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› PowerVision PowerRay Wizard Underwater 4K UHD ROV Instruction Manual

PowerVision PRE10

PowerVision PowerRay Wizard Underwater 4K UHD ROV

Model: PRE10 - Instruction Manual

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1. PRODUCT OVERVIEW

The PowerVision PowerRay Wizard is an advanced underwater remotely operated vehicle (ROV) designed for immersive underwater exploration, photography, and videography. It allows users to discover the aquatic world from a new perspective, offering real-time viewing and recording capabilities.

Key features include a 4K UHD camera for high-quality imaging, live WiFi streaming to a smartphone or tablet, and an impressive diving depth of up to 30 meters. The Wizard version comes equipped with the PowerSeeker sonar module for detecting fish and understanding underwater topography, along with premium ZEISS VR One Plus goggles for an unparalleled First-Person View (FPV) experience.



Figure 1.1: The PowerRay Wizard complete kit, including the underwater drone, remote controller, base station, 70-meter tether, PowerSeeker sonar, ZEISS VR One Plus goggles, and a protective hard case.



Figure 1.2: Close-up view of the PowerRay Wizard underwater drone, highlighting its sleek design and front-mounted camera and lights.

2. SETUP AND INITIAL PREPARATION

Before operating your PowerRay Wizard, ensure all components are present and properly prepared. The device is designed for ease of use, but careful initial setup is crucial for optimal performance.

2.1 Unpacking and Component Check

Carefully unpack all items from the hard case. Verify that the following components are included:

- PowerRay Underwater ROV with integrated battery
- Remote Controller
- Base Station
- 70-meter Communication Cable (Tether)

- PowerSeeker Sonar Module
- Charger for PowerRay and Base Station
- ZEISS VR One Plus Goggles
- Hard Case
- Accessory cables and documentation



Figure 2.1: All PowerRay Wizard components laid out for inspection, showing the drone, controller, base station, 70m cable, PowerSeeker, and VR goggles.

2.2 Charging the Batteries

Before first use, fully charge the PowerRay ROV's internal battery and the Base Station's battery. Connect the charger to the appropriate ports on both devices. The charging indicator lights will provide status updates. A full charge can take several hours.

2.3 App Installation and Connection

The PowerRay is controlled via the dedicated PowerVision Vision+ app, compatible with both iOS and Android devices. Download the app from your device's respective app store. Once installed:

1. Power on the Base Station.
2. Connect your smartphone or tablet to the Base Station's Wi-Fi network (SSID and password typically found on the Base Station or in the manual).

3. Open the Vision+ app and follow the on-screen prompts to connect to the PowerRay.

2.4 Assembling the PowerRay

Connect the 70-meter communication cable to the PowerRay ROV and the Base Station. Ensure the connections are secure and properly sealed to prevent water ingress. If using the PowerSeeker sonar module, attach it to the designated port on the PowerRay.

3. OPERATING THE POWERRAY WIZARD

Operating the PowerRay is intuitive, combining physical controls with a comprehensive app interface. Always ensure you are in a safe and clear environment before deployment.

3.1 Deployment and Control

Gently place the PowerRay into the water. The ROV is controlled using the included remote controller, which can hold your smartphone or tablet for live video feed and additional controls via the Vision+ app.



Figure 3.1: The PowerRay remote controller with a tablet displaying the live 4K video feed from the drone. Use the joysticks on the controller to maneuver the PowerRay horizontally and vertically. The maximum diving depth is 30 meters, and it can achieve a maximum speed of 4 knots (2 meters per second).

3.2 4K UHD Camera and Live Streaming

The integrated 4K UHD camera captures stunning underwater footage and photos. The live video feed is transmitted via Wi-Fi to your connected device, allowing for real-time observation and recording. Ensure sufficient lighting conditions for optimal image quality.

