Poseidon-480 User Manual V4

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Poseidon - 480 Waterproof Drone User Manual

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Warnings and Safety Notes

These warnings and safety notes are important and must be followed closely. Please abide by this information and follow the instructions in this Operating Manual, including the information provided in the online links, to ensure maximum safety.

The quadcopter's propellers are stiff and very sharp. The material they are made from is carbon fiber. This material makes the propellers very strong and enhances the flight performance of the quadcopter. Be careful! Do not allow your fingers, hands or other body parts to come into contact with the spinning propellers or serious injury will result!The propellers must be removed from the motors whenever you update the autopilot's firmware or whenever there's any question about safely operating the quadcopter.

⚠️

- Do not attempt to fly the quadcopter if one or more of the propellers are damaged. Flying with damaged propellers is not safe and can make the quadcopter fly uncontrollably.

- Always make sure the propellers are installed correctly and that the propeller hub washers and mounting screws are secured tightly. Never install the propellers without also installing the propeller hub washers!

General Safety

- The quadcopter can be extremely dangerous and cause bodily injury. Exercise the utmost caution when flying and operating it. It can be dangerous if you do not fly it in a safe manner
or do not pay close attention while flying it. You alone are responsible for its actions during flight.

- Before flight, always do a quick motor test to verify that all four propellers are spinning the correct directions. If you're not careful, it's possible to accidently install the outrigger arms and/or propellers incorrectly, which can result in the quadcopter not flying correctly and possibly crashing.

- We strongly suggest that when you first begin flying the quadcopter that you perform only basic maneuvers in the Stabilization Flight Mode until you are more familiar with its flight characteristics. Do not attempt to use any GPS Flight Modes without first understanding how to use these features.

Features

Poseidon-480 "Waterproof Drone" is a waterproof multi-rotor aircraft,designed for aerial photography, water sports enthusiasts design professional waterproof four-axis aircraft, the fuselage with high-end lightweight plastic material has lightweight and high-strength features, the body is sealed with a waterproof function, the motor was test through the water treatment, allowing users to take off and land in the water and fitted with a waterproof camera underwater photography, through the camera screen can enjoy the wonderful world of the sea, get more fun flying. His birth to solve the conventional aerial unmanned aerial vehicles can not solve the security problem, innovative product design to make the machine more compact, more powerful, more convenient to operate, and combines the most advanced aircraft technology and stabilization technology.The quick release structure allows you to carry it more conveniently, simple and efficient.

Long lasting battery

The high capacity, high performance 10000mAh Lithium Polymer battery offers up to 38 minutes of flight time.

2-axis or 3-axis brushless gimbal as options

Support GoPro Hero 3 ,It is easy to install, lightweight and ideal for everything from extreme sport to filmmaking.

Power system

4008 motors, 1355 propellers, and 40A ESCs combine to give you greater thrust You can load more equipment on your quad,payload 1500g when using a 6S LiPo battery.

Precision flight and stable hovering

Poseidon-480 install DJI NAZA-M-V2 flight controller，that offers many different modes which allows you to focus attention to be focused on shooting.

