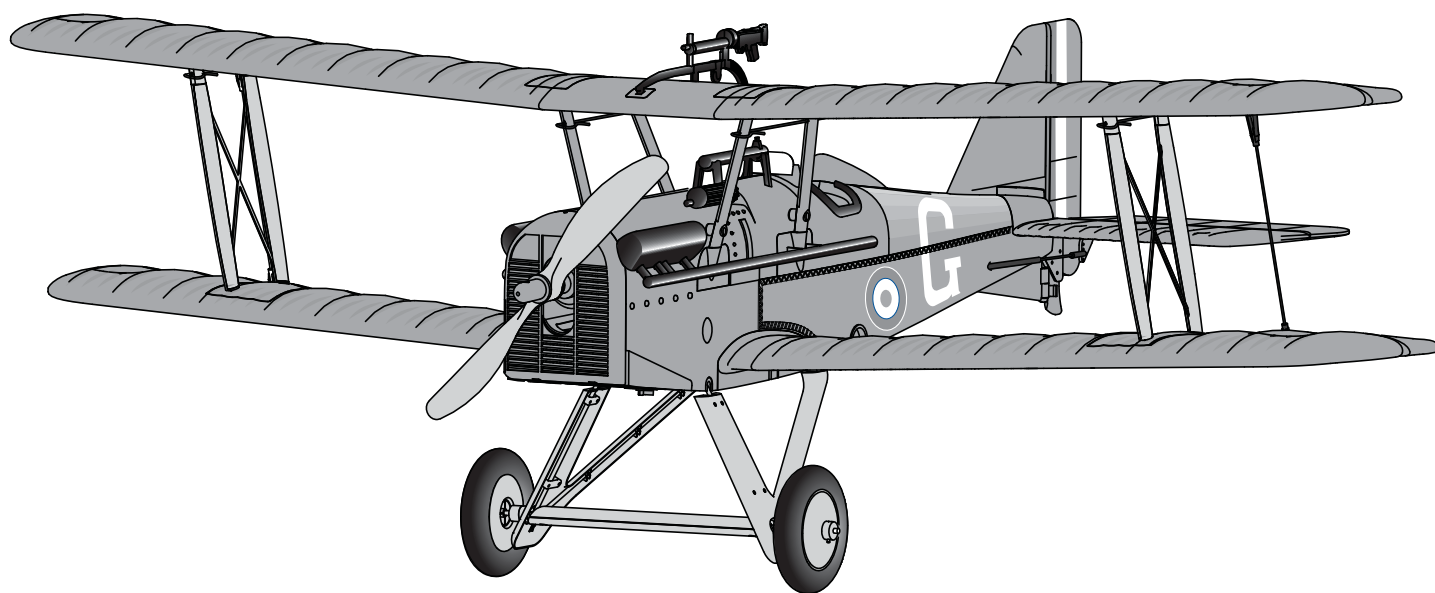




Royal Aircraft Factory S.E.5a

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, Inc. 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 attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. 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.

Additional 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.

This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help avoid collisions or injury.

Age Recommendation: Not for children under 14 years. This is not a toy.

- 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.

Battery Warnings

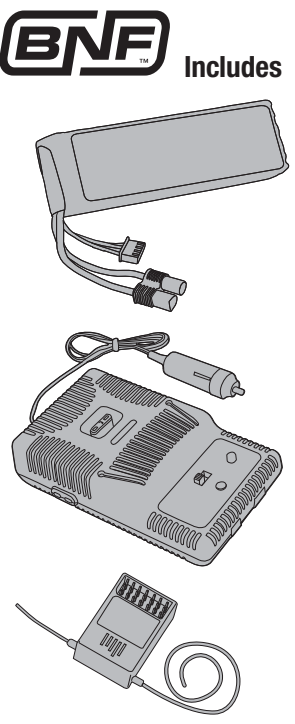
The Battery Charger included with your aircraft is designed to safely charge the Li-Po battery.



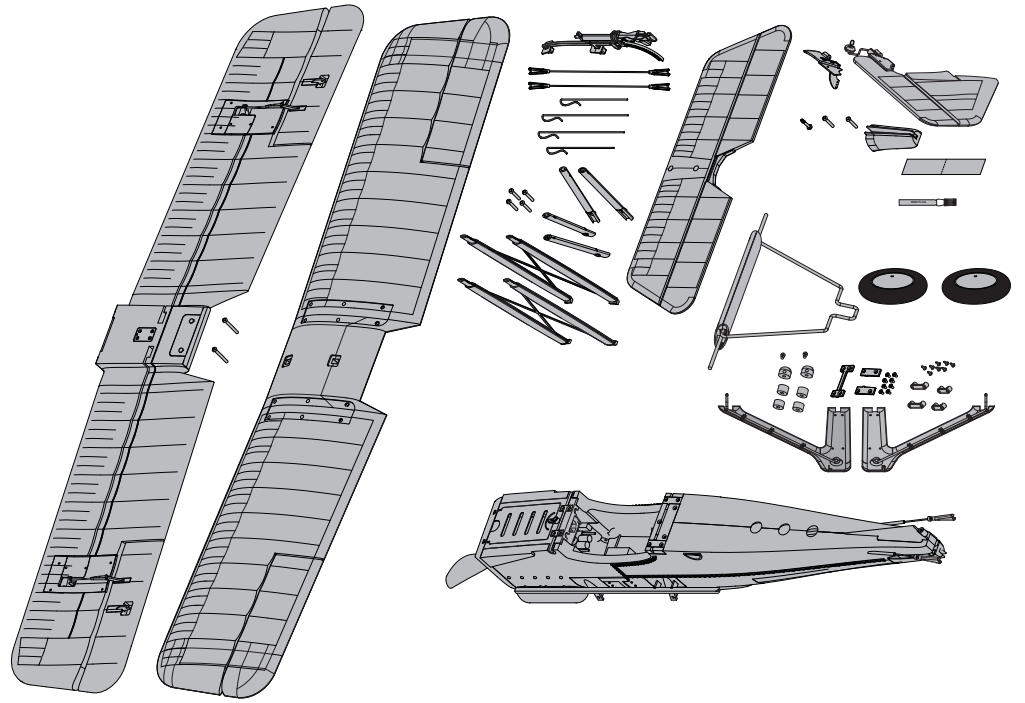
CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

- 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. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- NEVER USE A Ni-Cd OR Ni-MH CHARGER. 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 leave charging batteries unattended.
- Never charge batteries outside safe temperature range.
- Never charge damaged batteries.

Thank you for purchasing the ParkZone® RAF S.E.5a. You are about to enjoy one of the best looking, best flying foam World War I replicas in RC. Its combination of remarkable scale detail and spirited brushless motor performance will make for many memorable flights.



