

# Champ S+

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



**SAFE<sup>+</sup>**

**RTF**  
READY-TO-FLY

**BNF**  
Bind-N-Fly<sup>®</sup> Ready to fly. redefined.

hobbyzone<sup>®</sup>

**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](http://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.

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

## Safety Precautions and Warnings

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

Included in the Box

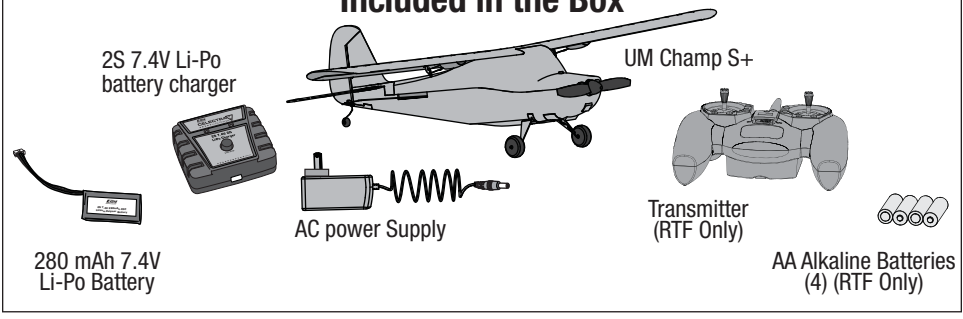
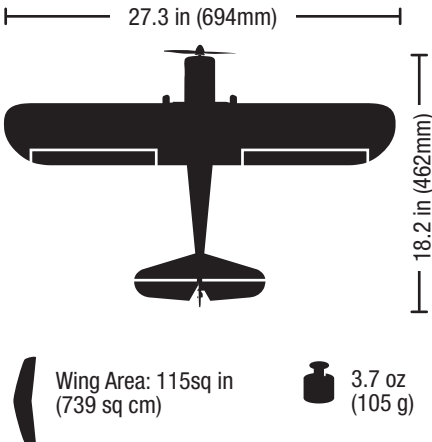


Table of Contents

Charging Warnings.....	4	Compass Calibration.....	17
Charging the Flight Battery.....	4	Appendix.....	17
Transmitter Batteries Installation.....	5	Control Direction Test.....	18
Transmitter.....	5	SAFE® Plus Control Direction Test.....	19
Transmitter Setup.....	6	Advanced User Information.....	20
Binding.....	7	Motor Service.....	22
Technology Flight Modes.....	8	Optional First Person View (FPV) Installation.....	23
Virtual Fence.....	9	Troubleshooting Guide (SAFE® Plus).....	24
Holding Pattern (HP).....	10	Troubleshooting Guide.....	24
AutoLand (AL).....	11	Limited Warranty.....	26
Indoor Flight / GPS OFF.....	12	Warranty and Service Information.....	27
Flying Tips.....	13	IC Information.....	27
Preflight Checklist.....	13	FCC Information.....	28
Battery Installation.....	14	Compliance Information for the European Union.....	28
Takeoff.....	14	Instructions for disposal of WEEE by users in the European Union.....	28
Flying.....	15	Replacement Parts.....	108
Low Voltage Cutoff (LVC).....	15	Optional Parts.....	109
Landing.....	16		
After Flying.....	16		

Specifications



		RTF <small>READY-TO-FLY</small>	BNF
	<b>Motor:</b> BL180 Brushless Outrunner Motor, 2500Kv	<b>Installed</b>	<b>Installed</b>
	<b>Receiver/ESC:</b> DSMX® /DSM2® RX/ ESC unit: Champ S+	<b>Installed</b>	<b>Installed</b>
	(2) 2.3-Gram Performance Linear Long Throw offset Servos	<b>Installed</b>	<b>Installed</b>
	<b>Battery:</b> 280mAh 2S 7.4V 30C Li-Po	<b>Included</b>	<b>Included</b>
	<b>Battery Charger:</b> Celectra™ 2S 7.4V Li-Po Charger	<b>Included</b>	<b>Included</b>
	<b>AC adapter</b>	<b>Included</b>	<b>Included</b>
	<b>Transmitter:</b> DSM2/DSMX Transmitter	<b>Included</b>	<b>Required to Complete</b>

To register your product online, go to [www.hobbyzonerc.com](http://www.hobbyzonerc.com)

## Charging Warnings

The included battery charger (EFLUC1007) has been 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 the battery or model 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.
- Always inspect the battery before charging.
- 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 BATTERIES.** Failure to charge the battery with a compatible charger may cause a 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 recommended levels.
- Never charge damaged batteries.
- Never attempt to dismantle or alter the charger.
- Never allow minors 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.

## Charging the Flight Battery

Your aircraft comes with a 2S 7.4V 280mAh 30C Li-Po battery and a 2S 7.4V Li-Po battery charger that requires use of the included AC power supply or the optional 12V (11V–14V) DC power cord (EFLUC1008).

Refer to the charging warnings. It is recommended to charge the battery pack while you are inspecting the aircraft. The flight battery will be required to confirm proper aircraft operation in future steps.

### Battery Charging Process

**NOTICE:** 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.

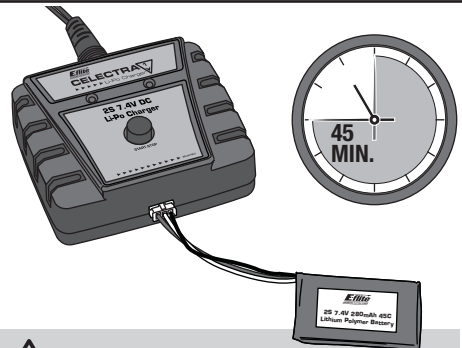
1. Gently press the battery connector into the charge port located on the front of the charger. The connector of the battery is specifically designed to allow it to fit into the charge port one way to prevent reverse polarity connection. However, check for proper alignment and polarity.
2. Press the button on the charger. The red LED will illuminate, indicating charging has begun.

Charging a fully discharged (not over-discharged) 280mAh battery takes approximately **45 minutes** at the charger's 300mA charge rate. The included battery can be charged at a rate of up to 3C (840mA).

Always disconnect the flight battery from the charger immediately upon completion of charging.

### LED Indications

1. Green LED blinking ..... Standby
2. Blinking Red LED at varying speeds.... Charging
3. Red and Green LED blinking simultaneously ..... Balancing
4. Solid Green LED ..... Full Charge
5. Red and Green LED flashing rapidly .... Error



**CAUTION:** Overcharging a battery can cause a fire.

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

**CAUTION:** Never exceed the recommended charge rate.

**RTF Transmitter**  
 READY-TO-FLY

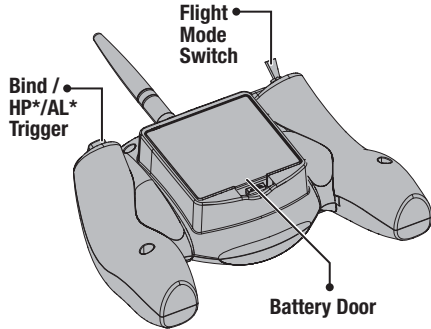
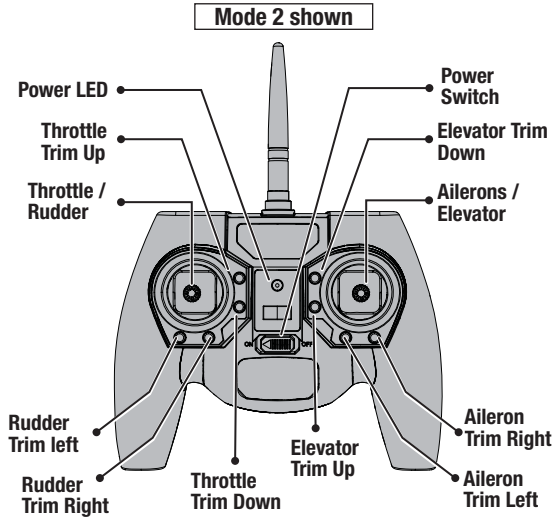
The included transmitter comes pre-bound to the aircraft.

**Low Battery Alarm**

When the battery voltage drops too low, an alarm sounds and the LED flashes. The batteries must be replaced immediately. If this happens while flying, land your aircraft as soon and as safely as possible.

