



[Manuals.plus](#) /

› [E-flite](#) /

› E-flite Carbon-Z Cub SS 2.1m RC Airplane Instruction Manual

## E-flite EFL124500

# E-flite Carbon-Z Cub SS 2.1m RC Airplane Instruction Manual

Model: EFL124500

## INTRODUCTION

This manual provides essential information for the safe assembly, setup, operation, and maintenance of your E-flite Carbon-Z Cub SS 2.1m RC Airplane. The Carbon-Z Cub SS is an updated and refined version of the original Carbon-Z Cub, featuring a giant-scale 84-inch (2.1m) wingspan with lightweight and exceptionally strong composite-reinforced, hollow-core Carbon-Z construction. It is designed for easy flight with innovative, optional-use SAFE Select flight envelope protection and the stability of exclusive AS3X technology, integrated with a Spektrum AR637T DSMX 6-Channel AS3X & SAFE Telemetry Receiver.

Please read this entire instruction manual carefully before operating the aircraft to ensure proper function and to prevent damage or injury.

## SAFETY INFORMATION

**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. The product 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.

- Always operate your aircraft in open areas away from people, vehicles, and buildings.
- Ensure all components are securely attached and in good working order before each flight.
- Never fly near power lines or other obstacles.
- Always disconnect the battery when the aircraft is not in use.
- Follow all local regulations and guidelines for RC aircraft operation.

## WHAT'S IN THE BOX

Your E-flite Carbon-Z Cub SS 2.1m BNF Basic package includes the following components:

- (1) E-flite Carbon-Z Cub SS 2.1m RC Airplane
- (1) 60A Brushless ESC (installed)
- (1) Brushless Outrunner Motor (installed)
- (6) Digital, Metal-Geared Servos (installed)
- (1) AR637T DSMX 6-Channel AS3X & SAFE Telemetry Receiver (installed)
- Product Manual

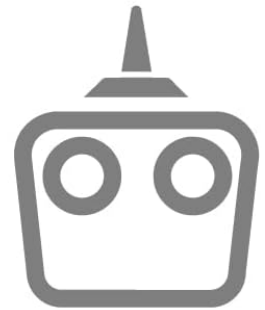
# Needed to Complete



**Battery**



**Charger**



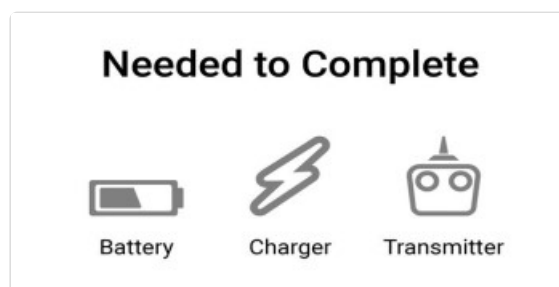
**Transmitter**

Side view of the E-flite Carbon-Z Cub SS 2.1m RC Airplane.

## NEEDED TO COMPLETE

The following items are required to complete the assembly and operation of your Carbon-Z Cub SS 2.1m and are not included in the box:

- 6+ channel Spektrum DSMX/DSM2 compatible transmitter
- 4–6S 14.8–22.2V 3200–7000mAh LiPo battery with EC5 or IC5 Connector
- Compatible LiPo charger



Visual representation of additional items required: Battery, Charger, and Transmitter.

## SETUP

This section outlines the initial setup procedures for your E-flite Carbon-Z Cub SS 2.1m. Ensure you have all necessary components before beginning.

1. **Wing Assembly:** Carefully attach the wings to the fuselage according to the detailed instructions in the included product manual. Ensure all connections are secure.
2. **Landing Gear Installation:** Verify that the landing gear is properly installed and secured. The large, tundra-style wheels are designed for various terrains.
3. **Receiver Binding:** Bind your Spektrum DSMX/DSM2 compatible transmitter to the installed AR637T receiver. Refer to your transmitter's manual for specific binding procedures.
4. **Control Surface Checks:** After binding, perform a thorough check of all control surfaces (ailerons, elevator, rudder) to ensure they move freely and in the correct direction relative to your transmitter inputs.
5. **Battery Installation:** Install your charged 4-6S LiPo battery into the designated battery compartment. Secure it to prevent movement during flight. Ensure the EC5 or IC5 connector is properly connected to the ESC.
6. **Center of Gravity (CG) Check:** Verify the aircraft's Center of Gravity (CG) as specified in the full product manual. Proper CG is critical for stable flight.



Side view of the Carbon-Z Cub SS, highlighting the landing gear and overall structure.



Detail of the propeller and motor cowling, part of the pre-installed components.

The E-flite Carbon-Z Cub SS 2.1m is equipped with advanced technologies to enhance your flying experience. This section covers basic operation and key features.

## Pre-Flight Checks

- Ensure your transmitter battery is fully charged.
- Confirm the flight battery is fully charged and properly installed.
- Check all control surfaces for free movement and correct response.
- Inspect the propeller for any damage.
- Verify that AS3X and SAFE Select modes are functioning as expected.

