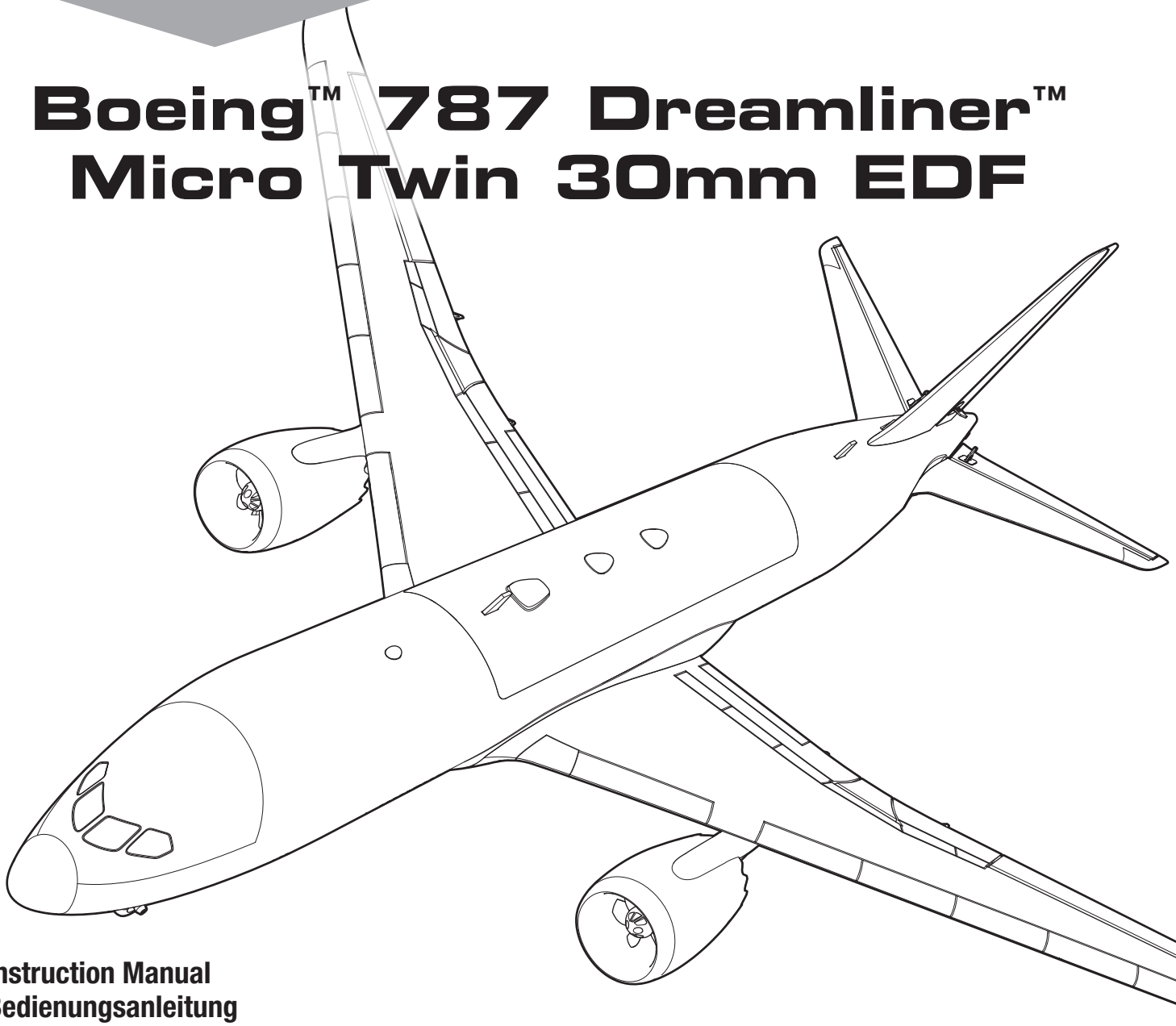
E-flite
ADVANCING ELECTRIC FLIGHT

BOEING
OFFICIALLY LICENSED PRODUCT

Boeing™ 787 Dreamliner™ Micro Twin 30mm EDF



Instruction Manual
Bedienungsanleitung
Manuel d'utilisation
Manuale di Istruzioni

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

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

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

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

BNF BASIC

EFL78750

1040422.1
Created 10/26

modellmarkt24.ch

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.

modellmarkt24.ch

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

Required Tools 3
Transmitter Setup 4
Thrust Reversing (Optional) 4
Transmitter Switch Layout 5
Integrated ESC Telemetry 5
Battery Installation and ESC Arming 6
Binding 6
Failsafe 6
Center of Gravity (CG) 7
SAFE Select Technology 7
Control Direction Test 8
AS3X Response Test 8
Control Horn and Servo Arm Factory Settings 9
Landing Gear 9
Hand Launching 10
Flying Tips and Repairs 10
Post Flight Checklist 10
Power System Service 11
Flight Controller Connections 11
Troubleshooting Guide AS3X 12
Troubleshooting Guide 12
Replacement Parts 13
Recommended Parts 13
Optional Parts 13
Contact Information 14
FCC Information 15
IC Information 15
Compliance Information for the European Union 15

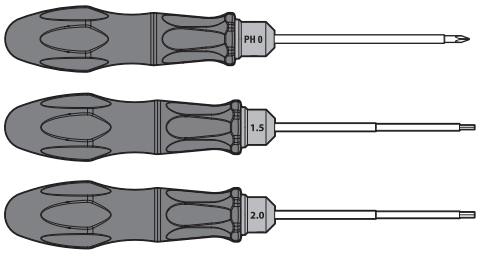
Specifications	
Wingspan	28.15" (715mm)
Length	26.18" (665mm)
Weight	Without Battery: 7.2oz (204g) With Recommended 3S 850mAh Flight Battery: 9.6oz (274g)

