



# **VisionAire**<sup>\*\*</sup>



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.

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

#### **Safety Precautions and Warnings**

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.

- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.
- · Always keep aircraft in sight and under control.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly.
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Always ensure failsafe is properly set before flying.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

# **Battery Warning**

The Battery Charger included with your aircraft is designed to safely balance and 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 (5–49° C). Do not store battery or aircraft in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- Always charge batteries away from flammable materials.
- Always inspect the battery before charging and never charge damaged batteries.
- Always disconnect the battery after charging, and let the charger cool between charges.

- Always constantly monitor the temperature of the battery pack while charging.
- ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTER-IES. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage
- Never discharge Li-Po cells to below 3V under load.
- · Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside recommended levels.
- 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.

# - Introduction -

Welcome to the exciting world of 3D flight! Even if this isn't your first 3D airplane, the *ParkZone® VisionAire*<sup>m</sup> aircraft is going to be a fast favorite. Its awesome power-to-weight performance coupled with the incredible balance of stability and agility its *AS3X*<sup>®</sup> (Artificial Stabilization – 3-aXis) system makes possible will have you pushing the limits of your aerobatic abilities in no time. The light wing loading and forgiving slow speed characteristics help too.

Before you start exploring the edges of the envelope, though, you must take a little time to read this manual. It contains important information about binding the VisionAire aircraft to your *DSM2®/DSMX®* transmitter, recommended dual rate settings, battery charging and much more. There's also a handy Troubleshooting Guide. It's all here to make sure your first flight, and every one after, is the best it can be.



# **Table of Contents**

Charging the Flight Battery	4
Low Voltage Cutoff (LVC)	4
Transmitter and Receiver Binding	5
Installing the Battery	5
AS3X System	6
Arming the ESC and Receiver	6
Installing Landing Gear	6
Installing Horizontal Tail	7
Control Surface Centering and Installing Clevises on Control Horn	s 7
Control Horn and Servo Arm Settings	7
Installing SFG Technology® Wing Fences	8
Installing the Wings	8
Transmitter Setup	9
Dual Rates and Expos	9
Control Direction Test	10
AS3X Control Direction Test	11

Center of Gravity (CG)	11
Flying Tips and Repairs	12
First Flight Preparation	12
Maintenance After Flying	12
Guidelines for Flying 3D	13
Service of Power Components	13
AMA National Model Aircraft Safety Code	14
Troubleshooting Guide AS3X	15
Troubleshooting Guide	15
Limited Warranty	
Contact Information	17
Compliance Information for the European Union	17
Parts Contact Information	64
Replacement Parts	
Optional Parts	
1	

# **Specifications**



# **Charging the Flight Battery**

Your VisionAire aircraft comes with a DC balancing charger and 3S Li-Po battery. You should only charge your battery with 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, ensure 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**

- Balances and 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



#### The Battery Charging Process 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 1. 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 (the VisionAire aircraft 2200mAh Li-Po battery will charge at 2 amps). DO NOT change the charge rate once the battery begins charging. 5. Move the cell selector switch to 2-cell or 3-cell depending on your battery (3-cell for included battery). 6. Connect the Balancing Lead of the Battery to the 2-cell or 3-cell charger port (4 pin charger port for your included 3-cell battery). 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. Attempting to charge an over-discharged battery will cause the charger to repeatedly flash and beep, indicating an error has occurred. 9. Always unplug the battery from the charger immediately upon completion of charging. **CAUTION**: Overcharging a battery can cause a fire. 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. NOTICE: If using a battery other than the included Li-Po battery, refer to your battery manufacturer's instructions for charging.

# Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supplied to the motor. Power to the motor pulses, showing that some battery power is reserved for flight control and safe landing.

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. 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.

## Transmitter and Receiver Binding

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum<sup>™</sup> DSM2<sup>®</sup>/DSMX<sup>®</sup> technology equipped aircraft transmitter to the receiver for proper operation (Please visit www.bindnfly.com for a complete list of compatible transmitters).

**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.



\*\* The throttle will not arm if the transmitter's throttle control is not put at the lowest position. If you encounter problems, follow the binding instructions and refer to the transmitter Troubleshooting Guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

# **Installing the Battery**

- 1. Press the latch button (A) and remove the battery hatch.
- 2. Apply the included strip of hook and loop tape to the bottom of your battery.
- 3. For the recommended CG, install the battery near the center of the compartment, then press the battery onto the hook and loop strip (**B**) and close the 2 hook and loop straps (**C**) around the battery. See the Adjusting the Center of Gravity instructions for more information.
- 4. Connect a fully charged battery to the ESC. *See the Arming the ESC instructions for correct connection of the battery to the ESC.*
- 5. Reinstall the battery hatch.