BNF Includes



	RAF S.E.5a Features	Bind-N-Fly® Aircraft	Plug-N-Play® Aircraft
	Onboard Electronics Receiver/Servos/ESC	Installed	Receiver Sold Separately
	Battery 3S 11.1V 1800mAh Li-Po	Included	Sold Separately
	12V DC Charger Variable rate 2-3 cell Li-Po battery charger	Included	Sold Separately

RAF S.E.5a Specifications	
Wingspan	37.1 in (943mm)
Length	30.0 in (760mm)
Weight (RTF)	40.6 oz (1150 g)

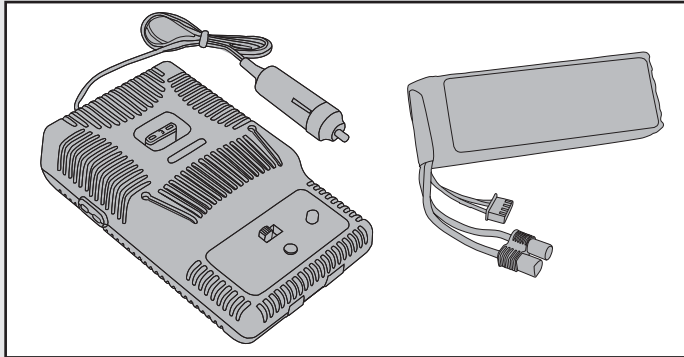
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Charging the Flight Battery

Your RAF S.E.5a comes with a DC balancing charger and 3S Li-Po battery. You must charge the included Li-Po battery pack with a Li-Po specific charger only (such as the included charger). Never leave the battery and charger unattended during the charge process. Failure to follow the instructions properly could result in a fire. When charging, make certain the battery is on a heat-resistant surface. Charge the flight battery while assembling the aircraft. Install the fully charged battery to perform control tests and binding.



DC Li-Po Balancing Charger Features

- Charges 2- to 3-cell lithium polymer battery packs
- Variable charge rates from 300mAh to 2-amp
- Simple single push-button operation
- LED charge status indicator
- LED cell balance indicator
- Audible beeper indicates power and charge status
- 12V accessory outlet input cord

Specifications

- Input power: 12V DC, 3-amp
- Charges 2- to 3-cell Li-Po packs with minimum capacity of 300mAh

3S 11.1V 1800mAh Li-Po battery pack (PKZ1031)

The ParkZone® 3S Li-Po battery pack features a balancing lead that allows you to safely charge your battery pack when used with the included ParkZone Li-Po balancing charger.

The Battery Charging Process

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. Attach the input cord of the charger to the appropriate power supply (12V accessory outlet).
3. When the Li-Po charger has been correctly powered up, there will be an approximate 3-second delay, then an audible “beep” and the green (ready) LED will flash.
4. Turn the control on the Amps selector so the arrow points to the charging rate required for the battery (see chart, for example the RAF S.E.5a’s 1800mAh Li-Po battery will charge at 1.5 amps). DO NOT change the charge rate once the battery begins charging.
5. Move the cell selector switch to 2-cell or 3-cell for your battery.
6. Connect the Balancing Lead of the Battery to the 2-cell (it has 3 pins) or 3-cell (it has 4 pins) charger port.
7. The green and red LEDs may flash during the charging process, when the charger is balancing cells. Balancing prolongs the life of the battery.
8. When the battery is fully charged, there will be an audible beep for about 3 seconds, and the green LED will shine continuously.
9. Always unplug the battery from the charger immediately upon completion of charging.

⚠ CAUTION: Overcharging a battery can cause a fire.

Note: Attempting to charge an over-discharged battery will cause the charger to repeatedly flash and beep, indicating an error has occurred.

Battery Capacity	Maximum Charge Rate
300-400mAh	300mA
500-1000mAh	500mA
1000-1500mAh	1A
1500-2000mAh	1.5A
2000mAh +	2.0A

⚠ CAUTION: Only use a charger specifically designed to charge a Li-Po battery. Failure to do so could result in fire causing injury or property damage.

⚠ CAUTION: Never exceed the recommended charge rate.

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 supply from the motor. Power to the motor pulses, showing that some battery power is reserved for flight control and safe landing.

When the motor pulses, land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Fully charge your Li-Po battery before storing it. During storage, make sure battery charge does not go below 3V per cell.



Transmitter and Receiver Binding

Binding is the process of programming the receiver of the control unit to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum™ DSM2™/DSMX™ technology equipped aircraft transmitter to the receiver for proper operation.

Note: Any JR® or Spektrum full range DSM2™/DSMX™ transmitter can bind to the Spektrum AR600 receiver. Please visit www.bindnfly.com for a complete list of compatible transmitters.



BIND PLUG

Note: When using a Futaba transmitter with a Spektrum DSM module, you must reverse the throttle channel.

✓ Binding Procedure Reference Table

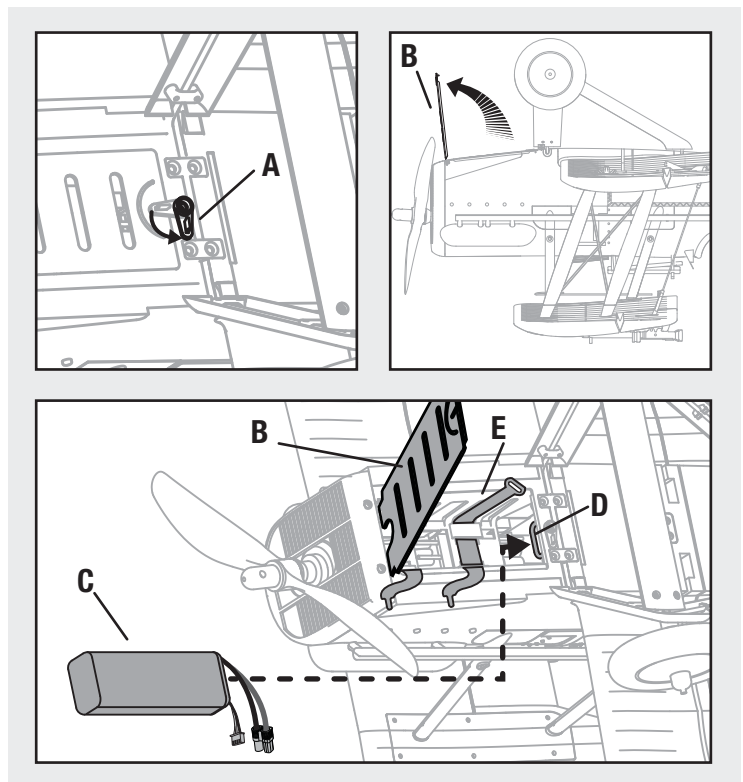
1.	Read transmitter instructions for binding to a receiver (location of transmitter's Bind Control).
2.	Make sure transmitter is powered off.
3.	Move the transmitter controls to neutral (flight controls and trim levers for rudder, elevators and ailerons) or to low positions (throttle and throttle trim).
4.	Install a bind plug in the receiver bind port extension.
5.	Connect the flight battery to the ESC. The receiver LED will begin to flash rapidly.
6.	Power on the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for binding button or switch instructions.
7.	When the receiver binds to the transmitter, the light on the receiver will be solid and the ESC will produce a series of sounds. The series of sounds is a long tone, then three short tones that confirm the LVC is set for the ESC.
8.	Remove the bind plug from the bind port extension.
9.	Safely store the bind plug (some owners attach the bind plug to their transmitter using two-part loops and clips).
10.	The receiver should keep the binding to the transmitter until another binding is done.

