

Instruction Manual Bedienungsanleitung Manuel d'utilisation Manuale di Istruzioni

BLADE 50

SPEKTRUM\* DSMX\* CONTROL + BEASTX\* FLYBARLESS TECHNOLOGY



#### 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 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.

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

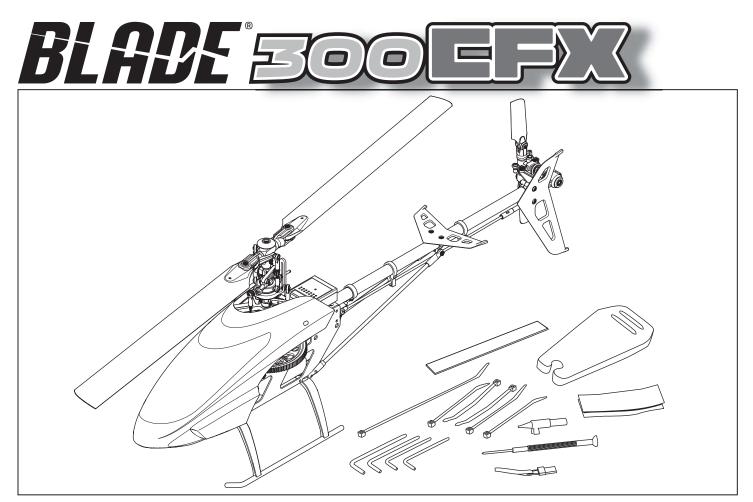
#### **General Safety Precautions and Warnings**

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

- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always move the throttle fully down at rotor strike.
- 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.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

WARNING AGAINST COUNTERFEIT PRODUCTS: If you ever need to replace a Spektrum component 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.

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Blade 300 CFX Specifications						
Length	20.1 in (510mm)		Tail Rotor Diameter	5.5 in (140mm)		
Height	7.7 in (195mm)		Flying Weight	17.9 oz (510 g)		
Main Rotor Diameter	21.7 in (550mm)					

#### **Included Items**

	Component	
Motor	320H Brushless outrunner, 4500Kv	installed
ESC	25-amp brushless	installed
Flybarless Unit	Spektrum <sup>™</sup> AR7200BX with BeastX <sup>®</sup> technology	installed
Swash Servos	DS76	installed
Tail Servo	DS76T	installed

## **Required Items**

	Component
Battery:	E-flite® 3S 11.1V 1350mAh 30C Li-Po Battery (EFLB13503S30)
Charger:	Dynamite® Prophet™ Sport Li-Po 35W AC Charger (DYNC2005)
Transmitter:	Full Range DSM2®/DSMX® technology transmitter (DX6i and up)

To register your product online, visit www.bladehelis.com

#### Low Voltage Cutoff (LVC)

Once the battery reaches 9V under load, the ESC will continuously lower power supplied to the motor until complete shutdown occurs. This helps prevent over-discharge of the Li-Po battery. Land immediately once 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.

Repeatedly flying the helicopter until LVC activates will damage the helicopter battery.

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

#### **Transmitter Setup**

**Program your transmitter before attempting to bind or fly the helicopter.** Transmitter programming values are shown below for the *Spektrum* DX6i, DX7/DX7se, DX7s, DX8, DX9 and DX18. The files for models using *Spektrum*<sup>™</sup> transmitters with *AirWare*<sup>™</sup> software are also available for download online in the Spektrum Community.

#### DX6i

SETUP LIST	ADJUST LIST			
Model Type HELI Reverse THRO N AILE N ELEV R RUDD R GYRO N PITC N Swash Type 1 Servo 90 Timer 4:00	D/R & Expo O-AILE O-ELEV O-RUDD 1-AILE 1-ELEV 1-RUDD Thro Curve NORM STUNT HOLD Pitc Curve NORM STUNT HOLD Travel Adj THRO AILE ELEV RUDD GYRO PITC	100% 100% 85% 85% 0% 100% 10% 30% 0% 100% 100% 100% 100%		 80% 100% 10% 100% 100% 000%

DX7/DX7se						
SYSTEM LIST Model Type	FUNCTION M D/R & EXP	ODE				
HELI	0-AILE	100%	0%			
	0-ELEV	100%	0%			
	0-RUDD	100%	INH			
Swash Type	1-AILE	85%	0% 0%			
1 Servo 90	1-ELEV 1-RUDD	85% 85%	U% INH			
	Thro Curve	0070				
	NORM	0%	25%	50%	70%	80%
	ST-1	100%	75%	75%	75%	100%
	ST-2	100%		100%		
	HOLD	0%	0%	0%	0%	0%
	Pitc Curve					
	NORM ST-1	30% 0%	INH INH	50% 50%	INH INH	100% 100%
	ST-2	0%	INFI	50%	INFI	100%
	HOLD	0%	INH	50%	INH	100%
	Travel Adj	Reve	ersing S	W		Timer
	THR0 100%	THRO		RUD	DR	4:00
	AILE 100%	AILE		GEA		
	ELEV 100%	ELEV		PIT.	R	
	RUDD 100%		SENS			
	GEAR 100% PIT. 100%		) F.M(			
	111. 10070	STN1 HOLD				
		ΠULL	5 13%	)		

#### DX7s/DX8/DX9/DX18

SYSTEM SETUP	FUNC	<b>FION LIST</b>									
Model Type	D/R &	Ехро			Throttle Cu	rve					
HELI	0-AILE	100%	0%		NORM		0%	25%	50%	70%	80%
	0-ELEV	100%	0%		ST-1		100%	75%	75%	75%	100%
Swash Type	0-RUD	D 100%	0%		ST-2 (DX8/1	18 only)	100%	100%	100%	100%	100%
1 Servo Normal	1-AILE		0%		HOLD		0%	0%	0%	0%	0%
1	1-ELEV		0%		Pitch Curve	е					
F-Mode Setup	1-RUD		0%		NOR		30%	40%	50%	75%	100%
Flight Mode: F Mode	2-AILE		0%		ST-1		0%	25%	50%	75%	100%
Hold: Hold	2-ELEV		0%		ST-2 (DX8/1	18 only)	0%	25%	50%	75%	100%
	2-RUD	D 85%	0%		HOLD		0%	25%	50%	75%	100%
Frame Rate	SERVO	SETUP									
11ms	Travel		Reverse	)	Timer			Gyro			
DSMX	THRO	100%	THRO	Ν	MODE	Countdo	own	SW		F	Mode
	AILE	100%	AILE	Ν	TIME	4:00 To	ne/Vibe	CH		Ge	ear
	ELEV	100%	ELEV	R	START	Throttle	Out	NORI	MAL/PO	S0 46	5%
	RUDD	100%	RUDD	R	POS	25		STUN	IT 1/PO	S1 46	5%
	GEAR	100%	GEAR	Ν				STUN	IT 2/PO	S2 46	6%
	PIT.	100%	PIT.	R				HOLD	)	46	5%

#### **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™ DSM2/DSMX technology equipped aircraft transmitter to the receiver for proper operation.