**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 become damaged, resulting in loss of performance and potential fire when batteries are charged.

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





# AS3X System

Horizon Hobby has always made RC sport, scale and unique aircraft with the kind of performance experts appreciate. First used in Blade<sup>®</sup> ultra micro flybarless helicopters, MEMS sensor technology within the Artificial Stability - 3 aXis (AS3X) System has been specifically tuned for airplanes helping invisibly correct for turbulence, torque and tip stalls.

Now the exclusive AS3X Stabilization system makes the leap from Ultra Micro aircraft to high performance parkflyers with the AR635 receiver. The precision and performance available from AS3X equipped Ultra Micro airplanes has

# **Arming the ESC and Receiver**

Arming the ESC also occurs after binding as previously described, but subsequent connection of a flight battery requires the steps below.

#### AS3X

The AS3X system will not activate until the throttle stick or trim is increased for the first time. Once the AS3X is active, the control surfaces may move rapidly on the aircraft. This is normal. AS3X will remain active until the battery is disconnected.

**NOTICE:** Due to increased servo power demands, only use the 40-Amp Lite Pro Switch-Mode BEC Brushless ESC (EFLA1040LB V2) with the AR635. Use of any other ESC presently available may result in damage to the aircraft.

- 1. Lower the throttle and throttle trim to lowest settings. Power on the Transmitter, then wait 5 seconds.
- Remove the battery hatch and install the flight battery to the hook and loop strip, then connect the battery to the ESC, noting proper polarity. Keep the aircraft immobile on its wheels away from wind for 5 seconds. If the ESC sounds a continuous double beep after the flight battery is connected, recharge or replace the battery.

**DO NOT** connect the battery while the throttle stick is at full or the ESC will go into programming mode.

If a musical tone sounds after 5 seconds, immediately disconnect the battery, then lower the throttle.

Refer to the ESC manual (available separately) for more information.

- 3. When power is applied to the ESC:
  - 1) The ESC will sound a series of tones (refer to step 4 of the binding instructions for more information).
  - 2) An LED will light on the receiver (the red, blue and green gain LEDs will also flash).

For further explanation of the gain lights, refer to the "Initializing the AR635" section of the AR635 receiver manual.

# **Installing Landing Gear**

- 1. Install the landing gear strut (**A**) with the wheels raked forward as shown.
- 2. Install the cover (**B**) on the fuselage using 4 screws (**C**).

Disassemble in reverse order.



heralded a new era of performance, and with the AR635 that performance is introduced for larger airplanes.

The outstanding control agility delivers an ultra smooth, locked-in feel that obeys your every command with performance that's natural feeling. It's so gratifying, in fact, that it's as though you're the RC pilot of an expertly tuned, giant-scale aircraft. Welcome to AS3X, your parkflyer will never be the same! To see what we mean, go to www.E-fliteRC.com/AS3X.







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



# **Installing Horizontal Tail**

- 1. Slide the horizontal tail tube (A) into the hole in the rear of the fuselage.
- 2. Install the 2 piece (left and right) horizontal tail as shown. Ensure the control horn faces down.
- 3. Apply 8 pieces of tape (**B**) to the fuselage mounts (one on the top and bottom of each half of the horizontal tail).
- Attach the clevis to the elevator control horn (see instructions for clevis connection).
- 5. When needed, disassemble in reverse order.

# **Control Surface Centering and Installing Clevises on Control Horns**

**Tip:** Turn the clevis on the linkage to change the length of the linkage between the servo arm and the control horn.

- Pull the tube from the clevis to the linkage.
- Carefully spread the clevis, then insert the clevis pin into the desired hole in the control horn.
- Move the tube to hold the clevis on the control horn.

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



# **Control Horn and Servo Arm Settings**

Fly the model at recommended settings before making changes. The illustration shows linkage positions chosen for the most balanced aerobatic response and AS3X performance. Linkage connections on the control horns directly affect aircraft response and AS3X performance.

**CAUTION:** Extreme 3D Flying is for advanced modelers. Moving linkages to other positions will require gain adjustment. If you increase the available travel by moving the linkage in on the control horn, the gain must be reduced to prevent oscillations in flight. Refer to the receiver manual for instructions.







# Installing SFG Technology® Wing Fences

- 1. Carefully apply the included tape (A) to the wing fence base.
- Align and install the left and right (marked L and R) top and bottom wing fences (B) into the respective wing slots (C). The bottom fences have integrated plastic skids, as shown.

If desired, apply a small amount of thin CA (cyanoacrylate adhesive) to the fences and wings.



