Stratocam[™]

Instruction Manual • Bedienungsanleitung • Manuel d'utilisation • Manuale di Istruzioni



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 www.horizonhobby.com and click on the support 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:

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

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.

14+ 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.
- **Charging Warnings**

CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

- Never leave charging batteries unattended.
- Never charge batteries overnight.
- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120° F (5–49° C). Do not store battery or aircraft in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- Always charge batteries away from flammable materials.

- 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.
- Always inspect the battery before charging and never charge dead or damaged batteries.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always constantly monitor the temperature of the battery pack while charging.
- ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTER-IES. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never charge batteries outside recommended levels.
- Never attempt to dismantle or alter the charger.
- Never allow minors under the age of 14 to charge battery packs.
- Never charge batteries in extremely hot or cold places (recommended between 40–120° F or 5–49° C) or place in direct sunlight.

<u>/!\</u>

Included in the Box



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Specifications and Features



Motor: (2) 180 brushed



- Battery: 2S 1300mAh Li-Po
- Battery Charger: 1.5A 2-cell Li-Po Battery charger

Power Supply: 2.0A AC Power Supply



Transmitter: 2.4GHz Transmitter



- SAFE[®] technology (Sensor Assisted Flight Envelope) is designed as flight assistance, not an autopilot. The pilot is always in control and required to fly the aircraft at all times.
- Landing skids, designed to protect propellers during landing.
- Break-away wing, designed to snap free from fuselage during a crash to minimize damage.



Pre	flight Checklist	✓
1.	Find a safe and open area.	
2.	Charge flight & camera battery	
3.	Install flight battery in aircraft.	
4.	Perform Control Direction Test.	
5.	Plan flight for flying field conditions.	
6.	Have fun!	



Camera

Charging

- 1. Connect the included USB cable to the USB port on a compatible power source.
- 2. Connect the other end of the USB cable to the camera. The red and blue LEDs will blink back and forth twice, then:
 - (a) If you connect to a computer, the red and blue LEDs will blink slowly, indicating charging.
 - (b) If you connect directly to a DC power source (no computer connection), the red LED will glow solid, indicating charging.
- 3. Charge the battery for approximately 30 minutes. The camera has an internal charger that automatically shuts off when the battery is fully charged.
- 4. Once the battery is fully charged, disconnect the USB cable from the USB power source and the camera. The red and blue LEDs will blink rapidly for 2 seconds, then camera will power OFF. When the camera battery is low, the red LED will blink.



Installation

- 1. Install the camera on the camera mount located on top of the fuselage.
- Connect the servo lead from the main board to the camera servo lead port. Ensure the brown wire is on the left side (as if sitting in the cockpit) for correct polarity.
- Press the camera power button. The red LED will glow solid during initialization, then turn blue when it is ready for use.



For first flights place adjustable camera lens in the center position. Adjust for future flights as desired.





Stratocam

Changing Camera Modes

The camera comes from the factory in still/picture mode. To change between video and picture mode, press and release the left stick on the transmitter. Expect a 4 second delay when switching modes.

IMPORTANT: Changing the mode on the camera without changing the mode on the transmitter, or changing the mode on the transmitter when the camera is off, will cause the camera LED and transmitter audio tone to be out of sync.

If the camera LEDs and transmitter audio tones become out of sync, reset both units by powering them OFF and then back $\mathsf{ON}.$



Operation

Picture Mode:

Press and release the trigger on the transmitter (1 beep) to take a picture. When taking a picture the blue LED on the camera will blink once and return to solid.

Video Mode:

Press and release the trigger on the transmitter (2 beeps) to start recording (Blue camera LED blinking slowly). Press and release the trigger again (3 beeps) to stop recording (camera LED turns solid).

For further information regarding camera operation refer to the instruction manual for the 720p HD video camera (EFLA801) at HorizonHobby.com.



Data Retrieval

Data from the camera can be retrieved through the micro USB port or the removable 8GB micro SD card.



SAFE® Technology Flight Modes

SAFE Technology is a revolutionary flight training system designed to give you a stable platform for safely developing your flying skills. Choose between Camera Stable 1 and Camera Stable 2 flight modes depending one your skill level and flying conditions. Release both control sticks at any time to self-level the aircraft.