Bir	Binding Procedure					
1.	Program your transmitter using the Transmitter Setup found in this manual.					
2.	Insert the bind plug in the BND/DAT port on the receiver.					
3.	Connect the flight battery to the ESC. The H menu LED should be flashing, indicating the AR7200BX is in bind mode.					
4.	Move the throttle stick to the desired failsafe position (low throttle position in normal mode).					
5.	Follow the procedures of your specific transmitter to enter Bind Mode. The system will connect within a few seconds. Once connected, the H LED will turn off and the AR7200BX will start the initialization process.					
6.	When the initialization process is complete, the Status LED light will come ON solid BLUE.					

7. Disconnect the flight battery and remove the bind plug from the AR7200BX. Store the bind plug in a convenient place.

NOTICE: Remove the bind plug to prevent the system from entering bind mode the next time the power is turned on.

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*.

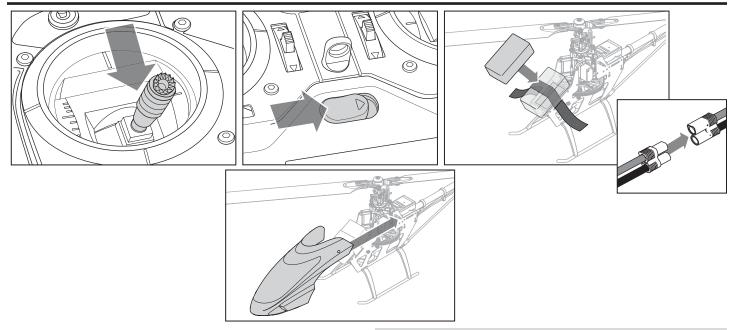
#### **Throttle Hold**

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

The blades will spin if throttle hold is OFF. For safety, turn throttle hold ON 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.

#### Installing the Flight Battery



- 1. Lower the throttle.
- 2. Power on the transmitter.
- 3. Center the throttle trim.
- 4. To allow the ESC to arm and to keep rotors from initiating at startup, turn on throttle hold and normal flight mode before connecting the flight battery. Please refer to your transmitter manual for more information on programming throttle hold and normal flight mode.
- 5. Attach hook material to the helicopter frame and loop material to the battery.
- Install the flight battery on the helicopter frame. Secure the flight battery with a hook and loop strap. Connect the battery cable to the ESC.

**CAUTION:** Always keep the power lead positioned AWAY from the elevator servo. Failure to do so could cause the lead to get caught and will result in crash causing property damage and injury.

- **CAUTION:** Make sure the flight battery does not come in contact with the motor. Failure to do so will cause the motor, ESC and battery to overheat, resulting in crash, causing property damage and injury.
- Do not move the helicopter until the AR7200BX initializes. The swashplate will move up and down indicating that the unit is ready. The AR7200BX will also emit a solid BLUE Status LED when it is ready.
- 8. The helicopter motor will emit 2 tones, indicating the ESC is armed.

**CAUTION:** Always disconnect the Li-Po battery from the aircraft receiver when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.

#### **Control Tests**



CAUTION: You must complete the Rudder and Cyclic tests prior to flight. Failure to complete the tests and ensure the sensor directions are not reversed can cause the helicopter to crash, resulting in property damage and injury.

#### Rudder

1. Power on the transmitter.

2. Turn TH HOLD ON and put the transmitter into normal mode.

**NOTICE:** Do not allow the helicopter to move until the Status LED is solid blue and all menu LEDs are OFF. The gyro will not operate correctly if the helicopter moves before the Status LED is solid blue.

- 3. Connect the helicopter battery to the ESC.
- 4. Move the rudder stick 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).

#### **Cyclic**

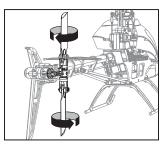
When using a flybarless rotor head, you are controlling rotational rates while the AR7200BX controls the servos. You are not directly controlling the servos with the transmitter.

It is normal for the swashplate to slowly move back to its original position after a stick input and for the servos to not move at the same speed as your control sticks.

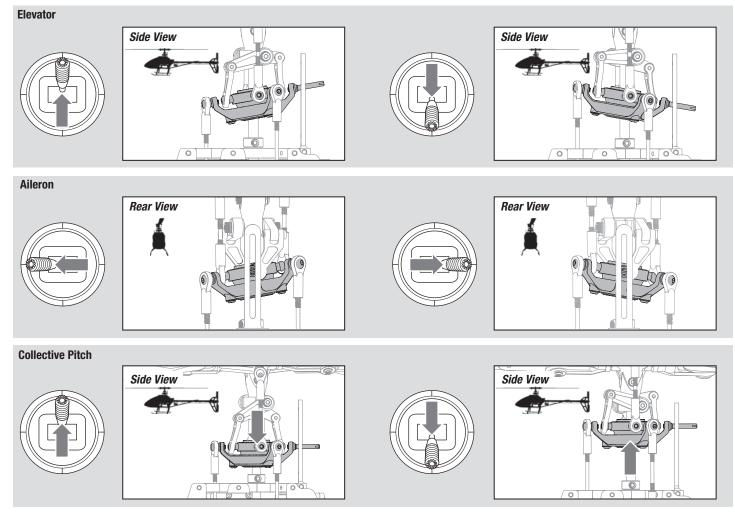
#### **Cyclic and Collective**

Turn on Throttle Hold when doing the control tests.

 Release the rudder control. Manually turn the helicopter nose to the left. The tail rotor blades automatically move as shown. If they do not move as shown, refer to the AR7200BX manual for information on reversing the tail sensor direction (Setup menu point F).



- 1. Tilt the helicopter forward. The swashplate should tilt backward.
- 2. Tilt the helicopter backward. The swashplate should tilt forward.
- 3. Roll the helicopter left. The swashplate should roll right.
- 4. Roll the helicopter right. The swashplate should roll left.
- 5. If the swashplate does not move in the correct direction, you will need to reverse the cyclic sensor direction. Refer to the AR7200BX manual for more information (Setup menu point M).



#### Motor Control Test

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

1. The motor beeps twice when the helicopter's ESC arms properly. Before you continue, confirm that TH HOLD is ON.

 $\triangle$ 

**WARNING:** The motor will spin when throttle is increased while TH HOLD is OFF.

2. Check the swashplate directions to ensure they are moving in the correct direction. Please refer to the diagrams above for reference.

WARNING: 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.

