

ApisQueen U1

ApisQueen U1 Set 12V-16V Underwater Thruster Instruction Manual

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of your ApisQueen U1 Set Underwater Thruster. Please read this manual thoroughly before installation and use to ensure proper functionality and longevity of the product.

2. WHAT'S IN THE BOX

The ApisQueen U1 Set includes the following components:

- 1x CW Thruster
- 1x CCW Thruster
- 2x 45A ESC (Electronic Speed Controller)
- 1x Non-waterproof Remote Control
- 1x Receiver
- 1x BEC (Battery Eliminator Circuit)
- 1x XT60 Plug
- 1x Pack of Screws

Note: Batteries are not included and must be purchased separately.



Figure 2.1: Overview of the ApisQueen U1 Set components.

3. SETUP

3.1. Thruster Installation

The thrusters are designed for easy installation. Ensure the mounting surface is clean and dry before attachment. The set includes one Clockwise (CW) and one Counter-Clockwise (CCW) thruster. The direction of rotation is crucial for proper boat movement.

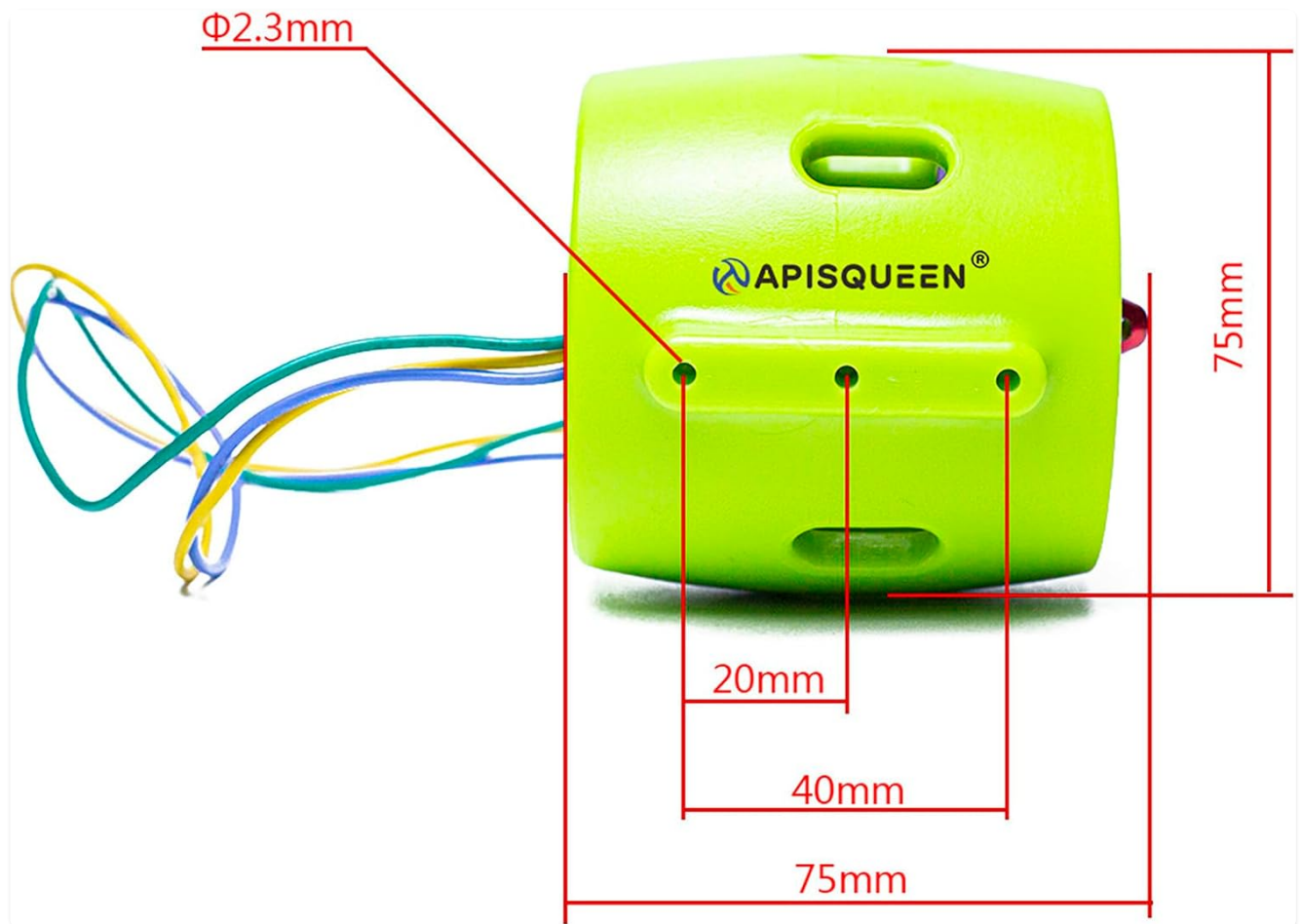


Figure 3.1: U1 Thruster dimensions for mounting.