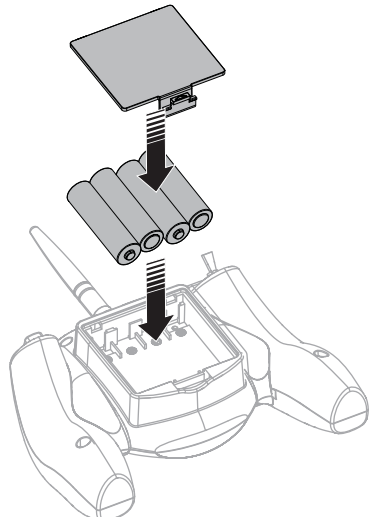
\*(HP) = Holding Pattern

\*(AL) = AutoLand



**Transmitter Batteries Installation**

Remove the battery cover. Install the four included batteries (noting proper polarity) and reinstall the battery cover.





## BNF AIRCRAFT ONLY

### Transmitter Setup

**IMPORTANT:** The installed receiver has been programmed for operation specifically in this aircraft.

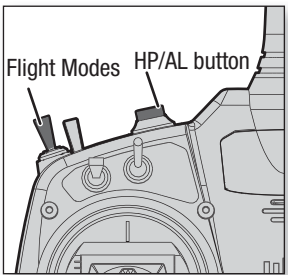
To operate the SAFE® Plus system in this aircraft, set up your optional DSMX®/DSM2® transmitter using the chart below.

- SAFE Flight mode is selected using Channel 5 signal (high, middle, low)
- Holding Pattern and AutoLand are selected using Button I (channel 6, Aux 1)

**IMPORTANT:** A transmitter with a 2-position Channel 5 switch will only allow the use of position 0 (Beginner Mode) or position 2 (Experienced Mode) flight modes. If possible assign Channel 5 in your transmitter to a 3-position switch to operate all 3 flight modes (refer to your transmitter's manual).

Refer to your transmitter's manual for more information about transmitter setup.

Non Computerized Transmitter Setup (DX5e)		
Transmitter	SAFE Plus mode switch	SAFE Plus Flight Modes Supported
Throttle, Aileron, Elevator and Rudder in Normal Position		
DX5e (2 pos switch)	CH 5 switch	0 Beginner 1 Experienced
DX5e (3 pos switch)	CH 5 switch	0 Beginner 1 Intermediate 2 Experienced

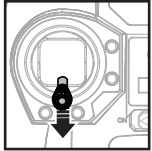
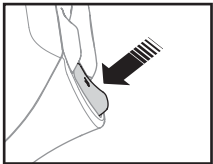
Computerized Transmitter Setup (DX6, DX7 (Gen 2), DX8 (Gen 2), DX9, DX18 and DX20)	
Start all transmitter programming with a blank model (do a model reset), then name the model.	
DX6 DX7 (Gen2) DX8 (Gen2) DX9 DX18 DX20	1. Go to the SYSTEM SETUP
	2. Set MODEL TYPE: AIRPLANE
	3. Go to CHANNEL ASSIGN: click NEXT to go to Channel Input Config: GEAR: B, AUX1: i
	4. Go to the FUNCTION LIST
	5. Go to SERVO SETUP: Reverse AUX1
Resulting in:	 <p>Switch B operates the 3 SAFE Plus modes (0 beginner/1 intermediate/2 experienced) Button I commands Holding Pattern/Autoland</p>

# Binding



## Re-Binding the RTF Transmitter

Your Champ S+ RTF transmitter comes pre-bound to the aircraft. If you ever need to re-bind your aircraft, follow this binding table.

Binding Procedure	
1. Make sure the flight battery is disconnected from the aircraft.	<b>4</b> 
2. Ensure the transmitter is powered OFF.	
3. Connect the flight battery to the aircraft and turn the aircraft upright. Both ailerons will go up. Set the aircraft upright on its wheels.	
4. Make sure the transmitter controls are at neutral and the throttle is in the low position.	<b>5</b> 
5. Put your transmitter into bind mode by holding the red HP/AL button while powering ON the transmitter, after two seconds release the button.	
6. After 5 to 10 seconds, the ailerons will return to center, indicating that the receiver is bound to the transmitter. If the ailerons do not return to center, refer to the Troubleshooting Guide at the end of the manual.	
<b>IMPORTANT:</b> The transmitter controls will not operate yet, as the aircraft is still searching for GPS lock.	
7. Disconnect the flight battery and power the transmitter off.	



## Binding Your Optional Transmitter

For a list of compatible DSMX®/DSM2® transmitters, please visit [www.bindnfly.com](http://www.bindnfly.com).

**CAUTION:** When using a Futaba® transmitter with a Spektrum DSM® module, you must reverse the throttle channel and rebind. Refer to your Spektrum module manual for binding and failsafe instructions. Refer to your Futaba transmitter manual for instructions on reversing the throttle channel.

Binding Procedure
Refer to your transmitter's unique instructions for binding to a receiver.
1. Make sure the flight battery is disconnected from the aircraft.
2. Ensure the transmitter is powered OFF.
3. Connect the flight battery to the aircraft and turn the aircraft upright. Both ailerons will go up. Set the aircraft upright on its wheels.
4. Make sure the transmitter controls are at neutral and the throttle is in the low position.
5. Put your transmitter into bind mode by holding the HP/AL button while powering ON the transmitter, after two seconds release the button.
6. After 5 to 10 seconds, the ailerons will return to center, indicating that the receiver is bound to the transmitter. If the ailerons do not return to center, refer to the Troubleshooting Guide at the end of the manual.
<b>IMPORTANT:</b> The transmitter controls will not operate yet, as the aircraft is still searching for GPS lock.
7. Disconnect the flight battery and power the transmitter off.
For subsequent flights, power ON the transmitter for 5 seconds before connecting the flight battery.

# SAFE<sup>+</sup>

## Technology Flight Modes

### Beginner Mode

(with automatic self-leveling):

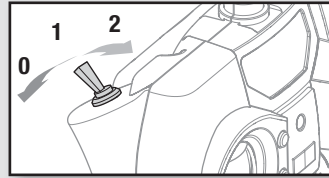
- Below 20 ft (10m), pitch (nose up and down) and roll (wing tips up and down) angles are limited to help you keep the aircraft airborne. Release both sticks for self-leveling.
- Above approx. 20 feet (10m), pitch and roll control are increased slightly.
- At any time release both sticks to activate Panic Recovery mode for self-leveling.

### Intermediate Mode:

- Same as beginner mode, with greater pitch and roll angle limits/control above approx. 20 feet (10m). Above 20 feet (10m) self-leveling is inactive.
- Below 20 feet, self-leveling is active when you release both sticks.

### Experienced Mode:

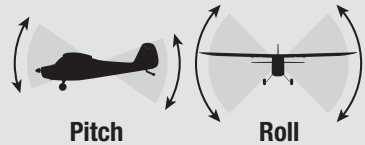
- Unlimited Flight Envelope. No pitch or roll angle/control limits.
- At any time switch to beginner mode and release the control sticks for self-leveling.



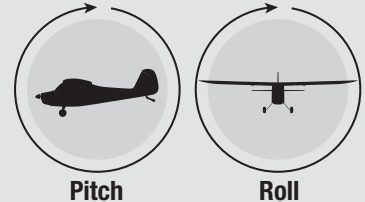
Beginner Mode  
(Switch Position 0)



Intermediate Mode  
(Switch Position 1)



Experienced Mode  
(Switch Position 2)



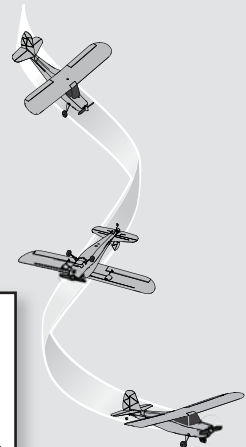
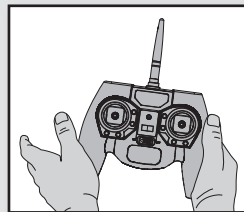
### Panic Recovery:

If you feel you have lost control of the aircraft, switch to beginner mode and release the control sticks. The SAFE technology will automatically return the aircraft to stable flight (wings level with a slight climb when the throttle is at 100%/full power).

Always fly at a safe altitude, as Panic Recovery may cause the aircraft to lose some altitude when leveling the wings.

When the aircraft regains stable flight, return to the control sticks and resume flying. The aircraft will return to its current flight mode.

**NOTICE:** If the aircraft is upside down when the sticks are released, sufficient altitude is required for the aircraft to return to straight and level upright flight.





## Virtual Fence

The Champ S+ comes out of the box with the Virtual Fence feature turned ON. This feature prevents unwanted flyaways by limiting the aircraft to a 450 ft (137m) flying radius (Virtual Fence). If the aircraft reaches the 450 ft boundary, the SAFE Plus technology will take over and fly the aircraft back into the flying radius. The aircraft will always position itself to re-enter the flying radius flying towards you. Once back in the flying radius, it will wag its wings twice to indicate that it is returning control to the pilot.