#### Blade 300 CFX Pre-Flight Checklist

#### Check all screws to ensure that they are tight

- Check belt tension to ensure that it is not too tight or too loose
- $\hfill\square$  Check main and tail blades to ensure they are not damaged
- Check all links to make sure they move freely, but do not pop off easily
- Check that flight battery and transmitter battery are fully charged
- □ Check all wires to ensure that they are not cut, pinched, or chaffed and are properly secured

#### Flying the Blade 300 CFX

# 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 300 CFX is intended to be flown outdoors or inside a large gymnasium.

**CAUTION:** The Blade 300 CFX is intended for pilots with experience flying aerobatic, collective pitch helicopters. The Blade 300 CFX is more responsive than other Blade helicopters, such as the Blade SR. If you are not an experienced 3D or collective pitch helicopter pilot, do not attempt to fly this product.

#### **Takeoff**

Deliberately increase throttle and establish a hover at least 24" (0.6 meter) high, outside of ground effect.



**CAUTION:** Do not give any aileron, elevator or rudder commands before takeoff or the helicopter may crash during takeoff.

#### Flying

The helicopter lifts off the ground when the rotor head reaches a suitable speed. Establish a low-level hover outside of ground effect to verify proper operation of your helicopter. You must not set any trim; the flybarless design of the Blade 300 CFX renders trim unnecessary. Setting trim or sub-trim can cause an unwanted drift or rotation of the helicopter.

#### **Gyro Gain Adjustment**

If the tail wags or oscillates, lower the gain on the gyro. On your transmitter's gyro menu, decrease the gyro gain values a small amount until the helicopter is stable within a particular flight mode.

3. Ensure the throttle is lowered completely. Turn throttle hold off at this time and confirm the transmitter is still set to normal flight mode. 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 the main rotor blades are spinning counterclockwise, reduce the throttle to low immediately. Turn throttle hold on. Disconnect the battery from the helicopter and reverse any two motor wire connections to the ESC and repeat the motor control test.

Check all wire connections

- Check gears to make sure no teeth are missing
- Do a complete control test
- □ Check that the servos are functioning properly
- Check to make sure the flight battery is properly secured
- Check to make sure the AR7200BX is properly secured

First flights should be performed in normal mode and low cyclic and rudder dual rates until you are familiar with the flying manner of the Blade 300 CFX. Discover the rates that fit your flying style.



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

#### Landing

Establish a low level hover. Deliberately lower the throttle until the helicopter lands. Do not give any aileron, elevator or rudder commands when the helicopter is landing.

#### 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 hovering stick position.

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

If the cyclic control is too slow or too fast, adjust the transmitter dual rates, expo or throttle curve to fit your liking.

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.

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#### **Blade Helicopter Belt Tension**

Belt tension that is too tight results in loss of power and causes the belt to wear more quickly. Tension that is too loose can cause belt damage and loss of tail rotor control in flight.

#### To check for proper belt tension:

- 1. View the tail rotor drive belt through the opening at the back of the main frame.
- 2. Use a hex wrench or standard screwdriver to compress the belt through the opening.
- 3. Apply light pressure on the belt, compressing the belt toward the left side of the tail boom.
- 4. The belt tension is correct if the compressed side of the belt reaches approximately halfway to the opposite side of the belt.
  - a. If the compressed side of the belt reaches farther than halfway to the other side of the belt, the tension is too loose.
  - b. If the compressed side of the belt does not reach halfway to the other side of the belt, the tension is too tight.

#### **Post-Flight Inspections and Maintenance**

#### To adjust belt tension:

- 1. Loosen the two horizontal stabilizer screws.
- $\ensuremath{\text{2. Loosen}}$  the four screws at the back of the main frame.
- 3. Slide the boom forward or aft to adjust the belt tension.
- 4. When the belt tension is properly adjusted, tighten the four screws at the back of the frame.
- 5. Tighten the horizontal stabilizer screws.

Ball Links	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.
Cleaning	Make sure the battery is not connected before cleaning. Remove dust and debris with a soft brush or a dry lint-free cloth.
Bearings	Replace bearings when they become notchy (sticky in places when turning) or draggy.
Wiring	Make sure the wiring does not block moving parts. Replace damaged wiring and loose connectors.
Fasteners	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.
Rotors	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.
Gyro	Make sure the AR7200BX is securely attached to the frame. Replace the double-sided tape when necessary. The helicopter will crash if the AR7200BX separates from the helicopter frame.

#### AR7200BX Default Blade 300 CFX Setup

#### SETUP MENU Menu LED solid

棠	- Status-LED:	OFF	Purple	Red Flashing	Red Solid	Blue Flashing	Blue Solid
A	Mounting orientation				upright (vertical)		flat (horizontal)*
В	Swashplate servo—frequency	User defined	50Hz	65Hz	120Hz	165Hz	200Hz*
C	Tail servo—center position pulse length	User defined	960µs		760µs		1520µs*
D	Tail servo— <b>frequency</b>	User defined	50Hz	165Hz	270Hz*	333Hz	560Hz
Ε	Tail servo—rotor endpoints	Tail stick—move to right endpoint and wait/left endpoint and wait					
F	Tail—sensor direction				default		reversed*
G	Swashplate—servo centering	Reference position	ELE center pos.		AIL center pos.		PIT center pos.
н	Swashplate— <b>mixer</b>	User defined	mechanical	90°	120°*	140°	140° (1=1)
I	Swashplate-servo directions	norirevirev	norlnorlrev*		norlrevlnor		default
J	Swashplate—cyclic pitch geometry	Aileron stick–a	djust 6° cyclic pitc	h on the roll axis	(blades aligned w	vith fuselage)	
К	Collective pitch range	Collective stick on max and min position and use tail stick to adjust desired pitch Stock settings provide +/- 12 degrees of collective pitch					
L	Swashplate-cyclic limit	Move aileron, elevator and pitch sticks – adjust max limits with tail stick					
М	Swashplate-sensor directions	rev   rev	rev   nor		default		nor   nor*
Ν	Pirouette optimization direction				default		reversed*

#### PARAMETER MENU Menu LED is flashing quickly

	• Status-LED:	OFF	Purple	Red Flashing	Red Solid	Blue Flashing	Blue Solid	
A	Swashplate— cyclic center adjustment	Aileron and elev	Aileron and elevator stick – reset with tail stick					
В	Control behavior	User defined	normal	sport	pro	extreme	transmitter*	
C	Swashplate—pitching up behavior	User defined	very low	low	medium*	high	very high	
D	Tail—HeadingLock gain	User defined	very low	low	medium*	high	very high	
E	Stick deadband	User defined	1	2*	3	4	5	
F	Tail—torque precompensation IX)	User defined	off*	low—nor	high—nor	low—rev	high—rev	
G	Cyclic response	User defined	normal	slightly increased*	increased	high	very high	
Η	Pitch boost	User defined	off*	low	medium	high	very high	

\*The AR7200BX included with your Blade 300 CFX helicopter is pre-programmed with these default settings. If you perform a factory reset on the included AR7200BX, it will default back to these helicopter settings.

