



Habu BNF & PNP Instruction Manual



© 2009 Horizon Hobby, Inc.
4105 Fieldstone Road
Champaign, IL 61822
USA

Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex
CM18 7NS
United Kingdom

Horizon Hobby Deutschland GmbH
Hamburger Strasse 10
25335 Elmshorn
Germany

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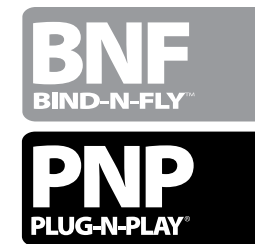
www.parkzone.com

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Specifications:
Wingspan: 36.3 in (920mm)
Length: 43.3 in (1100mm)
Weight: 2.8 lb (1300 g)
ESC: E-flite® 60-Amp Pro Switch-Mode BEC Brushless ESC
Charger: Variable Rate DC Powered Balancing Fast Charger (BNF)
Battery: E-flite 4S 14.8V 3200mAh 30C Li-Po (BNF)
Receiver: Spektrum™ AR500 5-channel Sport Receiver (BNF)





Habu EDF Introduction

From on the deck high-speed passes to horizon-to-horizon slow rolls, the Habu is a true sport jet in every sense. Optimized airframe for both high speed precision and amazing low-speed stability, the Habu does it all. With the functional rudder, outside snaps, spins and extended knife edge are all possible. With optional landing gear, the Habu can perform smooth takeoffs, touch and goes and picture perfect nose high landings. Remove the landing gear and hand launch for all out speed and performance.

Your Habu already has the 3-wire servos, an E-flite® Delta-V™ 15 fan, 3200Kv six-pole inrunner brushless motor, and an E-flite 60A brushless ESC installed. The Bind-N-Fly version also includes a 4-cell 3200mAh Li-Po battery pack, 3- to 4-cell balancing Li-Po Charger, and a Spektrum DSM2 full range AR500 receiver installed. The Plug-N-Play® version requires a 3200-3300mAh 4-cell Li-Po, charger, transmitter and receiver. The decals have already been applied, as well. In as little as an hour, you can be ready for your first flight with the Habu. This means you can spend your time refining your flying skills, not your building skills.

Warning: *Although your ParkZone® Habu comes almost ready to fly, this aircraft is for experienced RC pilots only and is not a toy. Misuse of the plane can cause serious bodily harm and damage to property. Therefore, only an experienced RC pilot should fly it. Because of the high performance nature of the Habu, we recommend you only fly in very large open areas or RC club fields.*

Note: *A full range 4-channel or greater transmitter (SPMR5500, SPMR6600 or SPMR7700) for the Habu BNF and PNP, receiver (SPMAR500 or SPMAR6200), battery and charger are required for the Habu PNP.*

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PNP Contents

Fuselage (includes the following):

60-Amp Pro Switch-Mode BEC Brushless ESC
Delta-V 15 69mm EDF Fan Unit

Hatch with Canopy

Horizontal Stabilizer

Exhaust Nozzle

Wing

Vertical Fin

Nose Wheel Plate (x2)

Tape

Screw Bag with Bind Plug and 1.5mm Hex Wrench

Fin Mount Plates Left and Right

Left Main Landing Gear

Right Main Landing Gear

Nose Gear



BNF Contents

Fuselage (includes the following):

60-Amp Pro Switch-Mode BEC ESC
Delta-V 15 69mm EDF Fan Unit
AR500 Receiver

Hatch with Canopy

Horizontal Stabilizer

Exhaust Nozzle

Wing

Vertical Fin

Nose Wheel Plate (x2)

3- to 4-cell Balancing Li-Po Charger

Tape

Screw Bag with Bind Plug and 1.5mm Hex Wrench

Fin Mount Plates Left and Right

3200mAh 4-cell 30C Li-Po battery

Left Main Landing Gear

Right Main Landing Gear

Nose Gear



Charging the Aircraft Battery (BNF Only)

Your Habu BNF comes with a DC balancing charger and 4S 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. It is recommended to charge the battery pack while assembling the aircraft. The flight battery will be required to confirm proper aircraft operation in future steps.