Installing the Battery

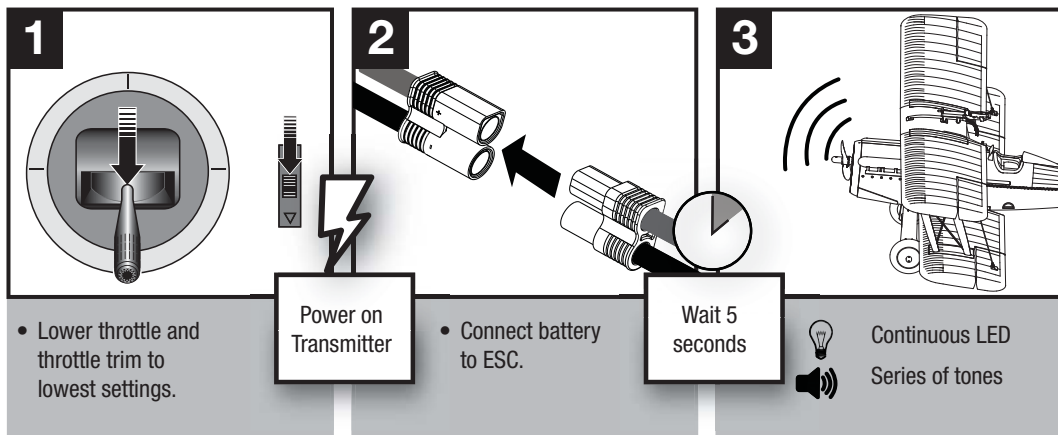
1. Turn the aircraft over so that the landing gear faces up.
2. Turn latch (A).
3. Open battery door (B).
4. Install flight battery (C) all the way to the rear (against the wire loop (D) of the landing gear) in the battery compartment. Connect battery to ESC.
5. Make sure the flight battery (C) is held tight using a hook and loop strap (E).
6. Close the battery door (B) and turn the latch (A) to hold the door closed.

⚠ CAUTION: Always disconnect the Li-Po 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 be damaged, resulting in loss of performance and potential fire when batteries are charged.

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



Before Flight



PLUG-N-PLAY

Installing a Receiver

- Before installing wing, install your park flyer or full range receiver in the fuselage using hook and loop tape or double-sided servo tape.
- Connect the elevator and rudder servo connectors to the appropriate channels of the receiver.
- Connect the aileron Y-harness to the aileron channel of the receiver.
- Connect the ESC connector to the throttle channel of the receiver.

Battery Selection and Installation

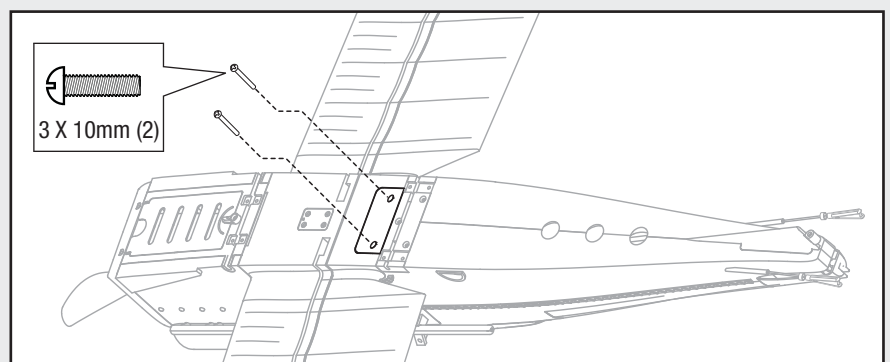
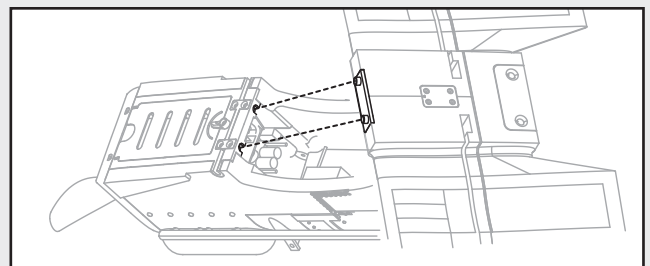
- We recommend the ParkZone 1800mAh 11.1V Li-Po battery (PKZ1031).
- If using another battery, the battery must be at least a 1800mAh battery.
- Your battery should be approximately the same capacity, dimensions and weight as the ParkZone Li-Po battery to fit in the fuselage without changing the center of gravity a large amount.

Installing Lower Wing

- Turn aircraft over so the bottom of fuselage faces up.
- Put the wing's guide pins in fuselage slot.
- Put aileron connectors in hole in fuselage.
- Connect left and right aileron connectors to the Y-harness in fuselage. There is no difference between the two connections on the Y-harness. Left and right servo connectors do not have to be connected to a particular side of the Y-harness.
- Align and attach wing to fuselage using two screws.

⚠ CAUTION: Do NOT crush or otherwise damage wiring when attaching wing to fuselage.

- When needed, disassemble in reverse order.

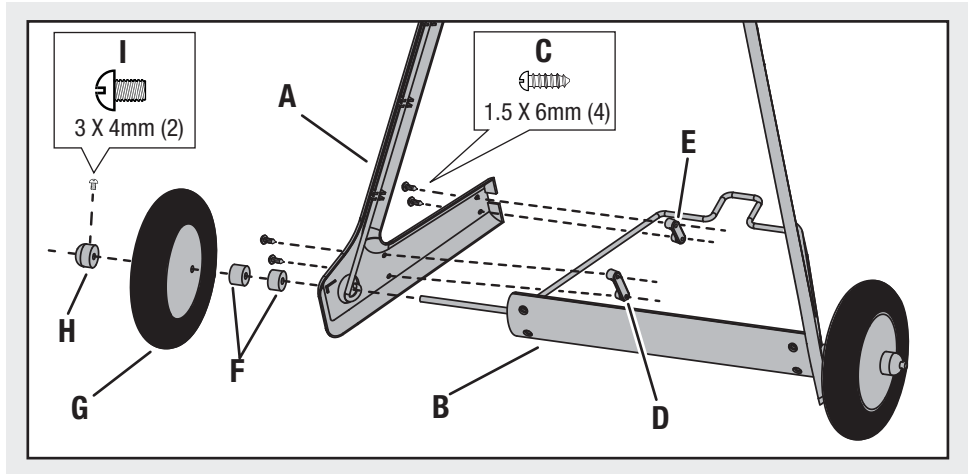


Installing Landing Gear

Assembling Landing Gear

1. Install left and right (marked L and R) landing gear covers (A) on landing gear axle assembly (B) using eight screws (C), two lower (wide) brackets (D) and two upper (narrow) brackets (E).
2. Install two spacers (F) and a wheel (G) on each end of axle using a collar (H) and setscrew (I).

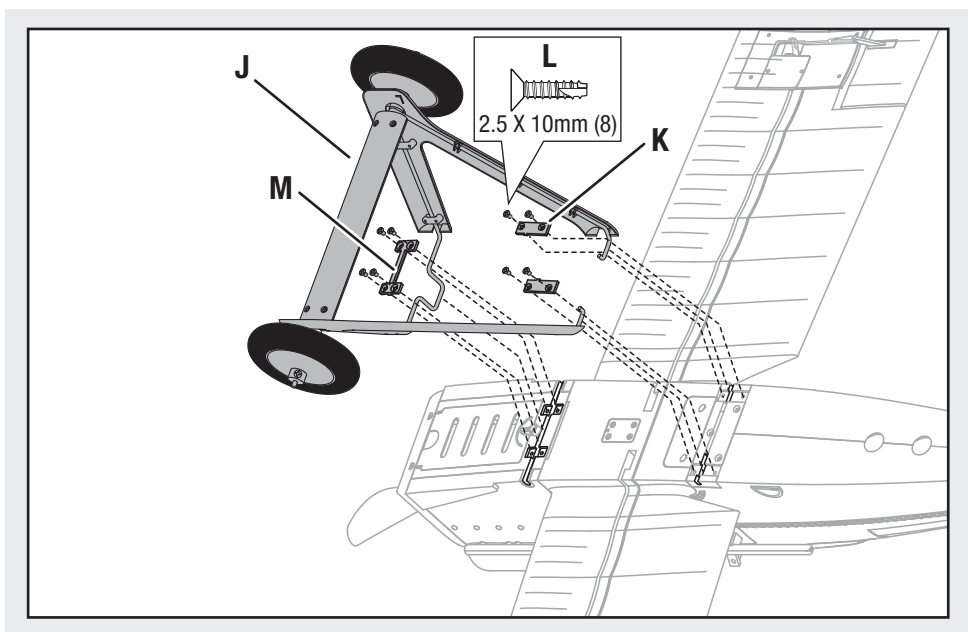
Use a small amount of threadlock on the setscrew of the wheel collar to make sure the wheel is kept on the axle.