Stable waterproof kits

Poseidon-480 with stable waterproof kits，can stop the rain,water,dust into the drone. It has solved the problem that a drone can not work in water.
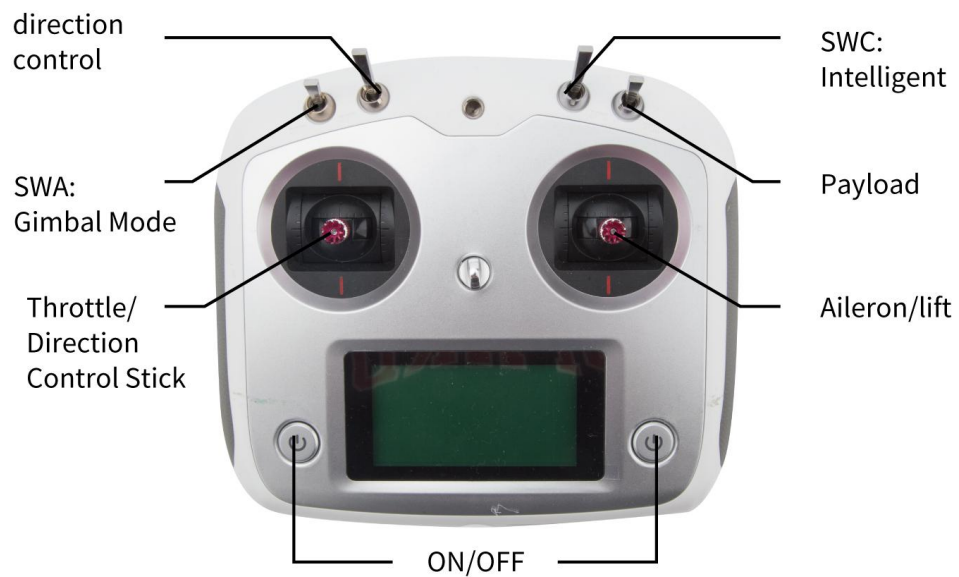
Kit Contents

A

B

C

D

E

F

H

G

Standard Common Parts --

A   Poseidon-480 Main Body

B   10 Channel 2.4GHz Digital Transmitter

C   100W balance charger

D   bait payload/FPV screen camera

E   1355 propellers*2pairs

F   6S 4500MAh battery*1

G   CD*1

H   7 inch 5.8GHz FPV screen

*The Kits in the package may differ from each version

Remote control

The transmitter comes paired and programmed from the factory to work with your Poseidon - 480 series quadcopter, there is no need change the settings of the remote controller.

direction control

SWC: Intelligent

SWA: Gimbal Mode

Payload

Throttle/ Direction Control Stick

Aileron/lift

ON/OFF

Switch Function Explain：

SWB:Flight Mode Explain   SWC:IOC Explain (I n telligent direction control)

SW	Position	Function	SW	Position	Function
SWB	Up	GPS mode	SWC	Up	close
	Middle	ALT_HOLD		Middle	Heading lock
	Down	RTL mode		Down	Return point lock

Note：Keep all the switches on the top position when power on the RC

⚠ When the remote controller gives the "B - B - B"sounds after power on，
   that means the battery is low voltage.you need change the battery

⚠ You must turn on the remote controller before powering on the quad.

Quadcopter

Use the information in this section to familiarize yourself with the basic layout of the quadcopter,including motor direction,front, back, left and right orientation, accessory inputs and ndition Indicator.

Heading

Clockwise Rotation   Counter Clockwise

Front

Counter Clockwise   Clockwise Rotation
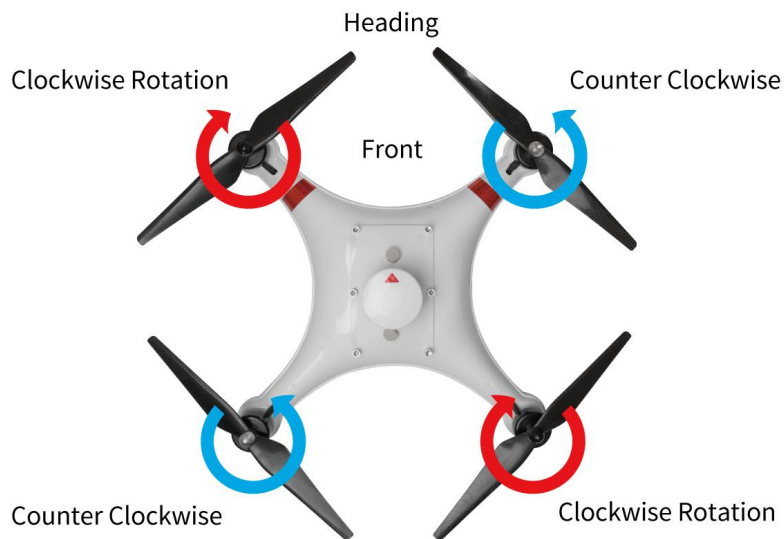
⚠ Using the Red mark on the arm to determine to front of the quadcopter

Assembling

This section will teach you how to assemble your poseidon -480 quadcopter and learn more about the poseidon-480 quadcopter,incorrect assemble will damage your quad or may heart yourself or other people.