DC Li-Po Balancing Charger Features

- Charges 3- to 4-cell lithium polymer battery packs
- Variable charge rates from .3 to 3.0A
- Simple single push-button operation
- LED charge status indicator
- LED cell balance indicator
- Audible beeper indicates power and charge status
- 12V accessory outlet input cord

Specifications

- Input power: 10-14.2V DC
- Charges 3- to 4-cell Li-Po packs with minimum capacity of 300mAh
- Variable charge rates from 300mAh to 3 amps

4S 14.8V 3200mAh Li-Po Battery Pack

The E-flite 4S Li-Po battery pack features a balancing lead that allows you to safely charge your battery pack when used with the included ParkZone Li-Po balancing charger.

To Complete the Charging Process

1. Attach the input cord of the charger to the appropriate power supply (12V accessory outlet), or use the HBZ6513 (Alligator Clip input adapter for 12V) and attach to 12V DC power supply. Once your charger has been correctly powered up, there will be an approximate 3-second delay, then you will hear an audible “beep”, and the green (ready) LED will flash.
2. Set the dial on the charger to the appropriate rate depending on the capacity of battery being charged.

BATTERY CAPACITY	MAX CHARGE RATE
300–500mAh	300mAh
500–1000mAh	500mAh
1000–1500mAh	1.0A
1500–2000mAh	1.5A
2000-3000mAh	2.0A
3000mAh +	3.0A

Warning: Selecting a charge rate higher than 1x battery capacity may cause a fire.

3. Select the proper number of cells that you will be charging, either 3 or 4 cells.
 4. Locate the safety charge lead on the battery pack. The charge lead of a 3-cell Li-Po battery will plug into the smaller 4-pin port on the bottom left of the charger. A 4-cell pack will need to plug into the 5-pin port on the bottom right of the charger. Once the battery is properly plugged into the correct port, it will beep 3 times if it is a 3-cell, and four times if it is a 4-cell pack. Once this is done, proceed to charge the battery pack.
 5. Push the start button to begin the charging process. Once this is done, the charger will make an audible beep that matches the cell count, and then the red (charge) LED will begin to flash. Do not adjust the current once the charger has begun to charge.
- Note:** At times, the green LED may also flash during the charging process, indicating that the charger is balancing one or more of the cells at the same time it is charging the battery pack. When this is occurring, the red and green LEDs will both be flashing. It will not always be necessary for the cells to be balanced.
6. When the battery pack is fully charged, you will hear an audible beep for about 3 seconds, and the green LED will be solid. Always unplug the battery from the charger immediately upon completion. Failure to do so could cause a fire.

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



Installing Flight Battery

Install your flight battery into the airplane. Secure the battery with the two hook and loop straps. Make sure all wires are clear of the hatch and that the hatch attaches firmly in place before flight.

Note: Only plug in your flight battery once you have bound the receiver (BNF), or after you have installed your receiver and plugged the speed control into the throttle channel. (PNP)



Habu BNF

Transmitter and Receiver Binding

Binding is the process of programming the receiver of the control unit to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. It will be necessary for you to 'bind' your chosen Spektrum DSM2 technology-equipped transmitter to the receiver for proper operation.

The transmitter you select must be a DSM2 full range (high power) transmitter. The following is a list of some of the Spektrum DSM2-equipped full range transmitters and modules that will bind to the receiver of the Habu:

Spektrum DX5e	JR X9303 2.4
Spektrum DX6i	JR 12X 2.4
Spektrum DX7/DX7se	All SPM Module systems

The following steps outline the binding process

- Confirm the process of entering the bind mode for your chosen transmitter by reviewing the instruction manual included with the transmitter.
- Make sure the flight battery is disconnected from the receiver unit and the transmitter is turned off.
- Plug the bind plug into the Batt/Bind port on the AR500 receiver.
- Plug the flight battery into the battery lead of the ESC. The LED on the receiver unit will begin flashing.
- After verifying the LED is flashing on the receiver, follow the steps that allow your chosen transmitter to enter bind mode.
- If you entered bind mode correctly, you will see a solid LED approximately 5–10 seconds later on the receiver. You should now be bound to the transmitter, and have full control and function.
- Remove and store the bind plug in a safe place.