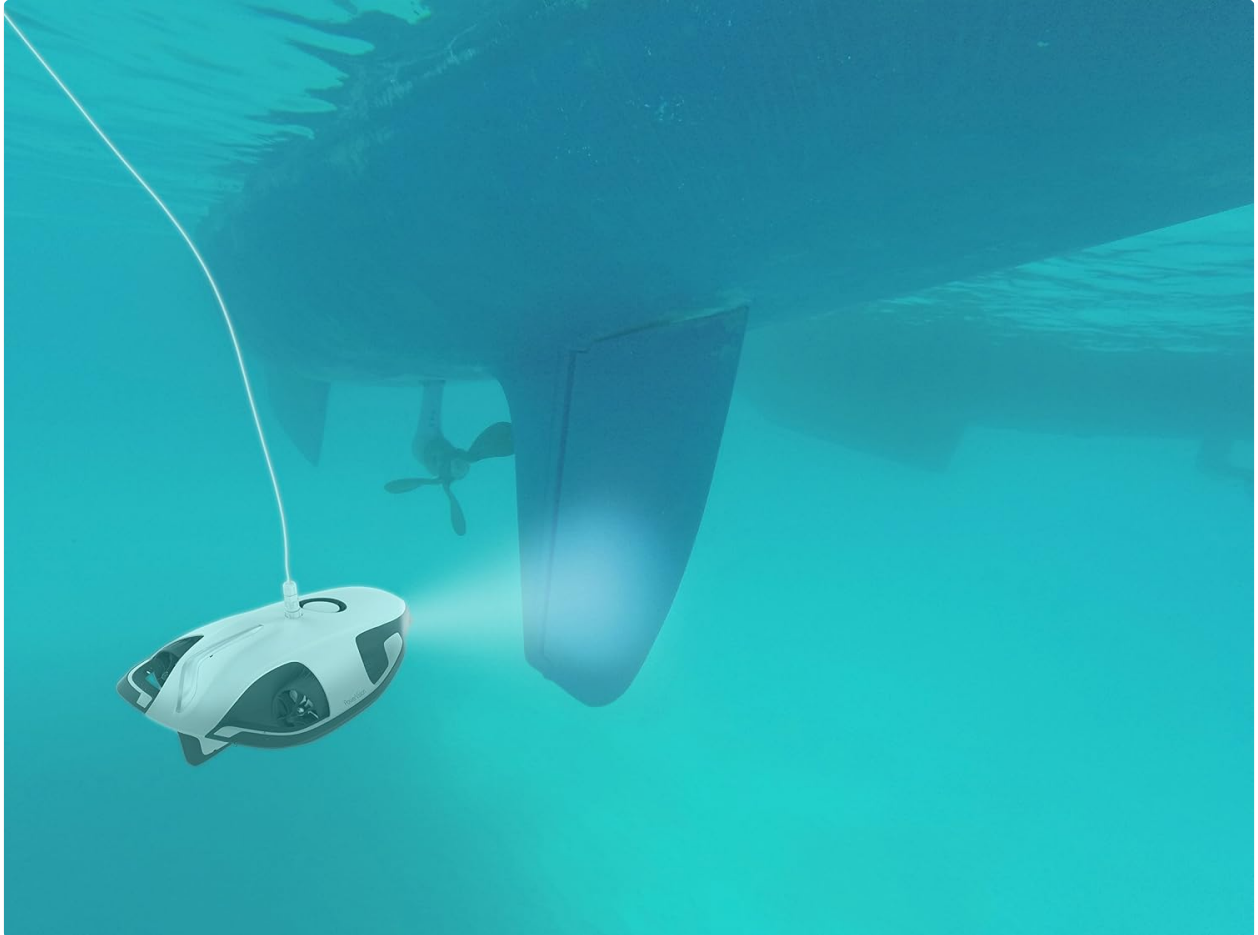


Figure 3.2: The PowerRay Wizard navigating underwater, demonstrating its exploration capabilities.

3.3 PowerSeeker Sonar Module

The PowerSeeker module, included with the Wizard version, provides advanced sonar capabilities. It can detect fish, measure water depth, and map the underwater terrain. Data from the PowerSeeker is displayed directly on your smartphone screen within the Vision+ app, enhancing your underwater awareness.



Figure 3.3: The PowerRay Wizard interacting with fish, showcasing its utility for fish finding and observation.

3.4 FPV with ZEISS VR One Plus Goggles

For an immersive FPV experience, insert your smartphone into the ZEISS VR One Plus goggles. The Vision+ app supports VR mode, allowing you to see the underwater world as if you were there. This feature provides a unique and engaging way to explore.



Figure 3.4: The ZEISS VR One Plus goggles, used for an immersive First-Person View experience with the PowerRay.

3.5 Fishing Attachment

The PowerRay Wizard includes a special attachment point for a fishing line, allowing users to observe fish directly as they bite. This feature integrates the drone into fishing activities, providing a unique advantage.

