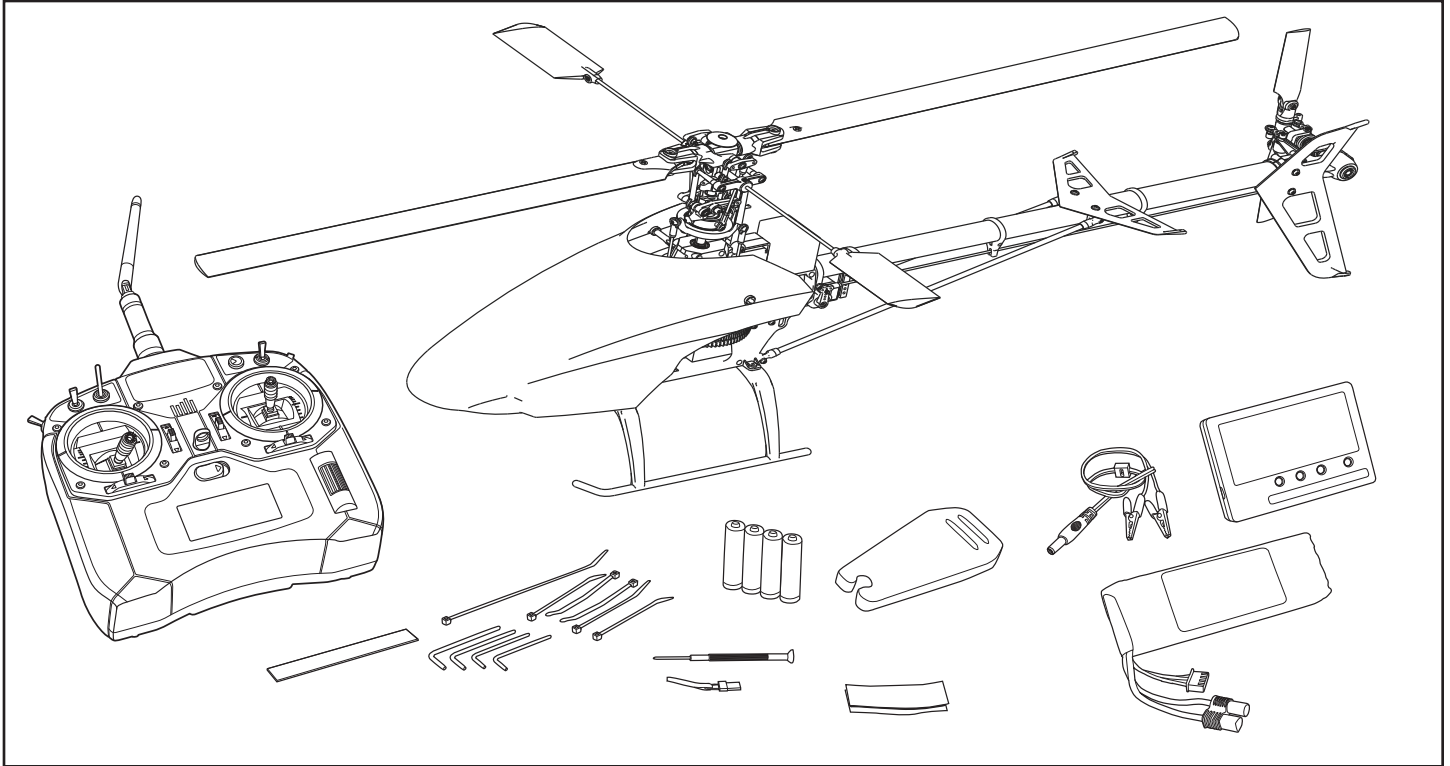


## Introduction

The Blade® 450 3D will give intermediate to advanced heli pilots an outdoor ready-to-fly experience like no other. It comes out of the box 100% factory built and equipped with state-of-the-art features like brushless power, digital servos, a MEMS heading lock gyro, CCPM control and symmetrical Blades. Its new and improved digital cyclic and tail servos provide crisper, cleaner response for added precision and stability while the new heading lock gyro provides more control over the tail for additional control and confidence. And because it's flight tested at the factory, no pre-flight setup is required. The Blade 450 3D is ready for everything from smooth hovering to 3D aerobatic flying as soon as you finish charging the battery included with the RTF, or bind to your DSM transmitter if purchasing the BNF Basic. The 450 3D's new aggressive body and trim scheme make this Blade one hot heli.



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### Blade 450 3D Specifications

<b>Length</b>	25.8 in (655mm)
<b>Height</b>	9.3 in (235mm)
<b>Main Rotor Diameter</b>	28.4 in (721mm)
<b>Tail Rotor Diameter</b>	5.6 in (142mm)
<b>Gross Weight</b>	26.9 oz (762 g)

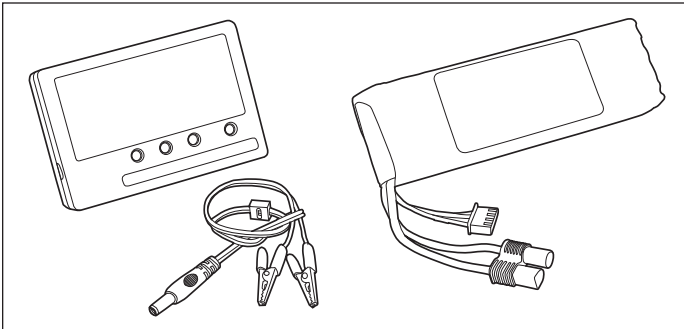
### Components

<b>Motor</b>	420H Brushless outrunner, 3800Kv (installed)
<b>ESC</b>	35-amp brushless (installed)
<b>Battery</b>	3S 11.1V 2200mAh 30C Li-Po (included with RTF)
<b>Charger</b>	DC Li-Po Balancing Charger (included with RTF)
<b>Transmitter</b>	Spektrum DX6i 6-channel Computer Radio with AA Batteries (included with RTF)
<b>Receiver</b>	Spektrum AR6115e Microlite 6 Channel Receiver (installed)
<b>Swash Servos</b>	DS76 (installed)
<b>Tail Servo</b>	DS76T (installed)
<b>Gyro</b>	G210 MEMS Micro Heading Lock (installed)

To register your product online, visit [www.bladeheli.com](http://www.bladeheli.com)

## Charging the Flight Battery

The Blade 450 3D RTF comes with a DC balancing charger and 3S Li-Po battery. You must charge the included Li-Po battery pack with a Li-Po specific charger only (such as the included charger). Never leave the battery and charger unattended during the charge process. Failure to follow the instructions properly could result in a fire. When charging, make certain the battery is on a heat-resistant surface. Charge the flight battery before binding the aircraft (BNF only) or performing control tests.



### DC Li-Po Balancing Charger Features

- Charges 3-cell lithium polymer battery packs
- 1.8A charge rate
- LED charge status indicator
- LED cell balance indicator
- 12V alligator clip input cord

#### Specifications


- Input power: 12V DC, 1.8-amp
- Charges 3-cell Li-Po packs with minimum capacity of 1800mAh

#### 3S 11.1V 2200mAh Li-Po Battery Pack

The Blade 450 3D 3S Li-Po battery pack features a balancing lead that allows you to safely charge your battery pack when used with the included Blade 450 3D Li-Po balancing charger.

### The Battery Charging Process

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. Connect the charger to a 12V power source noting proper polarity.
3. The CELL STATUS LEDs glow solid red and the CHARGE STATUS LED flashes red.
4. Connect the battery balance lead to the charger. The balance connector is keyed to prevent reverse polarity.
5. The CELL STATUS LEDs glow solid green or yellow and the CHARGE STATUS LED glows solid red when the battery is charging.
6. Charging is complete when all LEDs glow solid red.
7. Always unplug the battery from the charger immediately upon completion of charging.

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

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



**WARNING:** Failure to use the proper charger for a Li-Po battery can result in serious damage, and will cause a fire. ALWAYS use caution when charging Li-Po batteries.



**WARNING:** Selecting a charge rate higher than 1x (one times) the battery capacity may cause a fire.

### Low Voltage Cutoff (LVC)

The ESC will continuously lower power to the motor until complete shutdown when the battery reaches 9V under load. This helps prevent over-discharge of the Li-Po battery. Land immediately when the ESC activates LVC. Continuing to fly after LVC can damage the battery, cause a crash or both. Crash damage and batteries damaged due to over-discharge are not covered under warranty.

The DX6i timer is programmed for 6 minutes at the factory. The timer can be increased to 8 minutes if you are only hovering the helicopter.

Repeatedly flying the helicopter until LVC activates will damage the helicopter battery. We recommend using the timer and landing after 6 minutes of flying to prevent damage to the battery. If using the Advanced setting, the timer is programmed for 5 minutes.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Please fully charge and store a Li-Po battery. During storage make sure battery charge does not go below 3V per cell.