If you encounter any problems, repeat the binding process again, see the troubleshooting guide or call the Horizon Support Team at 1-877-504-0233, United Kingdom at +44 (0) 1279 641 097 or Germany at +49 4121 46199 66.

Transmitter-Specific Binding Instructions

DX5e:

- To bind your Habu to the DX5e, plug the bind plug into the Batt/Bind port on the AR500 receiver.
- Plug the battery into the ESC of the airplane. The LED on the receiver will begin flashing.
- Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
- Pull and hold the Trainer Switch on the transmitter while turning the transmitter on. Release the trainer switch once the LEDs on the front of the transmitter flash.
- The LED on the receiver will go solid amber and the system will connect after several seconds.
- Remove and store the bind plug in a safe place.

DX6i:

- Start with a blank model memory, or the one you have selected for the Habu.
- To bind your Habu to the DX6i, plug the bind plug into the Batt/Bind port on the AR500 receiver.
- Plug the battery into the ESC of the airplane. The LED on the receiver will begin flashing.
- Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
- Pull and hold the Trainer Switch on the transmitter while turning the transmitter on. Release the trainer switch once the word BIND flashes on the LCD screen on the front of the transmitter.
- The LED on the receiver will go solid amber and the system will connect after several seconds.
- Remove and store the bind plug in a safe place.

DX7 (includes DX7se):

- Start with a blank model memory, or the one you have selected for the Habu.
- To bind your Habu to the DX7, plug the bind plug into the Batt/Bind port on the AR500 receiver.
- Plug the battery into the ESC of the airplane. The LED on the receiver will begin flashing.
- Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
- Press the bind button on the back of the transmitter while turning the transmitter on. The bind button on the back of the transmitter will flash. Release the button after 2–3 seconds.
- The LED on the receiver will go solid amber and the system will connect after several seconds.
- Remove and store the bind plug in a safe place.

X9303:

- A. Start with a blank model memory, or the one you have selected for the Habu.
- B. To bind your Habu to the X9303, plug the bind plug into the Batt/Bind port on the AR500 receiver.
- C. Plug the battery into the ESC of the airplane. The LED on the receiver will begin flashing.
- D. Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
- E. Press the bind button on the back of the transmitter while turning the transmitter on. The bind button on the back of the transmitter will flash. Release the button after 2–3 seconds.
- F. The LED on the receiver will go solid amber and the system will connect after several seconds.
- G. Remove and store the bind plug in a safe place.

12X:

- A. Start with a blank model memory, or the one you have selected for the Habu.
- B. To bind your Habu to the 12X, plug the bind plug into the Batt/Bind port on the AR500 receiver.
- C. Plug the battery into the ESC of the airplane. The LED on the receiver will begin flashing.
- D. Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
- E. Press the black bind button on the back of the transmitter while turning the transmitter on. Release the button after 2–3 seconds.
- F. The LED on the receiver will go solid amber and the system will connect after several seconds.
- G. Remove and store the bind plug in a safe place.

Transmitter Control Identification

Note: Before each flight you should ALWAYS turn the transmitter on before connecting the flight battery to the receiver unit. After each flight, always disconnect the flight battery from the receiver unit before powering the transmitter off.

Additional Binding Information

Prior to each flight, you should ensure that you power on your transmitter and wait about five seconds before you plug the flight battery into the receiver. Doing this allows time for the transmitter to scan and secure two open frequencies. If the flight battery is plugged in too quickly and the link is missed, it may not allow the receiver to connect to the transmitter. If this occurs, simply leave the transmitter on and then disconnect and reconnect the flight battery.