Once you graduate to experienced mode, you can enjoy unrestricted flight control. When in trouble, release both control sticks and fip the mode switch back to Camera stable 1 or Camera stable 2 mode to self-level the aircraft.

IMPORTANT: It is recommended that beginners start in Camera Stable 1 using low rates with low wind conditions.



Dual Rates

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The default setting is Low Rate. High and low rates are available across all flights modes.

The Dual Rate button supports high and low rate functions for both elevator and rudder control surfaces.

Camera Stable 1 (Switch position 0):

Pitch (nose up and down) and Roll (wing tips up and down) angles are limited to help you keep the aircraft airborne in a narrow and stable flight envelope. When in trouble, release both sticks for self-leveling.

Camera Stable 2 (Switch position 1):

Larger pitch and roll angles allow for more aggressive maneuvering or higher wind conditions. When in trouble, release both sticks for self-leveling.

Experienced Mode (Switch position 2):

No limits to the flight, allowing full control over pitch and Roll.

IMPORTANT: When flying in Experienced Mode and the need arrives to prevent a crash, immediately release both sticks and push the flight mode switch to position 0 or 1 (Camera stable 1 or 2).

NOTICE: If the aircraft is upside down when the control sticks are released, sufficient altitude is required for the aircraft to recover to straight and level flight after flipping back to Camera Stable 1 or 2 modes.



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Tail Installation

To install the tail onto the fuselage of your aircraft, start by following the two easy steps below:

- 1. Insert the tail into the slot of the fuselage. Center it by using the centering guides (A) located on the top side of the tail.
- 2. Once the tail is in place and centered, apply 8 pieces of tape (included) to secure it into position, four on top and four on the bottom.



Attaching the Clevis to the Control Horn.

Finish the installation of the tail by connecting the control rod with the clevis on the tail control horn.

- 1. Open the clevis and put the pin in the **bottom hole** of the control horn.
- If adjustment of length is needed, hold the connector with pliers or hemostats and turn the clevis clockwise or counterclockwise on the connector.
- 3. Close the clevis onto the control horn and slide the tube towards the horn to tighten the clevis.









Wing Installation

Wing assembly

- 1. Insert the carbon tube (**A**) into the hole in the left wing, then slide the right wing onto the carbon tube. Tabs on the left and right wings should align once the wings are properly joined.
- 2. Secure the wing assembly by installing the Top Wing Plate (**B**) with the included brackets and screws on the top and bottom side of the wing assembly.
- 3. Install the wing fins (**C**) on the right and left wing tips by opening the back side of the wing fin and sliding it into the slot on the top of the wing. Secure the fins using the included 8 pieces of tape (**D**).
- Install the wing skids (E) on the right and left side of the wing by inserting the u-bend into the mounts on the bottom side of the wing.



Mounting the wing

- 1. Connect the motor wire connectors from the wing to the correct ESC connectors in the fuselage of the aircraft.
- 2. Attach the wing assembly by aligning the front tab with the fuselage, then aligning the rear magnets.

Tip!Make sure all wires are inside the fuselage. Stray
wires could prevent the wing from seating properly.

Flight Battery Installation

Locate the battery compartment on the bottom of the aircraft.

- 1. Turn the latch (A) and remove the battery door (B).
- Install the flight battery (C) in the rearmost portion of the battery compartment using hook and loop strips. If the camera is removed, install the battery in the forward most portion of the battery compartment.

- Do Not connect the wires at this time -

3. After connecting the battery, replace the door on the battery comparment and turn the latch.



Arming the Electronic Speed Control (ESC)