### Virtual Fence OFF

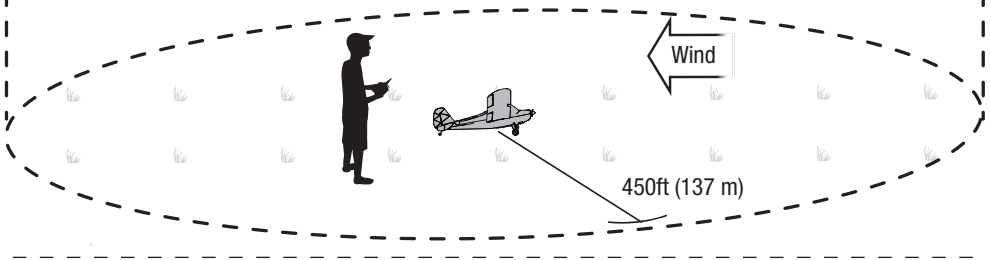
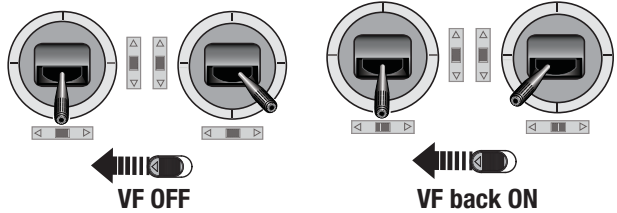
(Not recommended when using RTF Transmitter due to range limitation.)

For flying without the restriction of the Virtual fence (and within the range of your transmitter) the Champ S+ Virtual Fence feature can be deactivated. When the Virtual Fence is turned OFF, the 450 ft (137m) boundary has been removed.

The aircraft's Holding Pattern and AutoLand features will still function.

#### Turning Virtual Fence OFF or ON

1. Power ON the Transmitter.
2. Power ON the aircraft.
3. Place aircraft on its wheels.
4. Hold the transmitter sticks as shown until it establishes GPS lock.



### Emergency GPS OFF

#### GPS

In the rare occasion that the aircraft loses GPS signal while in flight and a flyaway appears to be happening, the Emergency GPS OFF option can be used by pressing and holding the trigger while toggling the flight mode switch 5 or more times. This will disable all GPS features (Virtual Fence, Holding Pattern and AutoLand) and allow pilot to manually control the aircraft.

**IMPORTANT:** If you experience GPS signal loss, perform a compass calibration before your next flight.



## Holding Pattern (HP)

If at any time the aircraft seems too far away, or you would like to “pause” the flight, press and release the HP/AL button on the transmitter.

The aircraft will return to the initialization point/location and begin to fly a circular pattern at an altitude of approximately 65 ft (20m).

When the aircraft is in HP, it flies fully autonomously. The transmitter sticks have no control.

**NOTICE:** As a safety precaution, the Holding Pattern feature can not be initiated when your aircraft is below an altitude of approximately 20 ft (6m).

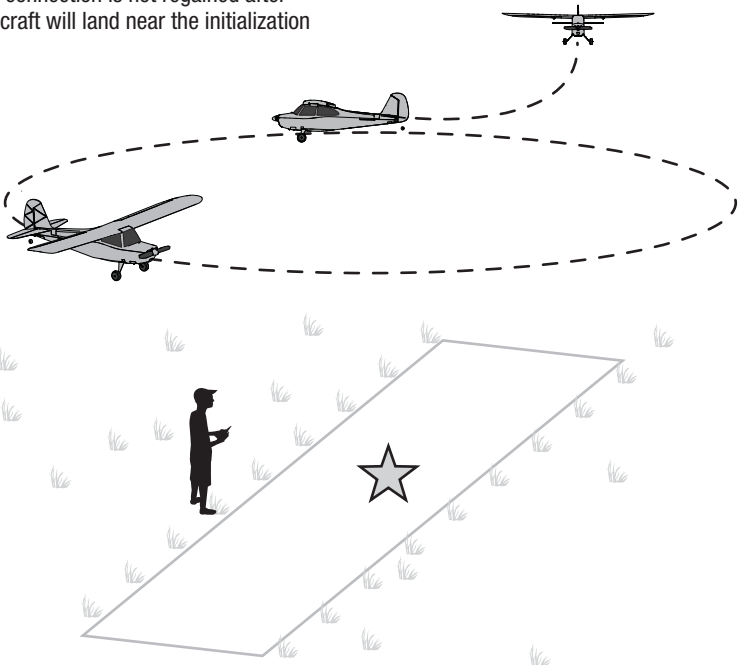
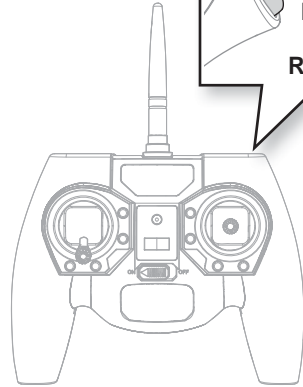
To deactivate HP and regain control, press and release the red HP/AL button again or change the flight mode.



**GPS IMPORTANT:** If your aircraft does not respond immediately to a Holding Pattern command the GPS signal may have been lost. Release both transmitter sticks and slowly reduce throttle to gently glide the aircraft to the ground.

### Failsafe

If at any time the aircraft loses radio connection, the aircraft will activate HP until it re-establishes radio connection. If radio connection is not regained after 30 seconds, the aircraft will land near the initialization point/location.



## AutoLand (AL)

When you are ready to land or your flight timer has signaled, press and hold the red HP/AL button on the transmitter for 4 seconds.

The aircraft will instantly respond and begin an upwind landing approach to return to the initialization point/location. The aircraft will land into the wind near your initialization point/location and come to a complete stop.

When AutoLand is activated, you can still control the aircraft to avoid obstacles like trees or poles. Once clear of the obstacles just let go of the control sticks and the AutoLand feature will take over and resume the landing.

At any time you can abort a landing by pressing and releasing the HP/AL button or by changing the flight mode.

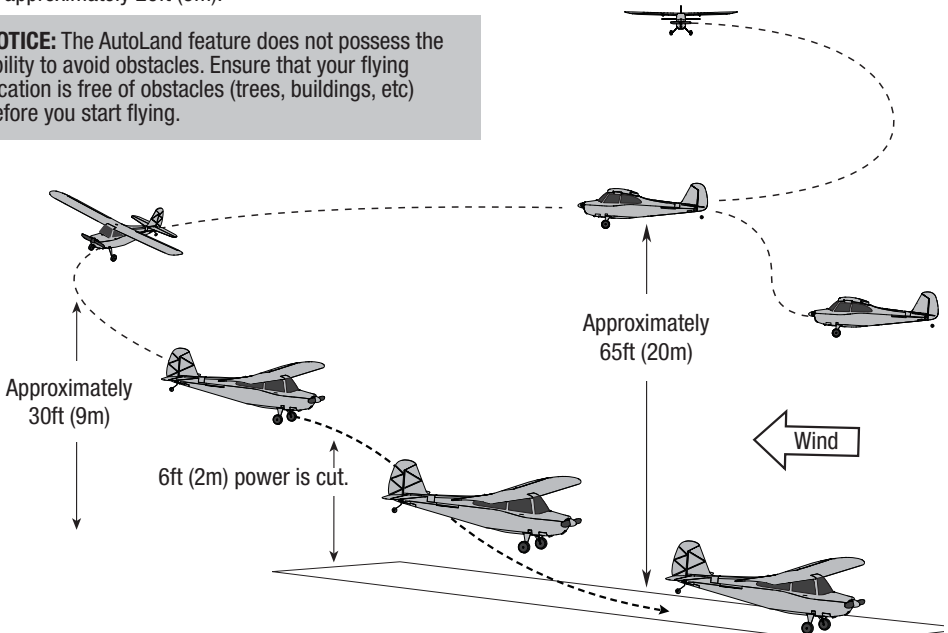
If you want to takeoff again after landing pull the throttle to low position and then press the red HP/AL button again to deactivate AutoLand.



**GPS IMPORTANT:** If your aircraft does not respond immediately to an AutoLand command, the GPS signal may have been lost. Release both transmitter sticks and slowly reduce throttle to gently glide the aircraft to the ground.

**IMPORTANT:** The AutoLand feature can not be initiated when your aircraft is below an altitude of approximately 20ft (6m).

**NOTICE:** The AutoLand feature does not possess the ability to avoid obstacles. Ensure that your flying location is free of obstacles (trees, buildings, etc) before you start flying.



## Indoor Flight / GPS OFF

Indoor Mode will need to be activated before indoor flight can happen. The GPS system will not be able to establish a GPS lock if activated while indoors. The aircraft will be unresponsive searching for a GPS signal.