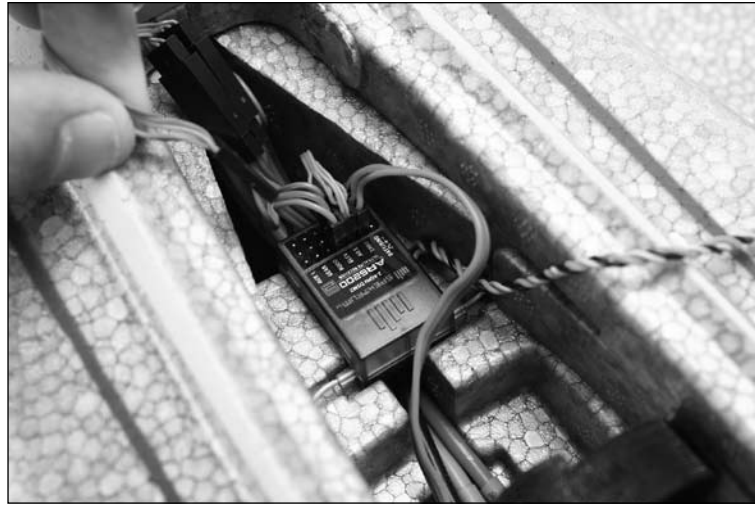
Note: If using a Futaba transmitter with a module, it may be necessary to reverse the throttle channel.

Note: If using a Spektrum radio it will be necessary to reverse the ailerons. Refer to **Control Direction Test** on pages 25–26 regardless of transmitter used.

Habu PNP

Installing the Receiver

1. Install your full range receiver in the location shown in the photo using hook and loop tape or double-sided servo tape.
2. Plug the elevator and rudder Y-harness into the appropriate ports of the receiver. Plug the Y-harness into the aileron channel of the receiver, and plug the ESC lead into the throttle channel.



General Assembly

Battery Selection:

When selecting a battery for your Habu we recommend the E-Flite 3200mAh 30C 4-cell battery (EFLB32004S30) or the Thunder Power 3300mAh 30C 4-cell battery (THP33004SP30).

If using a battery other than those recommended above, it must be able to handle 60-amps continuously. It should also be roughly the same capacity, dimensions, and weight as the previously mentioned batteries to allow the battery to physically fit into the airframe and not drastically shift the center of gravity.

Attaching the Wing

1. Locate the included wing mounting screw.
2. Turn over the fuselage so you are looking at the bottom. Do the same with the wing.
3. Connect the aileron leads to the preinstalled Y-harness, noting proper orientation. Route the Y-harness lead through the access hole in the bottom of the fuselage.



4. Carefully align the two locator pins on the rear of the wing into the two small holes in the rear of the fuselage.



5. Slide the aileron leads inside the fuselage so that they will not become pinched in between the wing and the fuselage when securing the wing. When the wing is seated, install the wing mounting screw.



6. Tighten wing mounting screw securely. Make sure there are no gaps between the wing and fuselage and that the aileron servo leads are not pinched between the wing and fuselage.



The wing is correctly installed when no gap exists between the wing and fuselage.

Attaching the Tail

1. Locate the following: horizontal stabilizer, rudder, two plastic fin mount plates, 7x larger self-tapping screws, the tailcone and the tape for securing the tailcone.



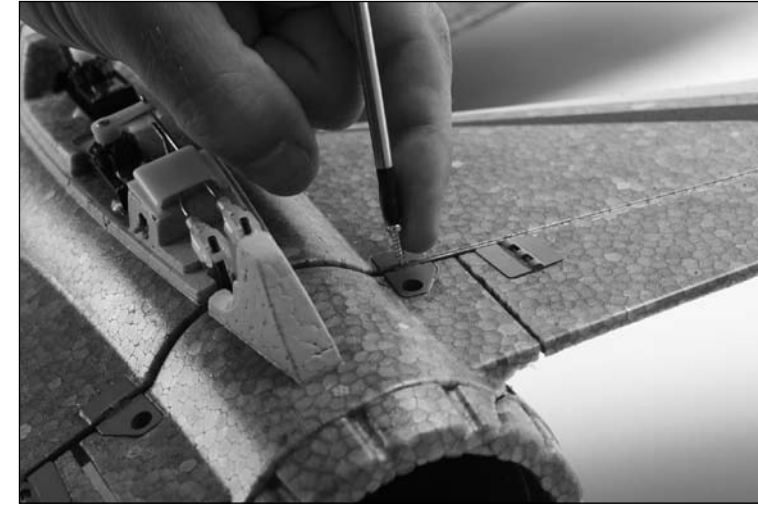
2. Plug the elevator and rudder servo leads into the connectors in the fuselage and tuck the elevator and rudder leads into the horizontal stabilizer.