1 Lower throttle and throttle trim (Mode 2 shown) Arming the ESC is required every time you perform a motor test or are ready to fly. To Arm the ESC, follow the steps below: 1. Lower the throttle stick and throttle trim to their low-To achieve the lowest throttle 0 est settings and power on your transmitter trim setting, hold down the throttle trim button until the \bigcirc 2. Connect the flight battery to the aircraft tones stop. 3. Once the battery is connected, the aircraft must be upright, level, & immobile for 5 seconds. **IMPORTANT:** The aircraft will not arm until it is placed Once arming of the ESC is complete, return the throttle level on its landing gear. trim to neutral by holding down the top button until the neutral (3 beep tone) occurs. CAUTION: Always keep hands away from the pro-O peller. When armed, the motor will turn the propeller in response to any throttle movement. 2) Connect the Flight battery to the aircraft CAUTION: Always disconnect the Li-Po flight battery from the aircraft receiver when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged. **Battery Precautions for Flight** 3 **Immobilize for 5 seconds** · Keep the aircraft close until you get familiar with flight time. Do not fly to LVC (motors pulsing) repeatedly. This may result in battery damage. · Always disconnect and remove the flight battery from of averes the receiver when finished flying.

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Perform the Control Direction Test with the transmitter SAFE flight mode switch set to **Experienced** mode (position 2).



Restrain the aircraft so it does not escape your control while you are testing your transmitter controls.

Move the sticks on the transmitter* to ensure the aircraft responds as shown.

If your model does not respond as shown, D0 NOT FLY! Refer to the Troubleshooting Guide in this manual for more information. If you need more assistance, contact the appropriate Horizon Hobby Product Support department.



Control Surface Centering

Before the first flights, or in the event of an accident, make sure the control surfaces (Rudder and Elevator) are centered (aligned) with the rest of the surface. If the control surfaces are not centered, centering can be achieved by following the steps below:

- 1. Turn on the transmitter and move all trims are neutral.
- 2. Plug in flight battery. **DO NOT raise the throttle**. Advancing the throttle will activate the stabilization system.
- 3. Make large adjustments by lengthening or shortening the clevis on the control rod (see "Attaching the Clevis to the Control Horn" step 2).
- 4. Make small centering adjustments by pushing the transmitter's trim buttons.

Tip! Use of transmitter trim may not correctly center the aircraft control surfaces due to the mechanical limits of linear servos.



IMPORTANT: Fully advancing the throttle will cause the elevator to move up while in Camera stable 1 or Camera stable 2

Choose a Flying Field

In order to have the most success and to protect your property and aircraft, it is very important to select a place to fly that is very open. Consult local laws and ordinances before choosing a location to fly your aircraft.

The site should:

- Have a minimum of 600 feet (183m) of clear space in all directions.
- Stay clear of pedestrians.
- Stay free of trees, buildings, cars, power lines or anything that could entangle your aircraft or interfere with your line of sight.

Your aircraft can reach speeds of up to 25–30 mph (40–48 km/h), so it can cover ground quickly.

Plan on flying in an area that gives you more space than you think you need, especially with first flights.



Range Test

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Before you start flying, we suggest you make sure the aircraft responds to your transmitter. You will need two people to do the range test, one to hold the transmitter and one to hold the aircraft.

- 1. Power on the transmitter for 5 seconds or more.
- 2. With the throttle stick and trim low, plug in the aircraft battery and keep the aircraft immobile for 5 seconds.
- One person holds the aircraft while the other person walks 300 feet (91 m) away with the transmitter on.
- 4. Move the transmitter tail controls and throttle to ensure they operate smoothly at 300 feet (91 m).

CAUTION: While holding the aircraft during the Range Test, always keep body parts and loose items away from the propeller. Failure to do so could cause personal injury.

If your aircraft does not range test correctly, do not attempt to fly it. Refer to the contact table at the end of the this manual to contact Horizon product support.

In good visibility conditions, we recommend flying your aircraft no more than 400 meters (approximately 1310 feet) from you. This will help to prevent loss of orientation as well keep your aircraft in control range of your radio system.



Flight Control

For smooth control of your aircraft, always make small control moves. All directions are described as if you were sitting in the aircraft.

For example, when the aircraft's nose is pointing toward you, left steering (rudder) will turn the aircraft left (your right while holding the transmitter).

- *Flying faster or slower:* When your aircraft is stable in the air, push the throttle stick up to make the aircraft go faster, and pull the throttle stick back to slow down. The aircraft will climb when the throttle is increased.
- *Elevator up and down:* Push the elevator stick forward to make the aircraft go down and pull the elevator stick back to go up.
- *Banking right and left:* Move the steering stick right to make the aircraft go right and move the steering stick left to go left (as if you are seated in the cockpit).

