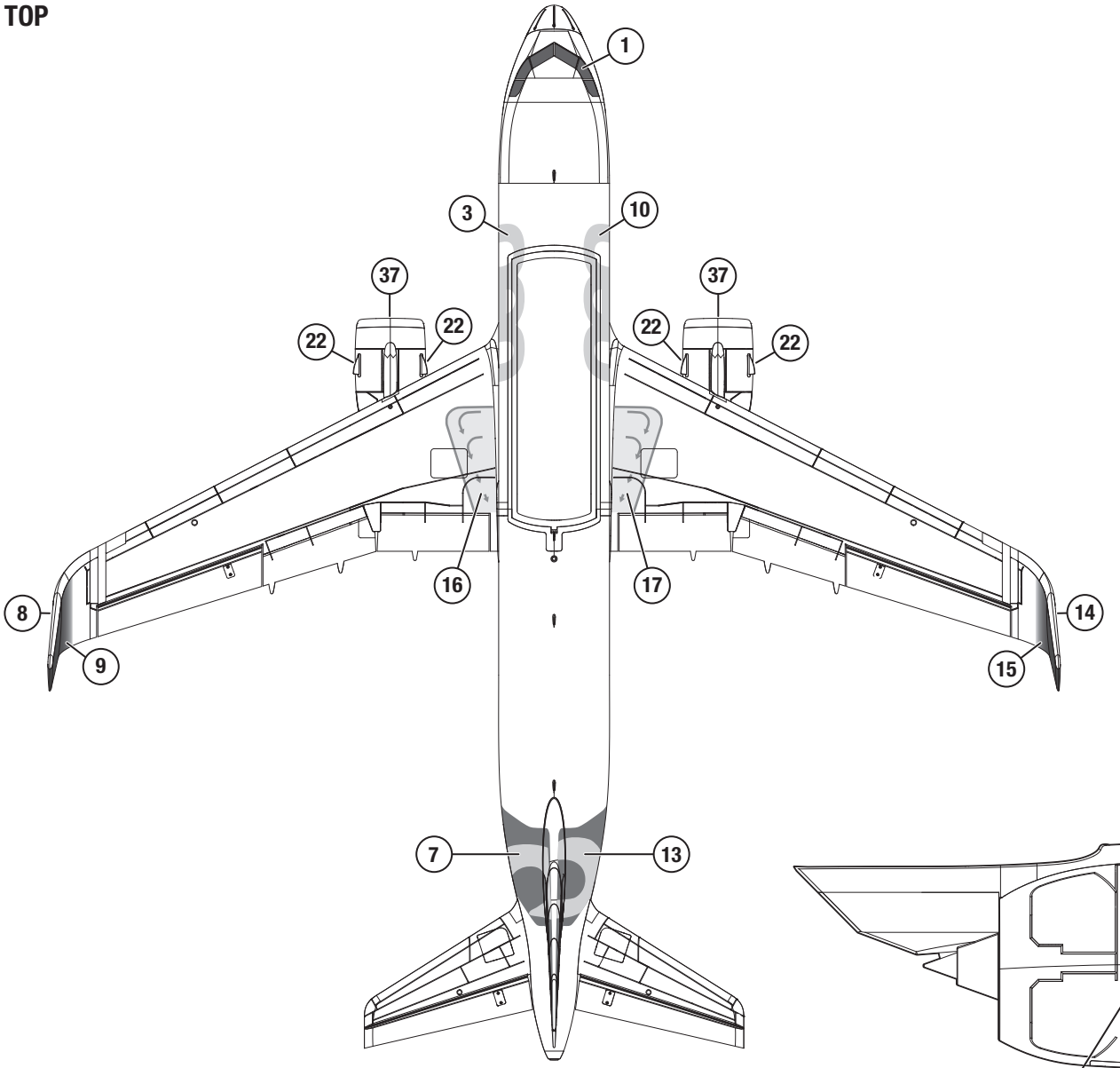

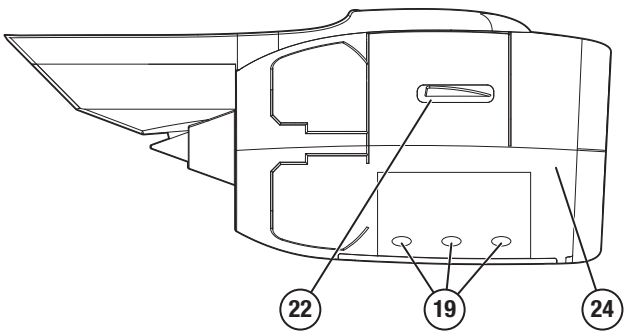

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