1 . Installing the Transmitter Batteries

1)Remove the battery cover from the back of the transmitter.   ⬅

2)Pressing the On/Off button of the remote controller at same time to power on the remote controller (All the switches must set to the UP)

2.Installing the landing gear

Put the carbon tube to the hole of the gear fixture, please put the carbon tube with groove towards the screw. Then using the M3*5 screw to fix the gear OK.
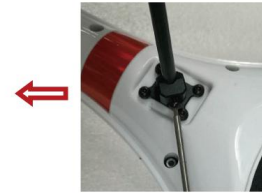
3.Installing the propellers

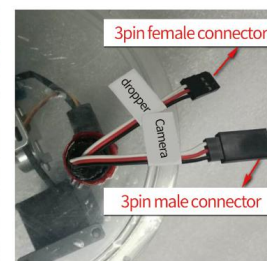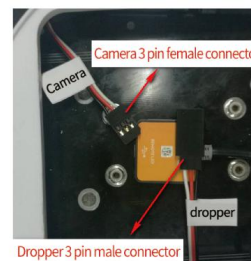Please install the propellers to the qudcopter follow the picture shown

The propeller with silver should fixed on ① ③

The propeller with black should fixed on ② ④
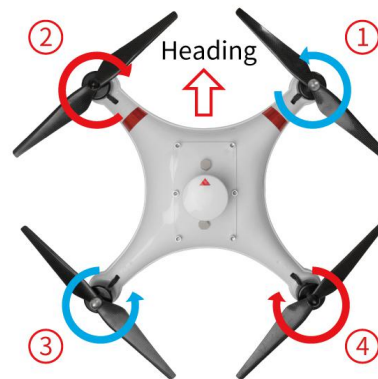
1) Connect the body board to payload with the 3 pin cables, Connect the camera to drone with 3pin Cables

Camera 3 pin female connector
Camera
dropper
Dropper 3 pin male connector

3pin female connector
dropper
Camera
3pin male connector

2) Align 8 wholes of the glass board and the bottom of the drone, and fix with 8pcs screws

3) payload controlling,

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Turn on the remote control and make sure SWD up(top). Power the drone, move the SWD down to open the payload release open, move SWD up, the payload release close

SWD Down

Open

SWD 上方 Up

Close
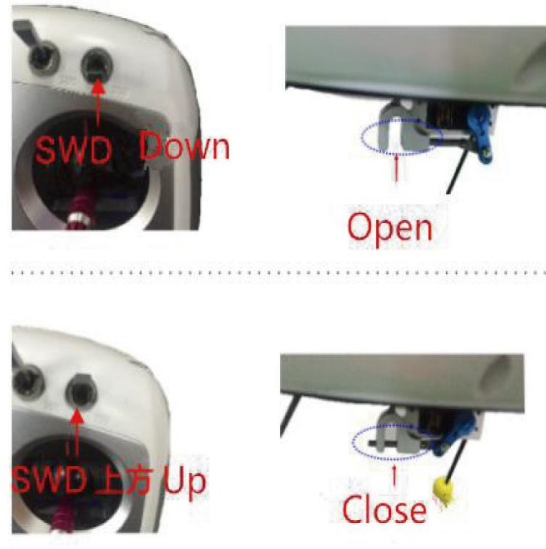
LED Condition Indicators

1).Turn on the remote control and power the drone

2).Please do not sway the drone within 6 seconds.Wait for system initialization LED flash ⚫🟢🟡🔴🟢🟡🔴🔴🟡🟢🟢🟢

