

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.

<u>CAUTION</u>: 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, 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.

WARNING AGAINST COUNTERFEIT PRODUCTS: If you ever need to replace your Spektrum receiver found in a Horizon Hobby product, always purchase from Horizon Hobby, Inc. or a Horizon Hobby authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, Inc. disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum.

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 the 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.

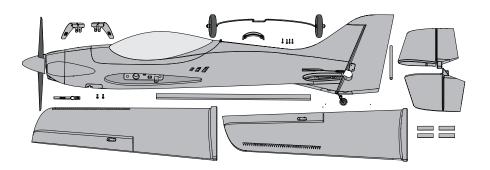
2

Table of Contents

Table of Contents	Center of Gravity (CG)	9
Transmitter and Receiver Binding	Control Direction Test AS3X Control Direction Test Flying Tips Motor Service Troubleshooting Guide AS3X Troubleshooting Guide Limited Warranty Warranty and Service Contact Information Compliance Information for the European Union Replacement parts Optional parts	9 10 11 12 12 12 13 13 14 15 15 58

Box Contents

Quick Start Reference		
Duel Detec	High	Low
Dual Rates	100 % 70%	
CG	76mm 3 inches back from the leading edge of the wing at the root.	
Flight Timer Setting	First Flight 5 Min.	7 Min.

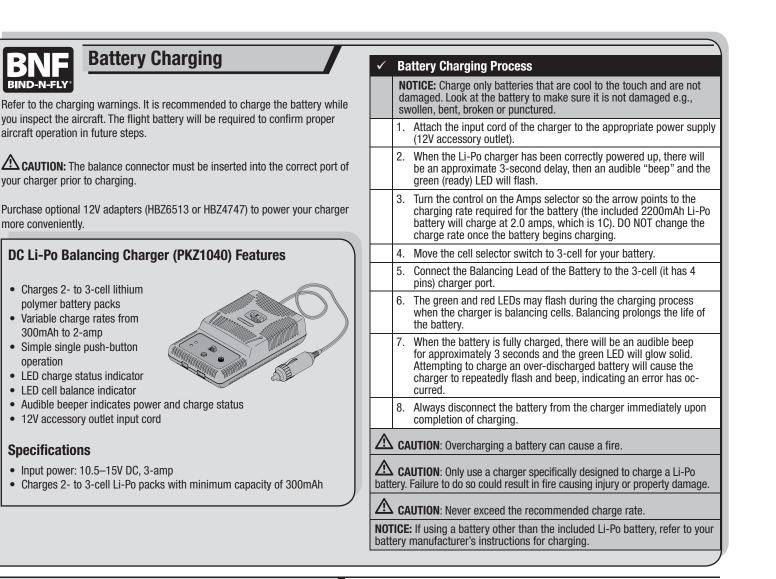


Specifications

PNP		BNF	1080.0mm (42.5 in)
Installed	Motor 480 Brushless Outrunner Motor,960Kv (PKZ4416)	Installed	
Installed	2 x Aileron Servos and 1 Elevator Servo (PKZ1081) 1 Rudder Servo (PKZ1090)	Installed	Ê
Installed	ESC 30-Amp Pro Switch-Mode BEC Brushless ESC (EFLA1030B)	Installed	(1017mm)
Sold Separately	Recommended Receiver Spektrum AR635 6-Channel Sport Receiver (SPMAR635)	Installed	inches (
Sold Separately	Recommended Battery 11.1V 3S 1800mAh 30C Li-Po (EFLB18003S30)	Included	- 40.0 i
Sold Separately	Recommended Battery Charger 2- to 3-Cell DC Li-Po Balancing Charger (PKZ1040)	Included	
Sold Separately	Recommended Transmitter Full-Range 4-Channel (or more) 2.4GHz with Spektrum [™] DSM2 [®] /DSMX [®] technology.	Sold Separately	Weight: 34.5 oz (978 g) with battery

\checkmark	Preflight Checklist
	1. Read this instruction manual thoroughly.
	2. Remove and inspect the contents.
	3. Charge the flight battery.
	4. Fully assemble the model.
	5. Install the flight battery in the aircraft (once it has been fully charged).
	6. Bind the aircraft to your transmitter.
	7. Make sure the linkages move freely.
	8. Perform the Control Direction Test with the transmitter.
	9. Perform the AS3X Control Direction Test with the aircraft.
	10. Adjust the flight controls and transmitter.
	11. Perform a radio system Range Check.
	12. Find a safe and open area.
	13. Plan flight for flying field conditions.