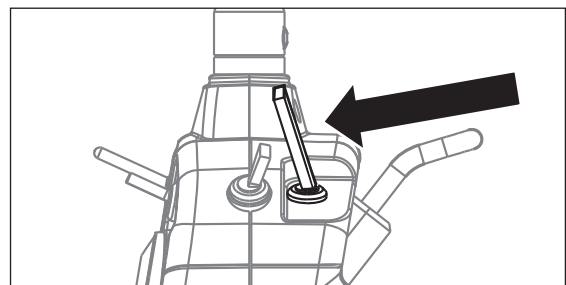
### Throttle Hold

Throttle hold only turns off the motor on an electric helicopter. You maintain pitch and direction control.

The blades will spin if throttle hold is OFF (0). For safety, turn throttle hold ON (1) any time you need to touch the helicopter or check the direction controls.

Throttle hold is also used to turn off the motor if the helicopter is out of control, in danger of crashing, or both.

Please refer to your transmitter manual for more information on programming throttle hold.



## 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™ DSM technology equipped aircraft transmitter to the receiver for proper operation.

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

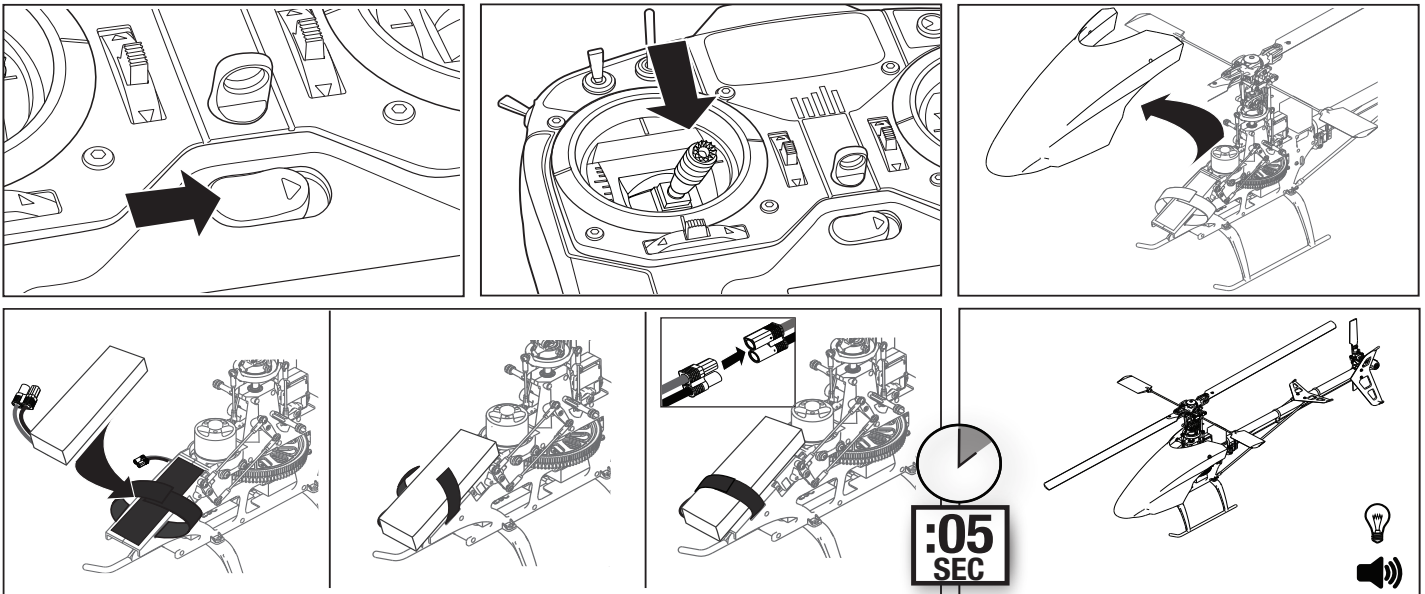
✓	Binding Procedure
	1. Read transmitter instructions for binding to a receiver (location of transmitter's Bind control).
	2. Make sure transmitter is powered off.
	3. Install a bind plug in the receiver battery/bind port.
	4. Connect the flight battery to the ESC. The receiver LED will begin to flash rapidly.
	5. Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) or to low positions (throttle).*
	6. Power on the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for binding button or switch instructions.
	7. When the receiver binds to the transmitter, the receiver light will turn solid.
	8. Disconnect the flight battery from the ESC. Remove the bind plug from the receiver.
	9. Safely store the bind plug (some owners attach the bind plug to their transmitter using two-part loops and clips).
	10. The receiver will keep the binding to the transmitter until another binding is done.

\* The throttle will not arm if the transmitter's throttle trim is not at the center position.

If you encounter problems, obey binding instructions and refer to transmitter troubleshooting guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

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

## Installing the Flight Battery



1. Power on transmitter.

2. Lower throttle and center throttle trim.

**⚠ WARNING:** To keep rotors from initiating at startup, activate throttle hold before connecting flight battery.

3. Attach hook material to the battery and loop material to the helicopter frame.

4. Install flight battery in battery tray. Secure flight battery with hook and loop strap. Connect battery cable to the ESC.

**Note:** The power lead must be positioned away from the elevator servo.

5. Wait 5 seconds while gyro initializes.

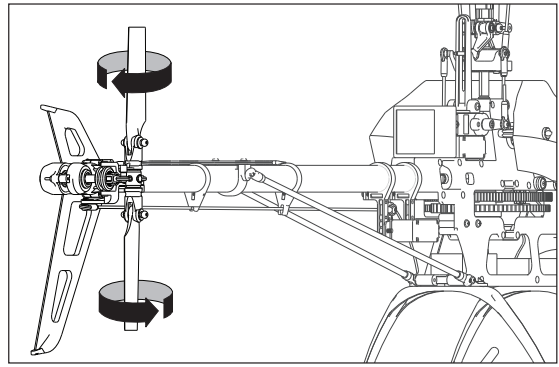
6. Aircraft will emit 2 tones and emit a solid LED on the gyro once it is ready.

**NOTICE:** Always disconnect the Li-Po from the ESC of the aircraft when not flying. Failure to do so will render the battery unusable.

**Note:** Keep helicopter still after connecting flight battery to let helicopter gyroscope calibrate. Do not allow the battery to touch the motor or the elevator servo.

## Gyro Test

1. Connect the aircraft battery to the ESC.  
**NOTICE:** Do not allow the helicopter to move until the red gyro LED is solid. The gyro will not operate correctly if the helicopter moves before the LED is solid red.
2. Move the TH HOLD switch to the (1) position.
3. Move the rudder control to the right. The tail rotor blades move as shown. If they do not move as shown, reverse the rudder channel in the transmitter (refer to your transmitter manual for instructions).
4. Release the rudder control. Quickly turn the helicopter nose to the left. The tail blades move in the same direction as right rudder input. If they do not move as shown, change the position of the reverse switch on the gyro.



## Motor Control Test

Place the helicopter on a clean and flat ground surface (concrete or asphalt) free of obstructions. Always stay clear of the moving rotor blades.

**CAUTION:** Keep pets and other animals away from the helicopter. Animals may injure themselves if they attack or run toward the helicopter.

1. Move all transmitter switches to the (0) position and move the throttle stick to idle/low stick position..
2. Turn the transmitter on. Make sure the transmitter shows at least 5.0V on the screen.

**CAUTION:** The transmitter battery alarm beeps when the transmitter batteries are 4.3V or less. Replace the transmitter batteries when the alarm beeps.

3. Connect the blue EC3™ battery connector to the ESC. Do not allow the helicopter to move until the red LED on the gyro is solid.
4. The motor beeps twice when the ESC arms properly. Move the Throttle Hold (TH HOLD) switch to the (1) position.