3. Place the horizontal stabilizer on the fuselage making sure it is resting on the fuselage without any gaps.



3. Screw the horizontal stab onto the fuselage using two of the self-tapping screws.



4. Remove the rudder pushrod and set aside. Slide fin and rudder into the fuselage.



5. Attach plastic fin mount plates on each side of the rudder making sure the fin mount plates are aligned with the holes on the fuselage and rudder.



6. Secure the plastic fin mount plates with 5 self-tapping screws.



7. Reattach rudder pushrod on second outermost servo arm hole, and outermost rudder control horn hole.



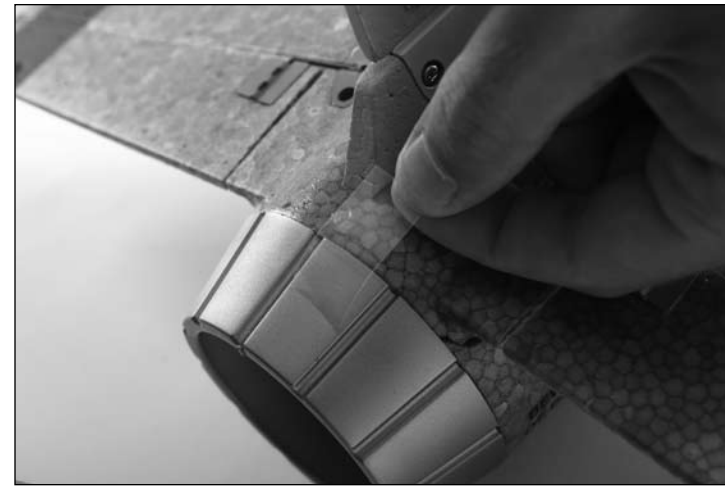
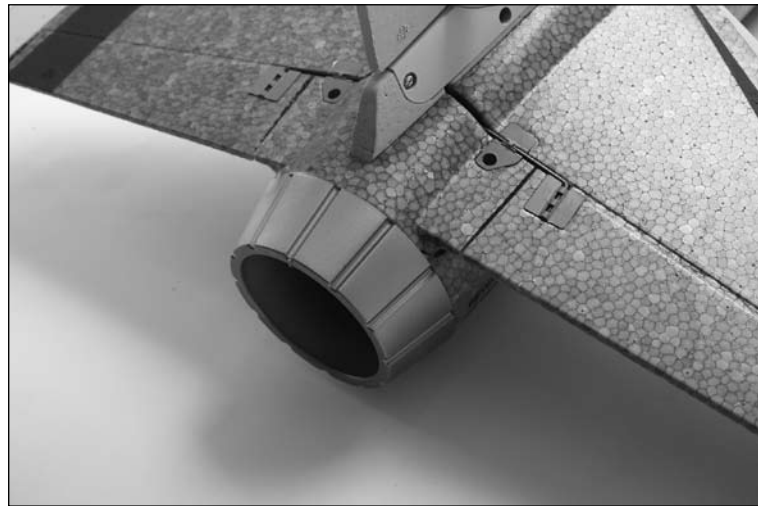
8. Power on transmitter and airplane and adjust clevis so rudder is centered.



9. Once rudder is centered, slide silicone keeper onto clevis to prevent clevis from opening in flight.



10. Slide tailcone on to the rear of the fuselage. Press firmly in place to make sure tailcone is fully seated. Secure in place with the included 4 pieces of tape at the locations shown in the following photos.