Attaching Landing Gear

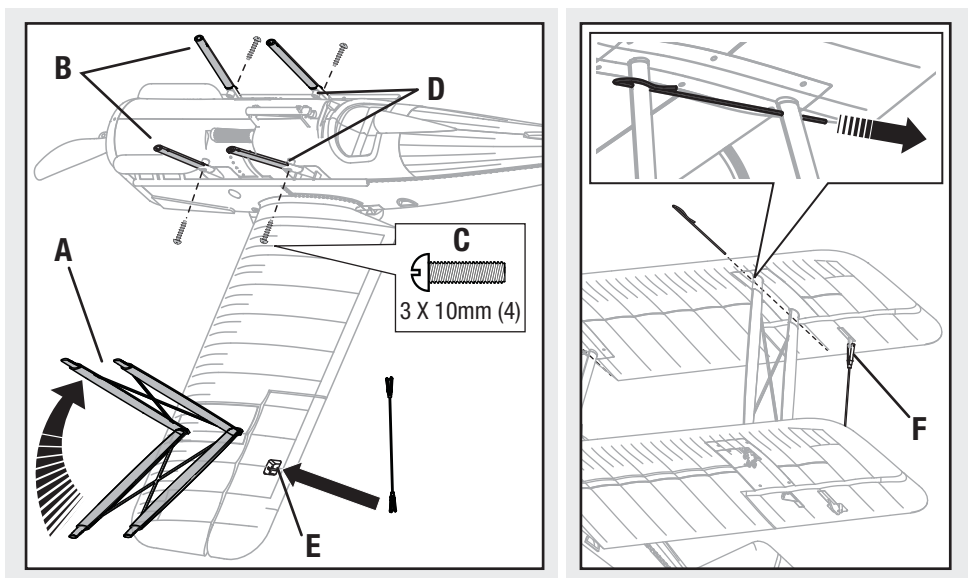
1. Turn fuselage so bottom of wing faces up.
2. Install landing gear assembly (J) in slots in bottom of fuselage.
3. Install left and right (marked L and R) rear plates (K) over rear fuselage landing gear slots using four screws (L).
4. Install front plate (M) over fuselage front landing gear slot using four screws.
5. Where needed, disassemble in reverse order.

Tip: Some spare screws have been provided in the event that you misplace one during assembly.



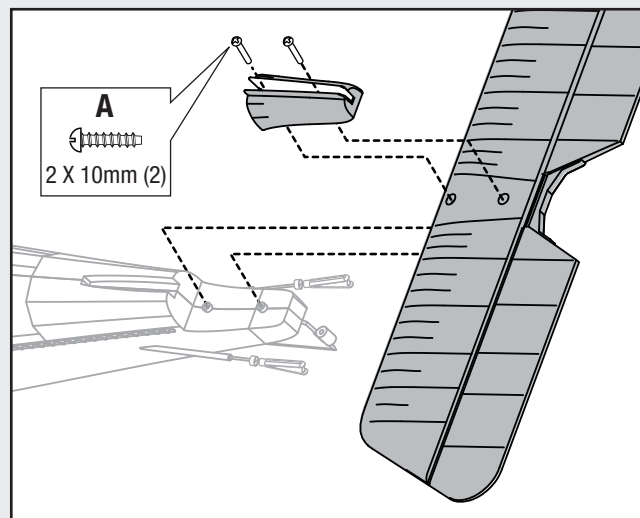
Installing Upper Wing

1. Turn model to rest on landing gear with the top of the lower wing facing up.
2. Attach left and right interplane struts (A, left is shown) to lower wing.
3. Attach front left and right cabanes (B) to fuselage using two screws (C).
4. Attach rear left and right cabanes (D) to fuselage using two screws.
5. Align upper wing with interplane struts and cabanes.
6. Attach upper wing to interplane struts using two short pins.
7. Attach upper wing to cabanes using two long pins.
8. Adjust length of left and right aileron linkages by turning clevises as needed.
9. Attach clevises to lower (E) and upper (F) wing aileron control horns.
10. When needed, disassemble in reverse order.

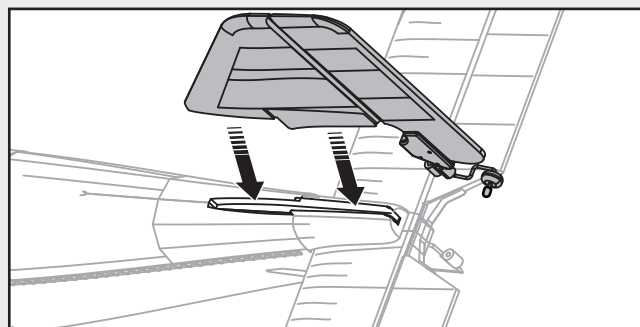


Installing Tail

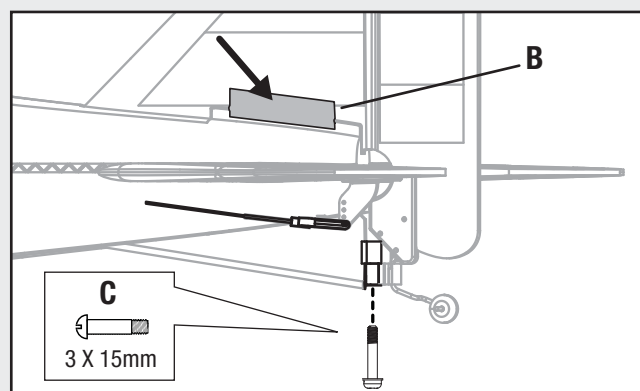
1. Attach the horizontal tail and vertical fin mount to the fuselage using two screws (A).



2. Install vertical fin in vertical fin mount.



3. Apply clear tape (B) to left and right sides of vertical fin and fin mount.
4. Install rudder hinge screw (C)
5. Attach clevises to control horns on rudder and elevator.
6. When needed, disassemble in reverse order.



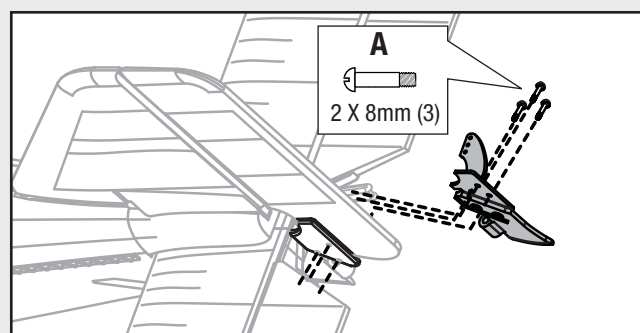
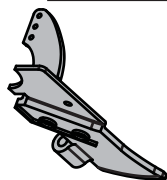
Installing Optional Tail Skid

Attach tail skid to fuselage and vertical fin using three screws (A).