For the first flights, make sure the transmitter is set in low rate (LED slowly blinking).



Trimming

For best results, trimming should always be done while flying directly into the wind. It is recommended that beginners trim the aircraft at 50% throttle while in Camera stable 1 or Camera stable 2 modes.

Adjusting Trim in flight

If your aircraft does not fly straight and level at half throttle with the steering stick at center, fly into the wind and press the trim buttons as shown.

After adjusting transmitter trim in the air, do not touch the control sticks for 2 seconds. This allows the receiver to learn the correct settings to optimize the SAFE system. Failure to do so could affect flight performance.

Tip! Hold down the opposite trim button until the neutral (3 beep tones) occurs to return the trim back to zero.

Manually Adjusting Trim

Perform manual adjustment of trim before increasing the throttle above 25% or the control surfaces will move when the aircraft is moved.

Return any trim setting on the transmitter to neutral by pushing the trim slider to the middle position, then adjusting the clevis on that control surface to position it same as it was with the trim slider offset.

- 1. Remove the clevis from the control horn.
- 2. Turn the clevis (as shown) to lengthen or shorten the pushrod.
- 3. Close the clevis onto the control horn using the same hole it was removed from. Slide the tube towards the horn to secure the clevis.



Flying Tips

- · Resist the desire to fly at full throttle. Flying slowly at first allows for greater response time should anything go wrong.
- · Always keep your aircraft in plain sight and up wind from you.
- Gain experience by first flying in large circles high off the ground. Once you feel comfortable, gradually progress to more advanced maneuvers.
- Do not attempt your first turn at low altitude. Higher altitudes allow for greater possibility of correction.
- · Control stick movements are quite sensitive. Avoid pushing the control sticks to their endpoints until you become more familiar with your aircraft.
- To recover from a nose dive or loss of control, decrease throttle and release the aileron stick. Pull the elevator stick back a small amount to pull up the nose of the aircraft.

Hand Launch

For first flights, hand launch your aircraft without landing gear installed. A dimple on each side of the lower fuselage shows where the aircraft can be held for hand launching. When hand-launching your aircraft alone, hold the aircraft in one hand and the transmitter in the other.

- 1. Carefully increase transmitter throttle control to FULL (100%).
- 2. Throw the aircraft into the wind while keeping the aircraft's wings parallel to the ground.

are less than 5-7 mph (8-11km/h). Flying in faster winds than this could make flying difficult and result in a crash.

A good flying day is calm, with winds that

Flying Conditions

Wind near the ground can be less than the wind at the elevation where your aircraft flies.

\checkmark	Pre	flight Checklist
	1.	Charge flight battery.
	2.	Install flight battery in aircraft (once it has been fully charged).
	3.	Make sure linkages move freely.
	4.	Perform Control Direction Test with transmitter.
	5.	Make sure control surfaces are centered.
	6.	Find a safe and open area.
	7.	Perform a radio system Range Check.
	8.	Plan flight for flying field conditions.



Flying

1. Let the aircraft rise at full throttle, into the wind, until the aircraft gets about 200 feet (61 meters) above the ground, then decrease the throttle to half (50%).

Tip!

Your aircraft's wing design causes a climb at full throttle without use of elevators.

Try to make only small and gentle movements of the control sticks so you can see how the aircraft responds. Your aircraft is designed to climb and turn well.

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: Crash damage is not covered under warranty.

Flying (continued)

Flying with the nose pointed toward you is one of the hardest things to do when learning to fly.

To practice piloting the aircraft with the nose pointed toward you, try flying in large circles high off the ground.

Failsafe

In the unlikely loss of radio connection, failsafe will turn the aircraft in a descending circle to the ground, unless the radio connection is restored.

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Low Voltage Cutoff (LVC)

NOTICE: Repeated flying to LVC will damage the battery.

For your first flights, set a timer for 7 minutes to avoid flying to LVC. Adjust your timer for longer or shorter flights once you have flown the aircraft.

- The aircraft protects the flight battery from accidental over-discharge by removing power supplied to the motor.
- If the motors pulse, land immediately and recharge the flight battery.
- After use, disconnect and remove the battery from the aircraft to prevent trickle discharge.
- If the Li-Po battery is discharged below 3V per cell, it will not hold a charge.