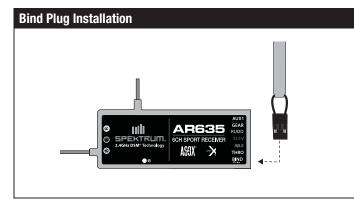
		Post Flight Checklist
	1.	Disconnect the flight battery from the ESC (Required for Safety and battery life).
	2.	Power OFF the transmitter.
	3.	Remove the flight battery from the aircraft.
	4.	Recharge the flight battery.
	5.	Repair or replace all damaged parts.
	6.	Store the flight battery apart from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

For a list of compatible DSM2/DSMX transmitters, please visit 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.



Failsafe

If the receiver loses transmitter communication, the failsafe will activate. When activated, the airplane controls return to the neutral position established during step 3 of the binding procedure.

\checkmark	Bi	nding Procedure Reference Table
	1.	Refer to your transmitter instructions for binding to a receiver.
	2.	Ensure the transmitter is powered off.
	3.	Make sure the transmitter controls are at neutral and the throttle is in the low position. $\!\!\!\!\!*$
	4.	Install a bind plug in the receiver bind port.
	5.	Connect the flight battery to the ESC. The ESC will produce a series of sounds. One long tone, then three short tones confirm that the LVC is set for the ESC.
	6.	The receiver LED will begin to flash rapidly.
	7.	Power on the transmitter while holding the transmitter bind button or switch.
	8.	When the receiver binds to the transmitter, the light on the receiver will turn solid and the ESC will produce a series of three ascending tones. The tones indicate the ESC is armed, provided the throttle stick and throttle trim are low enough to trigger arming.
	9.	Remove the bind plug from the bind port.
	10	. Safely store the bind plug.
	11	. The receiver should retain the binding instructions received from the transmitter until another binding is done.
low	est j	rottle will not arm if the transmitter's throttle control is not put at the position. If you encounter problems, follow the binding instructions or to the transmitter troubleshooting guide for other instructions. If

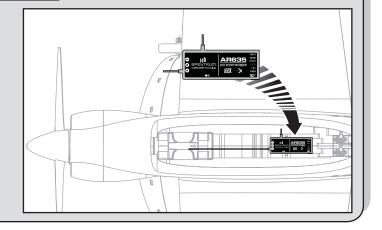
needed, contact the appropriate Horizon Product Support office.



Receiver Selection and Installation

The Spektrum AR635 receiver is recommended for ths airplane. If you choose to install another receiver, ensure that it is at least a 6-channel full range (sport) receiver. Refer to your receiver manual for correct installation and operation instructions.

- 1. Remove the canopy from the fuselage.
- 2. Install your full range (sport) receiver in the fuselage using double-sided servo tape.
- 3. Attach the elevator and rudder servo connectors to the appropriate channels of the receiver.
- 4. Attach the aileron Y-harness to the aileron channel of the receiver.
- 5. Attach the ESC connector to the throttle channel of the receiver.