The tail skid is provided as a scale feature.

The tail wheel is for improved steering of the model in runway takeoffs. The tail wheel is also recommended for landing on asphalt or hard surfaces.

Tail Skid

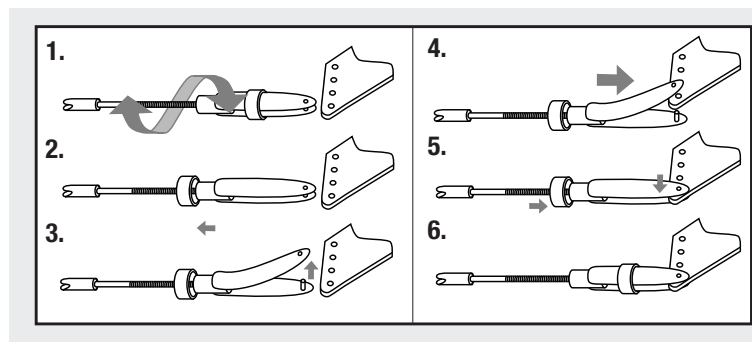


Installing Clevises on Control Horns and Control Centering

Tip: Turn the clevis clockwise or counterclockwise on the linkage.

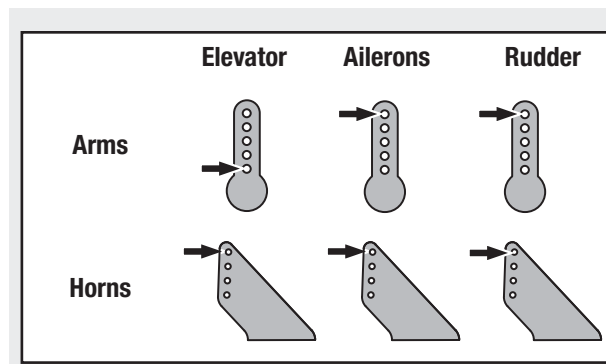
- Pull the tube from the clevis to the linkage.
- Carefully spread the clevis and put the clevis pin in a selected hole in the control horn.
- Move the tube to hold the clevis on the control horn.

After binding a transmitter to model receiver, set trims and sub-trims to 0, then adjust clevises to center control surfaces.



Factory Settings

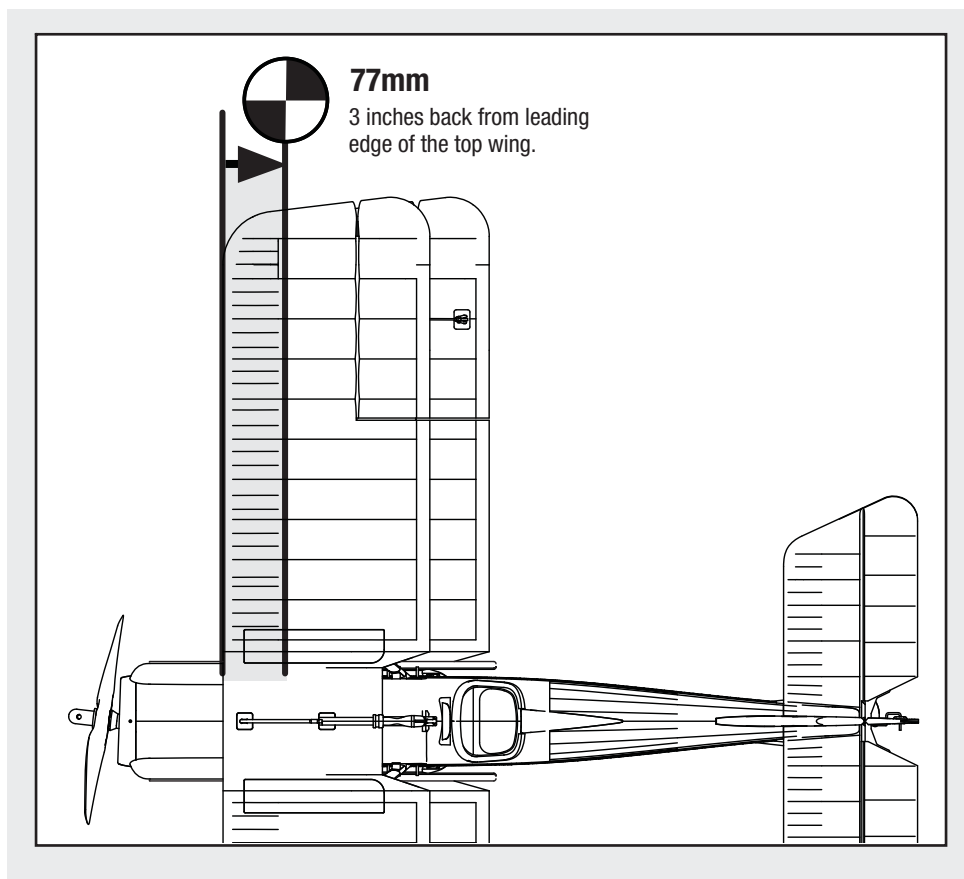
Fly the model at factory settings before making changes. For pilots who wish to fly the model with more control throw, adjust position of linkages on servo arms and control horns for increased travel.



Center of Gravity (CG)

Install flight battery all the way to the rear (against the wire loop of the landing gear) in the battery compartment. Make sure the flight battery is held tight using hook and loop straps. It is easiest to balance the RAF S.E.5a with the aircraft upright.

You will find the CG is located at the middle set of screws on the underside of the top of wing.

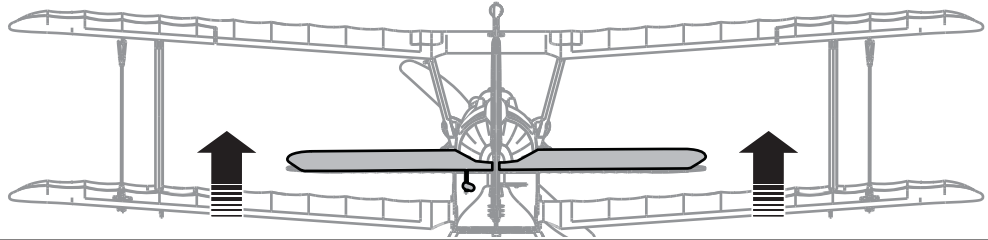


Control Direction Test

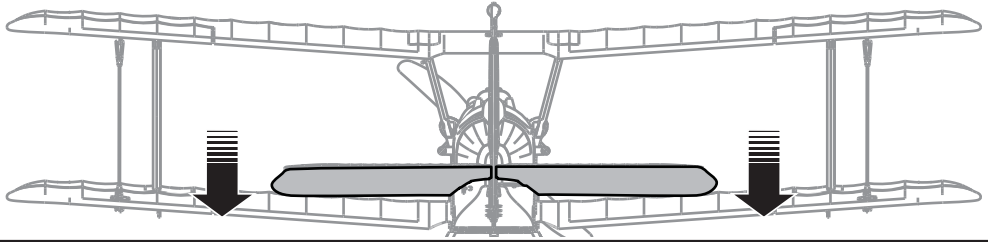
Bind your aircraft and transmitter before doing these tests. Move the controls on the transmitter to make sure aircraft control surfaces move correctly.

