



# User Manual

Skynetic Neptune II Flying Wing - PNP



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## INTRODUCTION

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Thank you for purchasing your Skynetic Neptune II Flying Wing. The Skynetic Neptune II is a flying wing that penetrates moderate winds while performing aerobatic maneuvers with ease. The wing stabilizers, dual rudders and positive dihedral keeps the Neptune II steady and tracking true in flight. Made of lightweight yet durable EPO foam with a streamlined, aerodynamic profile and a powerful AS2212 KV 2280 brushless outrunner motor, the Neptune II is tailor-made for countless hours of exhilarating, flying fun!!

The PNP version of this model airplane requires minimal assembly. Please visit [YouTube.com/MotionRC](https://www.youtube.com/MotionRC) or return to the product page on [MotionRC.com](https://www.MotionRC.com) or [MotionRC.eu](https://www.MotionRC.eu) to watch the complete Assembly Video for this model.

## SAFETY NOTICE

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**This user manual contains instructions to ensure the correct assembly and setup of this sophisticated flying model aircraft. It is essential to read this manual before attempting to fly this product. This product is not a toy!**

**The user assumes all responsibility and liability for the safe assembly and operation of this product. Failure to operate this product correctly may result in damage to the product, property, and/or cause bodily harm. Adult supervision at all times is required. Comply with all local rules and regulations regarding the safe operation of this product in your area. Do not attempt to fly this product in areas that are dangerous or unauthorized.**

**Contact Motion RC's technical support team if you have any questions or concerns, before flying this model. Visit [MotionRC.com](https://www.MotionRC.com) or [MotionRC.eu](https://www.MotionRC.eu) for warranty information.**



**This model requires a LiPo (Lithium Polymer) battery as a power source. As with any LiPo battery, special care is required. Always disconnect the battery from the model aircraft when the model aircraft is not being flown. Do not store batteries inside the model aircraft. Always follow the charger manufacturer's instructions to safely charge, discharge, and store batteries.**



MADE IN CHINA

## SPECIFICATIONS

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Length: 532mm / 21"

Wingspan: 1000mm / 39.3"

Flying Weight: 550-570g with battery

Motor: AS2212-2280Kv Brushless Outrunner (installed)

Propeller: 6x4\*2 propeller (included)

ESC: 40 Amp w/ 3A BEC with XT60 connector (installed)

Servo: 2pcs 9g micro servo (installed)

Radio (Required): Minimum 3 channel with Delta mixing capability

Receiver (Required): Minimum 3 channel

Battery (Required): 11.1 V 2000-2500mah 25C LiPo with XT60 connector

Recommended Environment: Minimum 100 yards x 50 yards open airspace

Assembly Time: Less than 1 Hour

## REQUIRED TOOLS AND SUPPLIES

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1. Glue suitable for adhering EPO Foam
2. #1 Phillips screwdriver



## STORAGE

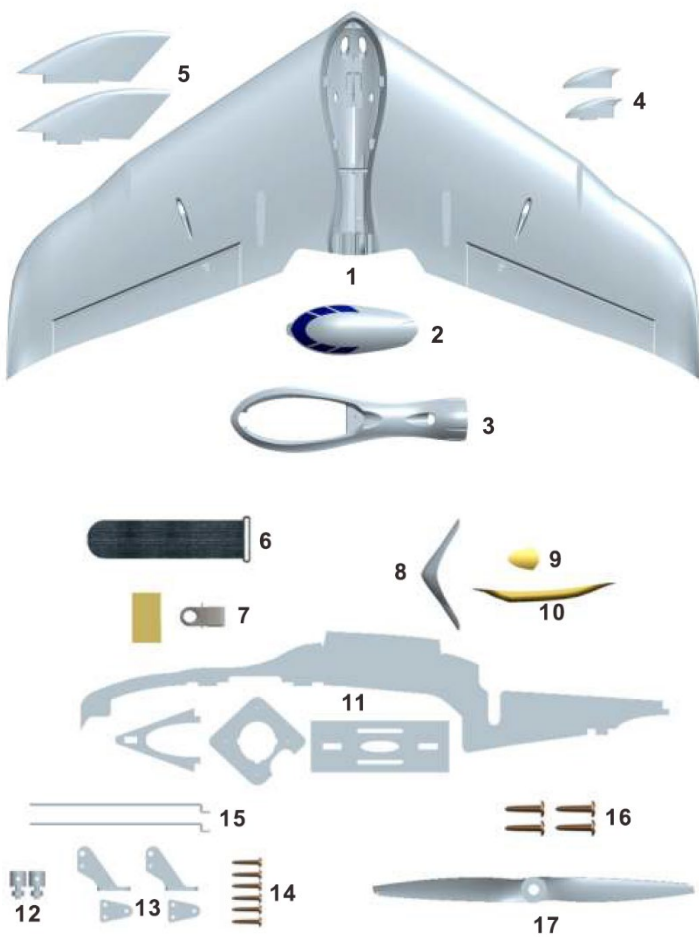
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Store the Skynetic Neptune II in a cool, dry place. Do not store the model aircraft with its nose facing upright, as this position may deform or damage the trailing edges of the Skynetic Neptune II's wingtips. Do not store a battery inside the mode, neither plugged in nor unplugged.