Battery Installation and ESC Arming

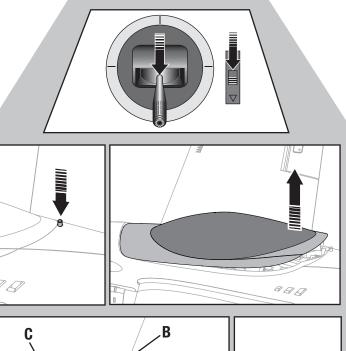
Battery Selection

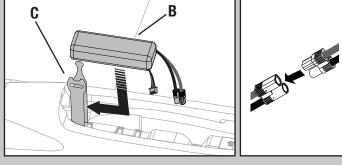
- We recommend the E-flite® 1800mAh 11.1V 3S 30C Li-Po (EFLB18003S30).
- If using another battery, the battery must be at least an 1800mAh battery.
- Your battery should be approximately the same capacity, dimensions and weight as the E-flite Li-Po battery to fit in the fuselage without changing the center of gravity a large amount.
- 1. Lower the throttle and throttle trim to the lowest settings. Power on the Transmitter, then wait 5 seconds.
- 2. Push the button (A) into the fuselage and remove the battery hatch.
- 3. Remove the battery hatch and install the battery (**B**) all the way to the front of the battery compartment. See the Adjusting the Center of Gravity instructions for more information.
- 4. Make sure the flight battery is secured using the hook and loop strap (C).
- Connect the battery to the ESC and keep the aircraft immobile on its wheels away from wind for 5 seconds.
 - The ESC will sound a series of tones (refer to step 5 of the binding instructions for more information).
 - An LED will light on the receiver (the red, blue and green gain LEDs will also flash).

If the ESC sounds a continuous double beep after the flight battery is connected, recharge or replace the battery.

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

6. Reinstall the battery hatch. Push the rear of the battery hatch securely to ensure the latch is fully engaged.



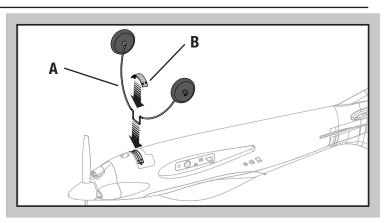


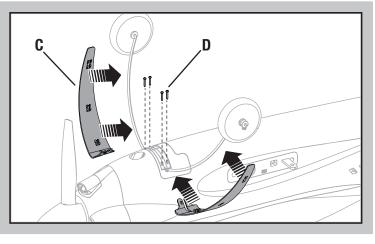


Landing Gear Installation

- 1. Install the landing gear strut (A) with the strut raked to the rear as shown.
- 2. Install the U-cover (B) on the fuselage.
- 3. Install the fairings (**C**, marked L and R) on the fuselage by using 4 screws (**D**).

Disassemble in reverse order.





Wing Installation

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.

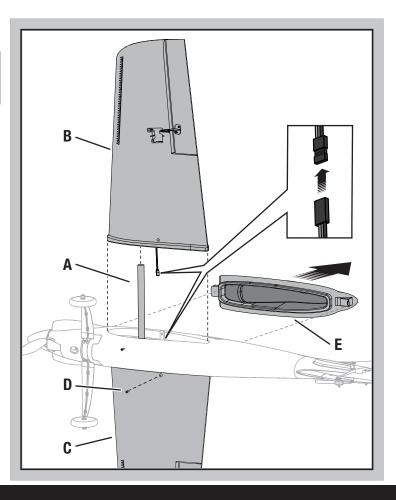
- 2. Install the left and right wings (**B** and **C**) over the wing tube and into the wing slot of the fuselage while inserting the aileron servo connectors through the provided holes.
- 3. Invert the fuselage so the landing gear is facing up. Secure the left and right wings to the fuselage using the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

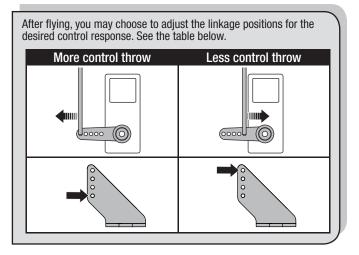
Disassemble in reverse order.

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



Control Horn and Servo Arm Settings

The table to the right shows the factory settings for the control horns and servo arms. Fly the aircraft at factory settings before making changes.



Horizontal Tail Installation

- 1. Slide the horizontal tail tube (A) into the hole in the rear of the fuselage.
- 2. Install the left and right horizontal tails (**B**) onto the fuselage as shown. Ensure the control horn faces down.
- 3. Apply 4 pieces of tape (C) to the fuselage mounts (one on the top and bottom of each half of the horizontal tail).
- 4. Attach the clevis to the elevator control horn (see instructions for clevis connection).