3.2. Wiring Connections

Follow the wiring diagram carefully. Incorrect connections can damage the components.

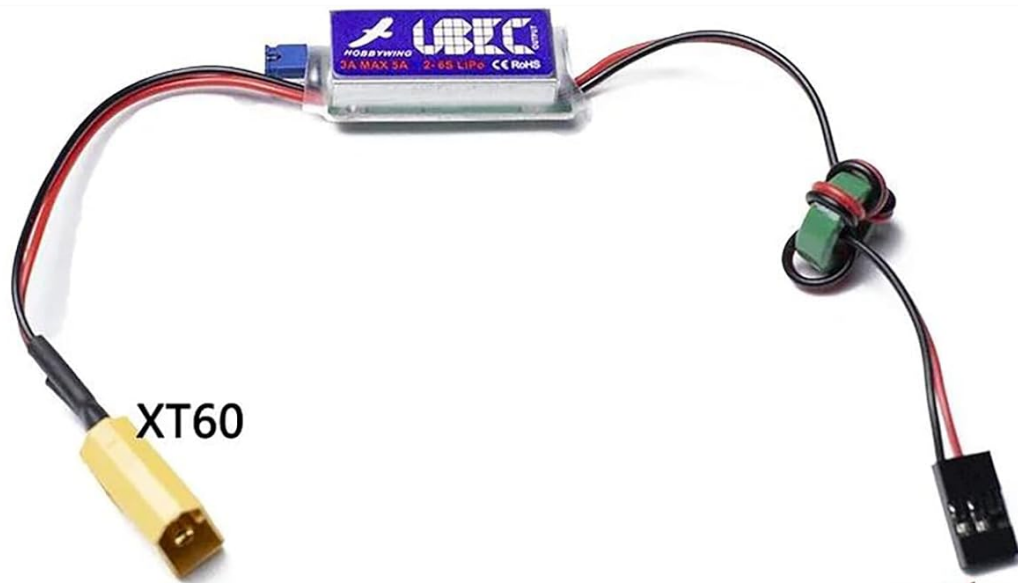
- **ESC Connection:** Connect the CW thruster to one 45A ESC and the CCW thruster to the other 45A ESC.
- **Power Distribution:** Use the XT60 plug to connect both ESCs and the BEC to your battery.
- **Receiver & BEC:** The BEC provides 5V/3A or 6V/3A output (switchable via jumper caps) to power the receiver. Connect the BEC output to the receiver.
- **ESC Signal:** Connect the signal wire from each ESC to the appropriate channel on the receiver.



PWM full name is (Pulse-width modulation).

It is also called duty cycle signal, which indicates the proportion of the high level duration to the whole signal period. 2ms for the whole period of PWM, 1.5ms stop, 1.5-2ms forward, 1.5-1ms reverse.

Figure 3.2: Thruster and ESC connection details.



XT60

INPUT: 5-25V (2-6S LIPO)

OUTPUT: 5V/3A OR 6V/3A
(CAN BE SWITCHED THROUGH JUMPER CAPS)

Figure 3.3: BEC wiring for receiver power.



XT60

Figure 3.4: XT60 adapter for power distribution.

3.3. Remote Control & Receiver

The remote control is pre-configured. No additional settings are required for basic operation. Simply connect the

power to start working. Other channel functions are reserved for DIY enthusiasts.

PWM Signal: The ESCs use Pulse-width modulation (PWM) for control. 1.5ms indicates stop, 1.5-2ms for forward rotation, and 1.5-1ms for reverse rotation.

Your browser does not support the video tag.

Video 3.1: This video demonstrates the connection and use of the ApisQueen U1 Set Underwater Thruster, including remote control operation and thruster response.

4. OPERATING INSTRUCTIONS

4.1. Power On Sequence

1. Turn on the remote control. It will beep to indicate successful power-on.
2. Connect the main power supply to the ESCs. Wait for the ESCs to complete their self-test (indicated by beeps) before operation.

4.2. Thruster Control

- **Forward:** Push the remote control joystick forward. Both thrusters will propel water towards the stern, moving the boat forward.
- **Backward:** Pull the remote control joystick backward. Both thrusters will propel water towards the bow, moving the boat backward.
- **Turn Left:** Push the joystick to the left. The left thruster will propel water towards the stern, and the right thruster will propel water towards the bow, causing the boat to turn left.
- **Turn Right:** Push the joystick to the right. The right thruster will propel water towards the stern, and the left thruster will propel water towards the bow, causing the boat to turn right.