Landing

The aircraft can fly for approximately 10 minutes on one battery charge.

When you notice that the aircraft no longer climbs while under full power or the motors begin to pulse, the battery is getting low and it is time to land.

- 1. Decrease the throttle and bring the aircraft's nose into the wind. Do not be afraid to fully reduce the throttle and let the aircraft glide unpowered.
- 2. While gliding into the wind, little or no elevator and rudder should be required. If you think the aircraft will land short of your target area, gently add a small amount of throttle.
- Once the aircraft is 3–4 feet (1-1.5 m) above the ground, slowly pull back the elevator stick. At this speed, this should result in a "flare", causing the nose to rise without increasing altitude but losing speed.
- 4. Allow the aircraft to come to a stop on its belly.

Tip!As you get more experienced at flying, try
adding a bit of UP elevator (pull back on the
elevator stick) just before touchdown to "flare"
the aircraft. With some practice, your landings
will be smooth and on target.

CAUTION: Never catch a flying aircraft in your hands. Doing so could cause personal injury and damage to the aircraft.





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NOTICE: When you are finished flying, never leave the aircraft in direct sunlight or in a hot, enclosed area such as a car. Doing so can damage the foam.

✓ Post Flight Checklist			✓ Post Flight Checklist		
	1. Disconnect flight battery from aircraft (Required for Safety)		5. Repair or replace all damaged parts		
	2. Power off transmitter		6. Store flight battery apart from air-		
	3. Remove flight battery from aircraft		 Make note of flight conditions and flight plan results planning for 		
	4. Recharge flight battery		future flights		

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Landing Gear Installation

- 1. Install the nose gear assembly using four screws. Ensure the strut coil faces towards the rear as shown.
- 2. Gently squeeze the main gear assembly and insert the strut wire into the retaining slot of the fuselage as shown.
- 3. Where needed, disassemble in reverse order.
- 4. Remove the wing skids when you are confident you can land and take off without tipping the wings and striking the propeller on the ground.



Runway Takeoff

To take off from a runway:

- 1. Correctly install the landing gear on your aircraft.
- Place the aircraft on its landing gear in a large, open area with smooth asphalt or concrete. The aircraft's nose should point into the wind (in no greater than 5–7 mph (8–11km/hr) wind).
- 3. Stand behind your aircraft so you can see the rudder, elevators and wheels.
- Slowly move the throttle stick to FULL (100%) while gently pulling back on the elevator stick. Use the rudder to keep the aircraft's nose pointed into the wind.
- With a full battery in calm wind, your aircraft should rise off the ground in approximately 20 feet (7 meters).

Tip!Using UP elevator will allow the aircraft to takeoff in
a shorter distance, however, too much UP elevator
will result in a stall.



Contol Horn Settings

The Illustration shows recommended hole settings of the clevises on the control horns.

When you are able to fly well, clevises may be moved to other control horn holes for greater rudder and elevator movement.



Binding

If your aircraft does not respond to the transmitter when the batteries in the aircraft and transmitter are fully charged, your aircraft and transmitter may need to be re-bound using the instructions below.

✓	Bind	ling Procedure Reference Table
	1.	Disconnect the flight battery from the aircraft.
	2.	Power off the transmitter.
	3.	Connect the flight battery in the aircraft. The receiver LED will begin to flash (typically after 5 seconds).
	4.	Make sure the transmitter controls are neutral, the throttle and throttle trim are in the low position, and the aircraft is immobile.
	5.	Push the left control stick into the case until it clicks, as you power on the transmitter. The transmitter will beep repeatedly and the LED will flash. Release after 2 seconds.
	6.	After 5 to 10 seconds, the re- ceiver status LED will begin flashing slowly and the transmitter will stop beeping, indicating that the receiver is bound to the transmitter



Motor Service

CAUTION: DO NOT handle a propeller, motor or ESC while the flight battery is connected to the ESC. Personal injury could result.