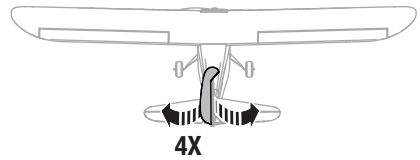
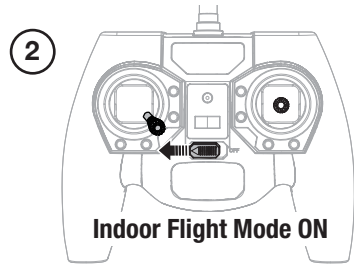
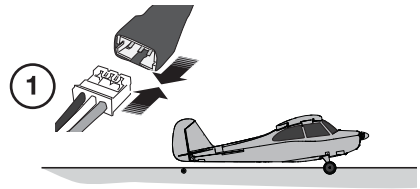
When Indoor Mode is turned ON the GPS features are OFF, meaning Virtual Fence, Holding Pattern and AutoLand are deactivated. However, the SAFE flight modes (Beginner, Intermediate and Experienced Modes) are fully functional.

### Turning ON Indoor Mode

1. Turn on the Transmitter.
2. Connect a fully charged flight battery to the aircraft to begin the aircraft's initialization process, then place the aircraft upright on the ground.
3. Put the transmitter sticks into the position as shown.

The aircraft will indicate that it is in Indoor mode by waving the rudder back and forth 4 times. It will wave its rudder every time a new battery is connected while in Indoor Mode.

Once the aircraft is in indoor mode, it will remain in indoor mode until the mode is turned OFF.

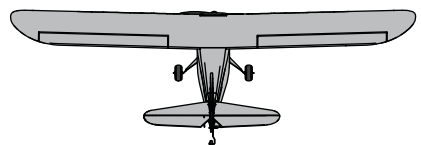
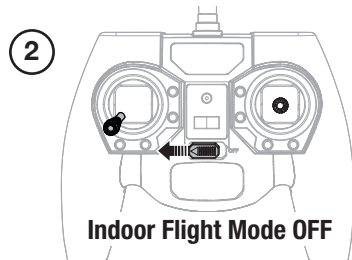
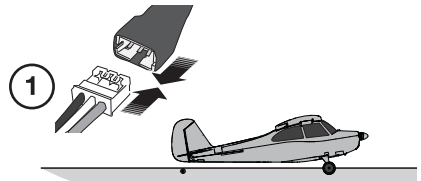


### Turning OFF Indoor Mode

1. Turn on the Transmitter.
2. Connect a fully charged flight battery to the aircraft to begin the aircraft's initialization process, then place the aircraft upright on the ground.
3. Put the transmitter sticks into the position as shown.

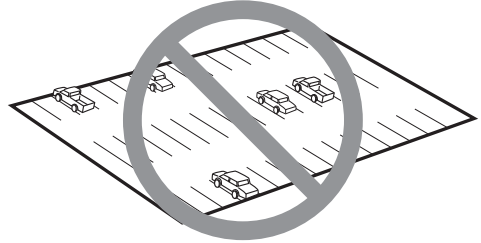
The aircraft will indicate that it is no longer in Indoor mode by not waving the rudder.

Once Indoor mode is turned OFF it will remain in OFF until the mode is turned ON.



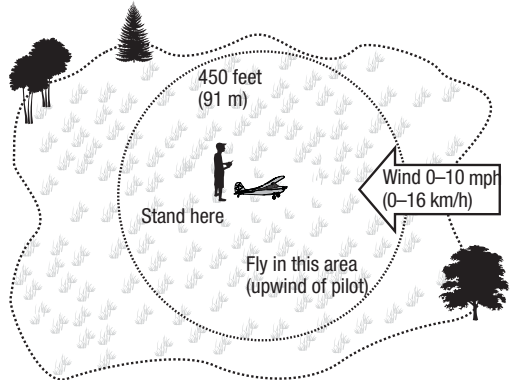
## Flying Tips

- Consult local laws and ordinances before choosing a location to fly your aircraft.
- Always make deliberate and steady control stick movements for smooth control of your aircraft.
- Keep your aircraft in plain sight and up wind.
- Always avoid flying near houses, trees, wires and buildings.
- Always avoid flying in areas where there are many people, such as busy parks, schoolyards or soccer fields.



### Champ S + Flying Tips

- Sensor Assisted Flight Envelope (SAFE® Plus) technology is designed as flight assistance, not an autopilot. The pilot is always in control and required to fly the aircraft at all times.
- Start in Beginner mode (Flight Mode switch position 0). As you learn and become more confident, change modes to advance your flying skills.
- Fly your aircraft outside in no greater than light winds up to 10 mph (16 km/h).
- Always takeoff or launch your aircraft directly into the wind if possible.
- For indoor flight, put the aircraft into Indoor Mode and fly the aircraft inside in a large gymnasium.



## Preflight Checklist

✓	
	1. Find a safe and open area.
	2. Charge flight battery.
	3. Set up your transmitter to support SAFE® Plus technology (BNF only).
	4. Install flight battery in aircraft.
	5. Perform Control Direction Test.

✓	
	6. Perform SAFE Control Direction Test.
	7. Plan flight for flying field conditions.
	8. Set a flight timer for 10 minutes.
	9. Have fun!

## Battery Installation

1. Open the battery hatch and place the battery so that it is centered in the battery compartment.
2. Power on your transmitter, then wait 5 seconds.
3. Connect the battery to the aircraft, noting proper polarity.

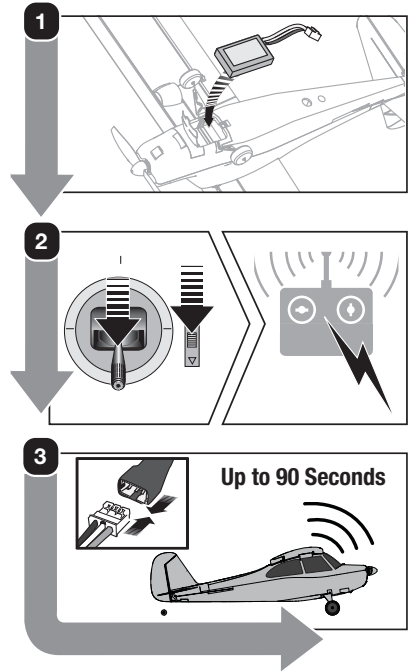
Both ailerons will go up, indicating that the aircraft is powered up. The aircraft will not connect to the transmitter or start to seek for GPS lock until it is upright on the ground and motionless.

When the aircraft is placed on the ground and is motionless (in the desired takeoff location) it will connect to the transmitter. The ailerons will return to center to indicate transmitter connection.

**IMPORTANT:** This sets the location for AutoLand.

Allow up to 90 seconds for the aircraft to establish GPS lock. GPS lock will be indicated by several tones and the transmitter will be given control.

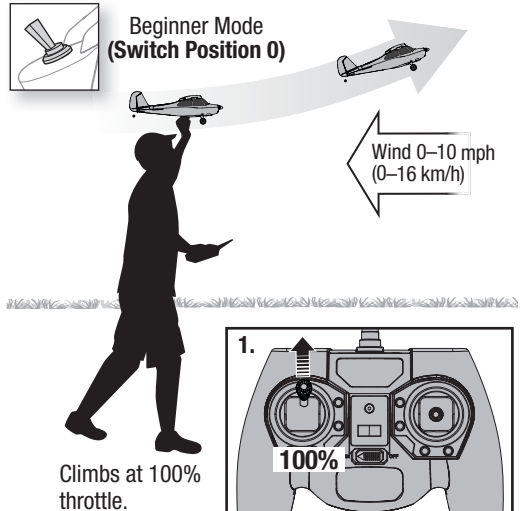
**IMPORTANT:** Try to keep the aircraft as still as possible when establishing GPS Lock.



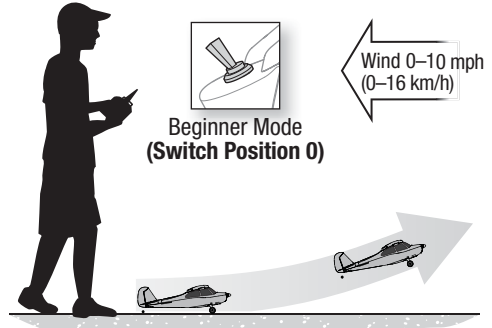
## Takeoff

### Hand Launch

1. For your first flights, place the aircraft in Beginner mode.
2. Place the aircraft on its landing gear in the center of your flying area facing into the wind and secure the aircraft from taking off. Advance the throttle to 100% then back down to 0% to set the landing direction (heading) for the AutoLand feature.
3. Pick up the aircraft and advance the throttle to 100% and with the nose level or slightly up, launch it into the wind with a light toss. Slowly pull back on the elevator to gain altitude.