# **Installing the Wings**

1. Slide the wing tube (A) into the fuselage.

**CAUTION:** DO NOT crush or otherwise damage the wiring when attaching the wing to the fuselage.

- 2. Install the left and right wing (**B** and **C**) over the wing tube and into the wing slot of the fuselage while inserting the aileron servo connectors through the provided holes.
- 3. Invert the fuselage so the landing gear is facing up. Secure the left and right wings to the fuselage using the included screws (**D**).
- 4. Remove the screw (E) and the receiver cover (F) from the bottom of the fuselage.

**Tip:** If needed, use hemostats or pliers to pull the servo connectors into the fuselage.

- 5. Connect the aileron servos from the wings to the Y-harness connectors in the fuselage. The left and right aileron servos can be connected to either side of the Y-harness.
- 6. Replace the receiver cover and the screw.

Disassemble in reverse order.

**IMPORTANT:** Correct operation of the AS3X system requires connection of both ailerons to the included Y-harness and the AILE channel of the receiver.



# **Transmitter Setup**

**IMPORTANT:** The AR635 receiver's default setting is for 3D mode using the DX6i transmitter and above. If you choose to fly using another transmitter, you must refer to the "receiver manual" for instructions.

A DSM2/DSMX four-channel (or better) transmitter with dual rates is required for flying this aircraft. The *Spektrum*<sup>™</sup> DX4e, DX5e, DX6i, DX7s, DX8, DX10t, DX18 and JR<sup>®</sup> X9503, 11X or 12X transmitters may be used. The settings below are recommended starting settings.

#### **Transmitters DX4e and DX5e**

Servo travel ...... 100% (not adjustable) Expo recommended

#### Activation and Deactivation of the Expo feature

(Some older DX4e and DX5e transmitters do not have this option.) If you plan to fly your aircraft with a DX4e or DX5e, disconnect the battery from the aircraft before activating the Expo feature in your transmitter. Once Expo is activated, it will remain activated for subsequent power cycles of the transmitter. Once Expo is deactivated, it will remain deactivated until it is activated again.

#### DX4e (Modes 1 and 2):

- 1. With the transmitter OFF, put the ACT switch in the down position (ON) and the Rate switch in the down position (LO).
- 2. Push and hold the trainer (bind) button and move and hold the two sticks (as shown here) for activation (**A**) or deactivation (**B**), while powering on the transmitter.
- Release the trainer switch and the control sticks only after a series of tones sound (ascending tones for activation, descending tones for deactivation).

#### DX5e (Modes 1 and 2):

- 1. Hold the aileron trim switch to the right for activation or to the left for deactivation when powering on the transmitter.
- Release the aileron trim switch after a series of tones (ascending tones to confirm that Expo is activated or descending tones to confirm that Expo is deactivated).

#### **Transmitters DX6i and Above**

**Tip:** DX6i transmitters can activate all three channel rates (aileron, elevator and rudder) using a combined Dual Rates switch. Rates and expo can also be adjusted if the recommended rates are not comfortable.

**Tip**: DX7s and above transmitters can activate rates on one Dual Rates switch like the DX6i transmitter. However, DX7s and above transmitters can also activate rates and exponential on the same switch as the flight mode (Channel 5). If desired, GF (General Flight) mode can activate low rates with moderate exponential, and 3D mode can activate high rates with exponential on a curve.

# **Dual Rates and Expos**

Dual Rate	High Rate	Ехро	Low Rate	Ехро
Aileron	100%	20%	70%	15%
Elevator	100%	20%	70%	15%
Rudder	100%	15%	70%	10%

For the best flight experience, we recommend flying your aircraft with the Dual Rate switched to high rate. However, if the control response is too great, low rate is still available.

A B C C C C C C C C			
✓ Transmitter Setup Checklist			
Before binding for Non-computerized Transmitters (DX4e, DX5e):			
1. Make sure the Exponential values are ON.			
2. Set all trims to NEUTRAL (0%).			
3. Move the transmitter Dual Rate switch to High Rate.			
After binding:			
<ol> <li>Check and adjust the servos so each arm's neutral position is perpendicular or as close to 90° as possible (loosen and adjust the servo arm splines on the servo only when needed). DO NOT use sub-trims to make fine adjustments, off-center sub-trim will affect servo travel and AS3X operation.</li> </ol>			
2. Adjust linkage lengths so the control surfaces center when the servo arm is close to perpendicular.			
3. Set rates in the transmitter as recommended.			
<b>CAUTION:</b> For safe operation, always re-bind the airplane after setup is complete to ensure the failsafe is updated with the latest setup.			

#### ✓ Transmitter Setup Checklist

Before binding for Computerized Transmitters (DX6i, DX7/DX7se, DX7s, DX8, DX10t, DX18):

- 1. Choose a blank model memory with only default (zero) settings (including trim and sub-trim).
- 2. Choose Wing/Aircraft Type for single aileron servo.
- 3. Make sure the Exponential values are set.
- Set all sub-trims to NEUTRAL (0%).
   Set servo travel values to 125% for Aileron, Elevator, and Rudder.
- 6. Set the Dual Rate to 100%, 70% for Aileron, Elevator, and Rudder.