Included Equipment	
Receiver and ESC	Receiver/15-amp Dual ESC Flight Controller w/Thrust Reverse
Motor	Brushless Motor; 0808-8800Kv, 8-pole (SPMX-1072)
Servos	(2) 2.3g Long-Throw linear off-set servo w/plug (SPMSA205) Ailerons (2) 2.3g Long-Throw Linear Servo w/plug (SPMSA206) Rudder, Nose Gear

Recommended Equipment	
Transmitter	NX7e+ 14 Channel Transmitter (SPMR7110)
Flight Battery	850mAh 3S 11.1V Smart G2 30C; IC2 (SPMX8503S30)
Battery Charger	S155 55W AC G2 Smart Charger (SPMXC2050)

Optional Accessories	
SPMR8210A	NX8+ 20 Channel DSMX Transmitter Only
SPMXC2060	Smart S250 AC Charger, 2x50W
SPMXC2080	Smart S1100 AC Charger, 1x100W
SPMXCA320	Adapter: IC3 Battery / IC2 Device; 6”

Required Tools



- Phillips Screwdriver (PH#0)
- Hex Drivers (1.5mm and 2mm)

modellmarkt24.ch

Transmitter Setup

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

Enable the throttle cut feature. Always engage throttle cut before approaching the aircraft.

Dual Rates

Low rate is recommended for the initial flights.

NOTICE: To ensure AS3X® technology functions properly, do not lower rate values below 50%.

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.

Transmitter Telemetry Setup

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

NX and DX Series Transmitter Setup
1. Power ON your transmitter, click on scroll wheel, roll to **System Setup** and click the scroll wheel. Choose yes.
2. Go to **Model Select** and choose ***<Add New Model>*** near the bottom of the list. Select ***Airplane Model Type*** by choosing the airplane, select ***Create***
3. Select **Model Name**: Input a name for your model file
4. Go to **Aircraft Type** and scroll to the wing selection Set **Wing:** ***Normal,*** **Tail:** ***Normal***
5. Select **<Main Screen>,** Click the scroll wheel to enter the **Function List**
6. Select **Rates and Expo**; ***Aileron*** Set **Switch**: ***Switch F*** Set **High Rates:** ***100%,*** **Expo** ***10%*** - **Low Rates** ***70%,*** **Expo** ***5%***
7. Select **Rates and Expo**; ***Elevator*** Set **Switch:** ***Switch C*** Set **High Rates:** ***100%,*** **Expo** ***10%*** - **Low Rates** ***70%,*** **Expo** ***5%***
8. Select **Rates and Expo**: ***Rudder*** Set **Switch:** ***Switch G*** Set **High Rates:** ***100%***, **Expo** ***10%*** - **Low Rates** ***70%***, **Expo** ***5%***
9. Select **Throttle Cut**; **Switch**: ***Switch H,*** **Position:** ***-100%***

iX Series Transmitter Setup
1. Power ON your transmitter and begin once the Spektrtum Airware app is open. Select the orange pen icon in the upper left corner of the screen, the system asks for permission to **Turn Off RF**, select ***PROCEED***
2. Select the three dots in the upper right corner of the screen, select ***Add a New Model***
3. 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/Tail Type.** Select **Wing:** ***Normal,*** **Tail:** ***Normal***.
7. Go to the **Model Adjust** menu
8. Select **Dual Rates and Expo**; Select ***Aileron*** Set **Switch**: ***Switch F*** Set **High Rates:** ***100%,*** **Expo** ***10%*** - **Low Rates:** ***70%,*** **Expo** ***5%***
9. Select **Dual Rates and Expo**; Select ***Elevator*** Set **Switch**: ***Switch C*** Set **High Rates**: ***100%,*** **Expo** ***10%*** - **Low Rates** ***70%,*** **Expo** ***5%***
10. Select **Dual Rates and Expo**; Select ***Rudder*** Set **Switch**: ***Switch G*** Set **High Rates**: ***100%,*** **Expo** ***10%*** - **Low Rates** ***70%,*** **Expo** ***5%***
11. Set **Throttle Cut**; **Switch**: ***Switch H,*** **Position:** ***-100%***

Thrust Reversing (Optional)

The ESC in this aircraft is equipped with thrust reversing, but it must be enabled before it will function. Reversing the motors is helpful when taxiing, or for shortening the ground roll after landing. Activating the designated switch reverses motor rotation while the throttle stick still controls motor speed.

⚠ **CAUTION:** Never activate thrust reversing in flight. Applying reverse thrust in flight will result in loss of control and possibly a crash. Crash damage is not covered under warranty.

IMPORTANT: Thrust reversing requires a Spektrum computer transmitter with a minimum of 7 channels. Reversing functions are only available with Smart Throttle technology

Thrust Reversing Setup

The transmitter must be programmed per the transmitter setup section and the aircraft bound and functioning properly before enabling the optional thrust reversing.

IMPORTANT: Set the transmitter to high rates with 100% travel before beginning the thrust reversing setup.

1. Power on the transmitter and aircraft. Allow the aircraft to fully initialize. Engage throttle cut.
2. From the main menu screen, scroll to the **ESC_Menu** screen.
3. Following the on-screen instructions, move and hold the transmitter sticks as instructed to enter ESC programming.
4. Move the elevator stick up or down on the transmitter to select **Function** from the menu list. The arrow indicates the selected option.
5. Move the aileron stick right to select **Rev_SW**. Move the elevator stick up or down to toggle from **<OFF>** to **<ON>**. Move the aileron stick left to exit the selection.
6. Use the transmitter sticks, as used above, to change the **Rev_SW** to the desired channel. The default channel selection is pre-set to use channel 7.