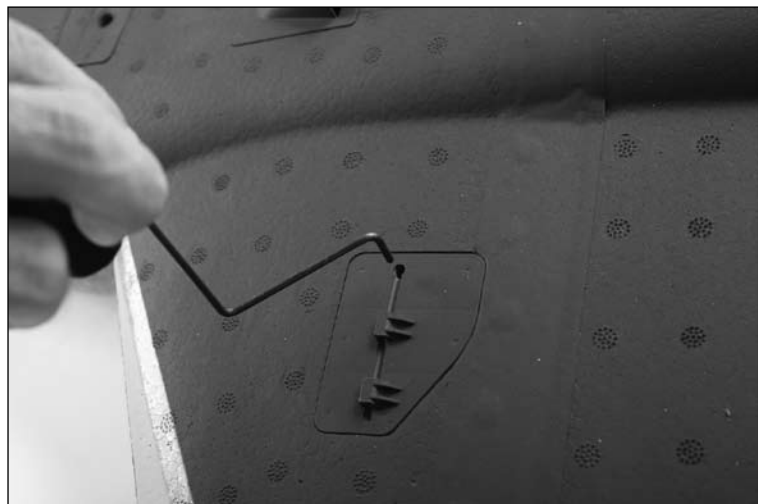
The Habu was intentionally designed to provide the choice to fly with or without landing gear. If you prefer to fly at the highest speed or in the most precise manner, we recommend flying without the LG installed. You will find it is very sleek and fast, as the drag is decreased.

If you choose to enjoy the terrific experiences of ROGs, touch and goes, and scale-like landings, then it is very enjoyable to attach the main and nose LG. Of course, you may choose to fly both ways, and we encourage this by providing two nose plates, one for the steerable nose gear and one to be used for hand launches and belly landings.

Follow the first section to install landing gear or follow the second section to set up your Habu without landing gear.

Installing the Landing Gear

1. Snap the main gear into the landing gear plates on the wing. Make sure wheels are facing out and struts are facing in.



2. Select the nosewheel plate with the servo and nosewheel steering arm installed. Plug the servo into the servo extension inside the nose cavity, and attach plate to fuselage with the 8 included self-tapping screws.

Note: Make sure the air intake is facing forward.



3. Insert nose wire into the nosewheel plate attached to the fuselage making sure to have the flatspot on the wire aligned with the setscrew. Tighten setscrew with included 1.5mm hex wrench.



Configuring without Landing Gear

1. Place landing gear plate without servo and nosewheel onto the fuselage.



2. Make sure the air intake is facing forward as shown in the photo.



3. Install the 8 self-tapping screws for the nose landing gear plate.



Note: Also included are two skids for belly landing. Place the front skid just behind the nose wheel plate. Place the second skid in front of the exhaust nozzle. This will help protect the bottom of the airframe for belly landing.

Control Direction Test

1. Move the elevator stick on the transmitter to check elevator pitch control. When the stick is pushed forward, the elevator should move down.



2. When the elevator stick is moved aft the elevator should move up.



3. Move the aileron stick to check aileron roll control. When the stick is pushed to the left, the left aileron should move up and the right aileron should move down.



4. With the aileron stick pushed right, the right aileron should move up and the left aileron should move down.

Note: If using a Spektrum transmitter, the ailerons will need to be reversed.



5. Move the rudder stick to check yaw control. When the stick is pushed to the right the rudder should also move to the right (if viewed from behind the airplane).



6. With the rudder stick pushed to the left, the rudder should move to the left.



If at any time during the test the controls respond in the opposite direction, it may be necessary to reverse/change the direction of operation of the flight controls. Follow your transmitter instructions to change the direction of the various flight controls.

Flying

Always choose a wide-open space for flying your ParkZone Habu. It is ideal for you to fly at an AMA sanctioned flying club. If you are not flying at an AMA approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Always follow local ordinances. We recommend only flying your Habu in light winds.

Center of Gravity Location

The CG location is 4 inches (102mm) from leading edge at the root of the wing +/- 1/4 inch (6.4mm).

Control Surface Travel Information

Note: Measured at widest point of control surface. Dual rates are set for 100% on high rate and 70% for low rate with all surfaces set for 100% ATV.

	High Rate	Low Rate
Aileron:	3/4-inch (19mm)	1/2-inch (13mm)
Elevator:	5/8-inch (16mm)	1/2-inch (13mm)
Rudder:	1-inch (25mm)	3/4-inch (19mm)

Range Checking your Radio System

After you have finished the final assembly, it is time to range check the radio system within the Habu.