## AS3X Technology

AS3X (Artificial Stabilization – 3-axis) technology works behind the scenes to smooth out the effects of wind and turbulence, providing a locked-in feel that makes the aircraft fly like a much larger, expertly tuned model. This system is always active and requires no input from the pilot during flight.

## SAFE Select Technology

SAFE Select offers optional-use flight envelope protection, making the Carbon-Z Cub SS easier to fly for intermediate pilots. It provides:

- **Pitch and Bank Angle Limits:** Prevents the aircraft from over-banking or over-pitching.
- **Automatic Self-Leveling:** Returns the aircraft to level flight when the control sticks are released.
- **Panic Recovery:** Instantly returns the aircraft to level flight with the press of a button.

Refer to the full product manual for instructions on how to activate and configure SAFE Select with your Spektrum transmitter.



The Carbon-Z Cub SS 2.1m performing a stable flight maneuver.



An RC pilot operating the aircraft, demonstrating typical outdoor usage.

## MAINTENANCE

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Regular maintenance ensures the longevity and safe operation of your E-flite Carbon-Z Cub SS 2.1m.

- **Cleaning:** After each flight, wipe down the aircraft with a soft, dry cloth to remove dirt, dust, or moisture. Avoid using harsh chemicals.
- **Propeller Inspection:** Regularly check the propeller for cracks, nicks, or bends. Replace damaged propellers immediately to prevent vibration and potential motor damage.
- **Control Surface Hinges:** Inspect all control surface hinges for wear or damage. Ensure they move freely without excessive play.
- **Motor and ESC:** Periodically check the motor and Electronic Speed Controller (ESC) for any signs of overheating or damage. Ensure all wiring connections are secure.
- **Battery Care:** Always store LiPo batteries in a cool, dry place at storage voltage. Never overcharge or over-discharge LiPo batteries. Follow all safety guidelines for LiPo battery handling and charging.
- **Structural Integrity:** Inspect the airframe for any cracks or damage to the Carbon-Z material. Repair any damage promptly using appropriate adhesives.



Detail of the robust landing gear, designed for various surfaces.

## TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with your Carbon-Z Cub SS 2.1m.

Problem	Possible Cause	Solution
Aircraft does not respond to transmitter.	Transmitter not bound to receiver; low transmitter/receiver battery; incorrect model selected on transmitter.	Re-bind transmitter and receiver; charge batteries; select correct model.
Motor does not start.	Throttle trim too high; ESC not armed; battery not connected or low voltage.	Lower throttle trim to minimum; ensure ESC arms (usually indicated by beeps); connect fully charged battery.
Aircraft flies erratically or is difficult to control.	Incorrect control surface direction; improper CG; damaged control surface or linkage.	Verify control directions; check CG; inspect and repair control surfaces/linkages.
AS3X/SAFE Select not functioning.	Receiver not initialized correctly; SAFE Select not activated or configured.	Ensure aircraft is stationary during power-up for receiver initialization; refer to manual for SAFE Select activation.

## SPECIFICATIONS

Detailed specifications for the E-flite Carbon-Z Cub SS 2.1m RC Airplane:

- **Brand:** E-flite
- **Model Name:** Carbon-Z Cub SS 2.1m BNF Basic with AS3X and Safe Select
- **Model Number:** EFL124500
- **Wingspan:** 84 inches (2.1 meters)
- **Material:** Plastic (Carbon-Z construction)
- **Item Weight:** 17.39 Pounds
- **Item Dimensions:** 53.2 x 28.2 x 9 inches
- **Power Source:** Battery Powered (LiPo)
- **Recommended Battery:** 4–6S 14.8–22.2V 3200–7000mAh LiPo with EC5 or IC5 Connector
- **Motor:** Brushless Outrunner (installed)
- **ESC:** 60A Brushless (installed)
- **Receiver:** AR637T DSMX 6-Channel AS3X & SAFE Telemetry Receiver (installed)
- **Servos:** (6) Digital, Metal-Geared Servos (installed)
- **Assembly Required:** Yes
- **Indoor/Outdoor Usage:** Outdoor
- **Maximum Speed:** 50 Miles per Hour
- **Age Range:** 14+
- **UPC:** 605482764190



### Skill Level 2

#### Some Experience Required

Skill Level 2 aircraft are a great choice for intermediate pilots who already have some experience with "Next Step" and beyond aircraft!

## WARRANTY AND SUPPORT

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For warranty information, technical support, or replacement parts, please refer to the official E-flite website or contact Horizon Hobby, LLC customer service. Keep your proof of purchase for any warranty claims.

**Horizon Hobby, LLC Contact Information:**

- **Website:** [www.horizonhobby.com](http://www.horizonhobby.com)
- **Phone:** Refer to the Horizon Hobby website for regional contact numbers.