4.3. Cruise Control

To activate cruise control, push the throttle rocker to the desired speed, then press the "OK" button. Release the throttle rocker, and the thrusters will maintain the current speed. To adjust speed in cruise control, push the throttle rocker forward to increase speed by 10 units at a time, or backward to decrease speed by 10 units. A "beep" sound will confirm each adjustment. To exit cruise control, press the "OK" button again.

4.4. Battery Voltage Check

The remote control screen displays the current battery voltage, allowing you to monitor power levels during operation.

5. MAINTENANCE

- **Usage Environment:** The U1 underwater thruster is designed for use exclusively in **freshwater environments**. Seawater use is not applicable and may cause damage.
- **ESC Water Resistance:** The 45A ESC features a nano waterproof process, making it splash-proof. However, it is **not designed for long-term submersion** in water. Avoid prolonged soaking.
- **Storage:** When not in use, disconnect the power supply and turn off the remote control to prevent accidental activation and conserve battery life.
- **Cleaning:** After each use, rinse the thrusters with fresh water to remove any debris or sediment.

6. TROUBLESHOOTING

If you encounter issues with your ApisQueen U1 Set, please review the following common troubleshooting steps:

- **No Power:** Ensure all battery connections are secure and the battery is charged. Check the remote control is powered on.
- **Thrusters Not Responding:** Verify that the ESCs have completed their self-test sequence. Check all signal cable connections between the receiver and ESCs.
- **Incorrect Thruster Direction:** If a thruster rotates in the wrong direction, you can change its rotation by switching any two of the three-phase wires connecting the thruster to the ESC.
- **Remote Control Issues:** Ensure the remote control is within range and has sufficient battery power.
- **ESC Overheating:** Ensure the ESC is not submerged for prolonged periods and has adequate ventilation if used in a confined space.

For persistent issues, please contact ApisQueen customer support.

7. SPECIFICATIONS

Feature	Specification
Brand	ApisQueen
Model Name	U1 underwater thruster
Item Model Number	U1
Material	Plastic
Voltage Range	12V~16V (Recommended 16V / 4S LiPo for efficiency)
Thrust	Up to 7.5 LBS (approx. 3.4 kg)
ESC	45A Bi-directional, Nano waterproof process (splash-proof)
Motor Type	Brushless
Item Weight	1.87 Pounds (approx. 0.85 kg)
Product Dimensions	3 x 1.5 x 3 inches (approx. 7.6 x 3.8 x 7.6 cm)
UPC	711258237710

APISQUEEN U1 UNDERWATER THRUSTER

Forward					Reversal				
Voltage (V)	Throttle	Current (A)	RPM	Thrust (Kg)	Voltage (V)	Throttle	Current (A)	RPM	Thrust (Kg)
24	20%	0.6	1371	0.30	24	20%	0.5	1405	0.20
24	30%	1.3	1885	0.60	24	30%	1.1	1954	0.40
24	40%	2.2	2262	0.80	24	40%	2	2434	0.50
24	50%	3.6	2708	1.30	24	50%	4	2845	0.80
24	60%	5	3051	1.50	24	60%	5	3222	0.90
24	70%	8	3325	1.80	24	70%	7	3497	1.20
24	80%	12	3565	2.20	24	80%	11	3805	1.40
24	90%	15	3805	2.30	24	90%	15	4114	1.80
24	100%	17	3977	2.70	24	100%	17	4354	2.00



APISQUEEN U1 UNDERWATER THRUSTER

Forward				Reversal			
Voltage (V)	Throttle	Current (A)	Thrust (Kg)	Voltage (V)	Throttle	Current (A)	Thrust (Kg)
10	100%	4	0.90	10	100%	4	0.70
12	100%	5	1.20	12	100%	5	0.80
14	100%	8.0	1.50	14	100%	8	0.90
16	100%	9	1.70	16	100%	8	1.20
18	100%	12	2.00	18	100%	12	1.30
20	100%	14	2.20	20	100%	14	1.60
22	100%	16	2.60	22	100%	15	1.80
24	100%	16	2.70	24	100%	16	2.00



Recommendation:
Use at 16V (4S LiPo) is the most efficient option!

Figure 7.1: ApisQueen U1 Underwater Thruster performance data.

8. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the product packaging or contact ApisQueen directly through their official channels. Specific warranty details are not provided in this manual.

Visit the [ApisQueen Store](#) for more products and information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question