Control mode indication	GPS signal status indication
Acro mode:no lights	good(more than 6 stars):no lights
ALT_HOLD: 🟡(rocker not in center 🟡🟡)	ok(6 stars) : 🔴
GPSmode: 🟢 (rocker not in center 🟢🟢)	bad(5 stars) : 🔴🔴
	very bad(less than 5 stars) . 🔴🔴🔴

Flight system status	Flashing sequence
System initialization and self checking	🔴🟢🟡🔴🟢🟡🔴🟢🟡🟢🟢🟢
IMU data exception	🔴🟢🟡
Preheat after power up	🟡🟡🟡🟡
Sensor Bias too large	🟢🟢🟢🟢🟢🟢
The compass error is too large	🟥🟥🟨🟨
Remote control signal lost	🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡🟡
low-voltage alarm	🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴
IOC Record flight forward or return point	🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢

Compass calibration	Flashing sequence
Start horizontal calibration	🟨🟨🟨🟨🟨🟨🟨🟨🟨🟨
Start vertical calibration	🟩🟩🟩🟩🟩🟩🟩🟩🟩🟩
Calibration fail	🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴🔴

Compass Calibration

⚠️ Be careful	1. Make sure to calibrate the compass when you flight for the first time or at a new flight location
	2. DO NOT calibrate your compass where there is strong magnetic interference,such as magnetite,car park,and steel reinforcement under the ground
	3. DO NOT carry ferromagnetic materials with you during calibration,such as keys or cell phonees.

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1）.Turn on the remote and power the drone
2）.Flip SWB more than 5 times to start calibration
process unitl the LED solid yellow
3）.Hold the drone horizontally and rotate
360°until LED solid green

Quickly flip CH5 till solid yellow

Horizontal Calibration

Vertical Calibration

Lay the drone flat

Heads Down
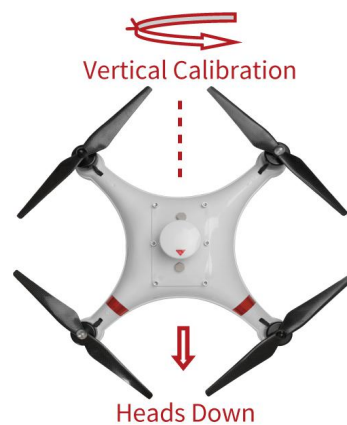
4）.Hold the drone vertically and again retate 360 ° unitl solid yellow. Calibration
successful.
5).If flash yellow or red ,calibration fail.Please repeat the steps above again

Unlock and lock motors

Only pushing throttle can' t start the motors. Put the remote control into
ALT_HOLD ,hold 7 seconds, move the rockers by anyway below to start and
stop motors

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Charger

Overview of the charger

2 . Charge Steps

1).Power on your charger, then connect your battery to the charger as the pic；

2)Set the correct parameter following the below：
Battery Type =>LiPo
Charge Type=>BALANCE
Charge Current => 5A
Cell NO.= >22.2V(6S)
Confirm above parameter is correct set, then press the "START/ENTER" for more than 3 seconds to start the process

3)When the battery is full, the charge process will end, it will also send out the the "B-B-B" to remind you.
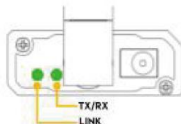
2.4G Bluetooth Datalink & iPad Ground Station（option）

1)The 2.4G Bluetooth radio includes both the airborne and ground ends, for transmit the wireless dates of Bluetooth station&iPad ground station software.

2)2.4G radio wave obstacle surmounting ability is weak.Please make sure that there is no visible obstruction between the airborne terminal antenna and the ground terminal antenna during the flight,Otherwise, the communication distance will be affected;The human body, trees, buildings or mountains and other obstructions may lead to the ground side and the airborne terminal lost contact instantly

3)When in use, the ground end antenna is vertical upwards,and put it as high as possible to increase the transmission distance of a radio station.