Note: Before flying after all control surfaces have been centered it is advisable to re-bind the airplane so the control surfaces are neutral when plugging in the flight battery.

Prior to Each Flying Session

- Always make sure your Habu is properly trimmed.
- Always make sure the receiver, ESC, and battery are properly secured.
- Turn on the transmitter prior to plugging in the flight battery. With the airplane on the ground and motor running, you should walk away approximately 100 feet and still have full control of all functions while following the specific range test feature of your DSM2 transmitter. **If this is not the case, do not fly.** Call the Horizon Support Team at 1-877-504-0233, United Kingdom at +44 (0) 1279 641 097 or Germany at +49 4121 46199 66.
- Always make sure that all controls are functioning per the transmitter input that you are giving. This includes ailerons, rudder, elevator and throttle.
- Always make sure you have fully charged the transmitter batteries or make sure your transmitter has fresh dry cells before you fly.
- Always ensure the servo reversing switches on the transmitter are set correctly.
- Always verify the dual rates switch is set at where you plan on flying. We recommend LOW rates for your initial flying. The Habu is VERY maneuverable on high rates and requires a lot of experience to handle properly.
- Always remove the flight battery from the airplane when you are done flying, or when you are on the way to the flying field.

Appendix

Habu Flying Tips

First set your timer to 3 minutes and 30 seconds. The Habu will fly for 4 minutes at full throttle. By setting your timer to 3:30 it will give ample time for a go-around if necessary. With throttle management the flight time can be extended significantly. You can adjust the timer as you become more accustomed to the flight time of the Habu.

ROG Takeoff

Taxi into position on the runway. Avoid sharp turns when taxiing at higher speeds as it is possible to have the plane tilt onto its side. Once in position on the runway, start your timer. Hold 1/2 to full up elevator at the start of the takeoff roll to get weight off the nosewheel and allow for smoother takeoffs. Steer with the rudder and as speed increases, reduce the up elevator input to 1/4 to 1/2 up elevator. The airplane will fly off the runway when flying speed is reached.

Handlaunch

It is advisable to have a helper for the first few hand launches. Hold the airplane behind the wing with the throwing hand and support the nose with the opposite hand. Run the motor up to full throttle and give a FIRM throw straight ahead. Plane should be launched firmly with nose up 5–10 degrees and directly into the wind, do not throw nose down.

Flying

The Habu is a go-where-you-point-it airplane. It tracks very straight and is capable of many maneuvers. The speed range of the Habu is very wide. From full throttle, high-speed passes to slow flight, the Habu has great handling qualities throughout the flight envelope. The Habu is capable of slow rolls, point rolls, large loops, knife edges and spins. If this is your first ducted fan, just remember that because there is no prop blast blowing air over the control surfaces, the controls will not be as responsive at low-speeds. The Habu is easy to fly, but because it can reach high speed, plan your flight path to avoid obstacles or people.

Landing

The Habu is very easy to land and can reward you with very smooth scale-like touchdowns. Approach the runway with a 1/4 to 1/8 throttle. Use the power to control altitude and elevator to control angle of attack. Once your glide path is established, fly the airplane down to about a foot off the runway. Gradually reduce power and flare the airplane to touch down on the main wheels first. Reduce elevator input to set the nosewheel on the ground and steer with the rudder stick until the plane has come to a stop. You can hold the nosewheel off the runway while landing for aerodynamic braking. However be aware that the airplane can hop back into the air if a gust of wind or if too much elevator input is given while holding the nose off the ground. Avoid sharp turns until the plane has slowed to prevent tipping the plane on its side.

Belly Landing

If landing on grass without the landing gear, use the same approach as if flying with landing gear. Start your flare with the power off about 1 foot above the ground and hold the nose off until the tail touches down. Try to keep the wings level to prevent grabbing a wing and turning the plane sideways.

Repairs

Thanks to the Habu's Z-foam construction, repairs to the foam can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc). Do to fact that the Habu is a low wing airplane and it is possible, when belly landing, to catch a control horn, replacement servos and gears are sold separately. See the parts list for the item numbers.