To perform a Blade 300 CFX AR7200BX factory reset, enter any Setup menu and press the setup button for 10 seconds. After performing the factory reset, you will need to re-center the swashplate servos by using setup menu G.

If you update the firmware on the AR7200BX to non-Blade 300 CFX firmware, all Blade 300 CFX helicopter default settings will be deleted. You will need to complete the entire AR7200BX setup process before flying the helicopter again. Please refer to the Spektrum AR7200BX instruction manual included with your helicopter for more information.

#### **AR7200BX Parameter Menu Tips**

Refer to the Spektrum AR7200BX manual to fine-tune the Blade 300 CFX to your flying and control style via the AR7200BX parameter menu.

If you would like to change the control behavior of the flybarless system to a pre-defined behavior in the AR7200BX, adjust parameter menu B (default behavior is transmitter).

If you would like to have the cyclic behavior to feel more linear OR more like a flybarred helicopter, increase the cyclic response by adjusting parameter menu G (default is 'slightly increased').

Refer to the Spektrum AR7200BX manual for specific details on each parameter.

# AR7200BX Fine-tuning and Adjustment

Observed Behavior	Suggested Adjustment				
Cyclic response is too slow or too fast	Adjust dual rates to fit your flying style. Refer to your transmitter instruction manual for more information				
	Adjust the control behavior parameter in the AR7200BX to fit your flying style				
Control inputs feel delayed	Increase Dial 2 on the AR7200BX				
The helicopter seems to overshoot control input and then return	Decrease Dial 2 on the AR7200BX				
The helicopter tail stops too abruptly	Decrease Dial 3 on the AR7200BX				
	Increase Dial 3 on the AR7200BX				
The helicopter tail does not stop precisely	Increase the rudder gain in your transmitter				
	Adjust the rudder heading lock gain parameter in the AR7200BX				
	Make sure the tail drive belt tension is adjusted correctly				

# Blade 300 CFX Troubleshooting Guide

Problem	Possible Cause	Solution
	Low flight battery or transmitter battery voltage	Fully charge or replace the flight battery and/or transmitter batteries
	AR7200BX is not in bind mode	Make sure the bind plug is connected to the AR7200BX BND/DAT port
Helicopter will not bind to the	Transmitter is not in bind mode	Refer to your transmitter's instruction manual for binding instructions
transmitter (during binding)	Transmitter too close to the helicopter during the binding process	Power off the transmitter. Move the transmitter to a larger distance from the helicopter. Disconnect and reconnect the flight battery to the helicopter and follow binding instructions
Helicopter will not link to the transmitter (after binding)	Helicopter is bound to a different model memory (ModelMatch™ radios only)	Disconnect the flight battery. Select the correct model memory on the transmitter. Reconnect the flight battery
transmitter (arter binding)	Flight battery/Transmitter battery charge is too low	Replace or recharge batteries
	The helicopter was moved during initialization	Lay the helicopter on its side during initialization if windy
AR7200BX will not initialize	The transmitter is powered off	Power on the transmitter
	Controls are not centered	Center elevator, aileron and rudder controls. Make sure the throttle is at idle
	Throttle not at idle and/or throttle trim is too high	Lower the throttle stick and throttle trim to the lowest settings
Helicopter will not respond to	The transmitter is not in normal mode or throttle hold is on	Make sure the transmitter is in normal mode and throttle hold is off
the throttle but responds to other controls	The motor is not connected to the ESC or the motor wires are damaged	Connect the motor wires to the ESC and check motor wires for damage
	Flight battery charge is too low	Replace or recharge flight battery
	Throttle channel is reversed	Power down helicopter. Reverse the throttle channel on the transmitter
	Flight battery has low voltage	Fully charge the flight battery
	Flight battery is old or damaged	Replace the flight battery
Helicopter power is lacking	Flight battery cells are unbalanced	Fully charge the flight battery, allowing the charger time to balance the cells
	Excessive current is being drawn through the BEC	Check all servos and the helicopter motor for damage
	Tail drive belt tension is not correct	See "Checking Tail Drive Belt Tension" in this manual
	Main rotor head is not spinning in the correct direc- tion	Make sure the main rotor head is spinning clockwise. Refer to motor control test
Helicopter will not lift off	Transmitter settings are not correct	Check throttle and pitch curve settings
	Flight battery has low voltage	Fully charge the flight battery
	Main rotor blades are installed backwards	Install the main rotor blades with the thicker side as the leading edge
	Rudder control and/or sensor direction reversed	Make sure the rudder control and the rudder sensor are operating in the correct direction
The helicopter tail spins out	Tail servo is damaged	Check the rudder servo for damage and replace if necessary
of control	Inadequate control arm throw	Check the rudder control arm for adequate travel and adjust if necessary
	Tail belt is too loose	Make sure the tail drive belt tension is adjusted correctly
	Cyclic gain is too high	Decrease Dial 1 on the AR7200BX
The helicopter wobbles in flight	Headspeed is too low	Increase the helicopter's head speed via your transmitter settings and/or using a freshly charged flight pack
	Dampers are worn	Replace the main rotor head dampers

#### **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 Li-Po batteries to Horizon. If you have any issue with a Li-Po 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.

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#### Warranty and Service Contact Information

Country of Purchase	Horizon Hobby	Contact Information	Address	
	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd	
United States of America	Horizon Product Support	www.quickbase.com/db/ bghj7ey8c?a=GenNewRecord		
	(Product Technical Assistance)	888-959-2304	Champaign, Illinois, 61822 USA	
	Sales	sales@horizonhobby.com		
		888-959-2304		
United Kingdom	Service/Parts/Sales:	sales@horizonhobby.co.uk	Units 1–4 , Ployters Rd, Staple Tye	
	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	
FIGILE	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.	
Unina	Horizon Hobby – China	+86 (021) 5180 9868	Shanghai, China 200060	

#### **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.

(1) this device may not cause interference, and (2) this device must accept any

interference, including interference that may cause undesired operation of the

#### **IC Information**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

#### **Compliance Information for the European Union**

#### **Declaration of Conformity**

(in accordance with ISO/IEC 17050-1) No. HH2014022803 Product(s): 300 CFX BNF Basic Item Number(s): BLH4650

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Equipment class:

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

EN 301 489-1 V1.9.2: 2012 EN 301 489-17 V2.1.1: 2009 EN55022:2010 + AC:2011 EN55024:2010

Signed for and on behalf of: Horizon Hobby, Inc. Champaign, IL USA Feb 28, 2014

Robert Peak Chief Financial Officer Horizon Hobby, LLC.