Elevator

**Up Elevator
Command**

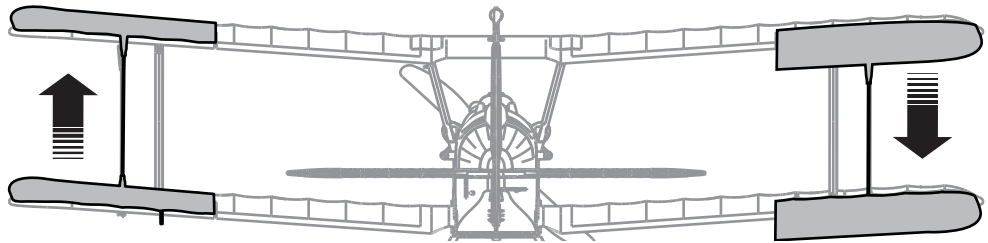


**Down
Elevator
Command**

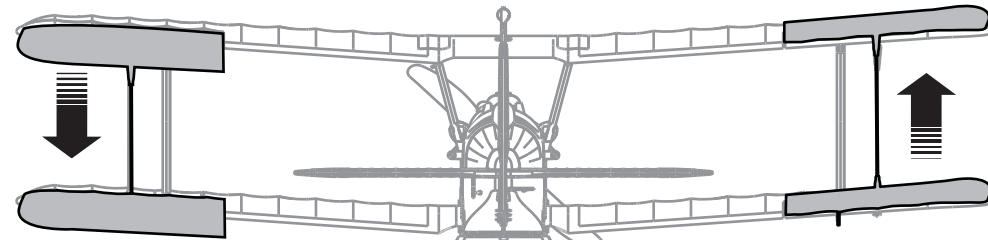


Aileron

**Stick
Left**

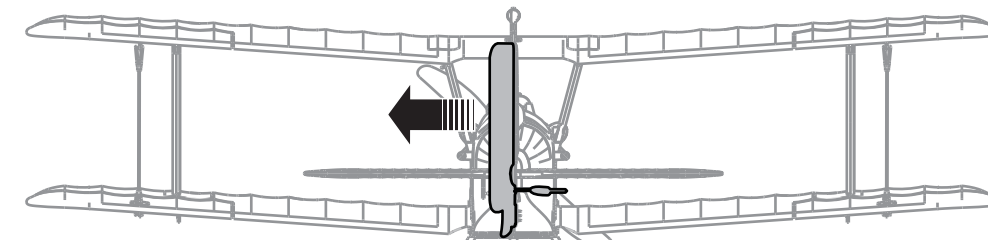


**Stick
Right**

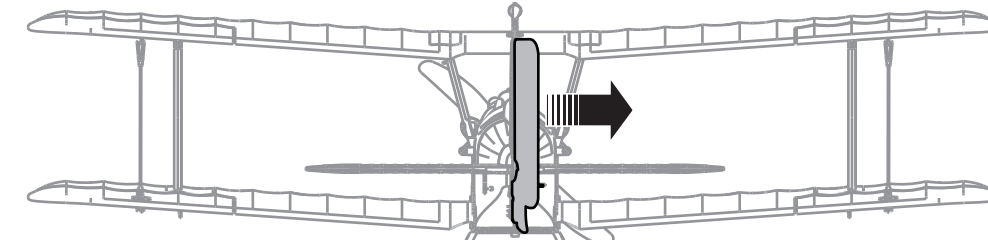


Rudder

**Stick
Left**



**Stick
Right**



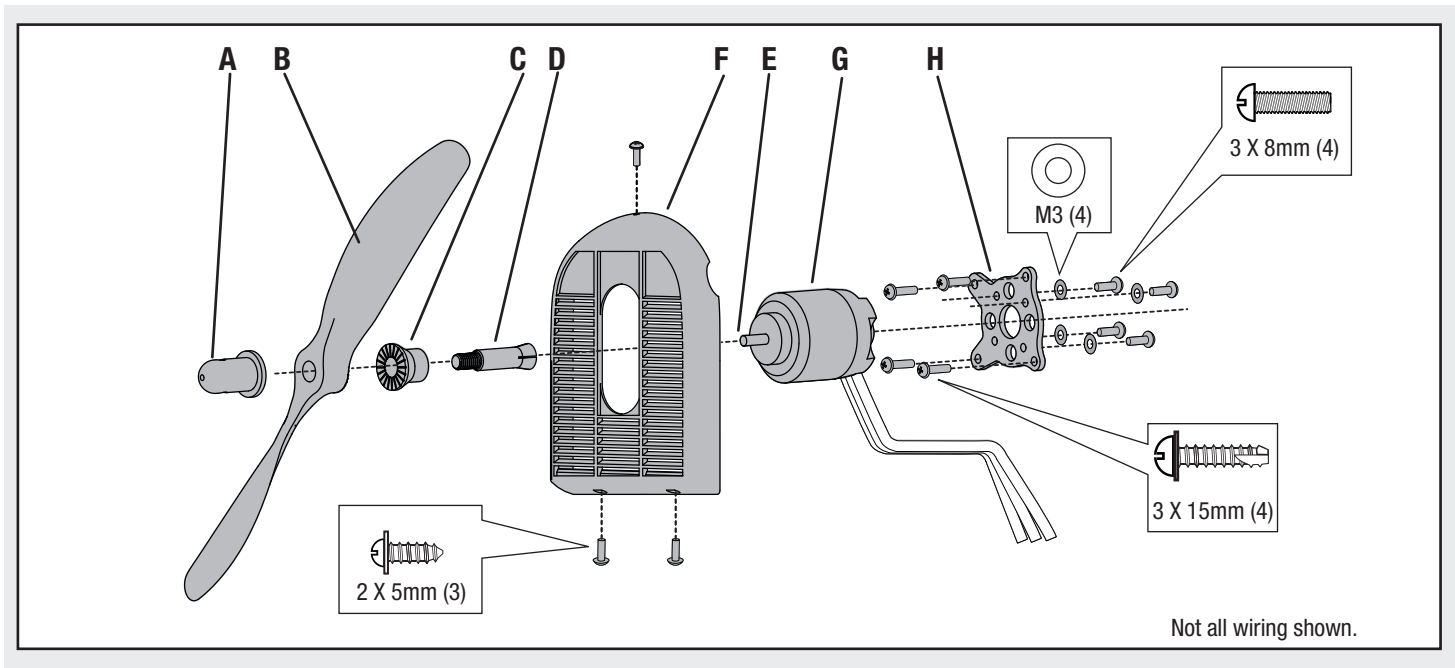
Service of Power Components

Disassembly

1. Remove spinner nut (A), propeller (B), backplate (C) and collet (D) from the motor shaft (E). You will need a tool to turn the spinner nut.
2. Remove three screws from cowling (F).
3. Carefully remove cowling from fuselage. Paint may keep cowling attached to the fuselage.
4. Remove four screws from motor mount and fuselage.
5. Disconnect motor wires from ESC wires.
6. Remove four screws and motor (G) from motor mount (H). Keep rubber washers attached to the motor mount when removing screws and motor from motor mount.

Assembly

1. Attach motor to motor mount using four rubber washers and four screws.
2. Correctly align wire colors and connect motor to ESC.
3. Attach motor mount to fuselage using four screws.
4. Attach cowling to fuselage using three screws.
5. Attach collet, backplate and propeller to motor shaft using spinner nut. The propeller side with the numbers for diameter and pitch (for example, 10 X 8) should face rearward, toward the motor. The grips on the propeller will face the back plate 'C' when installed. You will need a tool to tighten spinner nut on collet.



Control Surface Throws

Your DSM2/DSMX full range transmitter features dual rates to help you select the amount of travel that you want from the control surfaces.