Disassembly

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- Remove the wings from the fuselage (see installing the main wing section).
- Remove the spinner (A) by carefully pulling it away from the propeller (B). Remove residue from the spinner and propeller if applicable.
 To remove the propeller from the motor shaft, use a
- To remove the propeller from the motor shaft, use a pair of hemostats to hold the motor shaft (C) in place, then carefully pull the propeller from the motor shaft.
- 4. Remove 5 screws (**D**) from the motor cowling under the wing.
- Carefully remove the cowling (that contains the motor) from the wing.
- 6. Remove 2 screws (E) from the front of the cowling that secures the motor.
- 7. Remove the motor ($\ensuremath{\textbf{F}}\xspace)$ and motor wires from the wing.

Assembly

Assemble the aircraft by following the instructions above in reverse. To **install** a new propeller, carefully push on a new undamage propeller.

NOTICE: Make sure the propeller size numbers (4.75x2.5R for right side and 4.75X2.5L for left side) face out from the motor.

Correctly center and attach the spinner to the propeller hub using CA (cyanoacrylate adhesive).

Thanks to the Z-Foam[™] construction of your aircraft, repairs to the foam can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc).



Trouble Shooting Guide

Problem	Possible Cause	Solution	
Unit does not operate	There is no link between the transmitter and receiver	Re-Bind the system following directions in this manual	
	Transmitter AA batteries are depleted or installed incor- rectly as indicated by a dim or unlit LED on the transmit- ter or the low battery alarm	Check polarity installation or replace with fresh AA batteries	
	No electrical connection	Push connectors together until they are secure	
	Flight battery is not charged	Fully charge the battery	
	Crash has damaged the radio inside the fuselage	Replace the fuselage or receiver	
Aircraft keeps turning in	Rudder or rudder trim is not adjusted correctly	Adjust stick trims or manually adjust rudder position	
one direction	Damaged propeller	Land immediately and replace damaged propeller	
Aircraft is difficult to control	Wing or tail is damaged	Replace damaged part	
	Damaged propeller	Land immediately and replace damaged propellers	
Aircraft nose rises steeply	Wind is too gusty or strong	Postpone flying until the wind calms down	
at half throttle	Elevator is trimmed 'up' too much	If trim must adjusted more than 8 beeps when pushing the trim button, adjust push rod length	
	Battery is not installed in the forward-most portion of the battery compartment	Move the battery in the battery compartment to the correct position	
Aircraft will not climb	Battery is not fully charged	Fully charge battery before flying	
	Elevator may be trimmed 'down'	Adjust elevator trim 'up'	
	Propeller damaged or installed incorrectly	Land immediately, replace or install propellers correctly	
Aircraft is difficult to launch in the wind	Launching the aircraft down wind or into a cross wind	Launch the aircraft directly into the wind	
Flight time is too short	Battery is not fully charged	Recharge battery	
	Flying at full throttle for the entire flight	Fly at just above half throttle to increase flying time	
	Wind speed too fast for safe flight	Fly on a calmer day	
	Propeller damaged	Replace propeller	
Aircraft vibrates	Propeller, spinner or motor loose or damaged	Tighten or replace parts, including centering and gluing a spinner to a propeller hub	
Rudder or elevators do not move freely	Damaged or blocked push rods or hinges	Repair damage or blockage	

AMA National Model aircraft Safety Code

Effective January 1, 2014

A. GENERAL

A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. 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 any additional rules specific to the flying site.

- Model aircraft will not be flown:

 (a) In a careless or reckless manner.
 (b) At a location where model aircraft activities are prohibited.
- 2. Model aircraft pilots will:
 - (a) Yield the right of way to all man carrying aircraft.
 - (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D.)
 - (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
 - (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
 - (e) Not exceed a takeoff weight, including fuel, of 55 pounds unless in compliance with the AMA Large Model Aircraft program. (AMA Document 520-A.)
 - (f) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors).
 - (g) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
 - (h) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
 - (i) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property. Exceptions:
 - Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
 - Rocket motors (using solid propellant) up to a G-series size may be used provided they remain attached to the model during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code but may not be launched from model aircraft.
 - Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).
 - (j) Not operate a turbine-powered aircraft, unless in compliance with the AMA turbine regulations. (AMA Document #510-A).
- 3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:

(a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.