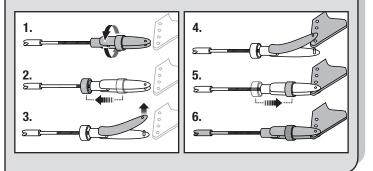
When needed, disassemble in reverse order.

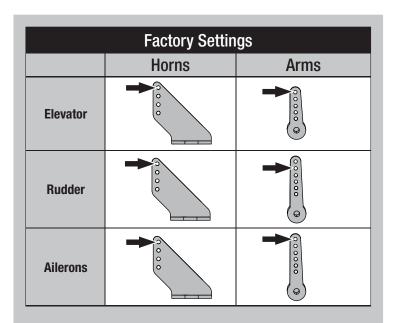
Clevis Installation

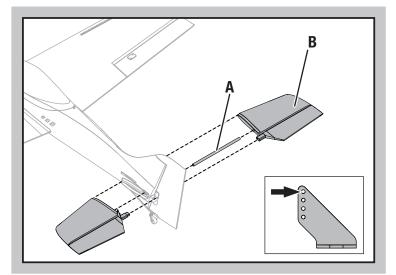
Tip: Turn the clevis on the linkage to change the length of the linkage between the servo arm and the control horn.

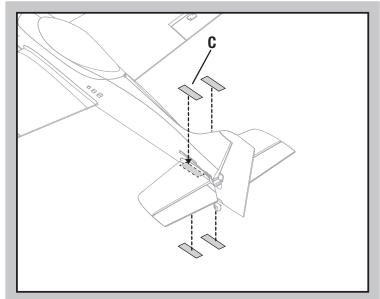
- Pull the tube from the clevis to the linkage.
- Carefully spread the clevis, then insert the clevis pin into the desired hole in the control horn.
- Move the tube to hold the clevis on the control horn.

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









Transmitter Setup

IMPORTANT: The AR635 receiver's default setting is for Sport 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*^m DX4e, DX5e, DX6i, DX7s, DX8, DX9, DX10t, DX18 and JR[®] X9503, 11X or 12X transmitters may be used. The settings below are recommended starting settings.

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.

✓ Transmitters DX4e and DX5e

Before binding for Non-computerized Transmitters (DX4e, DX5e):

	1. Set all trims to NEUTRA	_ (0%).
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2. Move the transmitter Dual Rate switch to High Rate.

After binding:

 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.
 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.

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).

Dual Rates

Dual Rate	High Rate	Low Rate
Aileron	100%	70%
Elevator	100%	70%
Rudder	100%	70%

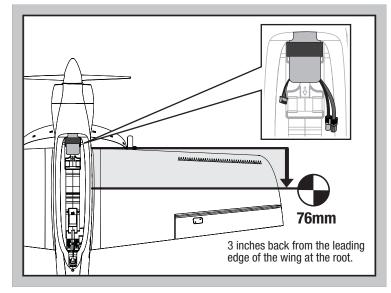
	re binding for Computerized Transmitters (DX6i, DX7/DX7se, DX7s DX9, DX10t, DX18):
	 Choose a blank model memory with only default (zero) settings (including trim and sub-trim).
	2. Choose Wing/Aircraft Type for single aileron servo.
	3. Set all sub-trims to NEUTRAL (0%).
	4. Set servo travel values to 100% for Aileron, Elevator, and Rudder.
	5. Set the Dual Rate to 100%, 70% for Aileron, Elevator, and Rudder.
After	r binding:
	 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). D0 N0T 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.
\land	CAUTION: For safe operation, always re-bind the airplane after setup is complete to ensure the failsafe is updated with the latest setup.

Center of Gravity (CG)

The CG location is 76mm back from the leading edge of the wing at the root.