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

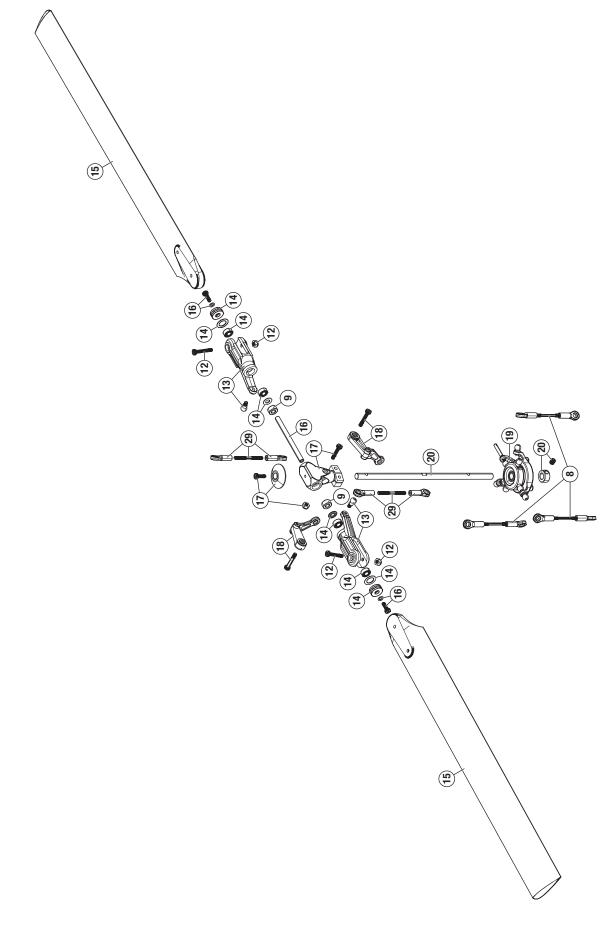


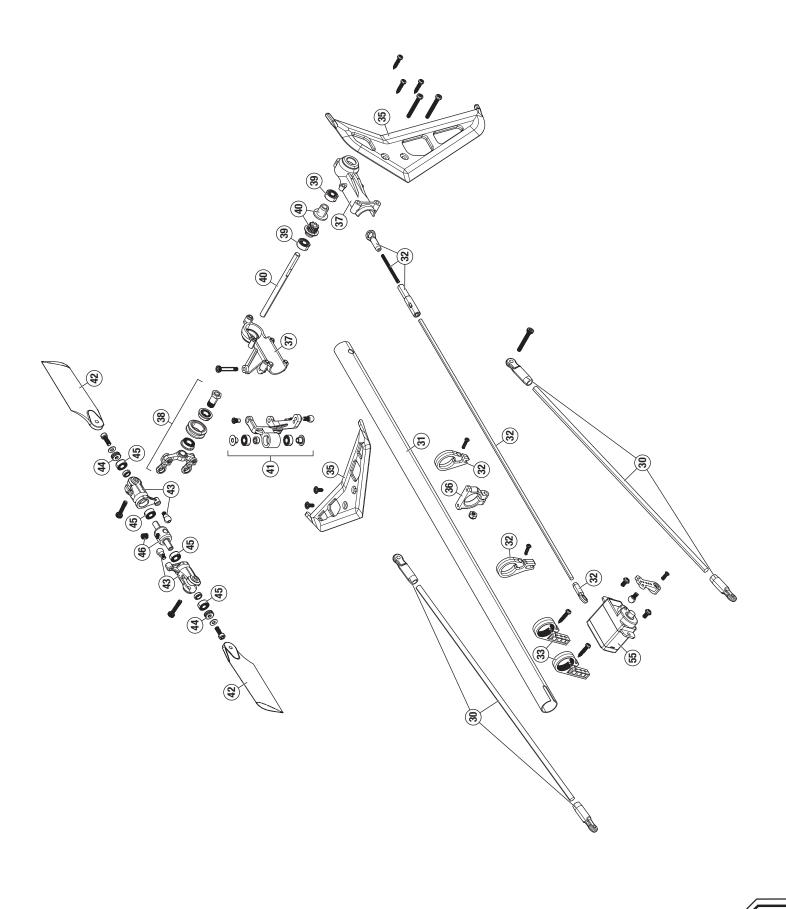
device.

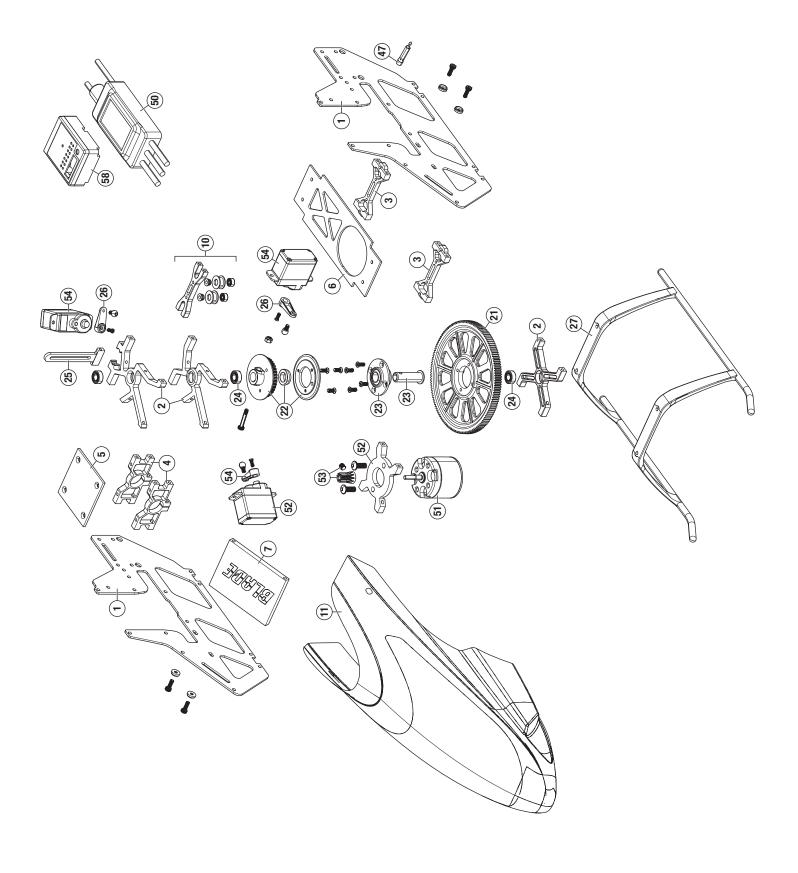
This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste 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.

