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User Manual

Skynetic Neptune 64mm EDF Jet - PNP

Rev. 6.1.2021

INTRODUCTION

Thank you for purchasing your Skynetic Neptune EDF Jet. The Skynetic Neptune is a flying wing with very stable characteristics. Made of light yet durable EPO foam with a streamlined, aerodynamic profile and a powerful 2611 KV 4500 Brushless Outrunner motor for 1:1 power-to-weight ratio, the Neptune is optimized for countless hours of exhilarating, flying fun!

The PNP version of this model airplane requires minimal assembly. Please visit YouTube.com/MotionRC or return to the product page on MotionRC.com or MotionRC.eu to watch the complete Assembly Video for this model.

SAFETY NOTICE

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 or 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

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SPECIFICATIONS

Length: 630mm / 24.8"

Wingspan: 1230mm / 48.4"

Flying Weight: 660-710g with battery

Powerplant: 64mm Electric Ducted Fan (EDF)

Motor: 2611 4500KV Brushless Outrunner (installed)

ESC: 30 Amp w/ 3A BEC

Servo: 2pcs 9g micro servo

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

Receiver (Required): Minimum 3 channel

Battery (Required): 11.1 V 1800-2500mah 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

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

STORAGE

Store the Skynetic Neptune 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's wingtips.

CONTENTS

The PNP ("Plug And Play") version of the Skynetic Neptune 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 and MotionRC.eu include:

1, 6, 7, 9	Fuselage	SKY1025-101
2, 3	Main Wing Set	SKY1025-100
4, 5	Vertical Stabilizer Set	SKY1025-102
8	Battery Hatch	SKY1025-103
10,11	Wing Fence Set	SKY1025-105
	Plastic Parts Set	SKY1025-104
	Hardware Set	SKY1025-109
	Wing Spar	SKY1025-106
	Skynetic 9g Servo with 360mm Lead	SKY6005-014
	Skynetic 2611-4500Kv Brushless Motor	SKY6000-021
	64mm EDF 5-Blade EDF Housing and Fan	SKY5005-002
	Motor Mount for AS28-14-1000Kv Motor	SKY5015-006
	Skynetic 30A ESC with XT60 Connector	SKY6003-006
	Neptune (Blue) Decal Sheet	SKY1025-107
	Admiral 2200mAh 3S 11.1V 35C LiPo Battery with XT60 Connector	EPR22003X6
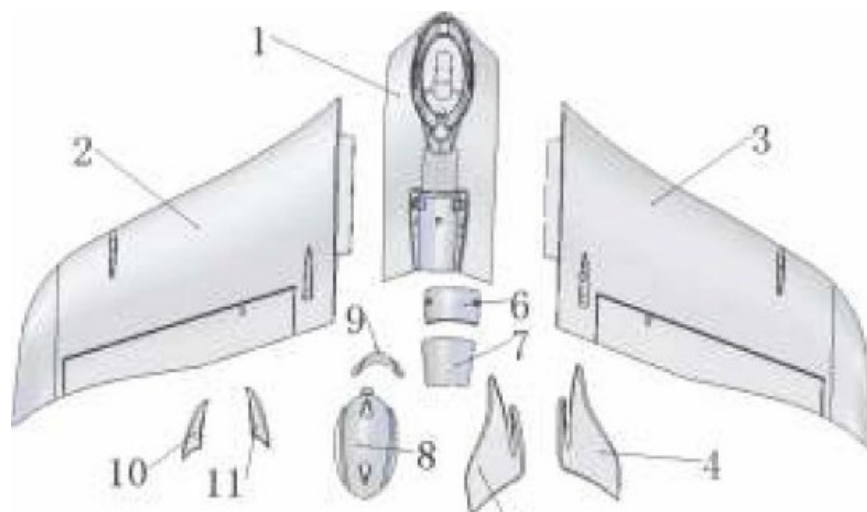
1. Fuselage