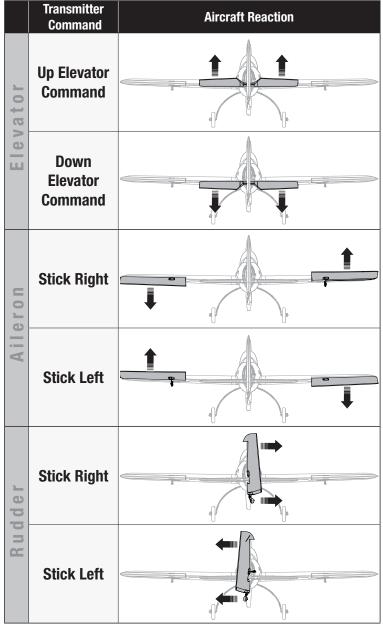
For first flights install the recommended flight battery all the way forward, secured by the strap. (as shown)

Aircraft CG and weight is based on an E-flite 11.1V 1800mAh 30C battery (EFLB18003S30) installed.



Control Direction Test

Move the controls on the transmitter to make sure the aircraft control surfaces move in the proper direction.



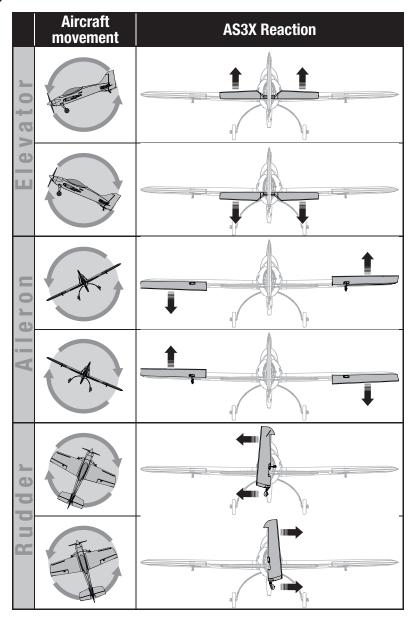
AS3X Control Direction Test

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.



Flying Tips

Consult local laws and ordinances before choosing a flying location.

Range Check your Radio System

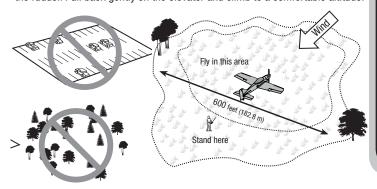
After final assembly, range check the radio system with the aircraft. Refer to your specific transmitter instruction manual.

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. If oscillation persists, refer to the Troubleshooting Guide for more information.

Takeoff

Place the aircraft in position for takeoff (facing into the wind). Select low rates for first takeoff 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

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. Ensure the aircraft will fly straight and level with no trim or sub-trim.

Landing

Flight times of 7 minutes or more are achievable if using proper throttle management.

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. If the motor pulses, land the aircraft immediately and recharge the flight battery. It is not recommended to fly the battery to Low Voltage Cutoff (LVC).

To land the aircraft, fly the aircraft down to the ground using 1/4 - 1/3 throttle to allow for enough energy for a proper flare. The aircraft is easiest to land doing a wheel landing (two point), where the aircraft touches down on the main landing gear first while the tailwheel is still off the ground. The aircraft can also be landed in a three-point attitude, where all three wheels touch down at the same time. When the aircraft touches down, reduce back pressure on the elevator stick to prevent the plane from becoming airborne again.

If landing on grass, it is best to hold full up elevator after touchdown and when taxiing to prevent nosing over.

Once on the ground, avoid sharp turns until the plane has slowed enough to prevent scraping the wingtips.

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 leave the aircraft in direct sunlight or in a hot, enclosed area such as a car. Doing so can damage the foam.



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.

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. LVC does not prevent the battery from over-discharge during storage.

NOTICE: Repeated flying to LVC will damage the battery.

Tip: Monitor your aircraft battery's voltage before and after flying by using a Li-Po Cell Voltage Checker (EFLA111, sold separately).

Repairs

Thanks to the Z-Foam[™] 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.