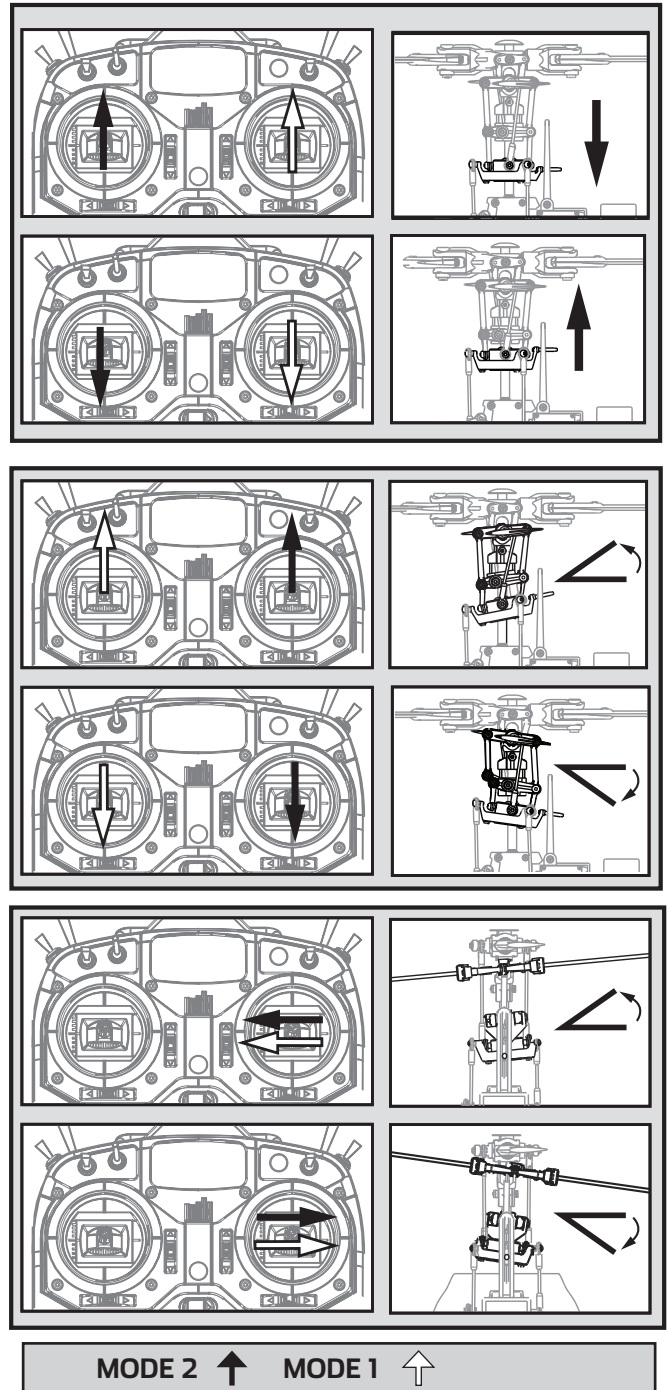
**WARNING:** The motor, main rotor and tail rotor will spin when the throttle is increased if the TH HOLD switch is not moved to the (1) position.

5. Place the helicopter in an open area outdoors.


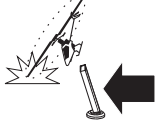
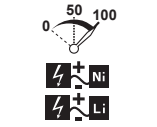
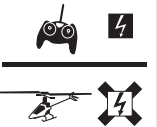

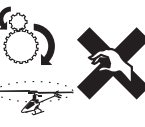
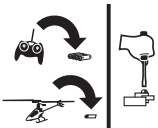
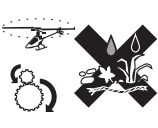


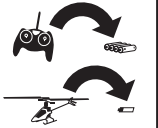
**CAUTION:** Stay at least 30 feet (10 meters) away from the helicopter when the motor is running. Do not attempt to fly the helicopter at this time.

Move the Throttle Hold switch to the (0) position. Slowly increase the throttle until the blades begin to spin. The main blades spin clockwise when viewing the helicopter from the top. The tail rotor blades spin counterclockwise when viewing the helicopter from the right-hand side.

**NOTICE:** If both the main rotor and tail rotor blades are spinning backward, reduce the throttle to idle. Move the throttle hold switch to the (1) position. Disconnect the battery from the helicopter and reverse any two motor wire connections to the ESC.





 <p><b>Always keep vehicle in sight and under control.</b></p>	 <p><b>Always turn on throttle hold at rotor strike.</b></p>	 <p><b>Always use fully charged batteries.</b></p>	 <p><b>Always keep transmitter powered on while vehicle is powered.</b></p>	 <p><b>Never operate vehicle with damaged wiring.</b></p>	 <p><b>Never touch moving parts.</b></p>
 <p><b>Always remove batteries before disassembly.</b></p>	 <p><b>Always keep moving parts clean.</b></p>	 <p><b>Always keep parts dry.</b></p>	 <p><b>Always let parts cool after use before touching.</b></p>	 <p><b>Always remove batteries after use.</b></p>	

**Consult local laws and ordinances before choosing a location to fly your aircraft.**

Select a large, open area away from people and objects. Your first flights should be outdoors in low-wind conditions. Always stay at least 30 feet (10 meters) away from the helicopter when it is flying.

The Blade 450 3D is not intended to be flown indoors where it might be possible to fly a Blade SR or Blade CX2. Experienced pilots may find it possible to fly the helicopter in a large gymnasium.

**CAUTION:** Please take a few minutes to familiarize yourself with the Blade 450 3D primary controls before attempting your first flight. The Blade 450 3D is more responsive than other Blade helicopters, such as the Blade SR. We recommend getting help from an experienced pilot and installing training gear if you are new to 3D or collective pitch helicopters.

While attempting to establish a low-level hover, you can also check to see if any trim adjustments are required to help keep the 450 3D from constantly drifting in various directions. If you find the aircraft constantly drifts without any directional control input, land the model before making any adjustments to the trim settings.

- If the helicopter drifts forward or backward, adjust the elevator trim.
- If the helicopter drifts to the left or right, adjust the aileron trim.

## Gyro Gain Adjustment

- If the tail wags or oscillates, lower the gain on the gyro.
  - On your transmitter, decrease the gyro gain values a small amount at a time until the helicopter is stable within a particular flight mode
- If the tail is drifting while hovering, increase the gain on the gyro.
  - On your transmitter, increase the gyro gain values a small amount at a time until the tail starts to wag/oscillate. Afterwards, reduce the gain until the tail stops wagging/oscillating within a particular flight mode.

## Post-Flight Inspections and Maintenance

<b>Ball Links</b>	Make sure the plastic ball link holds the control ball, but is not tight (binding) on the ball. When a link is too loose on the ball, it can separate from the ball during flight and cause a crash. Replace worn ball links before they fail.
<b>Cleaning</b>	Make sure battery is not connected before cleaning. Remove dust and debris with a soft brush or a dry lint free cloth.
<b>Bearings</b>	Replace bearings when they become notchy (sticky in places when turning) or draggy.
<b>Wiring</b>	Make sure wiring does not block moving parts. Replace damaged wiring and loose connectors.
<b>Fasteners</b>	Make sure there are no loose screws, other fasteners or connectors. Do not over tighten metal screws in plastic parts. Tighten screw so parts are mated together, then turn screw only 1/8th of a turn more.
<b>Rotors</b>	Make sure there is no damage to rotor blades and other parts which move at high speed. Damage to these parts includes cracks, burrs, chips or scratches. Replace damaged parts before flying.

**CAUTION:** Always fly the helicopter with your back to the sun and the wind to prevent loss of flight control.

Continue making trim adjustments until the helicopter hovers at a low altitude with very little drifting and directional control input. If the 450 3D is your first helicopter model, seek help from an experienced pilot to trim the model for you before making your first flight.

**When the helicopter is in stunt mode:**

- The rotor head speed is constant.
- The main rotor will increase negative pitch as the throttle/collective stick is moved from the middle stick position to the low stick position. Negative pitch allows the helicopter to fly upside down and perform aerobatics.

Change between stunt and idle up modes in a hover with the throttle near the middle stick position.

The helicopter may go up or down when you change between modes due to the difference in the throttle and pitch curves.

**WARNING:** Do not use EFLH1415A Main Blades with the Blade 450 or injury and/or property damage could occur.

## Throttle Curve and Pitch Curve

There are 2 flight profiles pre-programmed in the included DX6i transmitter. There is an intermediate flight profile and an advanced profile. In the factory configuration, the transmitter is programmed with the intermediate profile loaded. The Blade 450 is bound to Model 1 from the factory.

**The Intermediate Profile is loaded in Model Memory 1 and 9.**

**The Advanced Profile is loaded in Model Memory 10**

**To load the Advanced Profile:**

Copy sub-trim values from Model 1 to Model 10.

Copy Model 10 to Model 1.

**To load the Intermediate Profile:**

Copy sub-trim values from Model 1 to Model 9.

Copy Model 9 to Model 1.

Copying Model Memory 9 or 10 to Model Memory 1 allows you to change between the Intermediate and Advanced flight profiles without re-binding.

If you are just hovering or learning to hover, feel free to add 2 minutes to the timer (see the DX6i manual).

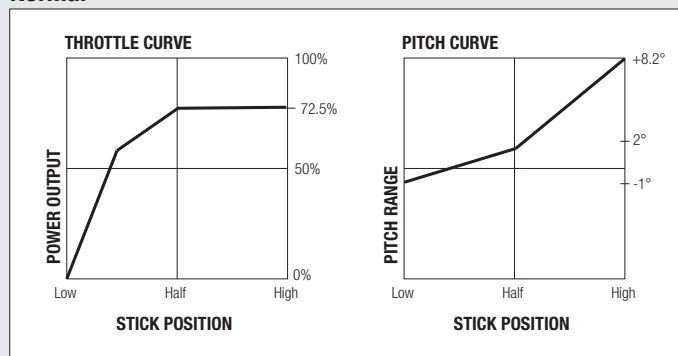
(The pitch range in the intermediate profile is +/- 10 degrees. It is +/- 12 degrees in the advanced profile).

If you want to get the absolute maximum performance out of your Blade 450 3D, increase the AILE and ELEV swash mix values by approximately 10%.