(b) An inexperienced pilot is assisted by an experienced pilot.

 When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL

- 1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
- A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
- 3. At all flying sites a safety line(s) must be established in front of which all flying takes place (AMA Document #706.)
 - (a) Only personnel associated with flying the model aircraft are allowed at or in front of the safety line.
 - (b) At air shows or demonstrations, a straight safety line must be established.
 - (c) An area away from the safety line must be maintained for spectators.(d) Intentional flying behind the safety line is prohibited.
- RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
- 5. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement. (AMA Documents #922 and #923.)
- 6. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
- 7. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual.
- 8. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times. Hand-held illumination systems are inadequate for night flying operations.
- 9. The pilot of a RC model aircraft shall:
 - (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
 - (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.
 - (C) Fly using the assistance of autopilot or stabilization system only in accordance with the procedures outlined in AMA Document #560.

Please see your local or regional modeling association's guidelines for proper, safe operation of your model aircraft.

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, or (vi) Product not compliant with applicable technical 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_renderservice-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-servicecenter.

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 noncompliant Product for a period of 60 days from notification, after which it will be discarded.

Contact Information

Country of Purchase	Horizon Hobby	Phone Number/Email Address	Address
	Horizon Service Center	servicecenter.horizonhobby.com/	
	(Repairs and Repair Requests)	RequestForm/	
	Horizon Product Support	www.quickbase.com/db/	
United States of		bghj7ey8c?a=GenNewRecord	4105 Fieldstone Rd
America	(Product rechnical Assistance)	888-959-2305	Champaign, Illinois, 61822 USA
	Sales	sales@horizonhobby.com	
		888-959-2305	
United Kingdom	Service/Parts/Sales:	sales@horizonhobby.co.uk	Units 1–4 , Ployters Rd, Staple Tye
United Kingdom	Horizon Hobby Limited	+44 (0) 1279 641 097	Harlow, Essex, CM18 7NS, United Kingdom
Cormonu	Horizon Technischer Service	service@horizonhobby.de	Christian-Junge-Straße 1
Germany	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	25337 Elmshorn, Germany
France	Service/Parts/Sales:	infofrance@horizonhobby.com	11 Rue Georges Charpak
	Horizon Hobby SAS	+33 (0) 1 60 18 34 90	77127 Lieusaint, France
China	Service/Parts/Sales:	info@horizonhobby.com.cn	Room 506, No. 97 Changshou Rd.
	Horizon Hobby – China	+86 (021) 5180 9868	Shanghai, China 200060

FCC Information

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.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

Antenna Separation Distance

When operating your transmitter, please be sure to maintain a separation distance of at least 5 cm between your body (excluding fingers, hands, wrists, ankles and feet) and the antenna to meet RF exposure safety requirements as determined by FCC regultions.

This illustration show the approximate 5 cm RF exposure area and typical hand placement when operating your transmitter.



IC Information

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

EU Compliance Statement

Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the R&TTE, EMC and LVD Directives.

A copy of the EU Declaration of Conformity is available online at: http://www.horizonhobby.com/content/support-render-compliance.

Instructions for disposal of WEEE by users in the European Union



This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of

disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Informazioni per i contatti

Stato in cui il prodotto é stato acquistato	Horizon Hobby	Indirizzo	Telefono/Indirizzo e-mail
Germania	Horizon Technischer Service	Christian-Junge-Straße 1 25335 Elmshorn Germany	+49 (0) 4121 2655 100 service@horizonhobby.de

Dichiarazione di Conformità EU

Horizon Hobby, LLC con la presente dichiara che il prodotto è conforme ai requisiti essenziali e ad altre disposizioni rilevanti del R&TTE, EMC e direttiva LVD.

Una copia della dichiarazione di conformità per l'Unione Europea è disponibile a: http://www.horizonhobby.com/content/support-render-compliance.



Istruzioni per lo smaltimento di RAEE da parte di utenti dell'Unione Europea

Questo prodotto non deve essere smaltito insieme ai rifi uti domestici. Invece è responsabilità dell'utente lo smaltimento di tali rifi uti, che devono essere portati in un centro di raccolta designato per il riciclaggio di rifi uti elettrici e apparecchiature elettroniche.