Motor Service

Disassembly

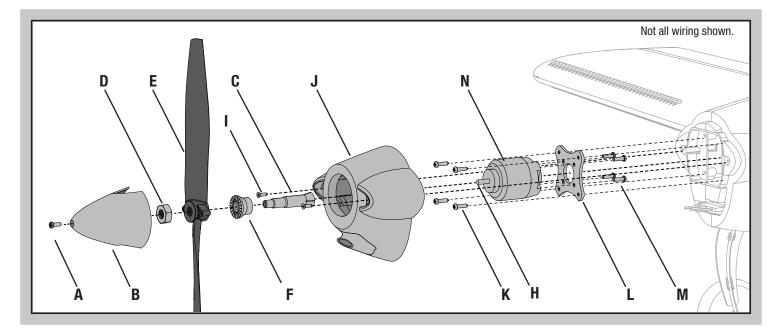
CAUTION: Always disconnect the flight battery from the aircraft before removing the propeller.

- 1. Remove the screw (A) and spinner (B) from the collet (C).
- 2. Remove the spinner nut (D), propeller (E), backplate (F) and collet from the motor shaft (H). You will need a tool to turn the spinner nut.
- 3. Remove the 2 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 (**M**) and motor (**N**) from the motor mount.

Assembly

Assemble in reverse order.

- Correctly align and connect the motor wire colors with the ESC wires.
- The propeller size numbers (10.75 x 8) must face out from the motor for correct propeller operation.
- A tool is required to tighten the spinner nut on the collet.
- Ensure the spinner is fully connected to the collet for safe operation.



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-	Assign correct transmitter type in the receiver (refer to receiver manual)
	puterized or non-computerized)	
	assigned in receiver	
	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 lowest position 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
responds to other 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 underpow-	Propeller installed backwards	Install propeller with numbers facing forward
ered	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 C rating is too low	Replace battery or use battery with correct C rating
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
Aircraft will not con- nect (after binding) to	Transmitter too near aircraft during connecting 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 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 (ModelMatch™ radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound using different DSM protocol	Bind aircraft to transmitter
Control surface does	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
not move	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	Weather conditions might be too cold	Postpone flight until weather is warmer
	Weather conditions might be too cold Battery is old, worn out, or damaged	Postpone flight until weather is warmer Replace 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 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. 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.

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.

Warranty and Service Contact Information

Country of Purchase	Horizon Hobby	Phone Number/Email Address	Address
	Horizon Service Center	servicecenter.horizonhobby.com/	
	(Repairs and Repair Requests)	RequestForm/	
United States of	Horizon Product Support	www.quickbase.com/db/	4105 Fieldstone Bd
America	(Product Technical Assistance)	bghj7ey8c?a=GenNewRecord	Champaign, Illinois, 61822 USA
America	(FIDUUCE TECHNICAL ASSISTANCE)	888-959-2305	Ghampaigh, minuis, 01022 USA
	Sales	sales@horizonhobby.com	
	Sales	888-959-2305	
United Kingdom	Service/Parts/Sales:	sales@horizonhobby.co.uk	Units 1–4 , Ployters Rd, Staple Tye
United Kingdom	Horizon Hobby Limited	+44 (0) 1279 641 097	Harlow, Essex, CM18 7NS, United Kingdom
Cormony	Horizon Technischer Service	service@horizonhobby.de	Christian-Junge-Straße 1
Germany	Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	25337 Elmshorn, Germany
France	Service/Parts/Sales:	infofrance@horizonhobby.com	11 Rue Georges Charpak
France	Horizon Hobby SAS	+33 (0) 1 60 18 34 90	77127 Lieusaint, France
China	Service/Parts/Sales:	info@horizonhobby.com.cn	Room 506, No. 97 Changshou Rd.
Unifia	Horizon Hobby – China	+86 (021) 5180 9868	Shanghai, China 200060

Compliance Information for the European Union

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2013121804

Product(s): Item Number(s): Equipment class: PKZ Artizan BNF PKZ6980 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 V1.9.2: 2012 EN 301 489-17 V2.1.1: 2009

EN60950-1:2006+A11:2009+A1:2010+A12: 2011

EN55022:2010 + AC:2011 EN55024:2010

Signed for and on behalf of: Horizon Hobby, Inc. Champaign, IL USA Dec 18, 2013

Robert Peak Chief Financial Officer Horizon Hobby, Inc.