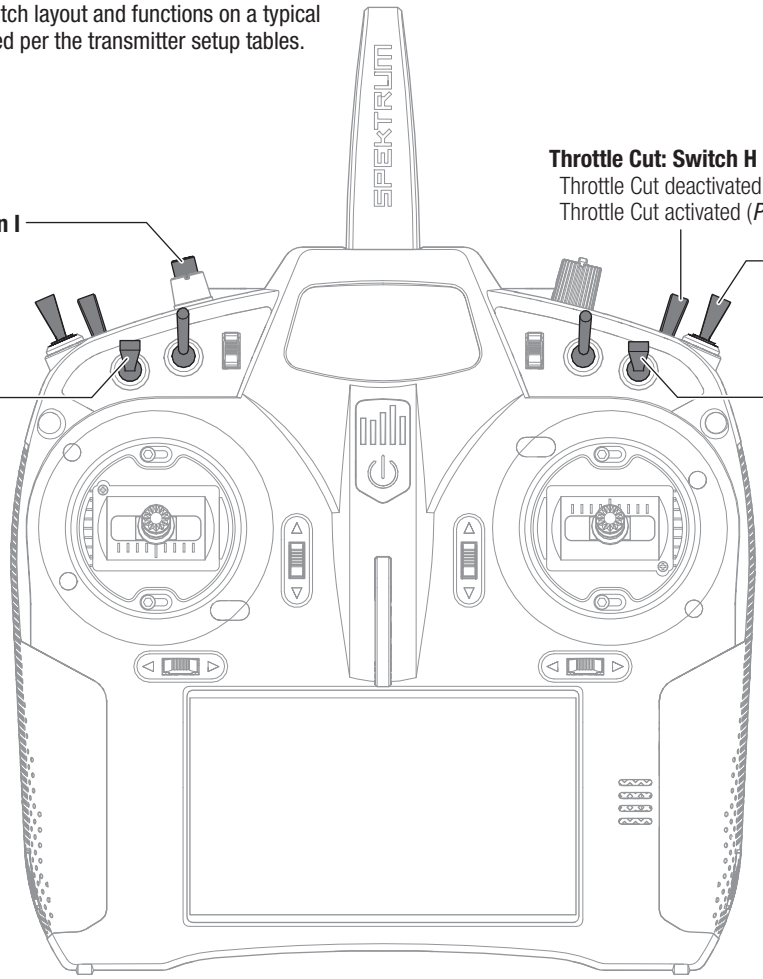
⚠ **CAUTION:** Do not assign thrust reversing and SAFE Select to the same channel. Doing so will reverse the motor when SAFE Select is enabled during flight, resulting in a crash.

7. Push the aileron stick left 3 times to exit the ESC_MENU and return to the main menu screen.
8. Power off the aircraft.
9. Click the scroll wheel to enter the **Function** list. Scroll down to and select **System Setup**.
10. Scroll to and select **YES** to enter the System Setup menu.
11. Scroll to and select **Channel Assign**.
12. Scroll to **A7: AUX 7** and select the desired switch or button used to activate thrust reverse. To help prevent possible accidental thrust reverse activation, we recommend using push button **I**.
13. Exit all menus.
14. Power on the aircraft, and test the thrust reverse operation.

modellmarkt24.ch

Transmitter Switch Layout

The following illustration shows the switch layout and functions on a typical Spektrum transmitter when programmed per the transmitter setup tables.



Thrust Reverse (Optional)**: Button I**

Throttle Cut: Switch H
Throttle Cut deactivated (*Pos 0*)
Throttle Cut activated (*Pos 1*)

Rudder Dual Rate: Switch G
Rudder High Rate (*Pos 0*)
Rudder Low Rate (*Pos 1*)
Rudder Low Rate (*Pos 2*)

Elevator Rate: Switch C
Elevator High Rate (*Pos 0*)
Elevator Low Rate (*Pos 1*)
Elevator Low Rate (*Pos 2*)

Aileron Rate: Switch F
Aileron High Rate (*Pos 0*)
Aileron Low Rate (*Pos 1*)
Aileron Low Rate (*Pos 2*)

Integrated ESC Telemetry

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

Telemetry Settings	
Rx V : Min Rx V	4.2V
Smart ESC : Low Voltage Alarm	3.4V
Smart Battery : Startup Volt Minimum	4.0V
Motor Pole Count	8
Warning Reports	10 seconds

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

modellmarkt24.ch

Battery Installation and ESC Arming

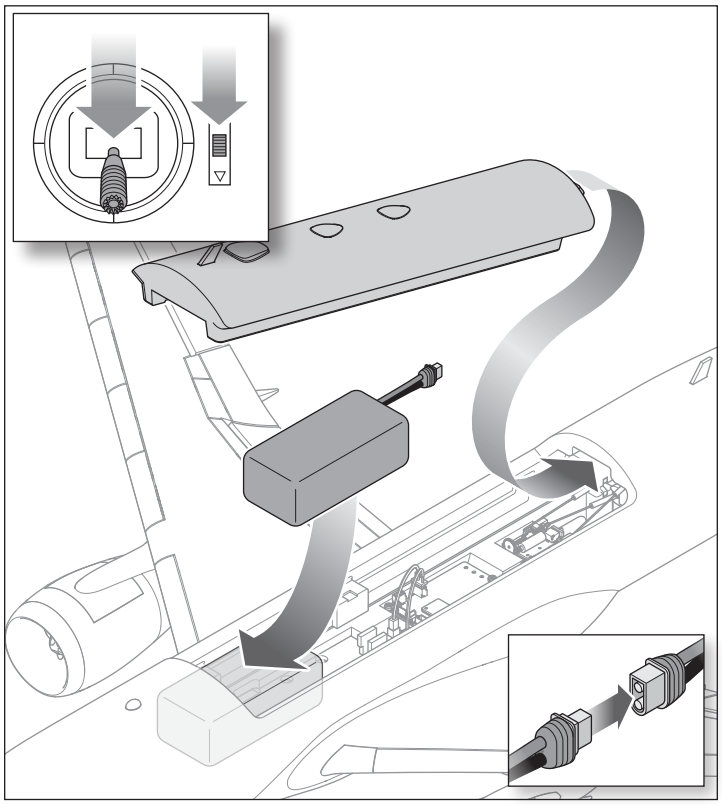
Battery Selection

A 3S 850mAh LiPo battery is required. The Spektrum 850mAh 11.1V 3S 30C LiPo battery (SPMX8503S30) is recommended. 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 LiPo battery packs to fit in the fuselage. Be sure the model balances at the recommended CG before flying.