4)2.4G Bluetooth Datelink LED indicators description

The LED Indicators of the 2.4G Bluetooth Datalink will work after power on, the descriptions are shown below.

	LED	TX/RX		LINK	
The Air end		🟢Green blinks	Sending	🟢Solid Green	The Air end links with the Ground end successfully
		🔴Red blinks	Receiving	🔴Solid Red	The Air end delinks with the Ground end
		🟡Yellow blinks	Searching the Main controller		
The Ground end		🟢Green blinks	Sending	🟢Solid Green	The Air end links with the Ground end successfully
		🔴Red blinks	Receiving	🔴Solid Red	The Air end delinks with the Ground end
		🟡Yellow blinks	Power voltage of the Ground end is less than 9.9V		

Notes :

(1) LED Indicators on both ends will blink🟡 when powering on, then the TX/RX indicator of the Air end will blink🟡 when searching the Main controller.
(2) The LED Indicators of LINK on both ends should be solid green to indicate that the two ends have linked successfully.
(3) It´s recommended to check the power voltage of the Ground end regularly when using batteries for power supply, in order to avoid over-discharging.

iPad Ground Station App

The iPad Ground Station is designed for remote flight control in applications of surveillance, aerial photography,etc., it should be used with the 2.4G Bluetooth Datalink to achieve auto flight after the setting of the routes. The application with easy usable design offers great portability and simple operation, which will provide users with an extraordinary flight experiences.

Functions		
Map information display	Joystick mode	One key Take off/ Go Home
Flight display in real time	Single waypoint	Auto Landing
Flight simulator	Waypoints	Customized Waypoints
4 kinds of Route Template	Customized Route Template	Low voltage alert
Voice guidance function	GPS SNR Display	

Flight control systems that support the iPad Ground Station
WKM(Firmware V5.24 or above), NAZA-M, NAZA-M V2(Firmware V4.00 or above) , A2(Firmware V2.0 or above).
Important: Phantom 2 supports iPad Ground Station V1.4.58. To use the iPad Ground Station with the Phantom 2, please update the main controller firmware to V2.00 or above, update the central board firmware to V1.0.1.24 or above while the BTU firmware should be updated to V1.0.1.3 or above.

iOS Devices that support the iPad Ground Station
iPad3 , iPad4 , iPad mini ,   iPad mini with Retina display , iPad Air (iOS 6.1 or above)

First time use		Tips and Notes
1. Open your iPad and search "DJI" in the App Store to download and install the Ground Station(GS) App.		
2. Open the Bluetooth function of your iPad.		There will have popups if you forget to enable the Bluetooth
3. Connect the 2.4G Bluetooth Datalink and BTU module to the Flight control system, power on.		Please refer to the Datalink part to connect
4. Run the GS App, create an account through the Internet and login.		PC account is available to login.
5. The GS will search your Main controller and named with "NEW" , you will be asked to set a new name and a password for the Main controller.		LED in GS indicates 🟢 🔵 after the GS is connected with the Main controller
6. Please read the tips text carefully after login. Open the FisrtUse function to make use of the help text.		FisrtUse function can be opened and closed in "More "•••" →"Settings "⚙"
7. Enable the Flight Simulator and try out the follow functions:		(1) Flight Simulator can be opened and closed in "More "•••" →"Settings "⚙"
Joystick	Use the sticks on the screen to control the aircraft	(2) When using the GS the Flight control system will enter into GPS control mode and the aquired satellites shoule be more than 6.
Single waypoint	Edit a single waypoint and go	
Waypoints	Use the templates 🖼 to set routes, 📝 batch the waypoints and upload the routes, then confirm and go	
Location	Use to locate the aircraft✈ or the iPad📱	(3) In GPS control mode the GS control priorto the Transmitter, Users can toggle the control mode switch to other mode and
Auto Landing	The aircraft will land slowly	back to the GPS mode quickly to get the
One key Go	Default Home point is the one recorded by the aircraft	

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User manual is subject to change without prior notice

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