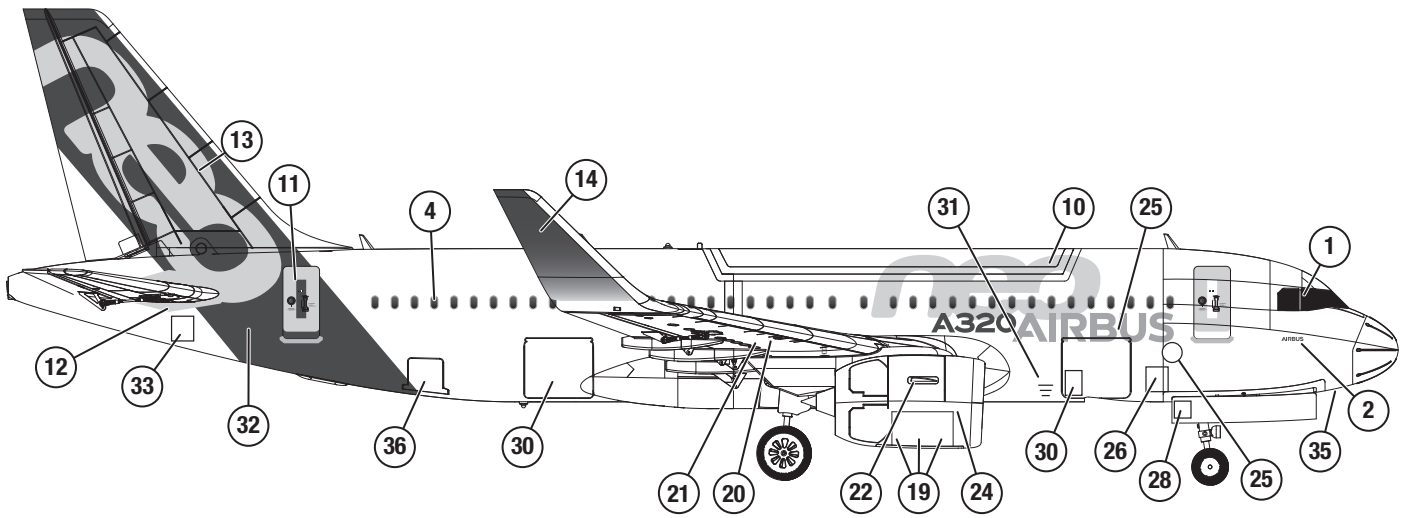

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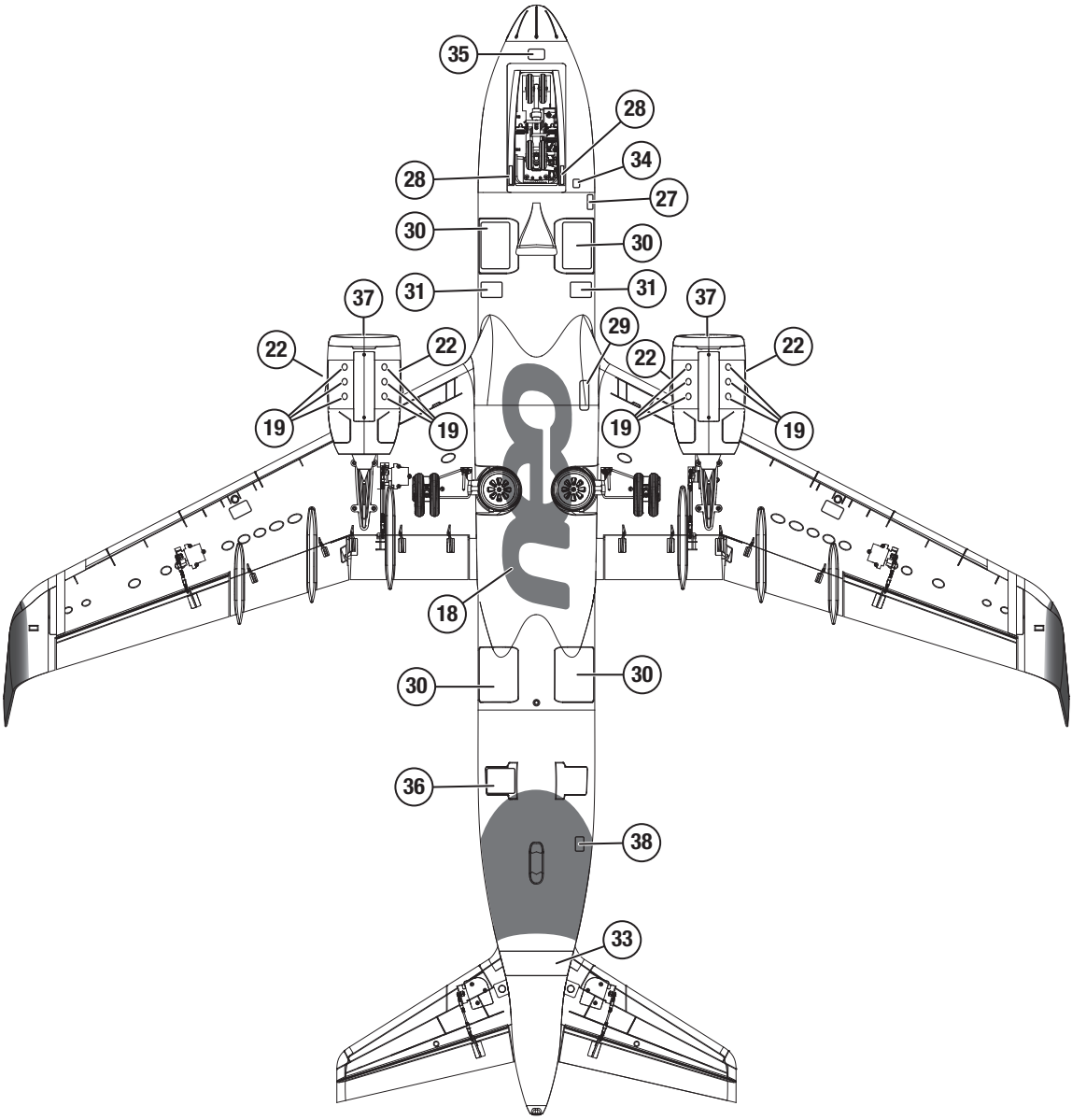