Effettuare la raccolta differenziata e il riciclaggio dei rifi uti provenienti da apparecchiature al momento dello smaltimento contribuisce a preservare le risorse naturali e garantisce che il riciclaggio sia svolto in modo da proteggere la salute e l'ambiente. Per ulteriori informazioni sui punti di raccolta si prega di contattare il proprio uffi cio locale, il servizio di smaltimento rifi uti o il negozio presso il quale è stato acquistato il prodotto.

Replacement Parts • Ersatzteile • Pièces de rechange • Pezzi di ricambio

Part # I Nummer Numéro I Codice	Description	Beschreibung	Description	Descrizione
HBZ8520	Wing Set Stratocam	Hobbyzone Stratocam: Tragflächenset	Aile : Stratocam	Set ali: Stratocam
HBZ8585	Bare Fuselage: Stratocam	Rumpf o. Einbauten: Stratocam	Fuselage nu: Stratocam	Fusoliera nuda: Stratocam
HBZ8586	Fuselage with Electronics: Stratocam	Rumpf mit Elektronik: Stratocam RTF	Fuselage avec électronique: Stratocam	Fusoliera con elettronica: Stratocam
HBZ8571	Transmitter Mode 2: Stratocam	Sender Mode 2: StratocamRTF	Emetteur mode 2: Stratocam	Trasmettitore Mode 2: Stratocam
HBZ8572	Transmitter Mode 1: Stratocam	Sender Mode 1: Stratocam	Emetteur mode 1: Stratocam	Trasmettitore Mode 1: Stratocam
HBZ8525	Stab Set: Stratocam	Leitwerksset: Stratocam RTF	Stabilisateur: Stratocam	Set stabilizzatori: Stratocam
HBZ8518	Landing Gear: Stratocam	Hobbyzone Stratocam: Fahrwerk	Train d'atterrissage : Stratocam	Carrello d'atterraggio: Stratocam
HBZ8551	Receiver: Stratocam	Empfänger: Stratocam	Récepteur: Stratocam	Ricevitore: Stratocam
HBZ8509	Pushrod Set: Stratocam	Gestängeset: Stratocam	Tringleries: Stratocam	Set comandi: Stratocam
HBZ8507	Propellers and Spinner Set: Stratocam	Propeller u. Spinnerset: Stratocam	Hélices et cônes: Stratocam	Set eliche ed ogive: Stratocam
HBZ8512	Battery Hatch: Stratocam	Akkuklappe : Stratocam	Trappe de batterie: Stratocam	Sportello sede batteria: Stratocam
HBZ7728	Motor Set: Firebird Stratos	Hobbyzone Stratocam: Brushed Motorset (2)	Paire de moteurs : Stratocam	motore: Firebird Stratos
HBZ8510	Decal Set: Stratocam	Dekorbogen: Stratocam	Planche de décoration: Stratocam	Set adesivi: Stratocam
HBZ8513	Camera Mount: Stratocam	Hobbyzone Stratocam: Kamerahalter	Support de caméra : Stratocam	Supporto videocamera: Stratocam
EFLA112/EU/ UK/AU	2.0A AC power supply	2.0A AC power supply	Alimentation secteur 2A	2.0A AC power supply
EFLA810	8G class 10 SD card	8G Class 10 SD Karte	Carte Micro SD 8Go Classe 10	Supporto videocamera: Stratocam
EFLA801	EFC-721 720p HD Video Camera	E-flite EFC-721 720p HD Video Kamera	Caméra EFC-721 HD 720P	Videocamera EFC-721 720p HD
EFLC3125	2-Cell DC Balancing Li-Po Charger	2S DC Balancing Ladegerät	Chargeur équilibreur LI-Po DC 2S	Caricabatterie per 2 celle LiPo con bilanciatore
EFLB13002S20	1300mAh 2S 7.4V 20C Li-Po, 13 AWG EC2 Battery	1300mAh 2S 7.4V 20C Li-Po, 13 AWG EC2 Akku	Batterie LI-Po 7.4V 2S 1300mA 20C, prise EC2	Batteria 1300mAh 2S 7.4V 20C Li-Po, 13 AWG EC2

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Patents Pending

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