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2013121805

Product(s): Item Number(s): Equipment class: PKZ Artizan PNP PKZ6975

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the EMC Directive 2004/108/EC:

1

EN55022:2010 + AC:2011 EN55024:2010

Signed for and on behalf of: Horizon Hobby, Inc. Champaign, IL USA Dec 18, 2013

Robert Peak Chief Financial Officer Horizon Hobby, Inc.



Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

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

Part # I Nummer Numéro I Codice	Description	Beschreibung	Description	Descrizione
PKZ6908	Spinner: ArtiZan	Spinner: ArtiZan	Cône : ArtiZan	Ogiva: ArtiZan
PKZ6903	Landing gear set: ArtiZan	Fahrwerk-Set: ArtiZan	Jeu de train d'atterrissage principal : ArtiZan	Set del carrello di atterraggio: ArtiZan
PKZ6925	Horizontal Stab: ArtiZan	Höhenleitwerk: ArtiZan	Stabilisateur : ArtiZan	Stabilizzatore orizzontale: ArtiZan
PKZ6912	Canopy/Hatch: ArtiZan	Kabinenhaube / Klappe: ArtiZan	Verrière : ArtiZan	Capottina/Portello: ArtiZan
PKZ6923	Servo Horns/Arms set: ArtiZan	Servohörner u. Arme: ArtiZan	Set de palonniers : ArtiZan	Set squadrette servi: ArtiZan
PKZ6924	Decal Sheet: ArtiZan	Dekorbogen: ArtiZan	Set de palonniers : ArtiZan	Foglio adesivi: ArtiZan
PKZ6922	Pushrod Set: ArtiZan	Gestängeset: ArtiZan	Set de tringleries : ArtiZan	Set rinvii: ArtiZan
PKZ6967	Bare Fuse: ArtiZan	Parkzone ArtiZan Rumpf o. Einbauten: ArtiZan	Fuselage nu : ArtiZan	Solo fusoliera: ArtiZan
PKZ6928	Motor mount: ArtiZan	Motorbefestigung: ArtiZan: ArtiZan	Support moteur : ArtiZan	Supporto del motore: ArtiZan
PKZ6920	Wing Set: ArtiZan	Parkzone ArtiZan Tragflächenset: ArtiZan	Aile : ArtiZan	Set ala: ArtiZan
PKZ6921	Wing and stab Tube: ArtiZan	Tragflächen- u. Leitwerksverbinder	Clé d'aile et de stabilisateur : ArtiZan	PKZ6921 Baionetta Ali e Stabiliz- zatore
PKZ6926	Cowl: ArtiZan	Parkzone ArtiZan Motorhaube: ArtiZan	Capot : ArtiZan	Capottina motore: ArtiZan
PKZ4416	480 Brushless Outrunner Motor 960Kv	BI Außenläufer 960kV	Moteur brushless 480 à cage tournante 960Kv	Motore 480 Brushless Outrunner 960Kv
PKZ6910	Prop Adapter: ArtiZan	Parkzone ArtiZan Propeller Adapter: ArtiZan	Adaptateur d'hélice : ArtiZan	Adattatore elica: ArtiZan
EFLA1030B	30-Amp Pro Switch-Mode BEC Brushless ESC (V2)	E-flite 30-Amp Pro Switch-Mode BEC Brushless Regler (V2)	Contrôleur Brushless 30A Pro Switch mode BEC V2	Regolatore 30-Amp Pro Switch-Mode BEC Brushless ESC (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
EFLB18003S30	1800mAh 3S 30C 11.1v LiPo	1800 mAh 3S 30C 11,1 V LiPo	Accu LiPo 1800 mAh 3S 30C 11,1 V	1800 mAh 3S 30C 11,1 V LiPo
PKZ6901	Propeller: 10.75 x 8	Propeller: 10.75 x 8	Hélice 10.75 x 8	Elica: 10.75 x 8
PKZ1081	Servo	Servo	Servo	Servo
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