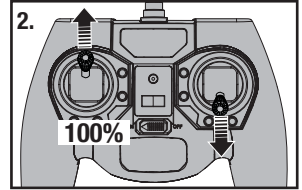


1. For your first flights, place the aircraft in Beginner mode.
2. Place the aircraft on its landing gear in the center of your flying area facing into the wind and secure the aircraft from taking off. Advance the throttle to 100% then back down to 0% to set the landing direction (heading) for the AutoLand feature.
3. Throttle up to 100% and slowly pull back on the elevator to takeoff.



**IMPORTANT:** The aircraft will only takeoff from smooth surfaces. If flying over rough surfaces or grass that is too long you should hand launch the aircraft.

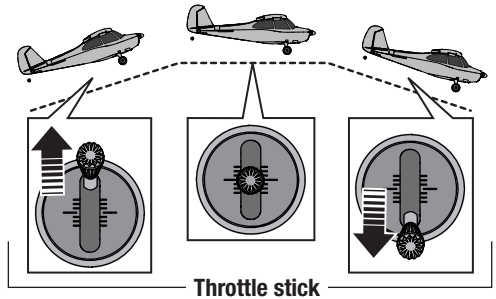
2. Gently pull back on the elevator stick to lift off of the ground.



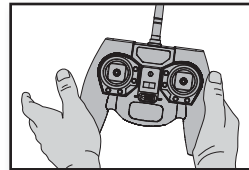
## Flying

In Beginner mode, your aircraft will climb at full throttle without use of the elevator stick.

- Set a flight timer for 10 minutes.
- If the motor pulses (LVC), land the aircraft immediately and recharge the flight battery.
- Flying with the nose pointed toward you is one of the hardest things to do when learning to fly. To practice piloting the aircraft, try flying in large circles high off the ground.
- If you lose control, simply release the sticks. The aircraft will level itself when in Beginner Mode.



Throttle stick

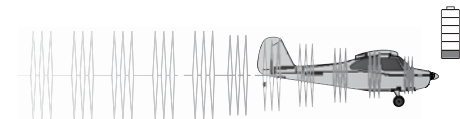


## Low Voltage Cutoff (LVC)

LVC is a built in feature to protect the battery from over-discharge. When the battery charge is too low, LVC limits power supplied to the motor. The aircraft will begin to slow and you will hear the motor pulse.

When the motor power decreases, 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. Charge your Li-Po battery to about half capacity before storage. During storage, make sure the battery charge does not fall below 3V per cell.



**NOTICE:** Repeated flying to LVC will damage the battery. It is important to set a flight timer to end your flight before you hit LVC.

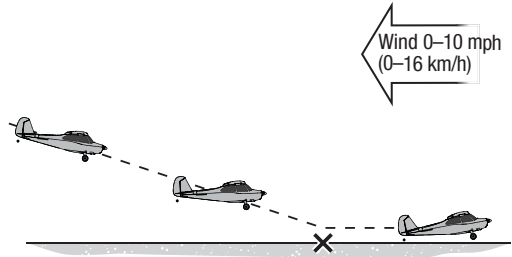
**NOTICE:** AL and HP Features will not work properly if LVC is activated.

## Landing

Press and Hold the **AL button** for approximately 4 seconds to automatically land the aircraft.

To manually land, approach the runway with the aircraft pointed into the wind and the wings level. Slowly lower the throttle to 25%. Near the ground, fully lower the throttle and pull back on the elevator stick to flare.

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



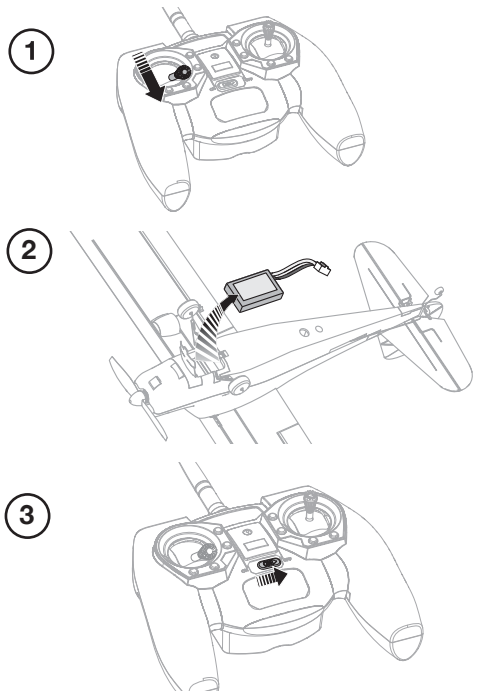
## After Flying

1. Lower the throttle stick completely.
2. Immediately disconnect and remove the battery from the aircraft. Keep hands away from the propeller.
3. Power off the transmitter.

**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 aircraft.

**NOTICE:** Always disconnect the battery from the aircraft before powering off the transmitter or injury and damage may result.

**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.



## Repairs

Repair this aircraft using foam safe CA (cyanoacrylate adhesive) glue DYNK0046 or clear tape. Only use foam safe CA glue as other types of glue can damage the foam. When parts are not repairable, see the Replacement Parts List for ordering by item number.

For a listing of all replacement and optional parts, refer to the list at the back of this manual.

**NOTICE:** Use of foam-safe CA accelerant on your aircraft can damage paint. DO NOT handle the aircraft until the accelerant fully dries.



# Appendix

## Compass Calibration

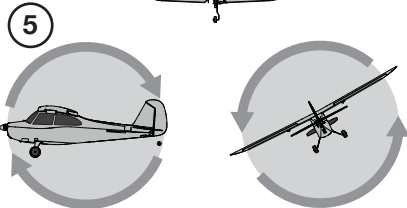
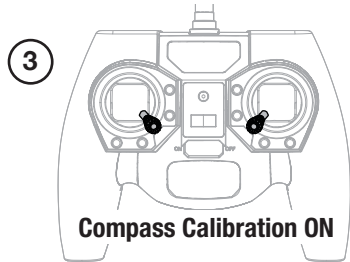
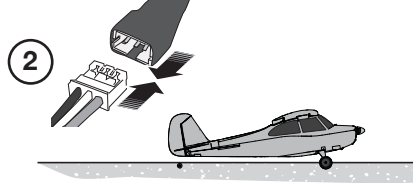
Calibration may be required if the accuracy of the AutoLand feature is poor or a compass error is given.

1. Power ON your transmitter.
2. Connect a fully charged battery to the aircraft and set the aircraft on the ground on its wheels.
3. Hold the transmitter sticks as shown.
4. Within 90 seconds, the ailerons will move up and down continuously, indicating that the aircraft is ready for compass calibration. You can now release the transmitter sticks (Keep the transmitter ON).

**IMPORTANT:** DO NOT Power OFF the transmitter when in Compass Calibration Mode.

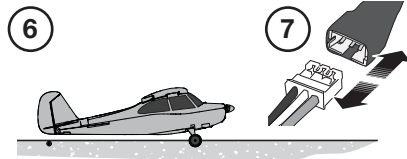
When the aircraft is in calibration mode the throttle is not active.

5. In calibration mode, pick up the aircraft and rotate it two full rotations nose over tail and then turn the aircraft 90° and do two full rotations wing tip over wing tip as shown.
6. Set the aircraft back on the ground on its wheels and turn off the transmitter.
7. Wait until the ailerons stop moving, then disconnect the flight battery.



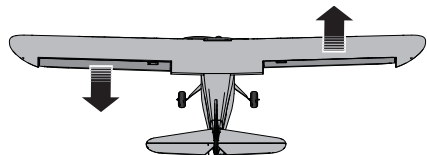
2 Full Rotations

2 Full Rotations



## Compass Error

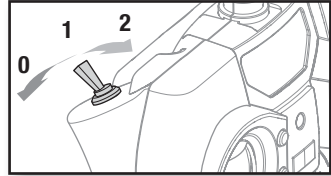
If at any time you experience no throttle response after power up and the ailerons are deflected full right, the aircraft is indicating a compass error. Disconnect the flight battery and perform the compass calibration procedure.