1. Lower the throttle and throttle trim to the lowest settings. Power ON the transmitter, then wait 5 seconds.
2. Remove the magnetic battery hatch.
3. Insert the battery into the battery compartment and secure in place with the hook and loop strap.
4. Connect the battery to the ESC. If you have not completed the bind sequence, do so at this time as outlined in the Binding section.

⚠ **CAUTION:** Always keep hands away from the fan intake. When armed, the motor will turn the rotor in response to any throttle movement.

5. Keep the aircraft immobile and away from wind or the system will not initialize.
   - The motors emit a tone when the battery is connected, followed by three even tones indicating the number of cells connected.
   - The motors emit a series of tones after the flight controller is initialized.
   - The flight mode LED on the flight controller indicates the flight mode after initialization.
6. Reinstall the battery hatch.



Binding

1. Power the aircraft ON.
2. The receiver in the flight controller will automatically enter bind mode if it does not connect to a transmitter. Bind mode is indicated by the bind LED flashing rapidly.
3. Put your transmitter into bind mode, the aircraft will bind and establish a connection with your transmitter. The bind LED glows solid.

   IMPORTANT: Lower the throttle stick on the transmitter prior to entering bind mode to set the failsafe throttle position.
4. The aircraft must be kept upright and stable to complete initialization.

Flight Controller LEDs		
LED	**LED Color**	**Mode**
Bind LED	Orange, Fast flash	Waiting for bind
	Orange, Solid	Bound, ready for flight
Flight Mode LED	Blue	SAFE
	Red	AS3X

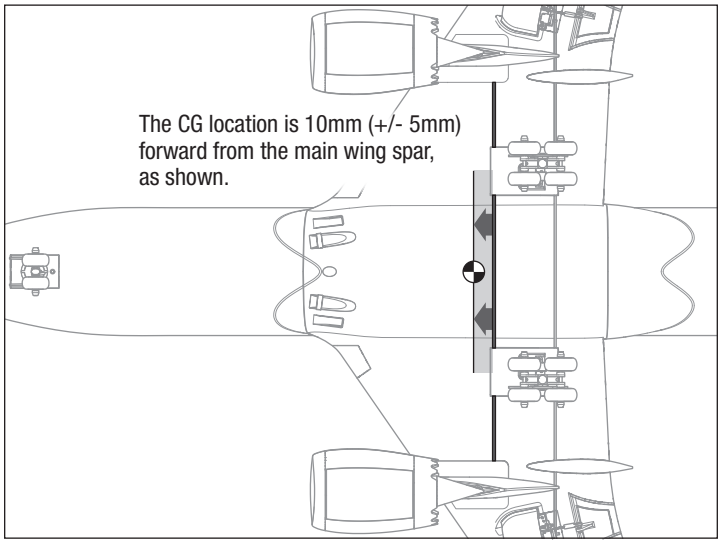
Failsafe

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

modellmarkt24.ch

Center of Gravity (CG)

Measure the CG location with the recommended battery (SPMX8503S30) installed, with the model inverted. The battery should be located near the center of the battery strap to achieve the proper CG. The preferred CG location is 10mm (+/- 5mm) in front of the main wing spar, located on the bottom of the wing assembly, as shown.



SAFE Select Technology

When SAFE Select is activated, bank and pitch limitations keep you from over-controlling the aircraft. Additionally, by releasing the controls in the event you lose orientation, SAFE Select will keep the aircraft level.
To activate SAFE Select, flip the Gear channel switch (Switch A) to position 0. Return the Gear switch to position 1 to turn OFF SAFE Select and fly with just the assistance of AS3X® technology.
If you become disoriented or the aircraft is in a confusing attitude, flip the Gear switch to position 0 and release the sticks. With the aileron and elevator sticks in the neutral position, SAFE Select will automatically keep the airplane in a straight and level attitude.

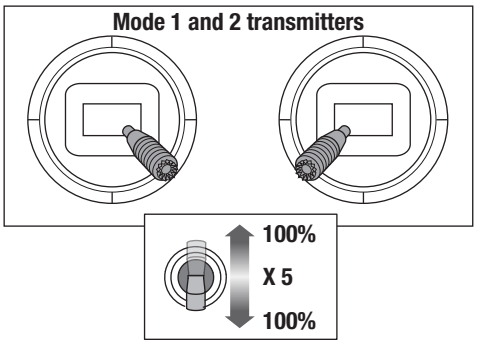
Disabling and Enabling SAFE Select

By default, the SAFE Select function of your aircraft is enabled and assigned to the Gear channel switch (channel 5). If you do not wish to have access to SAFE Select while flying, you can choose to disable SAFE Select functionality. AS3X will still be active when SAFE Select is disabled.
SAFE Select cannot be assigned to another channel in this aircraft. Choose to fly with SAFE Select ON or OFF using switch A (by default) when using the suggested transmitter setup.

IMPORTANT: Before attempting to disable or enable SAFE Select, ensure the aileron, elevator, rudder, throttle and gear channels are all on high rate with the travel set to 100%. Turn throttle hold OFF if it is programmed in the transmitter.

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

1. Power on the transmitter.
2. Power on the aircraft.
3. Hold both transmitter sticks to the inside bottom corners and toggle the Gear switch 5 times (1 toggle = full up and down). The control surfaces of the aircraft will move, indicating SAFE Select has been enabled or disabled.

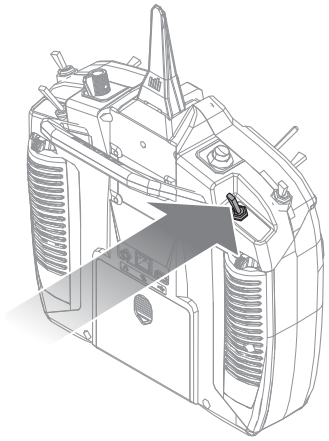


Repeat the process to re-enable or disable SAFE Select.