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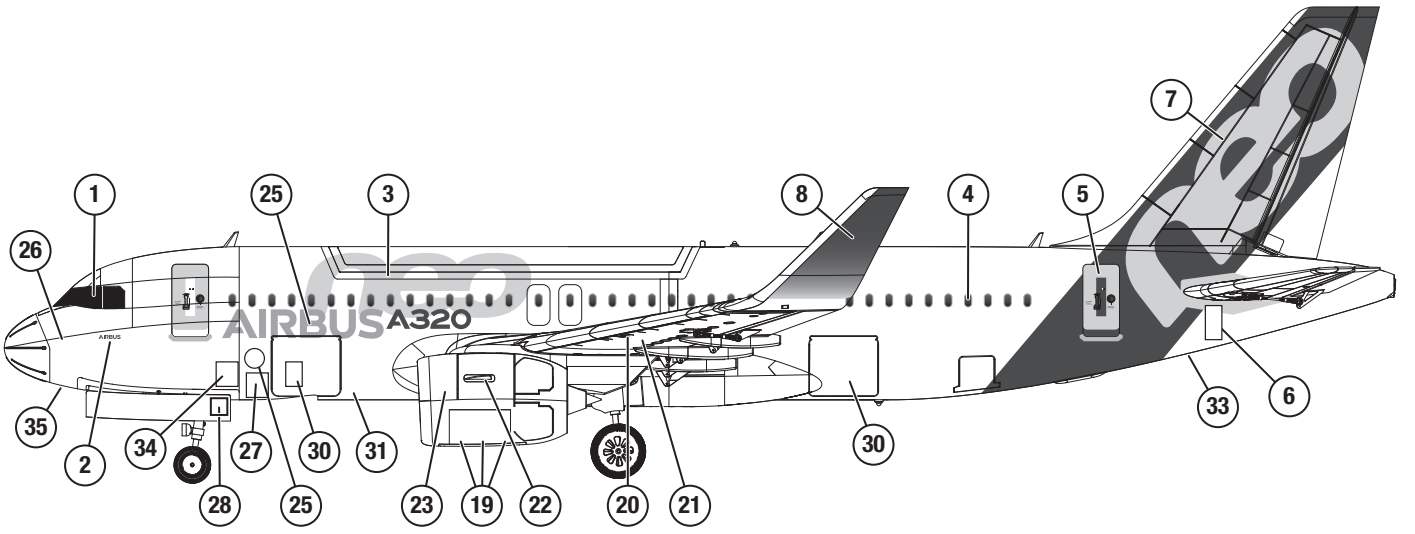
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