## Appendix

## Control Direction Test

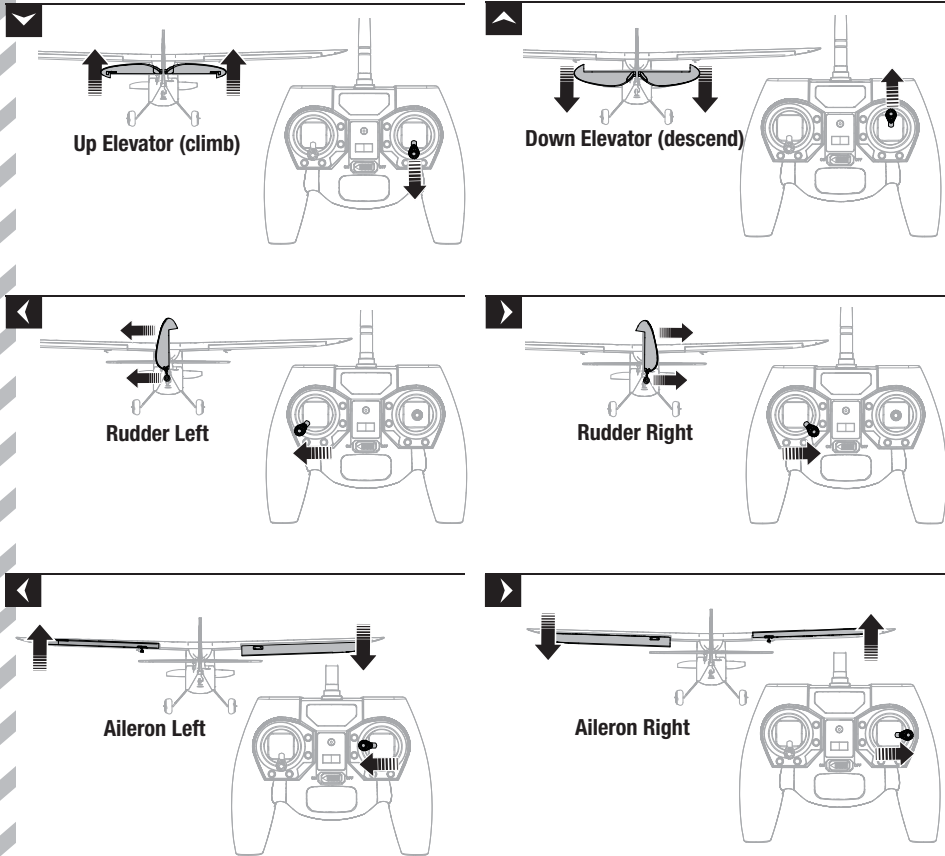
1. Place the aircraft into **Experienced Mode** (switch position 2).
2. Face the aircraft away from you.
3. Restrain the aircraft so it does not escape your control while you are testing your transmitter controls.
4. Move the sticks on the transmitter to ensure the aircraft responds as shown.
5. If the aircraft responds as shown, move the SAFE® mode switch to **Beginner Mode** (Position 0) to prepare to fly.



Experienced Mode  
(Switch Position 2)

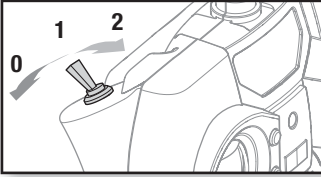
If the aircraft does not respond as shown, refer to the Binding instructions and Troubleshooting Guide in this manual for more information. If you need more assistance, contact the appropriate Horizon Hobby Product Support department.

## Mode 2 shown



# Appendix

## SAFE® Plus Control Direction Test



Put the aircraft into **Beginner Mode** (switch position 0) and Perform the Control Direction Test to ensure the SAFE® Plus system responds correctly to your aircraft's movements.

Once you are sure the aircraft responds correctly, move the aircraft as shown to ensure the SAFE® Plus system moves the control surfaces in their proper direction.

The rudder moves only while the aircraft is moving. This may prove difficult to see and is not an indication that the system is malfunctioning.

If the control surfaces do not respond as shown, do not fly the aircraft. Contact Horizon Hobby Product Support.

	Aircraft movement	SAFE Reaction
Elevator		
Aileron		
Rudder		

## Appendix

## Advanced User Information


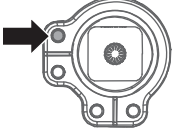

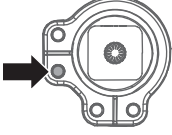
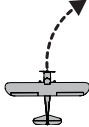
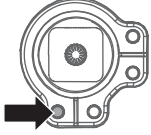
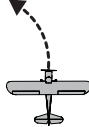
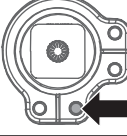

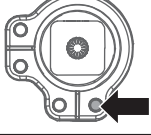

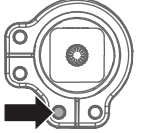
## Adjusting Trim in Flight

When you are comfortable flying in Experienced Mode, try adjusting the trim in flight. Press the trim buttons on your transmitter to adjust how the aircraft flies.

If the aircraft's nose drifts while the sticks are at neutral (centered) and the throttle is at 50%, press the trim buttons:

- Elevator trim: upper button to stop up drift
- Elevator trim: lower button to stop down drift
- Rudder trim: left button to stop right drift
- Rudder trim: right button to stop left drift
- Aileron trim: left button to stop right roll
- Aileron trim: right button to stop left roll

If you press a trim button until no beep sounds and the aircraft does not fly straight and level, land and manually adjust the trim as described below.

Direction of Drift	Button to Correct
	
	
	
	
	
	

## Manually Adjusting Trim

Press the trim buttons to return to center (3 beeps will sound), then use a pair of pliers to carefully bend the metal U-Bend:

Only adjust control surfaces to neutral when in Experienced mode.



Narrow for negative adjustment  
(Down elevator/aileron or rudder right)



Widen for positive adjustment  
(Up elevator/aileron or rudder left)

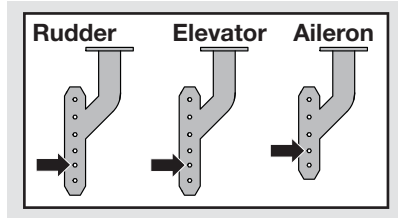
## Appendix

### Advanced User Information *Continued*

#### Settings for Control Horns

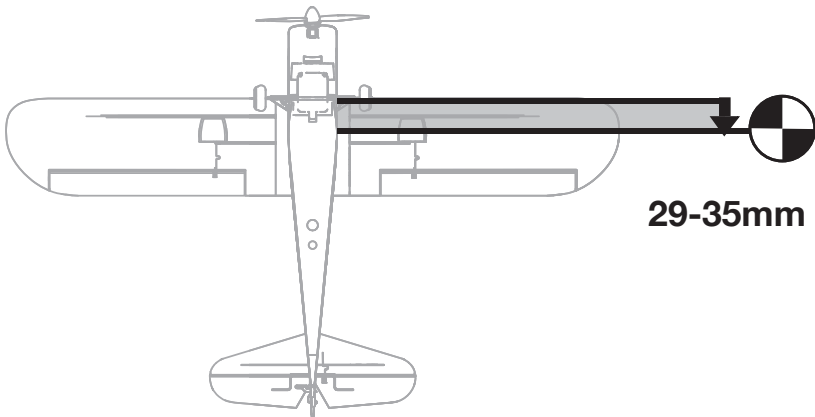
The illustration shows factory settings for linkages on the control horns.

After flying, if you want to modify control throw, carefully adjust the linkage positions for desired control response.



#### Center of Gravity (CG)

Measure back **29-35mm** from the leading edge of the wing, where the wing meets the fuselage, and place a mark. With the battery installed, balance the aircraft within this CG range.



## Motor Service

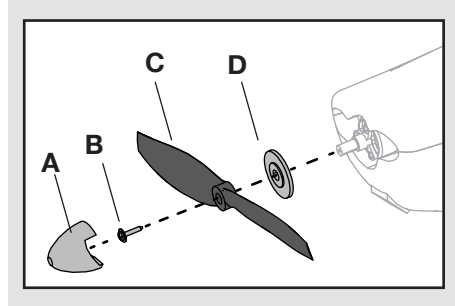
### Disassembly

**⚠ CAUTION:** DO NOT handle the propeller while the flight battery is connected to the ESC. Personal injury could result.

#### Propeller Removal

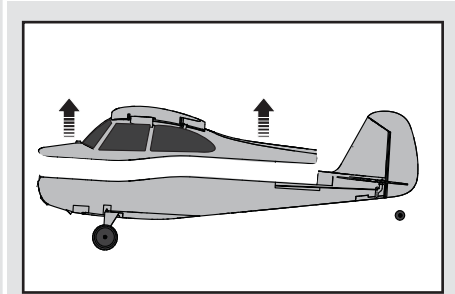
1. Disconnect the battery.
2. Remove the Spinner (A), Prop screw (B), Propeller (C) and Spinner backplate (D) from the propshaft.

Since the propeller and spinner are glued together, glue residue may need to be cleaned from the spinner or propeller when these parts are used again.