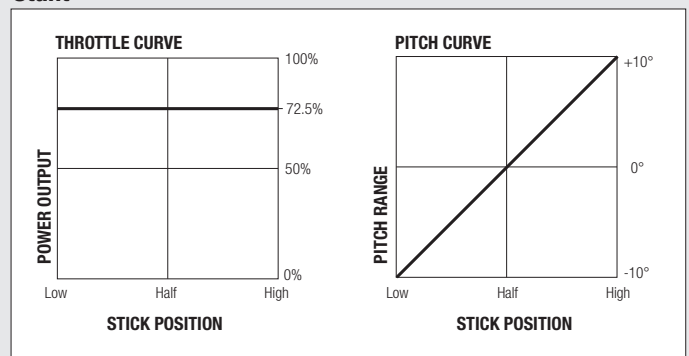
**Note:** When using this setup, your helicopter may experience restriction at maximum control throws. Avoid using maximum pitch and cyclic inputs simultaneously.

## Intermediate

### Normal

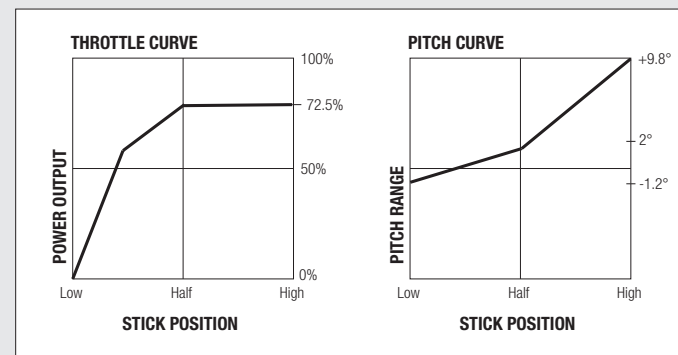


### Stunt

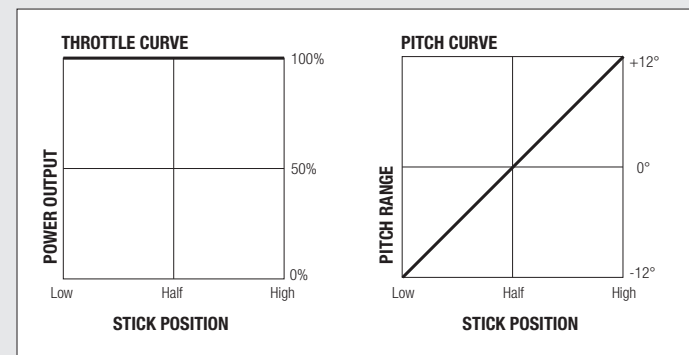


## Advanced

### Normal



### Stunt



## FCC Information

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

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

## Warranty and Repair Policy

**Warranty Period:** Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warranties that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

**Limited Warranty:** Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for all warranty claims.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any Product by Purchaser must be approved in writing by Horizon before shipment.

**Damage Limits:** HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. 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 this Product, you are advised to return this 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).

### WARRANTY SERVICES

**Questions, Assistance, and Repairs:** Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at [www.horizonhobby.com](http://www.horizonhobby.com).

**Inspection or Repairs:** If this Product needs to be inspected or repaired, please use the Horizon Online Repair 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 Repair Request is available at [www.horizonhobby.com](http://www.horizonhobby.com) under the Repairs tab. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for repair. 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 batteries to Horizon. If you have any issue with a battery, please contact the appropriate Horizon Product Support office.**

**Warranty Inspection and Repairs: To receive warranty service, you must include your original sales receipt** verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon.

**Non-Warranty Repairs: Should your repair not be covered by warranty the repair 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 repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for inspection or repair, you are agreeing to Horizon's Terms and Conditions found on our website under the Repairs tab.

## Warranty and Service Contact Information

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

## Customer Service Information

Country of Purchase	Horizon Hobby	Address	Phone Number / Email Address
United States	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	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 60 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

## Compliance Information for the European Union

AT	BG	CZ	CY	DE
DK	ES	FI	FR	GR
HU	IE	IT	LT	LU
LV	MT	NL	PL	PT
RO	SE	SI	SK	UK

### Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH20101229011



Product(s): Blade 450 3D RTF  
Item Number(s): BLH1600  
Equipment class: 2

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

**EN 300-328** Technical requirements for Radio equipment.  
**EN 301 489-1, 301 489-17**  
**EN 301 489-1, 301 489-3** General EMC requirements  
**EN 60950** Safety

Signed for and on behalf of:  
Horizon Hobby, Inc.  
Champaign, IL USA  
December 29, 2010

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

### Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2011010903



Product(s): Blade 450 3D BNF Basic  
Item Number(s): BLH1650  
Equipment class: 1

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

**EN 301 489-1, 301 489-17**  
**EN 301 489-1, 301 489-3** General EMC requirements

Signed for and on behalf of:  
Horizon Hobby, Inc.  
Champaign, IL USA  
January 09, 2011

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



### Instructions for disposal of WEEE by users in the European Union

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

## Spektrum DX6i

### Intermediate/fortgeschrittene Anfänger/Intermédiaire/Intermedio

#### SETUP LIST

<b>Model Type</b> HELI	<b>Swash Type</b> CCPM 120
<b>Reverse</b> THRO - N AILE - R ELEV - N RUDD - R GYRO - N PITC - N	<b>Timer</b> Type - Down Time - 6:00 Switch - Trainer

<b>Gyro</b> Rate:	<b>Swash Mix</b>
0: 77.5%    SW-F.Mode    NORM 0	AILE    -100% ELEV    -95%
1: 76.0%    STUNT 1	PITC    +85%

#### ADJUST LIST

<b>D/R &amp; Expo</b>						<b>Travel Adj</b>				
0-AILE	50%		+7%			THRO				100%
0-ELEV	50%		+7%			ELEV				100%
0-RUDD	77%		INH			GYRO				100%
1-AILE	75%		+15%			AILE				100%
1-ELEV	75%		+15%			RUDD				90%
1-RUDD	77%		INH			PITC				100%
<b>Thro Curve</b>						<b>Pitc Curve</b>				
NORM	0%	56.5%	72.5%	72.5%	72.5%	NORM	45%	51%	60%	73.5% 91%
STUNT	72.5%	72.5%	72.5%	72.5%	72.5%	STUNT	0%	25%	50%	75% 100%
HOLD	10%	10%	10%	10%	10%	HOLD	42%	46%	50%	75% 100%

### Advanced/erfahrene Piloten/Avancé/Avanzato

#### SETUP LIST

<b>Model Type</b> HELI	<b>Swash Type</b> CCPM 120
<b>Reverse</b> THRO - N AILE - R ELEV - N RUDD - R GYRO - N PITC - N	<b>Timer</b> Type - Down Time - 5:00 Switch - Trainer

<b>Gyro</b> Rate:	<b>Swash Mix</b>
0: 77.5%    SW-F.Mode    NORM 0	AILE    -100% ELEV    -95%
1: 76.0%    STUNT 1	PITC    +92%

#### ADJUST LIST

<b>D/R &amp; Expo</b>						<b>Travel Adj</b>				
0-AILE	75%		+15%			THRO				100%
0-ELEV	75%		+15%			ELEV				100%
0-RUDD	87%		INH			GYRO				100%
1-AILE	100%		15%			AILE				100%
1-ELEV	100%		15%			RUDD				90%
1-RUDD	87%		INH			PITC				100%
<b>Thro Curve</b>						<b>Pitc Curve</b>				
NORM	0%	56.5%	72.5%	72.5%	72.5%	NORM	45%	51%	60%	73.5% 91%
STUNT	100%	100%	100%	100%	100%	STUNT	0%	25%	50%	75% 100%
HOLD	10%	10%	10%	10%	10%	HOLD	42%	46%	50%	75% 100%





Spektrum DX7 / DX7se

Intermediate/fortgeschrittene Anfänger/Intermédiaire/Intermedio

SETUP LIST

<b>Model Type</b> HELI	<b>Swash Type</b> CCPM 120
<b>Reverse</b> THRO-N ELEV-R GEAR-N AILE-R RUDD-R PITC-N	<b>Timer</b> Type - Down Time - 6:00 Switch - Trainer  <b>Input Select</b> Gear: Gyro

<b>Gyro Auto</b> Rate: SW-FMode AUTO NORM 0 0: 77% STUNT 1 1: 76% HOLD 0	<b>Swash Mix</b> AILE -100% ELEV -100% PITC -84%
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ADJUST LIST

<b>D/R &amp; Expo</b>				<b>Travel Adj</b>							
0-AILE	50%	+7%		THRO	100%						
0-ELEV	50%	+7%		ELEV	100%						
0-RUDD	77%	INH		GYRO	100%						
				AILE	100%						
1-AILE	75%	+15%		RUDD	90%						
1-ELEV	75%	+15%		PITC	100%						
1-RUDD	77%	INH									
<b>Thro Curve</b>				<b>Pitc Curve</b>							
NORM	0%	57%	73%	73%	73%	NORM	45%	51%	60%	74%	91%
STUNT	73%	73%	73%	73%	73%	STUNT	0%	25%	50%	75%	100%
HOLD	-5%	-5%	-5%	-5%	-5%	HOLD	42%	46%	50%	75%	100%