#### After binding:

- 1. Check and adjust the servos so each arm's neutral position is perpendicular or as close to 90° as possible (loosen and adjust the servo arm splines on the servo only when needed). **DO NOT** use sub-trims to make fine adjustments, off-center sub-trim will affect servo travel and AS3X operation.
  - 2. Adjust linkage lengths so the control surfaces center when the servo arm is close to perpendicular.
  - 3. Set rates in the transmitter as recommended.

**CAUTION:** For safe operation, always re-bind the airplane after setup is complete to ensure the failsafe is updated with the latest setup.

# **Control Direction Test**

Move the controls on the transmitter to make sure the aircraft control surfaces move correctly and in the proper direction. After performing the Control Test, correctly set the failsafe. Make sure the transmitter controls are at neutral and the throttle and throttle trim are in the low position, then rebind the model to your transmitter. If the receiver loses its link to the transmitter, the failsafe will drive the servos to the settings made at binding.



# **AS3X Control Direction Test**

Perform the Control Direction Test to ensure the aircraft responds correctly to your transmitter. Once you are sure the aircraft responds correctly, move the aircraft as shown to ensure the AS3X system moves the control surfaces in their proper direction. If the control surfaces do not respond as shown, do not fly the aircraft. Refer to the receiver manual for more information.

The AS3X system will not activate until the throttle stick or trim is increased for the first time after the flight battery is connected. Once the AS3X is active, the control surfaces may move rapidly on the aircraft. This is normal. AS3X will remain active until the battery is disconnected.

#### **Gain Adjustment**

This aircraft and receiver were rigorously tuned for various flight conditions. On rare occasions, you might still see oscillation. Refer to Flying Tips and the Troubleshooting Guide for more information about oscillation or the option for axis gain adjustment.



# **Center of Gravity (CG)**

The CG location is measured from the leading edge of the wing at the root. This CG location has been determined with the recommended Li-Po battery installed near the center of the battery compartment.

**Tip:** You can fly your aircraft inverted to confirm CG is correct. The aircraft should fly level when flying inverted at <sup>3</sup>/<sub>4</sub> throttle with little or no elevator down pressure. If the aircraft CG is too far forward (nose-heavy), significant down elevator is required to fly level. If the aircraft CG is too far aft (tail-heavy), up elevator is required to fly level.



# **Flying Tips and Repairs**

#### **Range Check your Radio System**

Consult local laws and ordinances before choosing a flying location.

Perform a range check with your radio system. We recommend flying your ParkZone VisionAire aircraft outside in no greater than moderate winds. 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.

#### **Understanding Oscillation**

Once the AS3X system is active (after advancing the throttle for the first time), you will normally see the control surfaces react to aircraft movement. In some flight conditions, you may see oscillation (the aircraft rocks back and forth on one axis due to overcontrol). If oscillation occurs, decrease airspeed. Ensure the aircraft is in General Flight mode for higher airspeeds. If oscillation persists, refer to the Troubleshooting Guide for more information.

#### Takeoff

Place the aircraft in position for takeoff (facing into the wind). Set the flight mode (Channel 5) to **General Flight** and gradually increase the throttle to 3/4 to full and steer with the rudder. Pull back gently on the elevator and climb to a comfortable altitude.

#### Flying

Before activating 3D mode, fly the airplane and trim it for level flight at 3/4 throttle. After landing, adjust the linkages mechanically to account for trim changes and then reset the trims to neutral. Before changing flight modes, ensure the aircraft will fly straight and level with no trim or sub-trim.

This aircraft is extremely responsive to control input. Fly in General Flight (GF) mode (Channel 5, Position 0) until you are familiar with the aircraft's response. Fly first attempts in 3D mode at high altitude and slow speeds.

#### General Flight (GF) and 3D flight

The receiver's default gain settings for GF and 3D modes are set at the factory for safe and reliable performance.

**CAUTION:** Flying in level forward flight and calm wind conditions above 3/4 throttle in 3D mode or long high-speed dives may result in strong oscillation that can damage the aircraft.

If there is oscillation in either mode (GF or 3D), decrease throttle immediately. If oscillation persists, refer to the Troubleshooting Guide to adjust (decrease) the axis gain to stop oscillation. For additional instructions on changing the gain settings, refer to the receiver manual.

# **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. Ensure the receiver settings match your transmitter (see Transmitter Setup).