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

#	Part #	English	Deutsch	Français	Italiano
1	BLH4601	Main Frame: 300 CFX	Blade 300 CFX: Hauptrahmen	300 CFX - Flancs du châssis	Telaio principale: 300 CFX
2	BLH4602	Bearing Blocks: 300 CFX	Blade 300 CFX: Lagerblöcke	300 CFX - Paliers	Blocchi cuscinetti: 300 CFX
3	BLH4603	Bottom Plate Mount: 300 CFX	Blade 300 CFX: Halter Lagerplatte unten	300 CFX - Fixations de train	Supporto piastra inferiore: 300 CFX
4	BLH4604	Tail Boom Mount: 300 CFX	Blade 300 CFX: Halter Lagerplatte unten	300 CFX - Fixations de poutre de queue	Supporto tubo di coda: 300 CFX
5	BLH4605	Gyro Mount: 300 CFX	Blade 300 CFX: Kreiselhalter	300 CFX - Support de gyro	Supporto gyro: 300 CFX
6	BLH4606	Bottom Plate: 300 CFX	Blade 300 CFX: Lagerplatte unten	300 CFX - Platine inférieure	Piastra inferiore: 300 CFX
7	BLH4607	Battery Mount: 300 CFX	Blade 300 CFX: Akkuhalter unten	300 CFX - Support de batterie	Supporto batteria: 300 CFX
8	BLH4608	Swash Links: 300 CFX	Blade 300 CFX: Anlenkungen Taumel- scheibe	300 CFX - Biellettes de plateau cyclique	Collegamenti piatto: 300 CFX
9	BLH4609	Damper: 300 CFX	Dämpfer : 300CFX	300 CFX -Amortisseurs	Ammortizzatori: 300 CFX
10	BLH4610	Aluminum Belt Cross Member: 300 CFX	Blade 300 CFX: Riemenführung Alu	300 CFX - Guide de courroie en aluminium	Traversa alluminio per cinghia: 300 CFX
11	BLH4611	Stock Canopy: 300 CFX	Kabinenhaube: 300 CFX	300 CFX -Bulle	Capottina stock: 300 CFX
12	BLH4503	Main Rotor Blade Mounting Screw&Nut (2) : 300 CFX	Schrauben Blattgriffe: 300 CFX	300 CFX - Vis et écrou de fixation des pales principales (2)	Viti e dadi montaggio pale rotore principale (2): 300 CFX
13	BLH4502A	Aluminum Flybarless Main Rotor Grip Set: 300 CFX	Aluminium Flybarless Hauptrotorblat- thalter Set: 300X	300X -Pieds de pales principales en aluminium	Set supporti pale alluminio rotore princ. Flybarless: 300 CFX
14	BLH4504	Main Grip Bearing Kit: 300 CFX	Lagerblatthalter: 300 CFX	300 CFX -kit de roulements de pieds de pales	Kit cuscinetti supporti pale: 300 CFX
15	RV0B024550	245mm CF Main Rotor Blade, FBL	245mm Carbon Main Rotor Blade, FBL	Pales principales en carbone long 245mm, FBL	Pale rotore principale CF 245mm, FBL
16	BLH4506	Spindle/Feathering Shaft(2): 300 CFX	Spindel u. Blattlagerwelle: 300 CFX	300 CFX - Axe de pieds de pales avec visserie (2)	Alberino portapale (2): 300 CFX
17	BLH4507A	Aluminum Flybarless Head Block Set: 300 CFX	Aluminium Flybarless Rotorkopfzentral- stück: 300X	300X -Moyeu de tête en alu- minium	Set blocco testa alluminio Flybarless: 300 CFX
18	BLH4508A	Aluminum Flybarless Follower Arms: 300 CFX	Aluminium Taumelscheibenmitnehmer: 300X	300X -Bras FBL en aluminium	Braccetti alluminio follower Flybar- less: 300 CFX
19	BLH4510A	Aluminum Swashplate: 300 CFX	Aluminium Taumelscheibe: 300X	300X -Bras FBL en aluminium	Piatto oscillante alluminio: 300 CFX
20	BLH4511	Main Shaft (2): 300 CFX	Hauptrotorwelle (2) 300 CFX	300 CFX -Axe principal (2)	Albero principale (2): 300 CFX
21	BLH1651	Main Gear (2): B450/X, 300 CFX	Zahnrad (2) B450/X, 300 CFX	300 CFX/B450/X -Couronne principale (2)	Ingranaggio principale (2): B450/X, 300 CFX
22	BLH4513	Main Tail Drive Gear (2): 300 CFX	Hauptzahnrad Heckrotor (2) 300 CFX	300 CFX -Pignon d'entraînement d'anticouple (2)	Ingranaggio coda (2): 300 CFX
23	BLH4514	Main Gear Hub: 300 CFX	Hauptzahnrad: 300 CFX	300 CFX -Moyeu de couronne principale	Mozzo ingranaggio principale: 300 CFX
24	BLH4515	Bearings 4x8x3 (3): 300 CFX	Kugellager 4x8x3 (3): 300 CFX	300 CFX -roulements 4X8X3 (3)	Cuscinetti 4x8x3 (3): 300 CFX
25	BLH4518A	Aluminum AntiRotation Bracket/ Guide: 300 CFX	Aluminium Taumelscheibenführung: 300X	300X -Guide de plateau cyclique en aluminium	Guida/staffa antirotazione alluminio: 300 CFX
26	BLH4519A	Aluminum Servo Control Arms: 300 CFX	Aluminium Servokontrollarme: 300X	300X -Bras de servos en alu- minium	Braccetti servo alluminio: 300 CFX
27	BLH4520	Landing Gear Set: 300 CFX	Kufengestell: 300 CFX	300 CFX -Train d'atterrissage	Set carrello atterraggio: 300 CFX
28	BLH4523	Tail Drive Belt: 300 CFX (not shown)	Heckrotorriemen: 300 CFX (nicht abgebildet)	300 CFX -Courroie (non illustrée)	Cinghia trasmissione coda: 300 CFX
29	BLH4509	FBL Linkage Set: 300 CFX, 300 CFX	FBL Gestängeset: 300 CFX, 300 CFX	300 CFX, 300 CFX -Tringleries FBL	Set collegamenti FBL: 300 CFX, 300 CFX
30	BLH4525A	Tail Boom Brace/Support Set, Aluminum: 300 CFX	Aluminium Heckrohrhalter Set: 300 CFX	300 CFX -Renfort de tube de queue en aluminium	Set supporto tubo coda, alluminio: 300 CFX
31	BLH4526	Tail Booms (2): 300 CFX	Heckrohr (2) 300 CFX	300 CFX -Tube de queue (2)	Tubo coda (2): 300 CFX
32	BLH4527	Tail Pushrod Support/Guide Set: 300 CFX	Heckrotorgestänge / Führung: 300 CFX	300 CFX -Guide de commande d'anticouple	Set guida/supporto comando coda: 300 CFX
33	BLH4528	Tail Servo Boom Mount (2): 300 CFX	Heckrotorservohalter (2):300 CFX	300 CFX -Support de servo d'anticouple (2)	Supporto servo coda (2): 300 CFX
34	BLH4529	Tail Linkage/Pushrod (2): 300 CFX	Hecktrotorgestänge (2) 300 CFX	300 CFX -Tringlerie d'anticouple (2)	Astina comando coda (2): 300 CFX
35	BLH4530C	Stab/Fin Set, Carbon Fiber: 300 CFX	Carbon Stabilsitator Finne Set: 300X	300X -Dérive et stabilisateur en carbone	Set impennaggi in carbonio: 300 CFX