Advanced/erfahrene Piloten/Avancé/Avanzato

SETUP LIST

<b>Model Type</b> HELI	<b>Swash Type</b> CCPM 120
<b>Reverse</b> THRO-N ELEV-R GEAR-N AILE-R RUDD-R PITC-N	<b>Timer</b> Type - Down Time - 5:00 Switch - Trainer  <b>Input Select</b> Gear: Gyro

<b>Gyro Auto</b> Rate: FMode 0: 77.5% NORM 0 1: 76.0% STUNT 1	<b>Swash Mix</b> AILE -100% ELEV -100% PITC -100%
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ADJUST LIST

<b>D/R &amp; Expo</b>				<b>Travel Adj</b>							
0-AILE	75%	+15%		THRO	100%						
0-ELEV	75%	+15%		ELEV	100%						
0-RUDD	87%	INH		GYRO	100%						
				AILE	100%						
1-AILE	100%	15%		RUDD	90%						
1-ELEV	100%	15%		PITC	100%						
1-RUDD	87%	INH									
<b>Thro Curve</b>				<b>Pitc Curve</b>							
NORM	0%	57%	73%	73%	73%	NORM	45%	51%	60%	74%	91%
STUNT	100%	100%	100%	100%	100%	STUNT	0%	25%	50%	75%	100%
HOLD	-5%	-5%	-5%	-5%	-5%	HOLD	0%	25%	50%	75%	100%
<b>Thro Hold Switch:</b>											



**Spektrum DX8**

**Intermediate/fortgeschrittene Anfänger/Intermédiaire/Intermedio**

**SETUP LIST**

<b>Model Type</b> HELI	<b>Swash Type</b> 3 Servos 120
<b>Reverse</b> THRO-N AILE-R ELEV-R RUDD-R GYRO-N PITC-N	<b>Timer</b> 6:00

<b>Gyro</b>	<b>Swash Mix</b>
NORM 56.0%	AILE -80%
ST-1 54.5%	ELE -80%
ST-2 54.5%	PIT -56%
HOLD 56.0%	
Ch: Gear Sw: F Mode	

**ADJUST LIST**

<b>D/R &amp; Expo</b>					<b>Travel Adj</b>						
0-AILE	50%	7%			THRO	100%					
0-ELEV	50%	7%			AILE	100%					
0-RUDD	77%	0%			ELEV	100%					
1-AILE	75%	15%			RUDD	90%					
1-ELEV	75%	15%			GYRO	100%					
1-RUDD	77%	0%			PITC	100%					
2-AILE	75%	15%									
2-ELEV	75%	15%									
2-RUDD	77%	0%									
<b>Thro Curve</b>					<b>Pitc Curve</b>						
NORM	0%	57%	73%	73%	73%	NORM	45%	51%	60%	74%	91%
ST-1	73%	73%	73%	73%	73%	ST-1	0%	25%	50%	75%	100%
ST-2	73%	73%	73%	73%	73%	ST-2	0%	25%	50%	75%	100%
HOLD	10%	10%	10%	10%	10%	HOLD	42%	46%	50%	75%	100%

**Advanced/erfahrene Piloten/Avancé/Avanzato**

**SETUP LIST**

<b>Model Type</b> HELI	<b>Swash Type</b> 3 Servos 120
<b>Reverse</b> THRO-N AILE-R ELEV-R RUDD-R GYRO-N PITC-N	<b>Timer</b> 5:00

<b>Gyro</b>	<b>Swash Mix</b>
NORM 56.0%	AILE -80%
ST-1 54.5%	ELE -80%
ST-2 54.5%	PIT -85%
HOLD 56.0%	
Ch: Gear Sw: F Mode	

**ADJUST LIST**

<b>D/R &amp; Expo</b>					<b>Travel Adj</b>						
0-AILE	75%	15%			THRO	100%					
0-ELEV	75%	15%			AILE	100%					
0-RUDD	87%	0%			ELEV	100%					
1-AILE	100%	15%			RUDD	90%					
1-ELEV	100%	15%			GYRO	100%					
1-RUDD	87%	0%			PITC	100%					
2-AILE	100%	15%									
2-ELEV	100%	15%									
2-RUDD	87%	0%									
<b>Thro Curve</b>					<b>Pitc Curve</b>						
NORM	0%	57%	73%	73%	73%	NORM	45%	51%	60%	74%	91%
ST-1	100%	100%	100%	100%	100%	ST-1	0%	25%	50%	75%	100%
ST-2	100%	100%	100%	100%	100%	ST-2	0%	25%	50%	75%	100%
HOLD	10%	10%	10%	10%	10%	HOLD	0%	25%	50%	75%	100%