#### Motor Removal

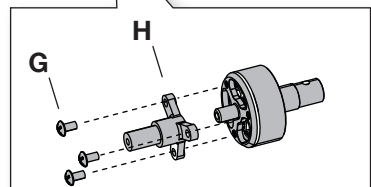
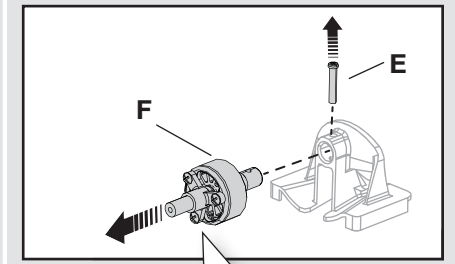
1. Carefully cut the tape and/or decals on the side of the fuselage to remove the top of the fuselage.
2. Disconnect the motor wire connector from the ESC/receiver connector.
3. Remove the screw (E) and motor (F) from the motor mount.
4. Remove 3 screws (G) and the prop adapter (H) from the motor. The motor magnet may attract screws to the motor.



### Assembly

Assemble in reverse order.

- Connect the motor wire connector to the ESC/receiver.
- The propeller size numbers (5 x 2.75) must face out from the motor for correct propeller operation.
- Attach the spinner to the propeller using foam safe CA (cyanoacrylate adhesive) Dynamite® foam safe CA, thick DYNK0046.
- Ensure the propeller adapter and motor mount are fully connected to the motor.
- Re-assemble the fuselage using clear tape.



# Appendix

## Optional First Person View (FPV) Installation

Visit the Champ S+ page at [www.hobbyzonerc.com](http://www.hobbyzonerc.com) for information about the optional FPV system (sold separately).

FPV compatible systems for this aircraft.

- SPMVS2500 - Camera and Teleporter V4 headset bundle

or

- SPMVA2500 - 25mW FPV Micro camera

- SPMVR1100 - Teleporter V4

or

- SPMVM430 - Spektrum Monitor

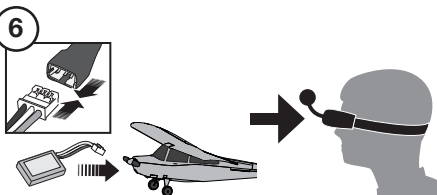
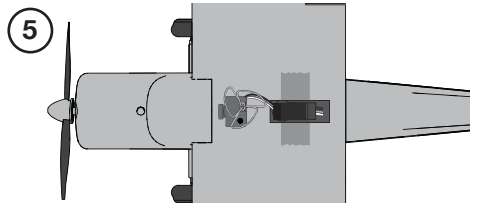
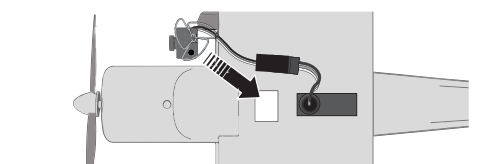
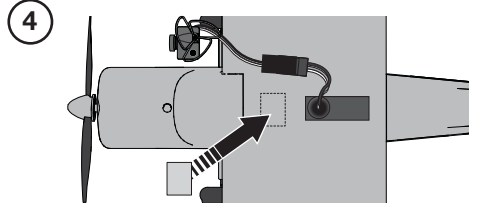
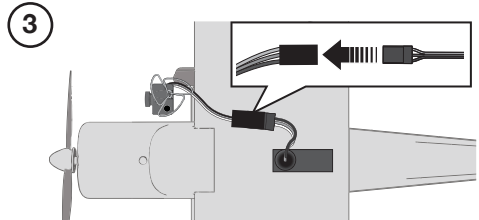
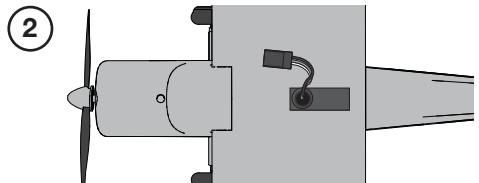
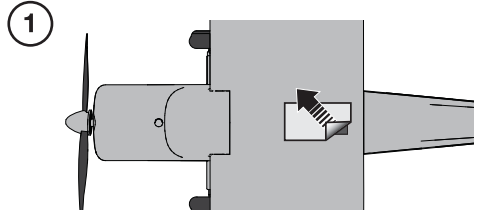
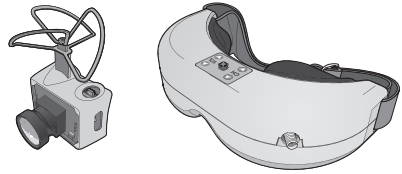
Consult local laws and ordinances before operating FPV (first person view) equipment. In some areas, FPV operation may be limited or prohibited.

**IMPORTANT:** You are responsible for operating this product in a legal and responsible manner.

### FPV Camera Installation

Refer to the Spektrum™ FPV System instructions for set up and operation.

1. Remove the decal on the top of the fuselage to expose the FPV power connector.
2. Carefully pull the FPV power connector out of the hole.
3. Align the red and black wire colors and connect the FPV power connector to the camera unit.
4. Ensure the camera points directly forward. Secure the camera unit on the wing using double-stick tape.
5. Put excess wire in the hole. If desired, cover the hole with clear tape.
6. Connect a flight battery to the aircraft, remove lens cap and test the FPV system.



## Troubleshooting Guide (SAFE® Plus)

Problem	Possible Cause	Solution
Controls oscillate in flight, (Aircraft rapidly jumps or moves)	Propeller is unbalanced, causing excessive vibration	Remove propeller and rebalance or replace it if damaged
	The prop screw is too loose, causing vibration	Tighten the prop screw
Aircraft does not connect to transmitter after battery is connected	Aircraft is not upright and immobile after battery is connected	Keep the Aircraft upright and immobile for up to 90 seconds after connecting the battery  Ailerons neutralize when aircraft is connected to transmitter but controls will not function until it established GPS lock
	Aircraft bound to different model memory (ModelMatch™ radios only)	Select correct model memory on transmitter and disconnect and reconnect flight battery to aircraft
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may not be compatible with Spektrum DSMX/DSM2 technology	Use a genuine Spektrum DSMX/DSM2 transmitter
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt linking again

## Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle stick and/or throttle trim too high	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor disconnected from receiver	Open fuselage and make sure motor is connected to the receiver
	AutoLand was not deactivated after landing	Deactivate AutoLand by pressing the AL/HP button or changing flight modes and lower throttle
Extra propeller noise or extra vibration	Propeller, spinner or motor is unbalanced, causing excessive vibration	Balance parts or replace it if damaged
	Prop screw is too loose	Tighten the prop screw
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 or old.	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity too low for flight conditions	Replace battery or use a larger capacity battery



Problem	Possible Cause	Solution
Ailerons go up aircraft will not bind to transmitter (during binding)	Transmitter too near aircraft during binding process	Power off transmitter, move transmitter a larger distance from aircraft, disconnect and reconnect flight battery to aircraft and follow binding instructions
	Bind switch or button not held long enough during bind process	Power off transmitter and repeat bind process
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter	Move aircraft and transmitter to another location and attempt binding again
	Aircraft was not placed upright on its wheels	Place aircraft upright on its wheels after powering up
Ailerons go up and aircraft will not respond to transmitter (after binding)	Less than a 90-second wait between first powering on transmitter and connecting flight battery to aircraft	Leaving transmitter on, disconnect and reconnect flight battery to aircraft
	Aircraft was not upright, level or motionless	Leaving transmitter on, disconnect and reconnect flight battery to aircraft assuring that the aircraft is upright, level and motionless
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wires damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Flight battery charge is low	Fully recharge flight battery
	Control linkage does not move freely	Make sure control linkage moves freely
Controls reversed	Transmitter settings reversed	Adjust controls on transmitter appropriately
Motor loses power	Damage to motor or power components	Do a check of motor and power components for damage (replace as needed)
Motor power quickly decreases and increases then motor loses power	Battery power is down to the point of receiver/ESC Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
Motor does not respond after landing	Over Current Protection (OCP) stops the motor when the transmitter throttle is set high and the propeller cannot turn	Fully lower throttle and throttle trim to arm ESC
	AutoLand has not been deactivated	Press and release HP/AL button to deactivate AutoLand feature
Servo locks or freezes at full travel	Travel adjust value is set above 100%, over driving the servo	Set Travel adjust to 100% or less and/or set sub-trims to Zero and adjust linkages mechanically

## 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, or (vii) use that violates any applicable laws, rules, or regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

### Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective.

Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

### Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As

Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

### Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

## WARRANTY SERVICES

### Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at [www.horizonhobby.com](http://www.horizonhobby.com), submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

### Inspection or Services

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at [http://www.horizonhobby.com/content/service-center\\_render-service-center](http://www.horizonhobby.com/content/service-center_render-service-center). If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into

Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

**NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.**

**Warranty Requirements**

**For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date.** Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

**Non-Warranty Service**

**Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the**

**expense unless the expense exceeds 50% of the retail purchase cost.** By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website [http://www.horizonhobby.com/content/service-center\\_render-service-center](http://www.horizonhobby.com/content/service-center_render-service-center).