2. Left wing

3. Right wing

4. Right Rudder

5. Left Rudder

6. EDF cabin

7. Exhaust cover

8. Battery Hatch

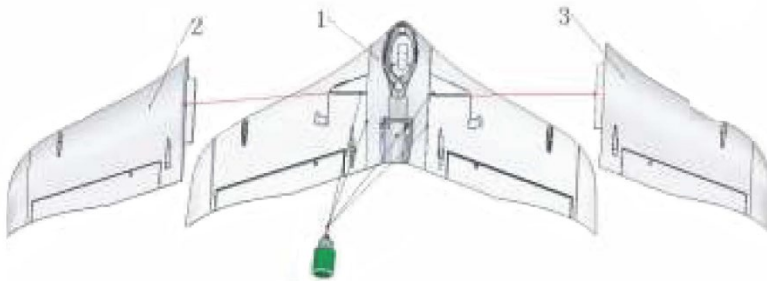9. Nose cover

10. Left wing fence

11. Right wing fence

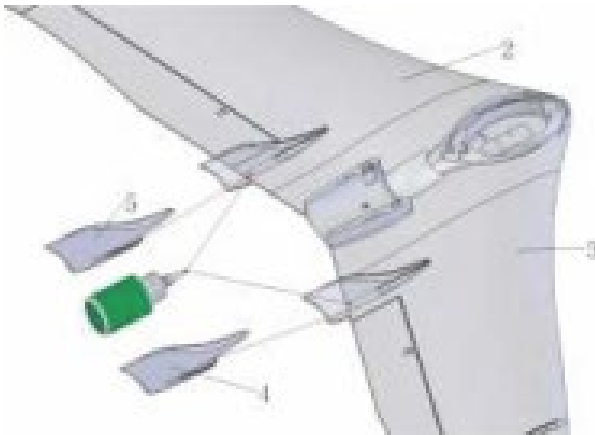Skynetic

ASSEMBLY

1   **GLUE WING HALVES**

Insert the main wing spar into the fuselage so that the spar is centered in the fuselage. Slide both wing halves onto their respective sides of the fuselage, and add a small amount of EPO Foam-Safe glue to the joint. Ensure the wings are level and uniform before the glue fully dries.

2   **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.

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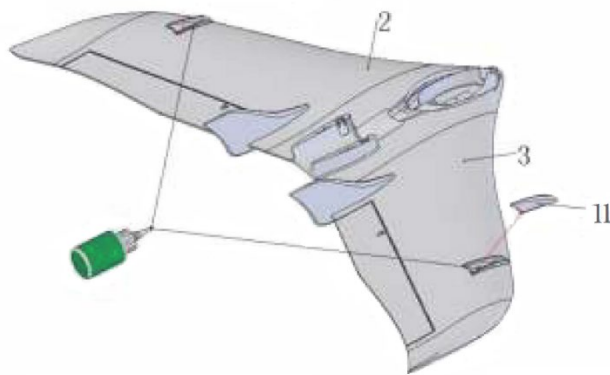
Using foam-safe glue, repeat the same process for the two wing fences, gluing them onto the molded slots as shown.

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

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 170-180mm ahead of the leading edge of the fuselage, as shown in the diagram below.

To measure the CG, support the model at this position on two fingertips with the model upright, and the model should balance level. If not, can 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.

CG 170-180MM

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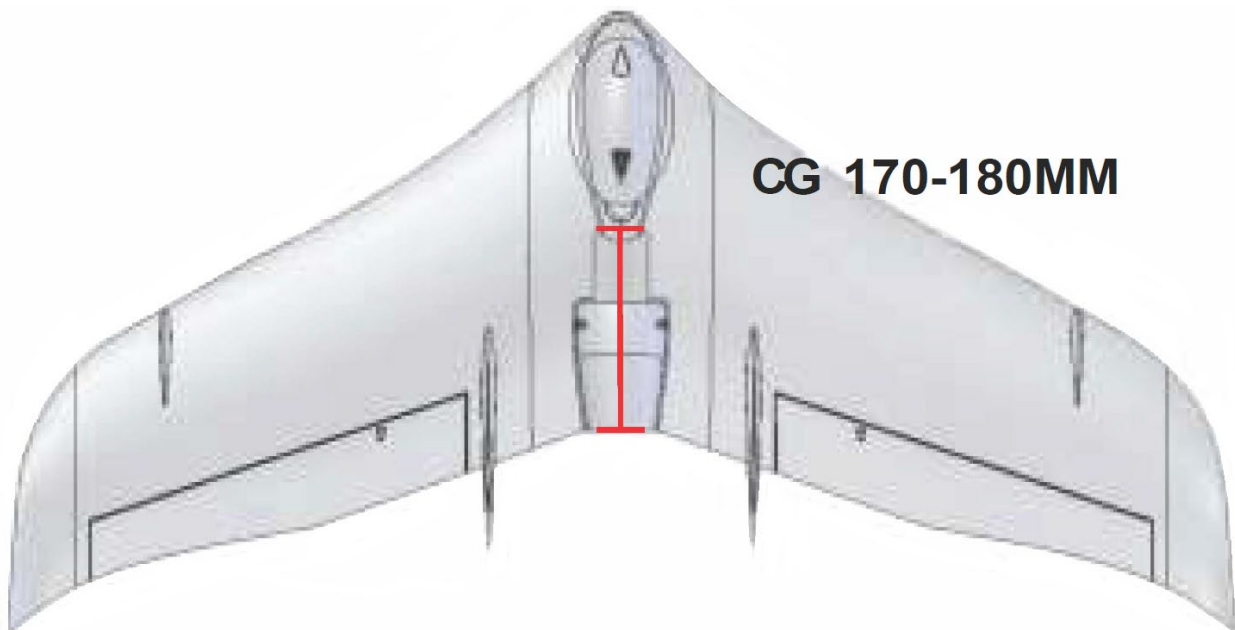
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SET CONTROL SURFACE TRAVEL

The Neptune 64mm EDF 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. Make adjustments to 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 (30mm)

                  Low Rate: ~12 degrees up and 1~2 degrees down (15-17mm)

ELEVATOR: High Rate: 25 degrees up and 25 degrees down (30mm)

                  Low Rate: ~12 degrees up and ~12 degrees down (15-17mm)

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PRE-FLIGHT CHECKS

- 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

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HAND LAUNCH AND FIRST FLIGHT

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

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REPAIRS AND MAINTENANCE

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.

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