## Optional Parts / Optionale Bauteile / Pièces optionnelles / Pezzi opzionali

Part #	English	Deutsch	Français	Italiano
BLH1608	Dampeners 80 (4): B450	Dämpfer 80 (4): B450	B450 : Amortisseurs 80 (4)	Gommino ammortizzatore 80 (4): B450
BLH1615C	325mm Carbon Fiber Main Rotor Blade Set: B450, B400	325mm Carbon Hauptrotorblätterset: B450, B400	B450, B400 : Paire de pales principales carbone 325mm	Set pale rotore principale in carbonio da 325mm: B450, B400
BLH1617A	Aluminum Main Rotor Blade Grip Set with Arms: B450	Aluminium Rotorblatthalter mit Anlenkungen: B450	B450 : Set Pieds de pales principales et bras en aluminium	Supporto alluminio per pale rotore con bracci: B450
BLH1623A	Aluminum Flybar Seesaw Holder Set: B450, B400	Aluminium Paddelstangenhalter Set: B450, B400	B450, B400 set de moyeu de barre de Bell en aluminium	Set supporto alluminio barra stabilizzatore: B450, B400
BLH1624A	Aluminum Flybar Paddle Control Frame Arm Set: B450, B400	Aluminium Paddelanlenkhebel: B450, B400	B450, B400 : set de bras de commande de barre de Bell en aluminium	Set controllo palette stabilizzatore: B450, B400
BLH1628C	Carbon Fiber Paddles: B450, B400	Carbon Paddelstangen: B450, B400	B450, B400 : palettes de barre de Bell en carbone	Palette stabilizzatore in carbonio: B450, B400
BLH1630A	Aluminum Washout Base: B450, B400	Aluminium Pitchkompensator: B450, B400	B450, B400 : partie basse de washout en aluminium	Base cursore passo (washout) in alluminio: B450, B400
BLH1631A	Aluminum Washout Control Arm Set: B450, B400	Aluminium Pitchkompensatorhebel Set: B400, B450	B450, B400 : Bras de washout en aluminium	Set braccetti controllo cursore (washout): B450, B400
BLH1633A	Aluminum Swashplate: B450, B400	Aluminium Taumelscheibe: B450, B400	B450, B400 : Plateau cyclique en aluminium	Piatto ciclico in alluminio: B450, B400
BLH1634A	Aluminum Anti-Rotation Bracket/Guide: B450, B400	Aluminium Taumelscheibenführung: B450, B400	B450, B400 : guide de plateau cyclique en aluminium	Supporto in alluminio antirotazione: B450, B400
BLH1654A	Aluminum Tail Drive Shaft Lower Bearing Block: B450, B400	Aluminium Lagersitz Heckrotor: B400, B450	B450, B400 : Palier inférieur d'arbre d'anticouple en aluminium	Supporto cuscinetto per albero trasmissione coda: B450, B400
BLH1655A	Aluminum Speed-Up Tail Drive Gear/Pulley Assy: B450, B400	Aluminium Riemenantrieb Heckrotor: B400, B450	B450, B400 : Arbre pignon/poulie transmission d'anticouple aluminium	Adattatore puleggia/ingranaggio trasmissione coda: B450, B400
BLH1657C	Carbon Fiber Tail Boom: B450	Carbon Heckrohr: B450	B450 : Poutre en carbone	Tube coda in carbonio: B450
BLH1658A	Aluminum Tail Servo Boom Mount: B450	Aluminium Servohalter Heck: B450	B450 : support de servo d'anticouple en aluminium	Supporto alluminio per servo coda: B450
BLH1661A	Tail Boom Brace/Support Set w/Aluminum Ends: B450	Aluminum Heckrohrabstützung: B450	B450 : Set de renforts et support de poutre en aluminium	Set supporti tubo coda: B450
BLH1662A	Aluminum Horizontal Stabilizer/Fin Mount: B450	Aluminium Stabilisatorhalter: B450	B450 : Support de dérive et stabilisateur en aluminium	Supporto alluminio per pianetti di coda: B450
BLH1663A	Aluminum Tail Case Set: B450	Aluminium Getriebegehäuse: B450	B450 : Boitier d'anticouple en aluminium	Carter coda in alluminio: B450
BLH1665A	Tail Rotor Shaft and Aluminum Drive Pulley: B450	Aluminium Heckrotorwelle/ Riemenantrieb: B450	B450 : Axe d'anticouple et poulie aluminium	Albero rotore coda con puleggia in alluminio: B450
BLH1667A	Aluminum Tail Rotor Pitch Lever Set: B450	Aluminium Heckrotor Pitchhebelset: B450	B450 : Levier de pas d'anticouple en aluminium	Leva comando rotore coda in alluminio: B450
BLH1668A	Aluminum Tail Rotor Pitch Control Slider Set: B450, B400	Aluminium Heckrotor Schiebehülse Set: B450, B400	B450, B400 : Slider d'anticouple en aluminium	Set cursore alluminio controllo passo coda: B450, B400
BLH1670A	Aluminum Tail Rotor Grip: B450	Aluminium Heckrotorblatthalter: B450	B450 : Pieds de pales d'anticouple en aluminium	Supporti alluminio per pale rotore coda: B450
BLH1672C	Carbon Fiber Stabilizer/Fin Set: B450	Carbon Leitwerk / Finnen Set: B450	B450 : set de stabilisateur/dérive en carbone	Stabilizzatore e pinna verticale in fibra di carbonio: B450
BLH1676A	Aluminum Servo Control Arms: B450, B400	Aluminium Servoarm Set: B450, B400	B450, B400 : Bras de servos en Aluminium	Squadrette servo in alluminio: B450, B400
BLH1679A	Aluminum Canopy Mounts: B450	Aluminium Haubenthalter: B450	B450 : Supports de bulle en aluminium	Set montaggio capottina in alluminio: B450
BLH1681A	Skyfire Canopy: B450	Skyfire Haube: B450	B450 : Bulle Skyfire	Capottina Skyfire: B450
BLH1681B	Inferno Canopy: B450	Inferno Haube: B450	B450 : Bulle Inferno	Capottina Inferno: B450
BLH1681C	Blaze Canopy: B450	Blaze Haube: B450	B450 : Bulle Blaze	Capottina Blaze: B450
BLH1690A	Swash leveling tool: B450, B400	Taumelscheiben Einstellehre: B450, B400	B450, B400 Outil de réglage de plateau cyclique	Attrezzo per livellamento piatto: B450, B400
EFLC505	Intelligent 1-5 Cell LiPo Charger with Balancer	E-flite 1-5 Zellen Lipo Lader mit Balancer	Chargeur-équilibreur Intelligent 1-5 S LiPo	Caricabatterie automatico per 1-5 celle LiPo con bilanciatore
EFLM1360H	440H Helicopter Motor 4200Kv	440H Helikopter Motor 4200Kv	Moteur brushless hélico 440H 4200Kv	Motore 440H 4200 Kv per elicottero
SPM8800	Spektrum DX8 8CH Transmitter with AR8000/TM1000: No Sxs	SPM8800 Spektrum DX8 8 Kanal Sender mit AR8000/TM 1000 ohne Servos	Emetteur Spektrum DX8 8 voies avec AR8000/TM1000	Trasmittitore Spektrum DX8 8 canali con AR8000/TM1000: senza servi
BLH1609	Pinion Gear, 9T 0.5M: B450, B400	Ritzel 9 Zähne, 0,5 Modul: B450, B400	B450, B400 : Pignon 9T 0,5m	Pignone 9T 0,5M: B450, B400
BLH1611	Pinion Gear, 10T 0.5M: B450, B400	Ritzel 10 Zähne 0,5 Modul: B450, B400	B450, B400 : Pignon 10T 0,5m	Pignone 10T 0,5M: B450, B400
EFLC4030	3.0-Amp Power Supply, 100-240V AC-12V DC	Netzteil 3.0 Amp 100 - 240V AC -12V DC	Alimentation AC vers 6DC 3.0- Amp 100 - 240V AC -12V DC	Alimentatore 3.0 A, 100-240V AC, 12V DC
EFLC 4030EU	3.0-Amp Power Supply, 100-240V AC-12V DC (EU)	Netzteil 3.0 Amp 100 - 240V AC -12V DC (EU)	Alimentation AC vers 6DC 3.0- Amp 100 - 240V AC -12V DC (EU)	Alimentatore 3.0 A, 100-240V AC, 12V DC (EU)
EFLC 4030UK	3.0-Amp Power Supply, 100-240V AC-12V DC (UK)	Netzteil 3.0 Amp 100 - 240V AC -12V DC (UK)	Alimentation AC vers 6DC 3.0- Amp 100 - 240V AC -12V DC (UK)	Alimentatore 3.0 A, 100-240V AC, 12V DC (UK)
EFLC 4030AU	3.0-Amp Power Supply, 100-240V AC-12V DC (AU)	Netzteil 3.0 Amp 100 - 240V AC -12V DC (AU)	Alimentation AC vers 6DC 3.0- Amp 100 - 240V AC -12V DC (AU)	Alimentatore 3.0 A, 100-240V AC, 12V DC (AU)