	High Rate	Low Rate
Aileron	22mm up/17 down	17mm up/14 down
Elevator	13mm up/down	10mm up/down
Rudder	20mm left/right	15mm left/right

The ailerons are factory pre-set to allow for more up travel than down (differential).

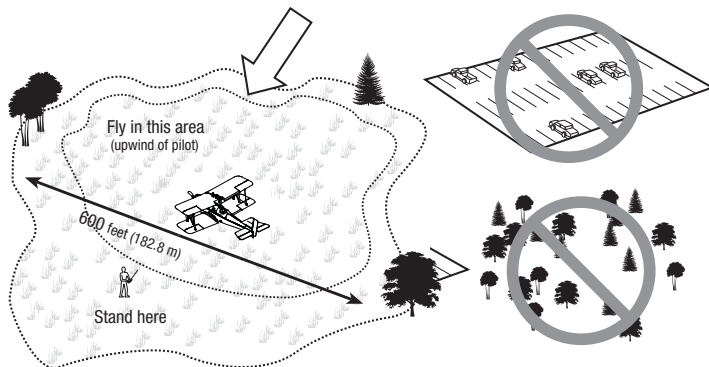
Flying Tips and Repairs

Range Check your Radio System

After final assembly, range check the radio system with the RAF S.E.5a. Refer to your specific transmitter instruction manual for range test information.

Flying

Always choose a wide-open space for flying your ParkZone RAF S.E.5a. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Consult local laws and ordinances before choosing a location to fly your aircraft.



Landing

Land the model when you hear the motor pulsing (LVC) or if you notice a reduction in power. If using a transmitter with a timer, set the timer so you have enough flight time to make several landing approaches.

Due to the scale landing gear and characteristics of the RAF S.E.5a, throughout flight and when landing keep the wings level, even when taxiing. An optional tail wheel has been included to help with ground handling.

You should land the RAF S.E.5a using a wheel landing (two point).

If the power is pulled all the way back when landing, the propeller acts like an air brake, which can lead to the elevator being less effective. Therefore, it is advisable to land with some amount of power on as it allows more time to flare the airplane for a smooth landing.

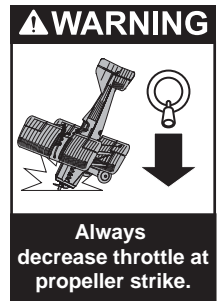
When setting up for landing, fly the airplane down to the ground using 1/4 - 1/3 throttle to allow for enough energy for a proper flare.

NOTICE: When finished flying, never keep the airplane in the sun. Do not store the aircraft in a hot, enclosed area such as a car. Doing so can damage the foam.

Repairs

Thanks to the Z-Foam™ construction of the RAF S.E.5a, repairs to the foam can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc). When parts are not repairable, see the Replacement Parts List for ordering by item number.

NOTICE: Use of foam-compatible CA accelerant on your model can damage paint. DO NOT handle model until accelerant fully dries.



First Flight Preparation

1. Remove and inspect contents.
2. Charge flight battery.
3. Read this instruction manual thoroughly.
4. Fully assemble model.
5. Install the flight battery in the aircraft (once it has been fully charged).
6. Bind aircraft to your transmitter.
7. Make sure linkages move freely.
8. Perform the Control Direction Test with the transmitter.
9. Adjust flight controls and transmitter.
10. Perform a radio system Range Check.
11. Find a safe and open area.
12. Plan flight for flying field conditions.

Maintenance After Flying

1. Disconnect flight battery from ESC (Required for Safety and battery life).
2. Power off transmitter.
3. Remove flight battery from aircraft.
4. Recharge flight battery.
5. Repair or replace all damaged parts.
6. Store flight battery apart from aircraft and monitor the battery charge.
7. Make note of flight conditions and flight plan results, planning for future flights.

AMA National Model Aircraft Safety Code

Effective January 1, 2011

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 and/or competition. All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. 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-See and Avoid Guidance.)
 - (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.
4. 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.
2. 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-Recommended Field Layout):
 - (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.
4. 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-Testing for RF Interference; #923- Frequency Management Agreement)
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. This does not apply to model aircraft flown indoors.
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.
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.

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

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
Extra propeller noise or extra vibration	Damaged propeller and spinner, collet or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller installed backwards	Install propeller with numbers facing forward
	Flight battery damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity may be 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 will not bind to transmitter	Aircraft or transmitter is too close to large metal object
	Bind plug is not installed correctly in bind port extension	Install bind plug in bind port extension and bind aircraft to transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
Aircraft will not link (after binding) to transmitter	Transmitter too near aircraft during linking process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft will not bind to transmitter	Aircraft or transmitter is too close to large metal object
	Bind plug left installed in bind port extension	Remove bind plug before cycling power
	Aircraft bound to different model memory (ModelMatch™ 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 model (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 not bound correctly or incorrect model selected	Re-bind or select correct model in transmitter
	Control trim out of adjustment	Adjust trims to restore full control
Controls reversed	Transmitter settings reversed	Do the Control Direction Test and adjust controls on transmitter appropriately
Motor loses power	Damage to motor, propeller shaft or power components	Do a check of batteries, transmitter, receiver, motor and wiring for damage (replace as needed)
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 C rating might be too small	Use recommended battery

Limited Warranty

What this Warranty Covers

Horizon Hobby, Inc. ("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, or (v) Products not purchased from an authorized Horizon dealer.

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 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 direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at www.horizonhobby.com

Inspection or Services

If this Product needs to be inspected or serviced, 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 www.horizonhobby.com under the Support tab. 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 cashiers 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 www.horizonhobby.com/Service/Request/.

Contact Information

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of America	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 Online Repair Request: visit www.horizonhobby.com/repairs
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 productsupport@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 66 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

Compliance Information for the European Union

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011052802

Product(s): S.E.5a WWI Park Flyer BNF
Item Number(s): PKZ5580
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC and EMC Directive 2004/108/EC:

EN 301 489-1 V1.7.1: 2006
EN 301 489-17 V1.3.2: 2008

EN55022: 2006,
EN55024: 1998+A1: 2001+A2: 2003



Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
May 28, 2011

Steven A. Hall
Vice President
International Operations and
Risk Management
Horizon Hobby, Inc.

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011052703

Product(s): S.E.5a WWI Park Flyer PNP
Item Number(s): PKZ5575
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

EN 301 489-1 V1.7.1: 2006
EN 301 489-3 V1.4.1: 2008



Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
May 27, 2011

Steven A. Hall
Vice President
International Operations and
Risk Management
Horizon Hobby, Inc.

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.