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#	Part #	English	Deutsch	Français	Italiano
36	BLH4531	Horizontal Stabilier/Fin Mount: 300 CFX	Halter Stabilisator/ Finne: 300 CFX	300 CFX -Support de dérive et stabilisateur	Supporto stabilizzatore orizzontale: 300 CFX
37	BLH4532	Tail Case: 300 CFX	Heckrotorgehäuse:300 CFX	300 CFX -Carter d'anticouple	Scatola coda: 300 CFX
38	BLH4533	Tail Rotor Pitch Lever Set: 300 CFX	Umlenkhebel f. Heckrotorpitchhülse: 300 CFX	300 CFX -Levier de pas d'anticouple	Set leva passo rotore coda: 300 CFX
39	BLH4534	Bearings 3x7x3 (2): 300 CFX	Kugellager 3x7x3 (2): 300 CFX	300 CFX -Roulements 3X7X3 (2)	Cuscinetti 3x7x3 (2): 300 CFX
40	BLH4535	Tail Rotor Shaft and Drive Pul- ley (2): 300 CFX	Heckrotorwelle und Antriebsrad (2): 300 CFX	300 CFX -Axe d'anticouple avec poulie (2)	Alberino e puleggia rotore coda (2): 300 CFX
41	BLH4536	Tail Rotor Pitch Control Slider Set: 300 CFX	Heckrotorpitchhülse	300 CFX -Coulisseau d'anticouple	Set cursore passo coda: 300 CFX
42	BLH4537	Tail Rotor Blade Set: 300 CFX	Heckrotorblätter: 300 CFX	300 CFX -Paire de pales d'anticouple	Set pale coda: 300 CFX
43	BLH1670	Tail Rotor Blade Grip/Holder Set: B450, 300 CFX	Heckrotor Blatthalter: B450, 300 CFX	B450,300 CFX -Pieds de pales d'anticouple	Set supporto pale rotore coda: B450, 300 CFX
44	BLH1612	Tail Rotor Thrust Bearings: B450, 300 CFX	Heckrotordrucklager: B450, 300 CFX	B450,300 CFX -Butées à billes de rotor d'anticouple	Cuscinetti reggispinta rotore coda: B450, 300 CFX
45	EFLH1115	Bearing 3x6x2.5mm (2): 300 CFX	Kugellager 3x6x2,5mm (2) 300 CFX	300 CFX -Roulement 3X6X2.5mm (2)	Cuscinetto 3x6x2.5mm (2): 300 CFX
46	BLH4540	Aluminum Tail Rotor Hub Set: 300 CFX	Aluminium Heckrotor Blatthalter Set: 300 CFX	300 CFX -Moyeu d'anticouple en aluminium	Set mozzo alluminio rotore coda: 300 CFX
47	BLH4517	Canopy Mounts (2): 300 CFX, 300 CFX	Kabinenhaubenhalter (2):300 CFX, 300 CFX	300 CFX, 300 CFX -Support de bulle	Supporti capottina (2): 300 CFX, 300 CFX
48	BLH4543	Complete Hardware Set: 300 CFX (not shown)	Kleinteile kpl (nicht abgebildet): 300 CFX	300 CFX -Set d'accessoires (non illustré)	Set completo viti: 300 CFX (non illustrato)
49	BLH4544	Mounting Access. Screwdriver, & Wrench: 300 CFX (not shown)	Montage Zbh. Schraubendreher und Inbusschlüssel (nicht abgebildet) : 300 CFX	300 CFX -Accessoires de montage,tournevis et clés (non illustré)	Accessori e attrezzi per il montaggio: 300 CFX (non illustrato)
50	EFLA325HB	25-Amp Helicopter Brushless ESC: 300 CFX	25A Hubschrauber Brushless Regler: 300 CFX	300 CFX -Contrôleur brushless 25A	Regolatore elettronico 25 A: 300 CFX
51	EFLM1160H	Brushless 320 Helicopter Motor,4500Kv: 300 CFX	Brushless 320 Hubschrauber Motor, 4500Kv: 300 CFX	300 CFX -Moteur brushless 320, 4500Kv	Motore brushless 320, 4500Kv: 300 CFX
52	BLH4516	Aluminum Motor Mount Set: 300 CFX	Aluminium Motorträger Set: 300 CFX	300 CFX -Support moteur en aluminium	Set supporto motore alluminio: 300 CFX
53	BLH1611	Pinion Gear, 11T 0.5M: B450, B400	Ritzel 11T 0,5M: B450, B400	B450,B400 -Pignon 11 dents 0.5M	Pignone, 11T 0.5M: B450, B400
54	EFLRDS76	7.6-Gram Sub-Micro Digital Servo (ELE/AIL/PIT)	7.6-Gr. Sub-Micro Digital Servo (ELE/ AIL/PIT)	Sub micro servo digital 7.6g (Profondeur/Aileron/pas)	Servo 7.6-Gram Sub-Micro Digital (ELE/AIL/PIT)
55	EFLRDS76T	7.6-Gram Sub-Micro Digital Servo- TR	7.6-Gr Sub-Micro Digital Servo- TR	Sub micro servo digital 7.6g (anticouple)	Servo 7.6-Gram Sub-Micro Digital - TR
56	EFLRDS761	Gear Set: DS76 (not shown)	Getriebe Set DS76 (nicht abgebildet)	Jeu de pignons pour DS76 (non illustré)	Set ingranaggi: DS76 (non illustrato)
57	EFLRDS76T1	Gear Set: DS76T (not shown)	Getriebe Set DS76T (nicht abgebildet)	Jeu de pignons pour DS76T (non illustré)	Set ingranaggi: DS76T (non illustrato)
58	SPMAR- 7200BX	AR7200BX 7CH DSMX Flybarless Control System	AR7200BX 7CH DSMX Flybarless	Module AR7200BX 7voies DSMX Flybarless	Sistema di controllo Flybarless AR7200BX 7CH DSMX
	BLH4541	Mini Helicopter Main Blade Holder: 300 CFX (not shown)	Blatthalter Hauptrotor 300 CFX (nicht abgebildet)	300 CFX -Support de pales pour mini hélicoptère (non illustré)	Supporto pale principali mini elicot- tero: 300 CFX (non illustrato)