Optional Parts • Optionale Bauteile • Pièces optionnelles • Pezzi opzionali

Part # Nummer Numéro Codice	Description	Beschreibung	Description	Descrizione
EFLA250	Park Flyer Tool Assortment, 5 pc	E-flite Park Flyer Werkzeugsorti- ment; 5 teilig	Assortiment d'outils park flyer, 5pc	Park Flyer assortimento attrezzi, 5 pc
EFLAEC302	EC3 Battery Connector (2)	E-flite EC3 Akkukabel, Buchse (2)	Prises EC3 coté batterie (2)	Connettore batteria
EFLAEC303	EC3 Device/Battery Connector	E-flite EC3 Kabelsatz, Stecker/ Buchse	Prises EC3 coté contrôleur (2)	Connettore batteria/dispositivo
PKZ1029	11.1V 3S 25C 2200MAH Li-Po	11.1V 3S 25C 2200mAh LiPo	11.1V 3S 25C 2200MAH Li-Po	11.1V 3S 25C 2200MAH Li-Po
EFLA111	Li-Po Cell Voltage Checker	E-flite Li-Po Cell Volt Checker	Contrôleur de tension Li-Po	Controllo tensione batteria LiPo
DYNC2015	Prophet Precept 80W LCD AC/DC Battery Charger	Prophet Precept 80W LCD AC/ DC Akku Ladegerät	DYNC2015 Chargeur Prophet Per- cept AC/DC 80W LCD	Prophet Precept 80W LCD ACDC Carica Batterie
EFLC3020	200W DC multi-chemistry bat- tery charger	E-flite 200W DC Multi-Akku Ladegerät	Chargeur multiple DC 200W	200W DC Caricabatterie univer- sale
EFLC4010	Celectra 15VDC 250W Power Supply	E-flite 15VDC 250W Netzteil - EU	Alimentation Celectra CC 15 V 250 W	Alimentatore Celectra 15V c.c., 250 W
DYN1405	Li-Po Charge Protection Bag, Large	Dynamite LiPoCharge Protection Bag groß	Sac de charge Li-Po, grand modèle	Busta protezione grande per LiPo
DYN1400	Li-Po Charge Protection Bag, Small	Dynamite LiPoCharge Protection Bag klein	Sac de charge Li-Po, petit modèle	Busta protezione piccola per LiPo
	DX4e DSMX 4-Channel Trans- mitter	Spektrum DX4e DSMX 4 Kanal Sender ohne Empfänger	Emetteur DX4e DSMX 4 voies	DX4e DSMX Trasmettitore 4 canali
	DX5e DSMX 5-Channel Trans- mitter	Spektrum DX5e DSMX 5 Kanal Sender ohne Empfänger	Emetteur DX5e DSMX 5 voies	DX5e DSMX Trasmettitore 5 canali
	DX6i DSMX 6-Channel Trans- mitter	Spektrum DX6i DSMX 6-Kanal Sender	Emetteur DX6i DSMX 6 voies	DX6i DSMX Trasmettitore 6 canal
	DX7s DSMX 7-Channel Trans- mitter	Spektrum DX7s DSMX 7 Kanal Sender	Emetteur DX7s DSMX 7 voies	DX7s DSMX Trasmettitore 7 canali
	DX8 DSMX 8-Channel Trans- mitter	Spektrum DX8 DSMX 8 Kanal Sender	Emetteur DX8 DSMX 8 voies	DX8 DSMX Trasmettitore 8 canali
	DX9 DSMX 9-Channel Trans- mitter	Spektrum DX9 DSMX 9 Kanal Sender	Emetteur DX9 DSMX 9 voies	DX9 DSMX Trasmettitore 9 canali
	DX18/DX18QQ DSMX 18-Channel Transmitter	Spektrum DX18/ DX18QQ DSMX 18 Kanal Sender	Emetteur DX18/DX18QQ DSMX 18 voies	DX18/DX18QQ DSMX Trasmet- titore 18 canali

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