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

Part # Nummer Numéro Codice	Description	Beschreibung	Description	Descrizione
EFLA1030	EFL 30A Pro Brushless ESC	E-Flite 30A Pro SB Regler	Contrôleur brushless EFL 30A Pro	Regolatore elettronico EFL 30A
PKZ1031	11.1V 1800mAh Li-Po battery pack	Parkzone 11.1V 1800mAh Li-po	Batterie Li-Po 11.1V 1800m	Batteria Li-Po 1800 mAh 11,1V
PKZ1081	SV80 long lead servo	SV80 Servo mit langem Kabel	Servo SV80 câbles long	Servo SV80 con cavo lungo a 3 fili
PKZ1090	DSV130 digital servo, metal gear	DSV130 Digitalservo MG	Servo digital DSV130, pignons métal	Servo digitale DSV130 con ingranaggi metallici
PKZ4416	480 Brushless outrunner (960Kv)	480 BI Außenläufer 960Kv	Moteur brushless 480à cage tournante 960Kv	Motore brushless 480 (960 Kv)
PKZ5501	Decal sheet: SE5a	Dekorbogen: SE5a	Planche de décoration	Foglio decals SE5a
PKZ5502	WWI prop 10 x 8	WWI Prop 10 x 8	Hélice maquette 10x8	Elica in scala 10x8
PKZ5503	Main landing gear set: SE5a	Haupt-Landegestell: SE5a	Train d'atterrissage	Carrello principale
PKZ5504	Tailwheel assembly: SE5a	Spornrad: SE5a	Roulette de queue	Ruotino coda assemblato
PKZ5505	Vertical tail w/accessories: SE5a	Seitenruder m. Zbh: SE5a	Dérive avec accessoires	Direzionale con accessori
PKZ5506	Hrzntl tail w/accessories: SE5a	Höhenruder m.Zbh: SE5a	Profondeur avec accessoires	Piano di coda orizzontale con accessori
PKZ5507	WWI Pilot: SE5a	WWI Pilot: SE5a	Pilote première guerre	Pilota in scala
PKZ5508	Prop Adapter: SE5a	Prop Adapter: SE5a	Adaptateur d'hélice	Adattatore elica
PKZ5509	Wing strut set: SE5a	Flächenstreben set: SE5a	Set de haubans	Distanziale ala
PKZ5510	Pushrod set: SE5a	Gestänge Set : SE5a	Set de tringleries	Set di barrette comandi
PKZ5511	Exhaust set: SE5a	Auspuffatt: SE5a	Faux échappement	Set silenziatore
PKZ5512	Machine gun set: SE5a	MG Set: SE5a	Mitrailleuse	Set mitragliatrice
PKZ5513	Motor mount: SE5a	Motorträger: SE5a	Support moteur	Supporto motore
PKZ5514	Cowl: SE5a	Cowling: SE5a	Capot	Finto radiatore
PKZ5520	Painted top wing: SE5a	Obere Tragfläche lackiert: SE5a	Aile supérieure peinte	Ala superiore già dipinta
PKZ5521	Painted bottom wing: SE5a	untere Tragfläche lackiert: SE5a	Aile inférieure peinte	Ala inferiore già dipinta
PKZ5535	Servo wire tape: SE5a	Parkzone Servokabel Tape: SE5a	Adhésif servo	Nastro per filo servi
PKZ5567	Painted bare fuselage: SE5a	Rumpf lackiert ohne Einbauten: SE5a	Fuselage nu peint	Fusoliera nuda già dipinta

Optional Parts • Optionale Bauteile • Pièces optionnelles • Parti opzionali

Part # Nummer Numéro Codice	Description	Beschreibung	Description	Descrizione
EFLA250	Park Flyer Tool Assortment, 5 pc	Park Flyer Werkzeugsortiment, 5 teilig	Assortiment d'outils pour parc flyer, 5p	Attrezzi per Park Flyer (5 pezzi)
PKZ1040	PKZ1040 2-3S Li-Po balancing charger	ParkZone 12V 2-3S Li-Po Balancer Lader	Chargeur équilibreur Li-Po 2-3s	Caricabatterie con bilanciatore per 2-3 celle Li-Po
EFLAEC302	EC3 Battery Connector, Female (2)	EC3 Akkukabel, Buchse (2)	Prise EC3 batterie, femelle (2)	Connettore batterie femmina EC3 (2)
EFLAEC303	EC3 Device/Battery Connector, Male/Female	EC3 Kabelsatz, Stecker/Buchse	Prise EC3 esc/batterie, mâle/femelle	Connettore batterie maschio/femmina EC3
EFLC505	1- To 5-cell Li-Po battery charger with balancer	E-flite 1-5 Zellen Li-Po Lader mit Balancer	Chargeur équilibreur Li-Po 1 à 5S	Caricabatterie con bilanciatore per 1-5 celle Li-Po
SPMAR600	AR600 6-Channel Sport DSM2/ DSMX Receiver	Spektrum AR600 DSMX 6 Kanal Sport Empfänger	Récepteur AR600 6voies	Ricevitore 6 canali AR600 DSM2/ DSMX
SPMR5510	DX5e DSMX 5-Channel Transmitter Only Mode 2	Spektrum DX5E DSMX 5 Kanalsender ohne Empfänger MD 2	DX5e émetteur seul, mode 2	Trasmittitore 5 canali DX5e DSMX - Mode 2
SPMR55101	DX5e DSMX 5-Channel Transmitter Only Mode 1	Spektrum DX5E DSMX 5 Kanalsender ohne Empfänger MD 1	DX5e émetteur seul, mode 1	Trasmittitore 5 canali DX5e DSMX - Mode 1
SPMR6610	DX6i DSMX Transmitter Only Mode 2	Spektrum DX6i DSM X Sender ohne Empfänger MD2	DX6i émetteur seul, mode 2	Trasmittitore 6 canali DX6i DSMX - Mode 2
SPMR66101	DX6i DSMX Transmitter Only Mode 1	Spektrum DX6i DSM X Sender ohne Empfänger MD1	DX6i émetteur seul, mode 1	Trasmittitore 6 canali DX6i DSMX - Mode 1
SPMR6610E	DX6i DSMX Transmitter Only Mode 2 Int'l	Spektrum DX6i DSM X Sender ohne Empfänger MD2	DX6i émetteur seul, mode 2 Int'l	Trasmittitore 6 canali DX6i DSMX - Mode 2 Int'l
SPMR66101E	DX6i DSMX Transmitter Only Mode 1 Int'l	Spektrum DX6i DSM X Sender ohne Empfänger MD1	DX6i émetteur seul, mode 1 Int'l	Trasmittitore 6 canali DX6i DSMX - Mode 1 Int'l
*SPMR8800	DX8 DSMX Transmitter Only Mode 2	Spektrum DX8 nur Sender Mode 1-4 2	DX8 émetteur seul, mode 2	Trasmittitore 8 canali DX8 DSMX - Mode 2
*SPMR8800EU	DX8 DSMX Transmitter Only Mode 2 Int'l	Spektrum DX8 nur Sender Mode 1-4 2 Int'l	DX8 émetteur seul, mode 2 Int'l	Trasmittitore 8 canali DX8 DSMX - Mode 2 Int'l
*SPMR88001EU	DX8 DSMX Transmitter Only Mode 1 Int'l	Spektrum DX8 nur Sender Mode 1-4 1 Int'l	DX8 émetteur seul, mode 1 Int'l	Trasmittitore 8 canali DX8 DSMX - Mode 1 Int'l
*SPMR88001AU	DX8 DSMX Transmitter Only Mode 1 AU	DX8 DSMX Transmitter Only Mode 1 AU	DX8 émetteur seul, mode 1 AU	Trasmittitore 8 canali DX8 DSMX - Mode 1 AU

***Note:** All Spektrum DX8 transmitters can be set up for modes 1–4

***Hinweis:** Alle Spektrum DX8 Sender können für die Modes 1 - 4 eingestellt werden

***Remarque :** Tous les émetteurs Spektrum DX8 peuvent être paramétrés dans les 4 modes

***Nota:** Tutti i trasmettitori Spektrum DX8 possono essere confi gurati per i modelli 1 - 4

**Parts Contact Information • Kontaktinformationen für Ersatzteile • Coordonnées (Pièces)
• Rrecapiti dei distributori**

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of America	Sales	4105 Fieldstone Rd Champaign, Illinois 61822 USA	800-338-4639 Sales@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 60 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

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Patents Pending

www.parkzone.com

PKZ5580, PKZ5575

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