# **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.

#### Landing

For your first flights, set your transmitter timer or a stopwatch to 5 minutes. Adjust your timer for longer or shorter flights once you have flown the model. When the motor pulses, land the aircraft immediately and recharge the flight battery. It is not recommended to fly the battery to LVC.

Make sure to land into the wind. Fly the aircraft to approximately 36 inches (90 cm) or less above the runway, using a small amount of throttle for the entire descent. Keep the throttle on until the aircraft is ready to flare. During flare,

WARNING

keep the wings level and the aircraft pointed into the wind. Gently lower the throttle while pulling back on the elevator to bring the aircraft down on its wheels.



**NOTICE:** If a crash is imminent, reduce the throttle and trim fully. Failure to do so could result in extra damage to the airframe, as well as damage to the ESC and motor.

**NOTICE:** Crash damage is not covered under warranty.

**NOTICE:** When you are 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<sup>™</sup> construction of this aircraft, 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. For a listing of all replacement and optional parts, refer to the list at the end of this manual.

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

- 8. Make sure linkages move freely.
- 9. Perform the Control Direction Test with the transmitter.
- 10. Perform the AS3X Control Direction Test with the aircraft.
- 11. Adjust flight controls and transmitter.
- 12. Perform a radio system Range Check.
- 13. Find a safe and open area.
- 14. Plan flight for flying field conditions
- 5. Repair or replace all damaged parts.
- 6. Store flight battery apart from aircraft and monitor the battery charge.
- Make note of flight conditions and flight plan results, planning for future flights.

# **Guidelines for Flying 3D**

#### **Getting Started**

This aircraft and its AS3X system were designed together to help an intermediate pilot apply standard flying skills to the demands of 3D flying. The calmer the wind conditions, the easier it is to execute maneuvers.

Enable the 3D setting in the AS3X system using the assigned channel 5/AUX switch on your transmitter. You may want to fly low airspeed, high rate maneuvers at an altitude that allows you space to escape into forward flight. For your first hover attempts, fly with the canopy toward you for easier orientation.

When you fly 3D, manage your throttle smoothly, but quickly respond to keep your model in the air and oriented the direction you want. If desired, use spotters to keep others from distracting you. Advanced 3D maneuvers always seem to attract a curious audience.

#### **Building Your Skills**

Increasing your skills takes time. Practice regularly and try following a plan for increasing your skills. Mastering one maneuver at a time may be more beneficial than trying to learn everything all at once. Always stay aware of your aircraft's performance in different conditions and attitudes:

#### What response can you consistently get from your aircraft?

- Set up your aircraft for consistent response in all attitudes and flight conditions where you choose to fly. Not all challenges are due to the equipment, just as not all challenges are due to the pilot's skills.
- If you feel you reach a plateau in your skills, see if you have built the right habits in the fundamentals of 3D flying. Play to your strengths and the strengths of your aircraft while minimizing reliance on areas of weakness.
- Know yourself and your equipment well enough so you can confidently take on greater challenges. Push yourself, but avoid pushing past your aircraft's performance envelope.
- Seek fun ways to safely share your enjoyment of 3D flying.

When you feel you are ready, you might want to try to reduce the gain to zero (turn off the AS3X system) and see how you do.

# **Service of Power Components**

#### Disassembly

- 1. Remove the screw (A) and spinner (B) from the collet (G).
- 2. Remove the spinner nut (C), propeller (D), backplate (E) and collet from the motor shaft (H). You will need a tool to turn the spinner nut.
- 3. Remove 3 screws (I) from the cowling (J). Carefully remove the cowling from the fuselage. Paint may keep the cowling attached to the fuselage.
- 4. Remove the 4 screws (**K**) from the motor mount (**L**) and the fuselage.
- 5. Disconnect the motor wires from the ESC wires.
- 6. Remove the 4 screws  $(\ensuremath{M})$  and motor  $(\ensuremath{N})$  from the motor mount.



You may want to master the **Harrier** first, an essential maneuver used to enter and exit other 3D maneuvers.

Advanced 3	Advanced 3D Maneuvers				
Harrier:	The aircraft flies forward slowly in a nose high (ap- proximately 45°) attitude.				
Inverted Harrier:	The inverted aircraft flies forward slowly in a nose high (approximately 45°) attitude.				
Hover:	The aircraft nose is pointed up while the prop thrust keeps the model in the air with little or no change in altitude.				
Torque Roll	The aircraft hovers with little or no change in altitude while rotating left around its roll axis.				
Harrier Roll:	The aircraft does a harrier while rotating around its roll axis.				
Waterfall:	The aircraft turns over completely (360 degrees) in the pitch axis with very little forward motion or change in altitude.				
Inverted Waterfall:	The inverted aircraft turns over completely (360 degrees) in the pitch axis with very little forward motion or change in altitude.				

#### Assembly

Assemble in reverse order.