Switch A is used for SAFE Select as shown below on the NX8

TIP: If you prefer to use a different switch to control SAFE Select, you can assign it to another switch in your transmitter by changing the switch assigned to gear/channel 5.

IMPORTANT: We recommend using high rates when flying with SAFE Select ON
Low rates with SAFE Select ON will reduce the pitch and bank angle limits resulting in less control and wider turns in particular.



modellmarkt24.ch

Control Direction Test

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

Elevator

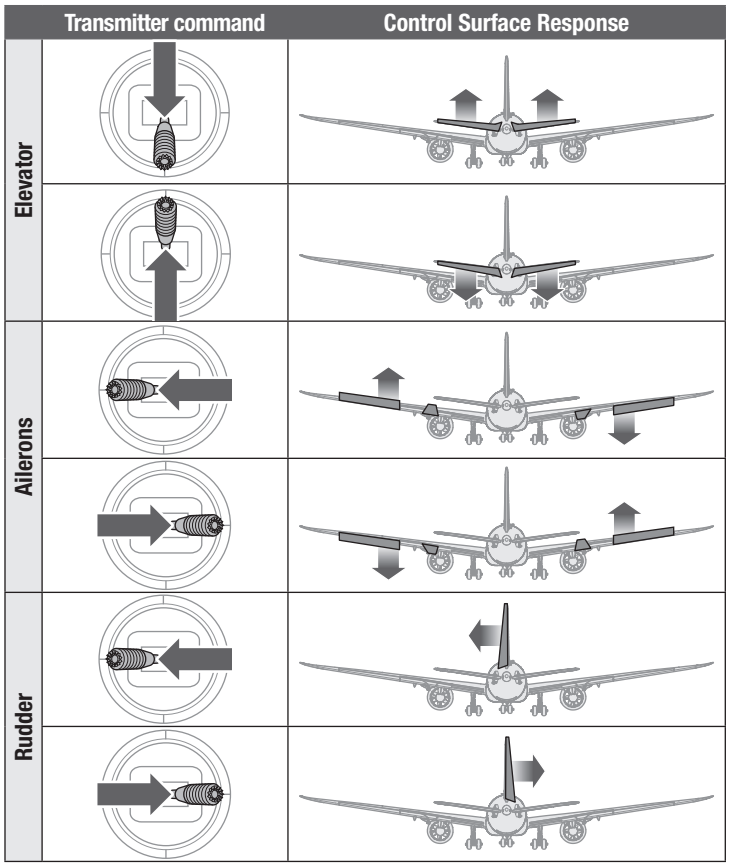
1. Pull the elevator stick back. The elevators should move up, which will cause the aircraft to pitch up.
2. Push the elevator stick forward. The elevators should move down, which will cause the aircraft to pitch down.

Ailerons

3. 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.
4. 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

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.



AS3X Response 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.

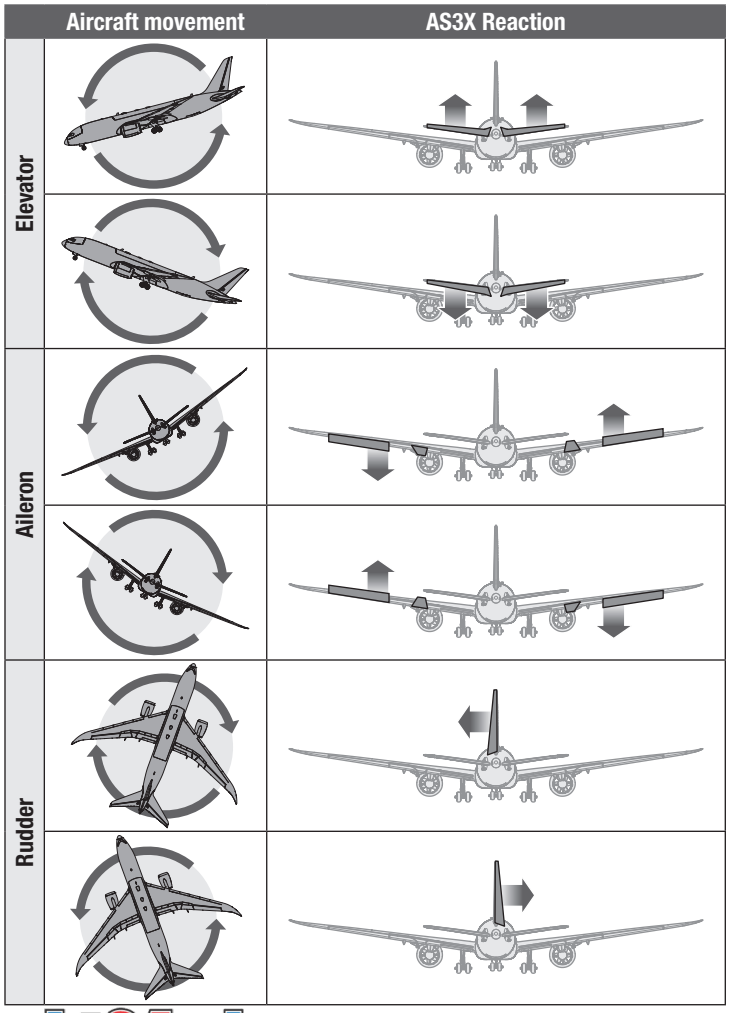
This test ensures that the AS3X® control system is functioning properly. Assemble the aircraft and bind your transmitter to the receiver before performing this test.

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.



modellmarkt24.ch

Control Surface Centering and Adjusting a Ball Link

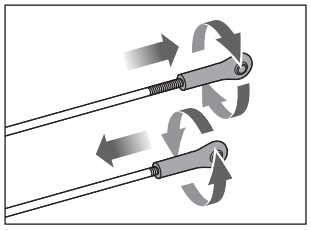
IMPORTANT: Perform the Control Direction Test before performing control surface centering.