**ATTENTION: Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.**

10/15

**Warranty and Service Information**

Country of Purchase	Horizon Hobby	Phone Number/Email Address	Address
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	productsupport@horizonhobby.com 877-504-0233	
	Sales	websales@horizonhobby.com 800-338-4639	
United Kingdom	Service/Parts/Sales: Horizon Hobby Limited	sales@horizonhobby.co.uk +44 (0) 1279 641 097	Units 1-4, Ployters Rd, Staple Tye Harlow, Essex, CM18 7NS, United Kingdom
Germany	Horizon Technischer Service	service@horizonhobby.de	Christian-Junge-Straße 1 25337 Elmshorn, Germany
	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	
France	Service/Parts/Sales: Horizon Hobby SAS	infofrance@horizonhobby.com +33 (0) 1 60 18 34 90	11 Rue Georges Charpak 77127 Lieusaint, France



**IC Information**

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

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."

## FCC Information

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Compliance Information for the European Union



### HBZ UMX Champ S+ RTF (HBZ5400)

**EU Compliance Statement:** Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED, EMC, and LVD Directives.

### HBZ UMX Champ S+ BNF Basic (HBZ5480)

**EU Compliance Statement:** Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED, 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 collection 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 –**

<b>Part # • Nummer Numéro • Codice</b>	<b>Description</b>	<b>Beschreibung</b>	<b>Description</b>	<b>Descrizione</b>
EFLB2802S30	280mAh 2S 7.4V 30C Li-Po battery	280mAh 2S 7.4V 30C Li-Po	Batterie Li-Po 7.4V 2S 280mA 30C	Batteria Li-Po 280mAh 2S 7.4V 30C
EFLUC1007	Celectra 2S 7.4V DC Li-Po Charger	Celectra 2S 7.4V DC Li-Po Ladegerät	Celectra Chargeur Li-Po 7.4V 2S	Celectra 2S 7.4V DC Li-Po Caricabatterie
EFLC4000	AC to 12VDC, 1.5-Amp Power Supply	E-flite 1,5A Netzteil AC zu 12V DC	Alimentation secteur AC vers 12V DC 1,5A	AC > 12VDC, 1.5-Amp Alimentatore
HBZ5457	RX/ESC unit: Champ S+	Hobbyzone Empfänger- und Reglereinheit: Champ S+	Champ S+ - Module RX/Contrôleur	RX/ESC unità: Champ S+
HBZ5458	GPS Unit: Champ S+	Hobbyzone GPS-Unit: Champ S+	Champ S+ - Module GPS	Unità GPS: Champ S+
HBZ5406	Landing Gear Set: Champ S+	Hobbyzone Landgestellset: Champ S+	Champ S+ - Train d'atterrissage	Set carrello: Champ S+
HBZ5420	Wing: Champ S+	Hobbyzone Tragfläche: Champ S+	Champ S+ - Aile	Ala: Champ S+
HBZ5425	Complete Tail: Champ S+	Hobbyzone Heck, komplett: Champ S+	Champ S+ - Empennage complet	Coda completa: Champ S+
HBZ5467	Bare Fuselage: Champ S+	Hobbyzone Rumpf, unlackiert: Champ S+	Champ S+ - Fuselage nu	Solo fusoliera: Champ S+
HBZ5405	Decal Set: Champ S+	Hobbyzone Dekorbogen: Champ S+	Champ S+ - Planche de décoration	Set adesivi: Champ S+
HBZ5407	Pushrods and Access: Champ S+	Hobbyzone Gestänge u. Zugriff: Champ S+	Champ S+ - Tringleries et accessoires	Rinvii: Champ S+
EFLUM180BL2	BL180 Brushless Outrunner Motor, 2500Kv	BL180 Brushless Außenläufer Motor, 2500Kv	Moteur Brushless à cage tournante BL180 2500Kv	BL180 motore brushless outrunner 2500Kv
HBZ5466	Battery Hatch: Champ S+	Hobbyzone Akkuabdeckung: Champ S+	Champ S+ - Trappe batterie	Portello batteria: Champ S+
HBZ5402	Spinner: Champ S+	Hobbyzone Spinner: Champ S+	Champ S+ - Cône	Ogiva: Champ S+
EFLUP050275	5 x 2.75 Electric Propeller	E-flite 5x2,75 Luftschraube	Hélice électrique 5 x 2,75	Elica per elettrico 5 x 2.75
EFLU4067	Prop Adapter:	Luftschraubenmitnehmer	Adaptateur hélice	Adattatore elica:
SPMSA2030LO	2.3-Gram Linear Long Throw Offset Servo	Spektrum 2,3-Gram Linear Servo Offset Servo m. langem Ruderweg	Servos linéaires 2.3g course longue	Servo lineare a corsa lunga 2.3g
EFLRMLP6	MLP6DSM Transmitter Mode 2	E-flite MLP6DSM 6CH Sender 2.4GHz: 180 QX HD	Emetteur MLP6DSM Mode 2	MLP6DSM Trasmettitore Mode 2
EFLRMLP61	MLP6DSM Transmitter Mode 1	E-flite MLP6DSM 6CH Sender 2.4GHz: 180 QX HD M1	Emetteur MLP6DSM Mode 1	MLP6DSM Trasmettitore Mode 1

**Optional Parts – Optionale Bauteile –  
– Pièces optionnelles – Pezzi opzionali –**

<b>Part # • Nummer Numéro • Codice</b>	<b>Description</b>	<b>Beschreibung</b>	<b>Description</b>	<b>Descrizione</b>
SPMVA2500	Spektrum FPV System - Ultra Micro	Spektrum Ultra Micro FPV System mit V-Brille	Système FPV Spektrum Ultra Micro	Sistema Spektrum FPV - Ultra Micro
SPMVS2500	Camera and Teleporter V4 headset bundle	Spektrum Teleporter V4 m. Micro-Kamera 25mW	Pack caméra avec lunettes Teleporter V4	Sistema videocamera e visore V4
SPMVA2500	25mW FPV Micro Camera	Spektrum 5,8Ghz 25mw Micro-Videokamera u. Vtx 5-13V	Micro caméra FPV 25mW	25mW FPV Micro Camera
SPMVR1100	Teleporter V4 Headset	Spektrum V4-Videobrille mit Head Tracking	Lunettes Teleporter V4	Visore Teleporter V4
SPMVM430	Spektrum Monitor	Spektrum Monitor	Moniteur Spektrum	Spektrum Monitor
EFLUC1008	DC Power Cord:	E-flite DC-Anschlußkabel	Cordon d'alimentation DC	Cavo alimentazione DC
EFLA700UM	Charge Plug Adapter:	E-flite EFL Ladekabeladapter	Adaptateur de charge	Adattatore spina di carica
RTM55R1000	Phoenix R/C Pro Simulator V5.5 w/ DXe Mode 2	Phoenix R/C Pro Simulator V5.5 m. DXe	Simulateur Phoenix V5.5avec DXe mode 2	Phoenix R/C Pro simulatoreV5.5 w/DXe Mode 2
RTM5500	Phoenix R/C Pro Simulator V5.0	Phoenix R/C Pro Simulator V5.0	Simulateur Phoenix V5	Phoenix R/C Pro simulatore V5.0
	DX5e DSMX 5-Channel Transmitter	DX5e DSMX 5-Kanal Sender	Emetteur DX5e DSMX 5 voies	DX5e DSMX Trasmettitore 5 canali
	DX6 DSMX 6-Channel Transmitter	DX6 DSMX 6-Kanal Sender	Emetteur DX6 DSMX 6 voies	DX6 DSMX Trasmettitore 6 canali
	DX7s DSMX 7-Channel Transmitter	Spektrum DX7s 7 Kanal Sender	Emetteur DX7s DSMX 7 voies	DX7s DSMX Trasmettitore 7 canali
	DX8 DSMX Transmitter	Spektrum DX8 nur Sender	Emetteur DX8 DSMX 8 voies	DX8 DSMX Trasmettitore 8 canali
	DX9 DSMX Transmitter	Spektrum DX9 nur Sender	Emetteur DX9 DSMX 9 voies	DX9 DSMX Trasmettitore 9 canali
	DX10t Transmitter	Spektrum DX10t nur Sender	Emetteur DX10t DSMX 10 voies	DX10t DSMX Trasmettitore 10 canali
	DX18 Transmitter	Spektrum DX18 nur Sender	Emetteur DX18 DSMX 18 voies	DX18 DSMX Trasmettitore 18 canali



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