## CONTENTS

The PNP (“Plug And Play”) version of the Skynetic Neptune II arrives 90% complete. All electronics have been pre-installed except for the receiver and flight battery that must be provided by the user. Spare parts available at [MotionRC.com](http://MotionRC.com) and [MotionRC.eu](http://MotionRC.eu) include:

Fuselage and Wing Fences Set	SKY1035-100
Vertical Stabilizer Set	SKY1035-101
Battery Hatch (Canopy)	SKY1035-102
Wing Fence Set	SKY1025-105
Plastic Parts Set	SKY1035-103
Accessory Set	SKY1035-104
Plywood Stiffener Set	SKY1035-105
Skynetic 9g Servo with 360mm Lead	SKY6005-014
Skynetic AS2212-2280Kv Brushless Outrunner Motor	SKY6000-018
Skynetic 6x4 Electric-type Propeller	SKY5000-005
Skynetic 30A ESC with XT60 Connector	SKY6003-006
Neptune II (Blue) Decal Sheet	SKY1035-107
Admiral 2200mAh 3S 11.1V 35C LiPo Battery with XT60 Connector	EPR22003X6



1. Fuselage
2. Canopy
3. Canopy Base
4. Wing Fences
5. Vertical Stabilizers
6. EDF cabin
7. Exhaust cover
8. Battery Hatch
9. Nose cover
10. Plastic Skid
11. Plywood Stiffener Set
12. EZ-Connector
13. Plastic Servo Horn
14. Servo Horn Screw
15. Pushrods
16. Motor Screw
17. Propeller



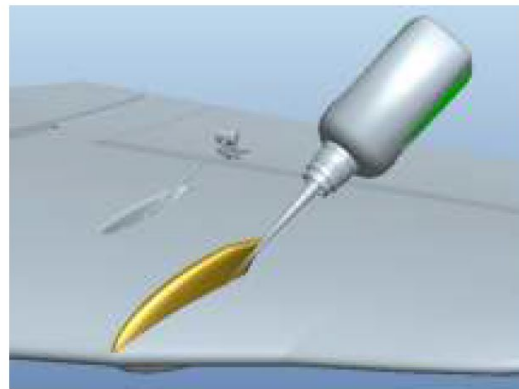
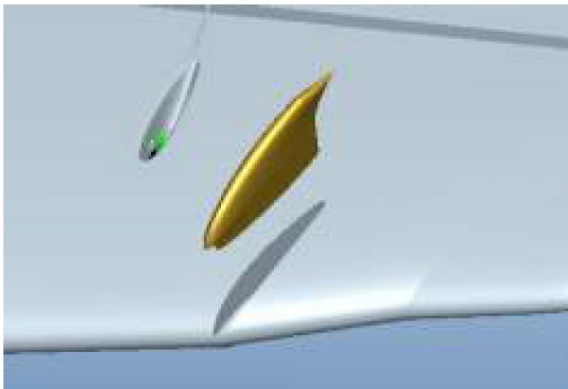
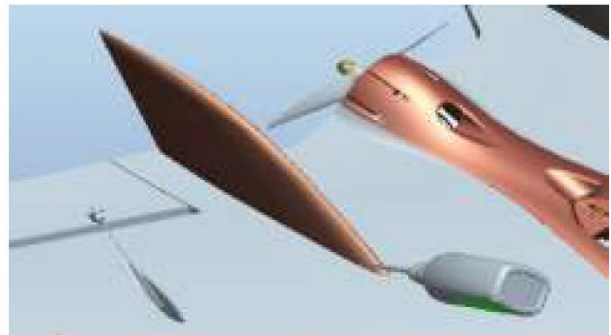
Center each servo using a servo tester before initial setup and flight

## ASSEMBLY

1

### INSTALL VERTICAL STABILIZERS AND WING FENCES

Using foam-safe glue, adhere the two vertical stabilizers into the slotted mounting areas as shown. Ensure that the vertical stabilizers are parallel to each other both the vertical and horizontal axis. Repeat the same process for the two wing fences, gluing them onto the molded slots as shown.



## 2

### INSTALL PROPELLER

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Install the propeller onto the motor as shown, ensuring that the leading edge of the propeller blades is facing forward and the thinner trailing edge of the propeller blades is facing rearward. Ensure the factory-installed motor's mounting screws are securely fastened with a screwdriver.