- Correctly align and connect the motor wire colors with the ESC wires.
- The propeller size numbers (12 x 4) must face out from the motor for correct propeller operation.
- A tool is required to tighten the lock nut on the collet.



# 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.

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

#### **B. RADIO CONTROL**

- 1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
- A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
- 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.
- 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.
- 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.
- 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

AS3X

Problem	Possible Cause	Solution
Oscillation	Flying over recommended airspeed	Reduce air speed
	Damaged propeller or spinner	Replace propeller or spinner
	Imbalanced propeller	Balance the propeller. For more information, view John Redman's propeller balancing video at www. horizonhobby.com
	Flight condition variations	Adjust gain to current flight conditions (wind, updrafts, local conditions (elevation, humidity, temperature, etc.))
	Motor vibration	Replace parts or correctly align all parts and tighten fasteners as needed
	Loose receiver	Align and secure receiver in fuselage
	Loose aircraft controls	Tighten or otherwise secure parts (servo, arm, linkage, horn and control surface)
	Worn parts	Adjust gain to compensate for parts wear or replace worn parts (especially propeller, pivot points or servo)
	Irregular servo rotation	Replace servo
	Incorrect transmitter type (com- puterized or non-computerized) assigned in receiver	Assign correct transmitter type in the receiver (refer to receiver manual)
	If oscillation persists	Decrease gain (refer to receiver manual)
Trim change	Trim is not at neutral	If you adjust trim more than 8 clicks, adjust the clevis to remove trim
when flight mode is switched	Sub-Trim is not at neutral	No Sub-Trim is allowed. Adjust the servo arm or the clevis
Incorrect response to the AS3X Control Direction Test.	Incorrect direction settings in the receiver, which can cause a crash	DO NOT fly. Correct the direction settings (refer to the receiver manual), then fly.

# Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not re-	Throttle not at idle and/or throttle trim too high	Reset controls with throttle stick and throttle trim at lowest setting
spond to throttle but	Throttle servo travel is lower than 100%	Make sure throttle servo travel is 100% or greater
controls	Throttle channel is reversed	Reverse throttle channel on transmitter
	Motor disconnected from ESC	Make sure motor is connected to the ESC
Extra propeller noise	Damaged propeller and spinner, collet or motor	Replace damaged parts
or extra vibration	Propeller is out of balance	Balance or replace propeller
	Prop nut is too loose	Tighten the prop nut
	Spinner is not tight or fully seated in place	Tighten the spinner or remove the spinner and turn it 180 degrees.
Reduced flight time	Flight battery charge is low	Completely recharge flight battery
or aircraft under-	Propeller installed backwards	Install propeller with numbers facing forward
powered	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 too low for flight conditions	Replace battery or use a larger capacity battery
Aircraft will not Bind (during binding) to	Transmitter too near aircraft during binding process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
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 binding again
	The bind plug is not installed correctly in the bind port	Install bind plug in bind port and bind the aircraft to the transmitter
	Flight battery/transmitter battery charge is too low	Replace/recharge batteries
	Bind switch or button not held long enough during bind process	Power off transmitter and repeat bind process. Hold transmitter bind button or switch until receiver is bound

Problem	Possible Cause	Solution
Aircraft will not con- nect (after binding)	Transmitter too near aircraft during connecting pro- cess	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
to 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 connecting again
	Bind plug left installed in bind port	Rebind transmitter to the aircraft and remove the bind plug before cycling power
	Aircraft bound to different model memory (Model- Match™ radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound using different DSM protocol	Bind aircraft to transmitter
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Transmitter is not bound correctly or the incorrect model was selected	Re-bind or select correct model in transmitter
	Flight battery charge is low	Fully recharge flight battery
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
Controls reversed	Transmitter settings are reversed	Perform the Control Direction Test and adjust the controls on transmitter appropriately
Motor power pulses	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing
then motor loses power	Weather conditions might be too cold	Postpone flight until weather is warmer
	Battery is old, worn out, or damaged	Replace battery
	Battery C rating might be too 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, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations.

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

#### **Purchaser's Remedy**

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

#### Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

#### Law

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

#### WARRANTY SERVICES

#### **Questions, Assistance, and Services**

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at www.horizonhobby.com, submit a Product Support Inquiry, or call 877.504.0233 toll free to speak to a Product Support representative.

#### **Inspection or Services**

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

copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

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

#### **Warranty Requirements**

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

#### **Non-Warranty Service**

Should your service not be covered by warranty, service will be com-

## **Contact Information**

pleted 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.

NOTICE: Horizon service is limited to Product compliant in the country of use and ownership. If non-compliant product is received by Horizon for service, it will be returned unserviced at the sole expense of the purchaser.