While SAFE is inactive, mechanically center the control surfaces.

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

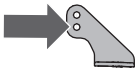
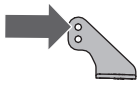
After binding a transmitter to the receiver, set the trims and sub-trims to 0, ensure the servos are in the correct positions, then adjust the linkages to center the control surfaces.

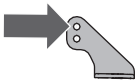
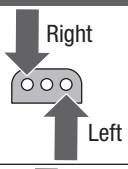
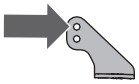
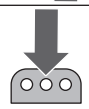
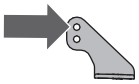
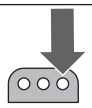
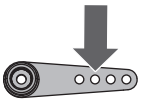
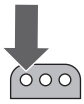
- Turn the linkage clockwise or counterclockwise until the control surface is centered.
- Attach the linkage to the control horn after adjustment.



Control Horn and Servo Arm Factory Settings

The table to the right shows the factory settings for the control horns and servo arms. Fly the aircraft at factory settings before making changes.
After flying, you may choose to adjust the linkage positions for the desired control response.

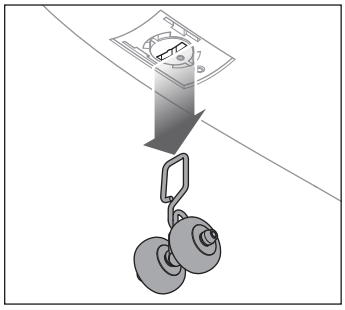
More control throw	Less control throw
	

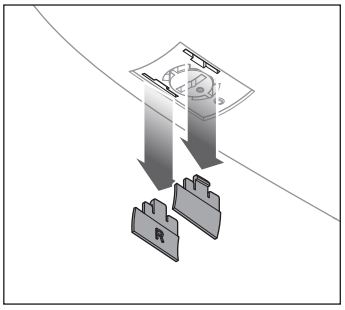
	Control Horns	Servo Arms
Elevator		
Ailerons		
Rudder		
Nose Wheel		

Landing Gear

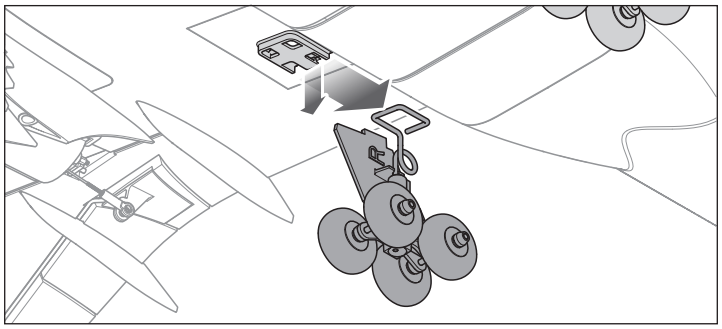
The landing gear may be left installed or removed to suit your flying area. We recommend using the landing gear when flying from a smooth hard surface. Remove the landing gear and hand launch the aircraft when flying from grass.

To remove the nose gear, pull the gear strut straight out. Remove the nose gear doors in the same manner.





To remove the main gear, lift slightly on the retention clip and slide the gear strut assembly to the rear.



modellmarkt24.ch

Hand Launching

NOTICE: Hand launching in AS3X mode is not recommended as it may result in a crash. Always hand launch in SAFE mode.

- We recommend flying without landing gear when hand launching.
- Always hand launch in SAFE mode, into the wind, in high rates.

Grip

Hold the aircraft on the bottom of the fuselage, just behind the wings.

Follow Through

Using an overhand throw, launch the aircraft with the wings level and the nose pointed slightly upwards. Follow through with your hand launch by pointing your fingers at the airplane after the throw. Avoid an arching throw which can pull the nose down at release.

Hand Launch Assist Mode

The aircraft is equipped with Hand Launch Assist Mode. The control unit applies control input to establish a preset climb angle and wing leveling. It returns to SAFE mode shortly after launch.
To activate Hand Launch Assist Mode:

1. Verify SAFE Select is enabled.
2. Place the model in SAFE mode.
3. Advance the throttle above 75%.
4. Hand launch the model normally.
   The acceleration of throwing the model activates the assist mode, leveling the wings and setting the model in a positive climb attitude.
5. After a few seconds of flight, the system automatically disengages and reverts to SAFE mode.
   The system resets after landing when the throttle is reduced below 5%, and the model is stationary for more than 5 seconds.

Flying Tips and Repairs

Consult local laws and ordinances before choosing a flying location.

IMPORTANT: Always allow the aircraft electronics to cool between consecutive flights, particularly when operating in warm weather conditions.

Flying Field

Always choose a wide-open space for flying your aircraft. It is recommended that you fly at a designated RC flying field. Always avoid flying near houses, trees, wires and buildings. Avoid flying in areas where there are many people, such as parks, schoolyards, or soccer fields.

Range Check your Radio System

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

Understanding 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 will see oscillation. If oscillation occurs, decrease airspeed. If oscillation persists, refer to the Troubleshooting Guide for more information.

Takeoff

Place the aircraft in position for takeoff (facing into the wind). Set your transmitter in low rate and gradually increase the throttle from ¾ to full and steer with the rudder control stick. As the airplane gains speed, gently pull back on the elevator and climb to a comfortable altitude

Flying

Fly the airplane and trim it for level flight at full throttle. After adjusting trim in flight do not touch the control sticks for 3 seconds. This allows the receiver to learn the correct settings to optimize AS3X performance.

Landing

Make sure to land the aircraft into the wind. Start to slow the model down to an approach speed. Fly the aircraft to approximately 3 feet (90 cm) or less above the runway, using a small amount of throttle for the entire descent. 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.

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 airplane in direct sunlight or a hot, enclosed area such as a car. Doing so can damage the foam.