## 3

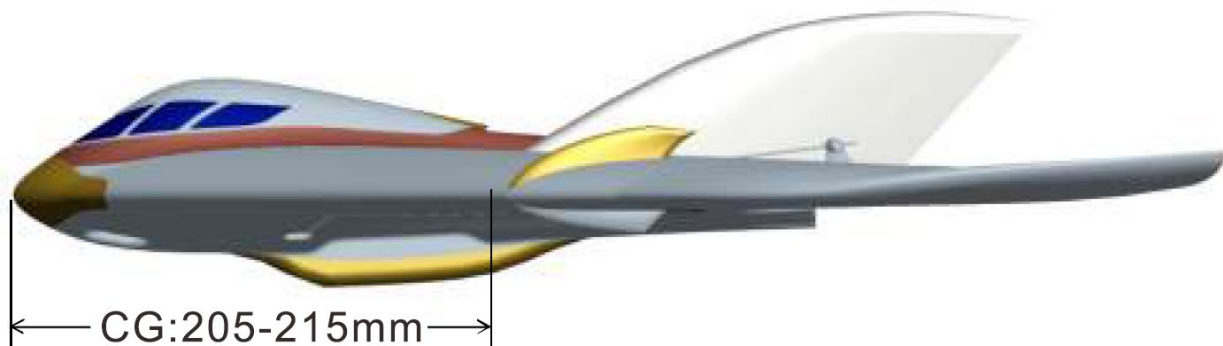
### INSTALL RECEIVER AND BATTERY TO SET CENTER OF GRAVITY ("CG")

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Install your provided receiver and position your provided flight battery into the battery compartment in a location that achieves the required Center of Gravity.

The Centre of Gravity (CG) range is within 205mm-215mm behind the aircraft's nose.

To measure the CG, support the model at this position on two fingertips with the model upright, and the model should balance level. If it does not balance level, move the flight battery forward or aft to achieve the correct balance point. Once the correct position is found, mark the location of the flight pack inside the model to ensure that it is always secured in the same position for all future flights.



## 4

### SET CONTROL SURFACE TRAVEL

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The Neptune II flies in “delta wing” mode configuration, using aileron and elevator mixed together to behave as “elevons”. Refer to your radio transmitter’s instruction manual to program a Delta Wing or Elevon Wing mode.

The following control surface travel (“throw”) is recommended as a safe starting point for your first flight. In subsequent flights, adjust the throw and Exponential (“Expo”) to your preference. The travels must be measured at the widest part of the control surface. Adjust the control linkage first, then fine tune using the digital sub-trim setting in your radio transmitter.

**AILERON:** High Rate: 25 degrees up and 25 degrees down  
Low Rate: ~12 degrees up and 1~2 degrees down

**ELEVATOR:** High Rate: 25 degrees up and 25 degrees down  
Low Rate: ~12 degrees up and ~12 degrees down

## 5

### PRE-FLIGHT CHECKS

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- Program a "throttle lock", if such a feature is available on your radio transmitter
- Conduct a thorough range check at an appropriate distance
- Orient the receiver antenna in an optimal position to reduce interference
- Calibrate the ESC's throttle range
- Check/adjust servo centering and ensure sufficient trim is available
- Remove any debris within the battery compartment and ensure the hatch is securely fastened
- Ensure the flight battery is in good condition, is fully charged, and is secure within the aircraft
- Ensure the model balances level when two fingers are placed within the stated CG range



# 6

## HAND LAUNCH AND FIRST FLIGHT

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Extra care must be taken to avoid physical contact with the spinning propeller during the hand launch sequence. Inexperienced persons must not attempt to launch the aircraft. Incorrect handling may result in serious injury.

Do not attempt to launch this airplane without throttle! The Neptune II should be hand-launched with the motor running at a minimum of half-throttle and pointing directly into wind.



Ask an experienced modeler to hand-launch your aircraft for you. The launcher should grip the Neptune firmly in the molded finger grip holes, then run forward for two or three paces and throw the Neptune firmly with the wings and fuselage level. The pilot should keep the model in a gentle climb, maintaining a shallow rate of climb, and a high airspeed.

Allow the Neptune to climb to a safe height, then adjust the trims on the transmitter until it flies in a perfectly straight line "hands off". While the model is still at a safe altitude, throttle back and try out the controls on the glide. Carry out a "dry run" landing approach at a safe height so that you are prepared for the real landing before the battery reaches ~3.65V under load.

Avoid tight turns during your initial test flights, especially not on the landing approach and/or at low altitude. It is always better to land safely at some distance from you, than to force the model back to your feet and risk a heavy landing.

To land the Neptune, align the model with your runway and reduce power gradually, allowing the aircraft to glide to a flat landing. Short, smooth, level grass is the ideal landing surface. Avoid excessively rough or uneven surfaces.

During your first flight, land after only two minutes of flight, check the battery voltage, and gradually increase flight time in ~15 second increments until the model consistently lands at 3.72-3.75V per cell. Your average flight time will vary based on your location, altitude, battery quality, and flying style. When in doubt, land early! Avoid over-discharging the battery, which may result in damage or loss of the airplane.

# 7

## REPAIRS AND MAINTENANCE

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Repair this aircraft using foam-compatible CA (cyanoacrylate adhesive) glue or clear tape. Only use foam-compatible CA glue, because other types of glue can damage the foam.

Use of foam-compatible CA accelerant on your aircraft can damage paint. Do not handle the aircraft until the accelerant fully dries.

For additional technical support and customer service, contact Motion RC.