# Parts List / Ersatzteile / Pièces de rechange / Pezzi di ricambio

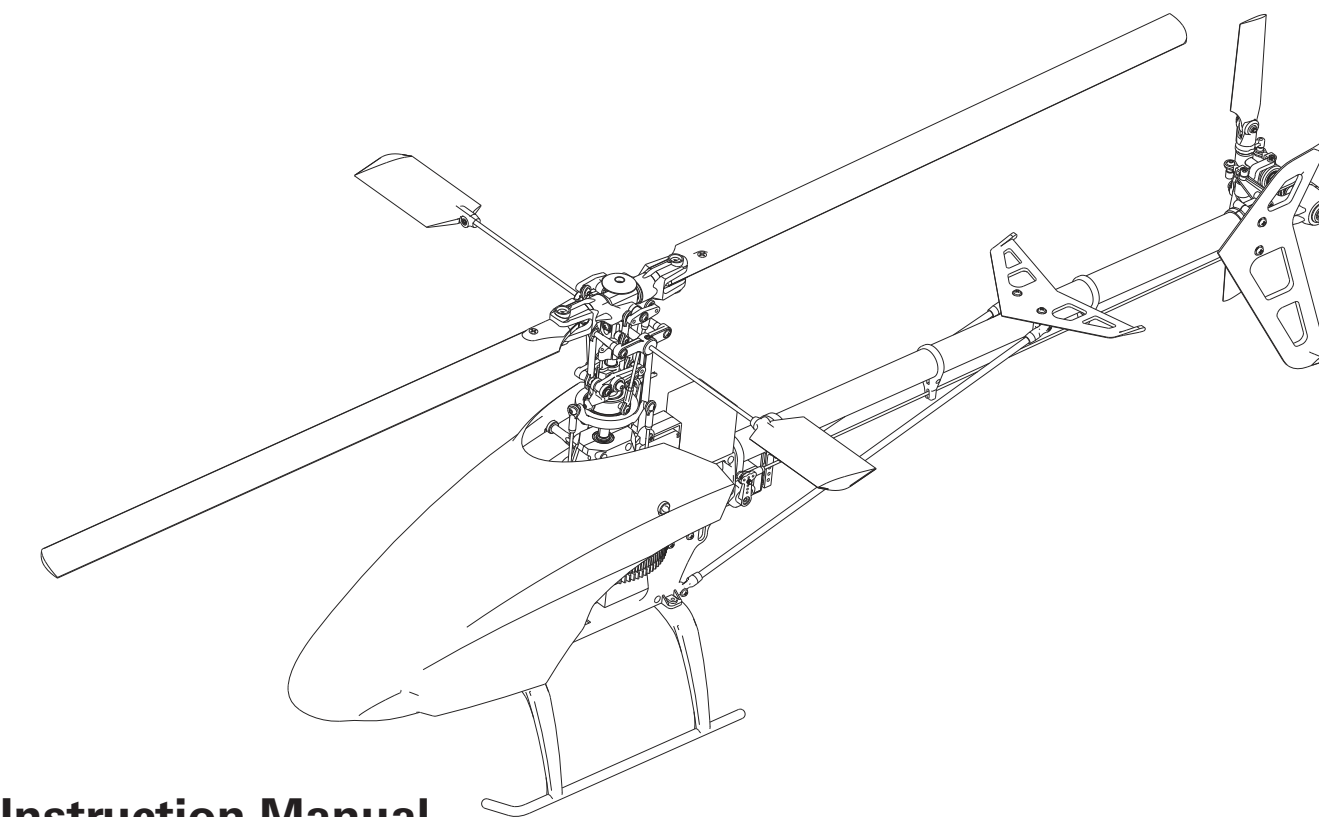
#	Part #	English	Deutsch	Français	Italiano
1	EFLH1115	3 x 6 x 2.5 Bearing Tail Drive Gear-Pulley Assembly (2): B450, B400	3 x 6 x 2.5 Kugellager Heckwelle (2): B450, B400	B450, B400 : Roulement 3x6x2,5 de l'axe pignon/poulie d'anticouple (2)	Ingranaggio-puleggia di trascinamento rotore di coda 3x6x2,5 (2): B450, B400
2	BLH1602	Dampeners 70o (4): B450	Dämpferinge 70° (4):450	B450 : Amortisseurs 70 (4)	Umidificatori 70 (4): B450
3	BLH1603	One-Way Bearing Hub w/One-Way Bearing: B450	Gegenstück Freilauf m. Lager: B450	B450 : Moyeu de roue libre/roue libre	Mozzo ingranaggio di autorotazione con ingranaggio di autorotazione: B450
4	BLH1604	Flybar Control Links (2): B450	Anlenkung Paddelstange (2): B450	B450 : Biellettes de barre de Bell (2)	Collegamenti comando flybar (2): B450
5	BLH1605	4 x 8 x 3 Bearing: Main Grip and Tail Shaft (4): B450	4 x 8 x 3 Lager: Main Grip and Tail Shaft (4): B450	B450 : roulements 4x8x3 de pieds de pales (4)	Cuscinetto albero principale e albero di coda 4x8x3 (4): B450
6	BLH1606	Flybar Weights (2): B450, B400	Paddelstange Gewichte (2): B450,B400	B450, B400 : Masselottes de barre de Bell (2)	Pesi flybar (2): B450, B400
7	BLH1607	1.5 x 4 x 2 Bearings: Washout Links (4): B450	1.5 x 4 x 2 Lager: Anlenkung (4): B450	B450 : Roulements épaulés 1,5x4x2 (4)	Cuscinetti 1,5x0,4x2 (4): B450
8	BLH1610	Pinion Gear, 10T 0.5M: B450, B400	Ritzel, 10Z 0.5M: B450, B400	B450, B400 : Pignon 10T 0,5m	Ruota del pignone, 10T 0,5 M: B450, B400
9	BLH1615	325mm Wood Main Rotor Blade Set: B450, B400	Hauptrotorblätter Set Holz: B450, B400	B450, B400 : Pales principales en bois 325mm	Set pale rotore principale in legno da 325 mm: B450, B400
10	BLH1616	Main Rotor Blade Mounting Screw and Nut Set (2): B450	Blatthalterschraube und Mutter Set (2): B450	B450 : Set de vis et écrous pour pales principales (2)	Set viti e dadi di fissaggio pala rotore principale (2): B450
11	BLH1617	Main Rotor Blade Grip/Holder set: B450	Blatthalter : B450	B450 Set de pieds de pales principales	Set pinza porta pale del rotore principale: B450
12	BLH1618	Bell Mixer Arm and Pushrod/Link Set: B450, B400	Bell Mischer Anlenkungs Set: B400, B450	B450, B400 : Set de bras de mixage et tringleries de barre de Bell	Set braccio miscelatore e asta di spinta Bell: B450, B400
13	BLH1619	Bell Mixer Pushrod/Link (2): B450, B400	Bell Mischer Anlenkungs Set ( 2): B400, B450	B450, B400 : tringleries de mixage de barre de Bell	Asta di spinta miscelatore Bell (2): B450, B400
14	BLH1620	Thrust Bearing (2): B450, B400	Lager Blatthalter:B450, B400	B450, B400 : Butées à billes (2)	Cuscinetto reggispinta (2): B450, B400
15	BLH1621	Spindle/feathering shaft (2): B450	Schraube / Unterlegscheibe Blattlagerhalter	B450 : axe de pieds de pales (2)	Albero Perno (2): B450
16	BLH1622	Head Block/Rotor Housing Set: B450	Rotorkopfzentralstück B450	B450 Moyeu de tête rotor	Set blocco di testa/alloggiamento del rotore: B450
17	BLH1623	Flybar Seesaw Holder Set: B450, B400	Paddelstange Zentralstück : B450, B400	B450, B400 : Etrier de barre de Bell	Set fissaggio bilanciante flybar: B450, B400
18	BLH1624	Flybar Paddle Control Frame Set: B450	Paddelstangen Anlenkung Rahmen Set: B450	B450 : palonnier de barre de Bell	Set rinvio del palino: B450
19	BLH1625	Flybar, 220mm (2): B450, B400	Paddelstange, 220mm (2):B450, B400	B450, B400 : Barre de Bell (2)	Flybar, 220 mm (2): B450, B400
20	BLH1628	Flybar Paddles (2): B450, B400	Paddel (2): B450, B400	B450, B400 : Palette de bell (2)	Pale flybar (2): B450, B400
21	BLH1630	Washout Base: B450, B400	Pitchmitnehmer Zentralstück :B400, B450	B450, B400 : Moyeu de washout	Base lavaggio: B450, B400
22	BLH1631	Washout Control Arm and Linkage Set: B450	Pitchmitnehmer Arm u. Verbinderset:B450	B450 : Bras de commande de washout et tringleries	Set braccio di comando lavaggio e collegamento: B450
23	BLH1632	Washout Control Arm Link Set: B450	Pitchlompensator Verbinderstücke: B450	B450 : set de tringleries de washout	Set collegamento braccio di controllo lavaggio: B450
24	BLH1633	Aluminum and Composite Swashplate: B450, B400	Aluminium.Kunststoff Taumelscheibe: B450,B400	B450, B400 : Plateau cyclique alu et composite	Piatto ciclico in alluminio e in composito: B450, B400
25	BLH1634	Anti-Rotation Bracket/Guide: B450, B400	Gegenhalter: B400, B450	B450, B400 : Guide de plateau cyclique	Staffa/guida anti-rotazione B450, B400
26	BLH1635	Control/Linkage Ball, Long (4): B450, B400	Kugelköpfe Lange (10): B400, B450	B450, B400 : Tringleries de commandes longues (4)	Sfera comando/collegamento, lunga (4): B450, B400
27	BLH1636	Control/Linkage Ball, Short (10): B450, B400	Kugelköpfe Kurz (10): B400, B450	B450, B400 : Tringleries de commandes courtes (4)	Sfera comando/collegamento, corta (10): B450, B400
28	BLH1637	Ball Link Set (20): B450, B400	Kugelpfannen (20): B400, B450	B450, B400 : Set de rotules (20)	Set collegamento sfera (20): B450, B400
29	BLH1638	Linkage Rod/Pushrod set: B450, B400	Servogestänge : B450, B400	Linkage Rod/Pushrod set: B450, B400	Set asta di collegamento/asta di spinta: B450, B400
30	BLH1639	Main Frame Set: B450	Ramen Set: B450	B450 : Châssis	Set telaio principale B450
31	BLH1640	Elevator Control Lever Set: B450, B400	Hebelset Nickservo: B450,B400	B450, B400 : Set de leviers de commande de profondeur	Set leva controllo elevatore: B450, B400
32	BLH1641	5 x 8 x 2.5 Bearing: Elevator Control lever (2): B450, B400	5 x 8 x 2.5 Lager :Hebel Nickservo (2): B450, B400	B450, B400 : Roulements 5x8x2,5	Cuscinetto 5x8x2,5: Leva controllo elevatore (2): B450, B400
33	BLH1642	5 x 10 x 4 Bearing: Main Shaft (2): B450, B400	5 x 10 x 4 Kugellager Hauptrotorwelle (2): B450, B400	B450, B400 : Roulements 5x10x4 d'axe principal (2)	Cuscinetto 5x10x4 Albero Principale (2): B450, B400
34	BLH1643	Aluminum Motor Mount Set: B450, B400	Aluminum Motorträger Set: B450, B400	B450, B400 : Set de fixations moteur en aluminium	Set montante del motore in alluminio: B450, B400
35	BLH1644	Hook and Loop Battery Strap: B450, B400	Klettband Akkuhalter	B450, B400 : Sangles velcro d'accu	Cinghie di velcro e gancio batteria: B450, B400
36	BLH1645	Landing Gear Set: 450	Kufengestell: 450	B450 : Set de train d'atterrissage	Set del carrello di atterraggio: B450
37	BLH1647	Main Shaft (2): B450	Rotorwelle (2): B450	B450 : Axe principal (2)	Albero Principale (2) B450