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

Part #	English	Deutsch	Français	Italiano
DYNC2005	Prophet Sport Li-Po 35W AC Charger	Dynamite Prophet Sport LiPo 35W AC Ladegerät-EU	Chargeur Dynamite Prophet Sport Li-Po 35W AC	Caricatore Prophet Sport Li-Po 35W AC
EFLB13503S30	1350mAh 3S 11.1V 30C LiPo, 13AWG EC3	1350mAh 3S 11.1V 30C LiPo, 13AWG, EC3 Stecker	Batterie Li-Po 11.1V 3S 1350mA 30C, prise EC3	Batteria LiPo 1350mAh 3S 11.1V 30C, 13AWG EC3
BLH1610*	Pinion Gear, 10T 0.5M: B450 3D/X, B400 , 300 CFX	Ritzel 10T 0,5M : B450 3D/X, B400, B300X	B450 3D/X,B400, B300 CFX -Pignon 10 dents 0.5M	Pignone, 10T 0.5M: B450 3D/X, B400, 300 CFX
BLH4526C	Tail Boom, Carbon Fiber: 300 CFX	Heckrohr Kohlefaser: 300X	300X -Tube de queue en carbone	Tubo coda in fibra di carbonio: 300 CFX

Part #	English	Deutsch	Français	Italiano
BLH4528A	Aluminum Tail Servo Boom Mount: 300 CFX	Aluminium Heckservohalter: 300X	300X -Support de servo d'anticouple en aluminium	Supporto alluminio per servo coda: 300 CFX
BLH4531A	Aluminum Horizontal Stab Fin Mount: 300 CFX	Aluminium Horizontal Stabilisator Halter: 300X	300X -Support de stabilisateur en aluminium	Supporto in alluminio per impen- naggio orizzontale: 300 CFX
BLH4532A	Aluminum Tail Case Set: 300 CFX	Aluminium Heckrotorgehäuse: 300X	300X -Carter d'anticouple en alu- minium	Set scatola coda in alluminio: 300 CFX
BLH4533A	Aluminum Tail Rotor Pitch Lever Set: 300 CFX	Aluminium Heckrotorgestänge 300X	300X -Levier de pas d'anticouple en aluminium	Set leva passo rotore coda in alluminio: 300 CFX
BLH4535A	Tail Rotor Shaft Aluminum Drive Pulley: 300 CFX	Heckrotorwelle mit Antriebsrad: 300X	300X -Axe d'anticouple avec poulie en aluminium	Alberino e puleggia rotore coda in alluminio: 300 CFX
BLH4536A	Aluminum Tail Rotor Pitch Control Slider Set: 300 CFX	Aluminium Pitchschiebehülse Set: 300X	300X -Coulisseau d'anticouple en aluminium	Set cursore passo coda alluminio: 300 CFX
BLH45370R	Tail Rotor Blade Set, Orange: 300 CFX	Heckrotorblätter Set Orange: 300X	300X -Pales d'anticouple, orange	Set pale coda, arancio: 300 CFX
BLH4537GR	Tail Rotor Blade Set, Green: 300 CFX	Heckrotorblätter Set Grün: 300X	300X -Pales d'anticouple, vert	Set pale coda, verde: 300 CFX
BLH4537YE	Tail Rotor Blade Set, Yellow: 300 CFX	Heckrotorblätter Set Gelb: 300X	300X -Pales d'anticouple, jaune	Set pale coda, giallo: 300 CFX
BLH4537C	Tail Rotor Blade Set Carbon Fiber: 300 CFX	Heckrotorblätter Set Kohlefaser: 300X	300X -Pales d'anticouple, carbone	Set pale coda, carbonio: 300 CFX
BLH1670A	Aluminum Tail Rotor Blade Grp Set Hub: B450, 300 CFX	Aluminium Blatthalter: B450 ,300X	B450, 300X -Pieds de pales d'anticouple en aluminium	Set supporto pale alluminio per rotore coda:B450, 300 CFX
BLH4542A	Black/Yellow Option Canopy	Kabinenhaube Gelb/Schwarz	Bulle optionnelle Noir/jaune	Capottina opzionale nero/giallo
BLH4542B	Red/Black Option Canopy	Kabinenhaube Rot/Schwarz	Bulle optionnelle Rouge/noir	Capottina opzionale rosso/nero
BLH4542C	Yellow/Green Option Canopy	Kabinenhaube Gelb/Grün	Bulle optionnelle Jaune/vert	Capottina opzionale giallo/verde
BLH2149	300 CFX Carrying Case	300 CFX Tragekoffer	300X -Valise de transport	Valigetta per il trasporto del 300 CFX
EFLC3025	Celectra 80W AC/DC Multi-Chem- istry Battery Charger	Celectra 80W AC/DC Multi Akku Ladegerät	Chargeur Celectra AC/DC 80W	Caricabatterie multiplo Celectra 80W AC/DC
EFLC4030	3.0-Amp Power Supply, 100- 240V AC-12V DC	3,0 A Netzgerät 100- 240V AC 12 DC	Alimentation secteur 100-240V 3A 12V DC	Alimentatore 3 A, 100-240V AC-12V DC
EFLC4030AU	3.0 Amp Power Supply, 100-240V AC-12V DC AU	3,0 A Netzgerät 100- 240V AC 12 DC AU	Alimentation secteur 100-240V 3A 12V DC, prise AU	Alimentatore 3 A, 100-240V AC- 12V DC AU
EFLC4030EU	3.0 Amp Power Supply 100-240V AC-12V DC EU	3,0 A Netzgerät 100- 240V AC 12 DC EU	Alimentation secteur 100-240V 3A 12V DC, prise EU	Alimentatore 3 A, 100-240V AC- 12V DC EU
EFLC4030UK	3.0 Amp Power Supply, 100-240V AC-12V DC UK Plug	3,0 A Netzgerät 100- 240V AC 12 DC UK	Alimentation secteur 100-240V 3A 12V DC, prise UK	Alimentatore 3 A, 100-240V AC- 12V DC spina UK
	DX8 DSMX Transmitter Only	DX8 DSMX nur Sender	Emetteur seul DX8 DSMX	Solo trasmettitore DX8 DSMX
	DX7s 7 Ch with AR8000 No SX's	DX7s 7 Kanal mit AR8000 ohne Servos	DX7s 7 voies avec AR8000, sans servo	Radio DX7s 7 Ch con AR8000 senza servi
	DX7s Transmitter Only	DX7s nur Sender	Emetteur seul DX7s	Solo trasmettitore DX7s

\* If used, Carbon Blades are required
\* Carbonblätter werden benötigt
\* Utilisation impérative de pales carbone avec cette pièce
\* Se usato richiede le pale in carbonio

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