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor. Power to the motor pulses, showing that some battery power is reserved for flight control and safe landing.
Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Charge your Li-Po battery to about half capacity before storage. During storage, make sure the battery charge does not fall below 3V per cell. LVC does not prevent the battery from over-discharge during storage.

NOTICE: Repeated flying to LVC will damage the battery.

TIP: Monitor your aircraft battery's voltage before and after flying by using a Smart LiPo Battery Checker and Servo Driver (SPMXBC200, sold separately).

Repairs

Use only foam-compatible CA, foam-compatible accelerant or epoxy. 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 accelerator on your aircraft can damage paint. DO NOT handle the aircraft until accelerator fully dries.

Post Flight Checklist

Disconnect the flight battery from the ESC
Power OFF the transmitter
Remove the flight battery from the aircraft
Recharge the flight battery

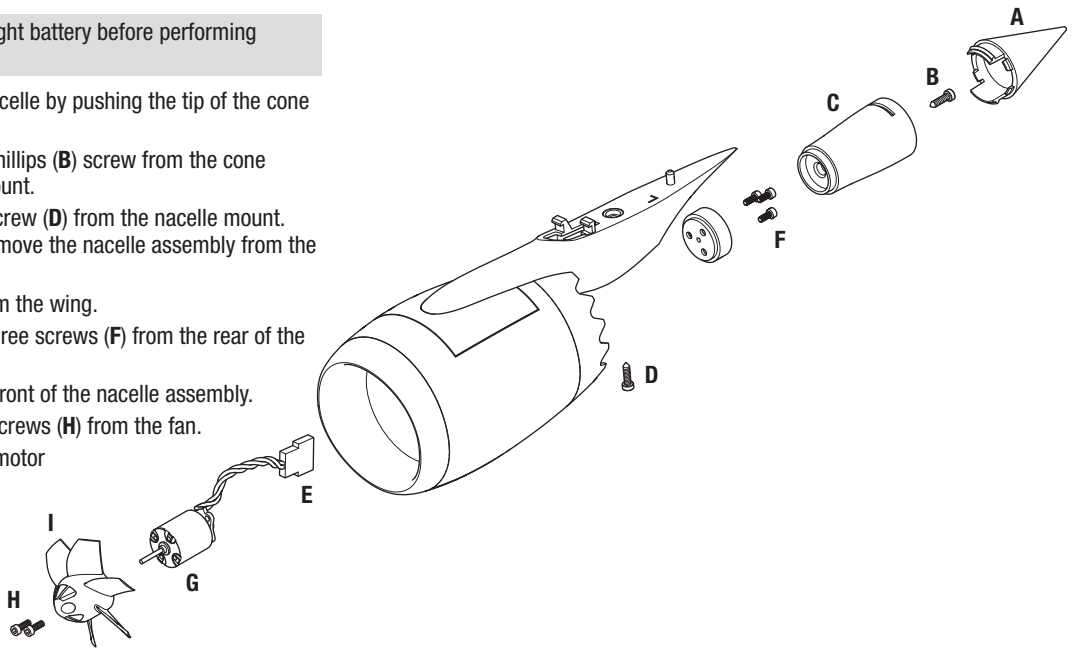
Repair or replace all damaged parts
Store the flight battery apart from the aircraft and monitor the battery charge
Make note of the flight conditions and flight plan results, planning for future flights

modellmarkt24.ch

Power System Service

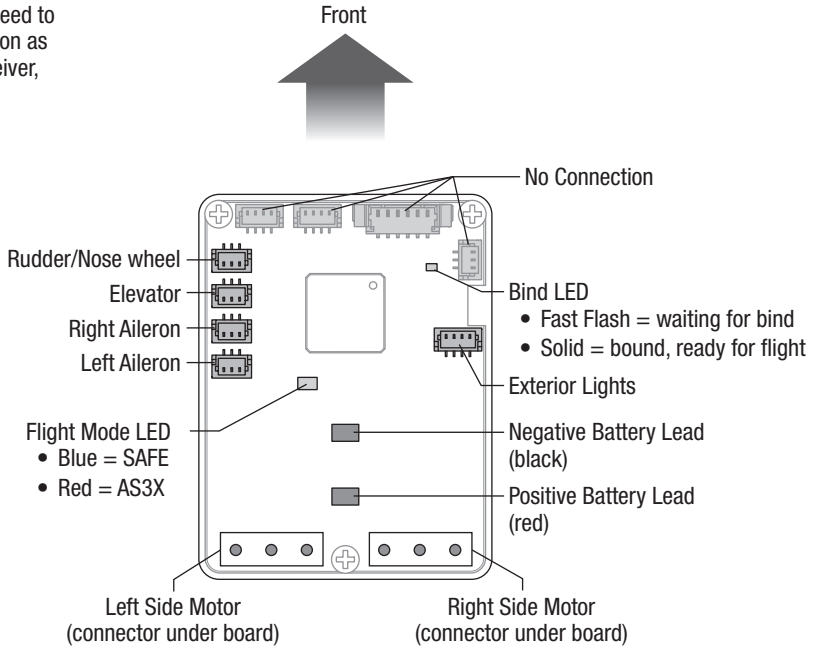
CAUTION: Always disconnect the flight battery before performing power system service.

1. Remove the tail cone (**A**) of the motor nacelle by pushing the tip of the cone to one side until the clips release.
2. Using a PH#0 screwdriver, remove the Phillips (**B**) screw from the cone extension (**C**) at the rear of the motor mount.
3. Using a PH#0 screwdriver, remove the screw (**D**) from the nacelle mount. Tilt the nacelle up and slide it back to remove the nacelle assembly from the wing.
4. Disconnect the motor power lead (**E**) from the wing.
5. Using a 1.5mm hex driver, remove the three screws (**F**) from the rear of the motor mount.
6. Remove the motor (**G**) and fan from the front of the nacelle assembly.
7. Using a 1.5mm hex driver, remove two screws (**H**) from the fan.
8. Remove the fan (**I**) from the front of the motor
9. Assemble the unit in reverse order.