BNF
BIND-N-FLY™**PNP**
PLUG-N-PLAY™**Replacement Parts**

Make sure that you keep your Habu EDF flying. Replacement parts are available at your local hobby shop or from Horizon Hobby (www.horizonhobby.com). Please try your local hobby shop first. By supporting them, they will be there when you need them.

Item #	Description
PKZ1062	Servo Gear Set (For SV80 Servo)
PKZ1064	Metal Gear Set (For DSV130 Servo)
PKZ1090	DSV130 3-Wire Digital Servo Metal Gear (Rudder, Elevator, Nose Wheel Steering)
PKZ1081	SV80 Long Lead 3-wire Servo (Ailerons)
PKZ7002	Decal Sheet
PKZ7006	Main Landing Gear
PKZ7007	Nose Gear set
PKZ7008	Complete Nosewheel Assembly
PKZ7010	Aileron Servo Covers with Screws
PKZ7011	Exhaust Nozzle
PKZ7012	Servo Horn Set
PKZ7013	Canopy and Pilot
PKZ7014	Main Landing Gear Blocks
PKZ7015	Cooling vent
PKZ7020	Painted Wing
PKZ7021	Vertical Tail Support with Screws
PKZ7022	Vertical Stabilizer
PKZ7023	Pushrod Set with Clevis
PKZ7024	Horizontal Stab
PKZ7025	Landing Skid (2)
PKZ7040	3-4S DC Li-Po Balancing Charger (Included with BNF)
PKZ7067	Bare Fuselage
EFLA1060	60-Amp Pro Switch-Mode BEC Brushless ESC
EFLB32004S30	3200mAh 4S 14.8V 30C Li-Po, 12AWG EC3 (Included with BNF)
EFLDF15	Delta-V 15 69mm EDF Fan Unit (No Motor)
EFLDF151	Rotor, 5-blade: Delta-V 15
EFLM3215DF	BL15 Ducted Fan Motor, 3200Kv
SPMAR500	AR500 DSM2 5-Channel Sport Receiver (Included with BNF)

Optional Parts

Item #	Description
EFLA110	Power Meter
EFLA253	Hex Driver, 1.5mm
EFLA258	Screwdriver, #1 Phillips
EFLAEC301	EC3 Device Connector, Male (2)
EFLAEC302	EC3 Battery Connector, Female (2)
EFLAEC303	EC3 Device & Battery Connector, Male/Female
EFLC505	1- to 5-cell Li-Po Charger with Balancer
THP33004SP30	3300mAh 4-cell 14.8V Pro Power 30C Li-Po
SPMAR500	AR500 DSM2 5-Channel Sport Receiver
SPMAR6200	AR6200 DSM2 6-Channel Receiver Ultralite
SPMR5500	DX5e 5-Channel Full Range Transmitter Only
SPMR6600	DX6i 6-Channel Full Range Transmitter Only
SPMR7700	DX7 7-Channel Full Range Transmitter Only

Warranty Information

Age Recommendation: 14 years or over. This is not a toy. This product is not intended for use by children without direct adult supervision.

Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants 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

(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 warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(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 goods 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).

Safety Precautions

This is a sophisticated hobby Product and not a toy. 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. The Product 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 injury.

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, or call 877.504.0233 toll free to speak to a Product Support representative.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). 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. A Service

Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

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 Hobby.

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. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. Please note: non-warranty repair is only available on electronics and model engines.

United States

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
USA

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822
USA

Please call 877-504-0233 or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

United Kingdom

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex
CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or e-mail us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

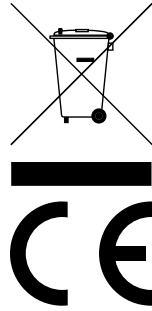
Germany

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
Germany

Please call +49 4121 46199 66 or e-mail us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

Compliance Information for the European Union



Instructions for Disposal of WEEE by Users in the European Union

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

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2009101902

Product(s): PKZ Habu BNF and PNP
Item Number(s): PKZ7080, PKZ7075
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 General EMC requirements

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
October 19, 2009

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