#	Part #	English	Deutsch	Français	Italiano
38	BLH1649	One-Way Bearing Shaft and Shim Set: B450, B400	Freilaufhülse m. Scheibe: B450, B400	B450, B400 : Axe de roue libre et set de rondelles	Albero ingranaggio di autorotazione e spessore: B450, B400
39	BLH1651	Main Gear (2): B450	Hauptzahnrad (2): B450	B450 : Couronne principale (2)	Ingranaggio principale (2): B450
40	BLH1652	One-Way Bearing 6 x 10 x 12: B450, B400	Freilauf 6 x 10 x 12: B450, B400	B450, B400 Roue libre 6x10x12	Ingranaggio di autorotazione 6x10x12: B450, B400
41	BLH1653	Main Tail Drive Gear (2): B450	Zahnrad Heckrotorantrieb (2): B450	B450 : Couronne d'anticouple (2)	Ingranaggio principale di trascinamento della coda (2): B450
42	BLH1654	Tail Drive Shaft Lower Bearing Block/ Mount: B450	Halter Heckrotorwellenlager: B450	B450 : Support de roulement inférieur	Blocco/montante cuscinetto inferiore albero di trascinamento di coda: B450
43	BLH1655	Tail Drive Gear/Pulley Assembly: B450	Zahnrad Heckrotorriemen: B450	B450 : Arbre d'anticouple pignon/poulie	Gruppo ingranaggio/puleggia di trascinamento di coda: B450
44	BLH1656	Tail Drive Belt: B450, B400	Heckrotor Riemen: B450, B400	B450, B400 : Courroie d'anticouple	Cinghia di trascinamento di coda: B450, B400
45	BLH1657	Tail Booms (2): B450	Heckrohr (2): B450	B450 : Poutre de queue (2)	Aste di coda(2): B450
46	BLH1658	Tail Servo Boom Mount (2): B450	Servobefestigung Heckrohr (2): B450	B450 : Fixations de servo d'anticouple	Montante asta servo di coda (2): B450
47	BLH1659	Tail Linkage/Pushrod set (2): B450	Anlenkstange Heckrotor: (2)	B450 : Tringlerie de commande d'anticouple (2)	Set collegamento di coda/asta di spinta (2): B450
48	BLH1660	Tail Pushrod Support/Guide Set: B450	Halter Heckrotoranlenkstange: B450	B450 : Set de guide de commande d'anticouple	Set supporto/guida asta di spinta della coda: B450
49	BLH1661	Tail Boom Brace/Support Set (2): B450	Heckrotor Abstützung und Halter Set (2): B450	B450 : Set de reforts et supports de tube de queue (2)	Braccio asta di coda/set di sostegno(2): B450
50	BLH1662	Horizontal Stabilizer/Fin Mount: B450	Leiterksbefestigung/ Heckfinne: B450	B450 : Fixation de dérive et stabilisateur	Montante deriva/stabilizzatore orizzontale: B450
51	BLH1663	Tail Case Set: B450	Heckrotor Gehäuse: B450	B450 : Boitier d'anticouple	Set alloggiamento coda: B450
52	BLH1665	Tail Rotor Shaft and Drive Pulley (2): B450	Heckrotorschaft (2): B450	B450 : Axe et poulie de rotor d'anticouple (2)	Albero rotore di coda e puleggia di trascinamento (2): B450
53	BLH1666	2 x 5 x 2.5 Bearing: Paddle Control Frame: B450, B400	2 x 5 x 2.5 Kugellager Paddelstange: B450, B400	B450, B400 Roulement 2x5x2.5 de bras de washout(2)	2x5x2,5 cuscinetto braccio miscelazione lavaggio (2): B450, B400
54	BLH1667	Tail Rotor Pitch Lever Set: B450	Heckrotor Anlenkungset: B450	B450 : Set de levier de pas d'anticouple	Set leva passo del rotore di coda: B450
55	BLH1668	Tail Rotor Pitch Control Slider Set: B450	Heckrotor Schiebülse Set: B450	B450 : Set de slider d'anticouple	Set cursore comando passo rotore di coda: B450
56	BLH1669	Aluminum Tail Rotor Hub Set: B450	Heckrotorzentralstück Aluminium Set: B450	B450 : Moyeu d'anti couple en alu	Set mozzo del rotore di coda in alluminio: B450
57	BLH1670	Tail Rotor Blade Grip/Holder Set: B450	Blatthalter Heckrotor: B450	B450 : Pieds de pales d'anticouple	Set pinza/sostegno pale del rotore: B450
58	BLH1671	Tail Rotor Blade Set: B450	Rotorblätter Heckrotor: B450	B450 : Set de pales d'anticouple	Set pale del rotore di coda: B450
59	BLH1672	Stabilizer/Fin Set, White: B450	Leitwerk / Heckfinne, weiss: B450	B450 : Set Dérive/stabilisateur	Stabilizzatore/deriva, bianco: B450
60	BLH1673	Complete Hardware Set: B450	Schraubensatz kpl. : B450	B450 : Set de visserie	Set completo hardware: B450
61	BLH1674	Mounting Accessories, Screwdriver, & Wrench: B450, B400	Montage Werkzeug: Schraubendreher und Schlüssel	B450, B400 : Set d'outils tournevis et clés	Mnting Access. Cacciavite e chiave: B450, B400
62	BLH1676	Servo Arm Set: B450, B400	Servo Arm Set: B450, B400	B450, B400 : Bras de servos	Set braccio del servo: B450, B400
63	BLH1679	Canopy mounts (2): B450	Halter Kabinenhaube (2): B450	B450 : Fixations de bulle (2)	Staffe di montaggio calottina (2): B450
64	BLH1681	Canopy: B450	Kabinenhaube: B450	B450 Bulle Cold fusion (origine)	Calottina Cold Fusion (a magazzino): B450
65	EFLRG210HL	G210HL Micro Heading Lock MEMS Gyro	G210 MEMS Micro Heading Lock Kreisel	Micro Gyro G210HL à conservateur de cap MEMS	G210HL Giroscopio MEMS Micro Blocco Coda
66	EFLRDS76	7.6-Gram Sub-Micro Digital Servo	7.6-Gram Sub-Micro Digital Servo	Sub Micro Servo digital 7.6g	Servo digitale sub-micro da 7,6 grammi
67	EFLRDS76T	7.6-Gram Sub-Micro Digital Tail Servo	7.6-Gram Sub-Micro Digital Heck Servo	Sub Micro Servo digital d'anticouple 7.6g	Servo digitale sub-micro di coda da 7,6 grammi
68	SPMAR 6115E	AR6115E Micro Lite 6-Channel Receiver, End Pin	AR6115E Microlite 6 Kanal Empfänger	Récepteur Spektrum 6 voies AR6115E Microlite	Ricevitore Spektrum AR6115E Microlite a 6 canali
69	EFLA335H	35-Amp Helicopter Brushless ESC	35-Amp Hubschrauber Brushless Regler: B450	B450 Contrôleur Brushless Hélico 35A	ESC Elicottero Brushless 35 Amp: B450
70	EFLB 22003S30	2200mAh 3S 11.1V 30C LiPo, 13AWG EC3	2200mAh 3S 11.1V 30C LiPo Akku, 13AWG EC3	Li-Po 30 C 2 200 mAh 11,1 V 3S	3S 11,1 V 220 mAh 30C Li-Po
71	BLH1001	Mini Helicopter Main Blade Holder: B450, B400	Blatthalter Mini Hubschrauber: B450, B400	B450, B400 : support de pales principales Hélico	B450, B400 : supporto pala rotore principale di elicottero
72	EFLC3115	3S 11.1V LiPo Balancing Charger, 1.8A	3S 11.1V LiPo Balancer Ladegerät, 1.8A	Chargeur-équilibreur Li-Po CC	Caricabatterie con bilanciatore CC Li-Po
73	SPMR6600	DX6i Transmitter Only	DX6i nur Sender	Émetteur DX6i seul	Solo trasmittente DX6i
74	EFLM1350H	420H Helicopter Motor 3800Kv: B400, B450	420H Hubschrauber Motor 3800Kv: B400, B450	Cage-tournante brushless 420 H, 3 800 Kv	420H Brushless outrunner, 3800 Kv

**RTF** **BNA**  
BASIC

**BLADE** 450 3D

#1 BY DESIGN



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

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US patent number 7, 391, 320. Other patents pending.

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## 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 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 a little or no possibility of injury.

**CAUTION:** Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

**WARNING:** Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

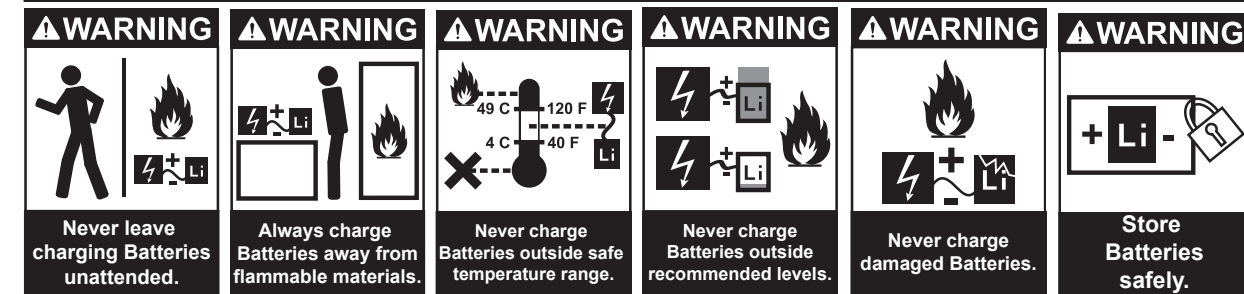
**WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

## Additional Safety Precautions and Warnings

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

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

## Battery Warnings



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

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

- By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.

- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120° F. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- NEVER USE A Ni-Cd OR Ni-MH CHARGER. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.