Flight Controller Connections

All the functions of this aircraft are handled in the flight controller. If you need to remove the flight controller it needs to be reinstalled in the same orientation as originally mounted. The servo connectors should be at the rear of the receiver, facing down.
Reference the following diagram for servo and motor connections.



modellmarkt24.ch

Troubleshooting Guide AS3X

Problem	Possible Cause	Solution
Oscillation	Damaged rotor or nose cone	Replace rotor or nose cone
	Imbalanced rotor	Balance the rotor
	Motor vibration	Replace parts or correctly align fan unit or other parts and tighten fasteners as needed
	Loose receiver	Align and secure receiver in fuselage
	Loose aircraft controls	Tighten or otherwise secure parts (servo, arm, linkage, horn and control surface)
	Worn parts	Replace worn parts (especially rotor, nose cone, or servo)
	Irregular servo movement	Replace servo
Inconsistent flight performance	Trim is not at neutral	If you adjust trim more than 8 clicks, adjust the ball link to remove trim
	Sub-Trim is not at neutral	No Sub-Trim is allowed. Adjust the servo linkage
	Aircraft was not kept immobile for 5 seconds after battery connection	With the throttle stick in lowest position. Disconnect battery, then reconnect battery and keep the aircraft still for 5 seconds

Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle not at idle and/or throttle trim too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle servo travel is lower than 100%	Make sure throttle servo travel is 100% or greater
	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor disconnected from ESC	Make sure motor is connected to the ESC
Excessive fan noise or excessive vibration	Damaged fan, nose cone, collet or motor	Replace damaged parts
	Fan is out of balance	Balance or replace fan
	Fan screw is loose	Tighten the fan 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 not cold before use (Do not apply heat to the battery)
	Battery capacity too low for flight conditions	Replace battery or use a larger capacity battery
Aircraft will not bind (during binding) to transmitter	Transmitter too near aircraft during binding process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt binding again
	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
	Aircraft bound to different model memory (ModelMatchTM radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound to a different aircraft using different DSM protocol	Bind aircraft to transmitter
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Transmitter is not bound correctly or the incorrect airplanes was selected	Re-bind or select correct airplanes in transmitter
	Flight battery charge is low	Fully recharge flight battery
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
Controls reversed	Transmitter settings are reversed	Perform the Control Direction Test and adjust the controls on transmitter appropriately
Motor power pulses then motor loses power	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
	Weather conditions might be too cold	Postpone flight until weather is warmer
	Battery is old, worn out, or damaged	Replace battery
	Battery C rating might be too low	Use recommended battery

modellmarkt24.ch

Replacement Parts

Part #	Description
EFL-4045	LED Light Set
EFL-4526	Fuselage
EFL-4527	Wing
EFL-4528	Vertical Stabilizer
EFL-4529	Horizontal Stabilizers
EFL-4530	Pushrod Linkage Set
EFL-4531	Cockpit Hatch
EFL-4532	Battery Hatch
EFL-4533	Landing Gear Set
EFL-4534	Left Nacelle with Wing Mount
EFL-4535	Right Nacelle with Wing Mount
EFL-4536	Nacelle Exhaust Cone Set
EFL-4537	Control Horn Ball Link Set
EFL-4538	Screw Set
EFL-4539	Motor and Servo Extension Wire Set
EFL-4541	Decal Set
EFL-4542	Nose Gear assembly
EFL-4543	Fuselage Tail Cone Cover
EFLU6558	Ducted Fan Unit, 6-blade
SPMSA205	2.3g Long-Throw Linear Offset Servo with Plug
SPMSA206	2.3g Long-Throw Linear Servo with plug
SPMX-1037C	Receiver/15-amp Dual ESC Flight Controller with Thrust Reverse
SPMX-1072	Brushless Motor; 0808-8800Kv 8 Pole

Recommended Parts

Part #	Description
SPMX8503S30	850mAh 3S 11.1V Smart G2 30C; IC2
SPMXC2050	S155 55W AC G2 Smart Charger
SPMR7110	NX7e+ 14 Channel Transmitter Only

Optional Parts

Part #	Description
SPMR8210A	NX8+ 20 Channel DSMX Transmitter Only
SPMXC2060	Smart S250 AC Charger, 2x50W
SPMXC2080	Smart S1100 AC Charger, 1x100W
SPMXCA320	Adapter: IC3 Battery / IC2 Device; 6”

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

Important Federal Aviation Administration (FAA) Information

Use the QR code 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.

modellmarkt24.ch

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 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	

modellmarkt24.ch

FCC Information

Contains FCC ID: BRWWAC01T
This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and/or antenna and your body (excluding fingers, hands, wrists, ankles and feet). This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Supplier's Declaration of Conformity

Micro Boeing 787 Twin 30mm EDF BNF Basic (EFL78750): This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

IC Information

CAN ICES-3 (B)/NMB-3(B)
Contains IC: 6157A-WAC01T
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:

Micro Boeing 787 Twin 30mm EDF BNF Basic (EFL78750): 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 and output:
Receiver:
2402–2478 MHz
1.43 dBm

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

UK CA

modellmarkt24.ch

E-flite®

ADVANCING ELECTRIC FLIGHT

Officially Licensed By

BOEING

© 2026 Horizon Hobby, LLC.
E-flite, AS3X, SAFE, the SAFE logo, DSM, DSM2, DSMX, the DSMX logo, Bind-N-Fly, the BNF logo, ModelMatch, IC2, IC3, and the Horizon Hobby logo are trademarks or registered trademarks of Horizon Hobby, LLC. The Spektrum trademark is used with permission of Bachmann Industries, Inc.
Produced under license from The Boeing Company. BOEING, 787, DREAMLINER the distinctive logos, product markings and trade dress are trademarks of The Boeing Company.
All other trademarks, service marks and logos are property of their respective owners.
US 8,201,776. Other patents pending.
http://www.horizonhobby.com/

Created 10/26

modellmarkt24.ch

1040422.1