Country of Purchase	Horizon Hobby	Address	Phone Number/Email Address
United States of	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 Online Repair Request: visit www.horizonhobby.com/service
America	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	Christian-Junge-Straße 1 25337 Elmshorn Germany	+49 (0) 4121 2655 100 service@horizonhobby.de
France	Horizon Hobby SAS	11 Rue Georges Charpak 77127 Lieusaint, France	+33 (0) 1 60 18 34 90 infofrance@horizonhobby.com
China	Horizon Hobby – China	Room 506, No. 97 Changshou Rd. Shanghai, China, 200060	+86 (021) 5180 9868 info@horizonhobby.com.cn

# **Compliance Information for the European Union**

#### **Declaration of Conformity**

(in accordance with ISO/IEC 17050-1)

#### No. HH2012092701

Product(s): Item Number(s): Equipment class: PKZ VisionAire BNF PKZ6580 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, EMC Directive 2004/108/EC and LVD Directive 2006/95/EC:

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

EN60950-1:2006+A12: 2011

Signed for and on behalf of:

EN55022: 2010 EN55024: 2010

Horizon Hobby, Inc. Champaign, IL USA Sept. 27, 2012

DEGT

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.

# Parts Contact Information • Kontaktinformationen für Ersatzteile • Coordonnées pour obtenir des pièces détachées • Recapiti per i ricambi

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 Hobby GmbH	Christian-Junge-Straße 1 25337 Elmshorn, Germany	+49 (0) 4121 2655 100 service@horizonhobby.de
France	Horizon Hobby SAS	11 Rue Georges Charpak 77127 Lieusaint, France	+33 (0) 1 60 18 34 90 infofrance@horizonhobby.com
China	Horizon Hobby – China	Room 506, No. 97 Changshou Rd. Shanghai, China, 200060	+86 (021) 5180 9868 info@horizonhobby.com.cn

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

Part #   Nummer Numéro   Codice	Description	Beschreibung	Description	Descrizione
PKZ6538	Decal Set: VisionAire	Dekorbogen: VisionAire	Planche de décalcomanies : VisionAire	Foglio con decalcomanie: VisionAire
PKZ6508	Spinner: VisionAire	Spinner: VisionAire	Cône : VisionAire	Ogiva: VisionAire
PKZ6503	Landing gear set: VisionAire	Fahrwerk-Set: VisionAire	Jeu de train d'atterrissage principal : VisionAire	Set del carrello di atterraggio: Vision- Aire
PKZ6521	Wing & H. Tail Tube: VisionAire	Parkzone VisionAire Tragflächen- und Leitwerksverbinder: VisionAire	Clé d'aile et de stabilisateur : VisionAire	Ala & tubo coda orizz: VisionAire
PKZ6513	Hatch Set: VisionAire	Parkzone VisionAire Akkuklappe: VisionAire	Set de trappes : VisionAire	Set portello: VisionAire
PKZ6537	SFG Set: VisionAire	Parkzone VisionAire SFG Set: VisionAire	Set de SFG : VisionAire	Set SFG: VisionAire
PKZ6533	Horns & Pushrod: VisionAire	Parkzone VisionAire Ruderhorn und Gestängeset: VisionAire	Tringleries et guignols : VisionAire	Squadrette e comandi: VisionAire
PKZ6567	Bare Fuse: VisionAire	Parkzone VisionAire Rumpf o. Einbauten: VisionAire	Fuselage nu : VisionAire	Solo fusoliera: VisionAire
PKZ6528	Motor mount: VisionAire	Motorbefestigung: VisionAire: VisionAire	Support moteur : VisionAire	Supporto del motore: VisionAire
PKZ6520	Wing Set: VisionAire	Parkzone VisionAire Tragflächenset: VisionAire	Aile : VisionAire	Set ala: VisionAire
PKZ6524	H. Tail: VisionAire	Parkzone VisionAire Höhenruder: VisionAire	Stabilisateur : VisionAire	Piani coda orizz: VisionAire
PKZ6525	Rudder: VisionAire	Parkzone VisionAire Seitenruder: VisionAire	Dérive : VisionAire	Timone: VisionAire
PKZ6529	Tray & Gear Mount: VisionAire	Parkzone VisionAire Akkuträger und Getriebabdeckung: VisionAire	Support de train d'atterrissage : VisionAire	Supporto carrello & tray: VisionAire
PKZ6526	Cowl: VisionAire	Parkzone VisionAire Motorhaube: VisionAire	Capot : VisionAire	Capottina motore: VisionAire
EFLM7225	BL10 Motor: VisionAire	Parkzone VisionAire BL10 Motor: VisionAire	Moteur BL10 : VisionAire	Motore BL10: VisionAire
EFLM72252	Prop Adapter: VisionAire	Parkzone VisionAire Propeller Adapter: VisionAire	Adaptateur d'hélice : VisionAire	Adattatore elica: VisionAire
EFLA1040LB	40-Amp Lite Pro Switch-Mode BEC Brushless ESC (V2)	E-flite 40-Amp Lite Pro Switch-Mode BEC Brushless Regler (V2)	Contrôleur Brushless 40A Lite Pro Switch mode BEC V2	
SPMAR635	Spektrum 6-Channel AS3X Sport Receiver	Spektrum 6 Kanal AS3X Sport Empfänger	Récepteur Spektrum 6 voies avec AS3X	Ricevitore sport AS3X Spektrum 6 canali
PKZ1029	2200mAh 3S 25C 11.1v LiPo	2200 mAh 3S 25C 11,1 V LiPo	Accu LiPo 2200 mAh 3S 25C 11,1 V	2200 mAh 3S 25C 11,1 V LiPo
EFLP12040E	Propeller: 12 x 4E	Propeller: 12 x 4E	Hélice 12x4E	Elica: VisionAire
EFLR7155	13 g Digital Micro Servo	E-flite 13g Digital Micro Servo	Micro servo digital 13g	Micro servo digitale 13g
PKZ1040	2-3 DC Lipo balancing charger	2-3 DC Lipo-Balancer-Ladegerät	Chargeur-équilibreur CC Li-Po 2–3 cellules	Caricabatteria con bilanciatore per 2 o 3 celle Li-Po
EFLM72251	BL10 Motor Shaft: VisionAire	Parkzone VisionAire BL10 Motorwelle: VisionAire	Axe de moteur BL10	Albero motore BL10: VisionAire

# **Optional Parts • Optionale Bauteile • Pièces optionnelles • Pezzi opzionali**

Part #   Nummer Numéro   Codice	Description	Beschreibung	Description	Descrizione
EFLB25003S30	2500mAh 3S 11.1V 30C LiPo, 12AWG EC3 by E-flite	E-flite 2500mAh 3S 11.1V 30C LiPo; 12AWG EC3	Batterie Li-Po E-flite 11.1V 3S 2500mA 30C avec prise EC3	2500mA Li-Po E-flite 11.1V 3S 30C 12AWG EC3
EFLA250	Park Flyer Tool Assortment, 5 pc	Park Flyer Werkzeugsortiment, 5 teilig	Assortiment d'outils park flyer, 5pc	Park Flyer assortimento attrezzi, 5 pc
EFLAEC302	EC3 Battery Connector, Female (2)	EC3 Akkukabel, Buchse (2)	Prise EC3 femelle (2pc)	EC3 Connettore femmina x batteria (2)
EFLAEC303	EC3 Device/Battery Connector, Male/Female	EC3 Kabelsatz, Stecker/Buchse	Prise EC3 male/femelle	EC3 Connettore batteria maschio/ femmina
EFLC3025	Celectra 80W AC/DC Multi-Chemistry Battery Charger	Celectra 80 W AC/DC Multi-Chemistry-Batterieladegerät	Chargeur de batterie AC/DC Celectra 80 W multi-types	Caricabatterie per batteria multichi- mica 80 W c.a./c.c.
EFLC3020	200W DC multi-chemistry battery charger	200W DC Multi-Batterie Ladegerät - EU	Chargeur multiple DC 200W	200W DC Caricabatterie universale
EFLC4010	Celectra 15VDC 250W Power Supply	Celectra 15 V DC 250-W-Netzstecker	Alimentation Celectra CC 15 V 250 W	Alimentatore Celectra 15V c.c., 250 W
	DX4e DSMX 4-Channel Transmitter	Spektrum DX4e DSMX 4 Kanal sender ohne Empfänger	Emetteur DX4e DSMX 4 voies	DX4e DSMX Trasmettitore 4 canali
	DX5e DSMX 5-Channel Transmitter	Spektrum DX5e DSMX 5 Kanal sender ohne Empfänger	Emetteur DX5e DSMX 5 voies	DX5e DSMX Trasmettitore 5 canali
	DX6i DSMX 6-Channel Transmitter	Spektrum DX6i DSMX 6-Kanal Sender	Emetteur DX6i DSMX 6 voies	DX6i DSMX Trasmettitore 6 canali
	DX7s DSMX 7-Channel Transmitter	Spektrum DX7s DSMX 7 Kanal Sender	Emetteur DX7s DSMX 7 voies	DX7s DSMX Trasmettitore 7 canali
	DX8 DSMX 8-Channel Transmitter	Spektrum DX8 DSMX 8 Kanal Sender	Emetteur DX8 DSMX 8 voies	DX8 DSMX Trasmettitore 8 canali

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#### www.parkzone.com PKZ6580