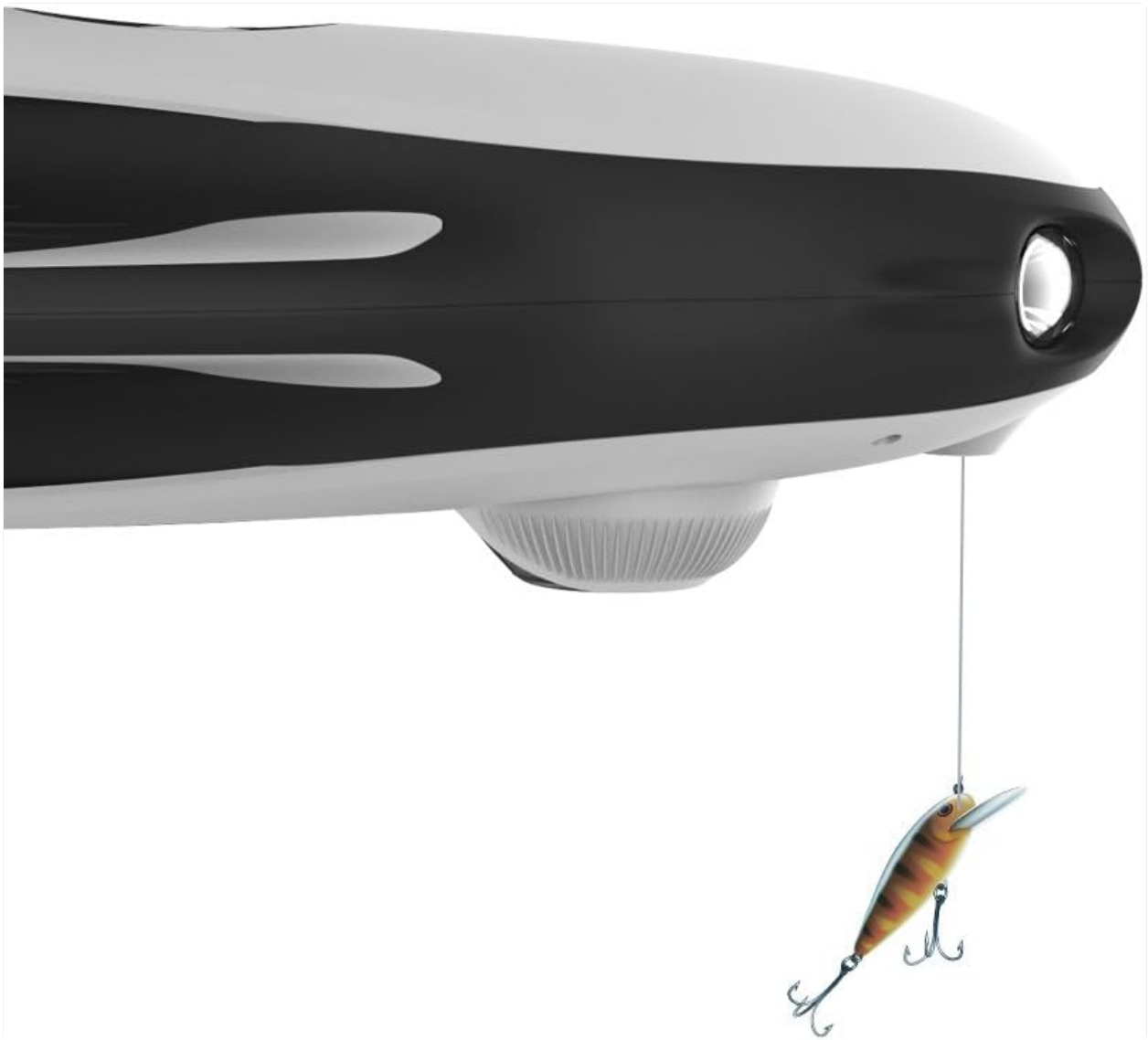


Figure 3.5: The PowerRay Wizard with a fishing lure attached, demonstrating its capability for integrated fishing.

4. MAINTENANCE AND CARE

Proper maintenance ensures the longevity and reliable performance of your PowerRay Wizard. Always follow these guidelines after each use.

4.1 Cleaning After Use

After each dive, especially in saltwater, rinse the PowerRay ROV, communication cable, and PowerSeeker module thoroughly with fresh water. This helps prevent corrosion and buildup. Use a soft cloth to gently wipe surfaces. Ensure all components are completely dry before storage.

4.2 Propeller and Seal Inspection

Regularly inspect the propellers for any debris (e.g., fishing line, small pebbles) that may have become entangled. Clear any obstructions carefully. Check all rubber seals and O-rings on the PowerRay and cable connections for signs of wear, cracks, or damage. Damaged seals can compromise waterproofing.

4.3 Battery Storage

For long-term storage, ensure the PowerRay and Base Station batteries are charged to approximately 50-60%. Store them in a cool, dry place away from direct sunlight and extreme temperatures. Avoid fully discharging batteries for extended periods.

4.4 Cable Care

When winding the 70-meter communication cable, do so neatly and without kinks or sharp bends. Store it in a way that prevents tangling or damage to the connectors.

5. TROUBLESHOOTING COMMON ISSUES

If you encounter problems with your PowerRay Wizard, refer to the following common issues and their solutions before contacting support.

Problem	Possible Cause	Solution
No connection to PowerRay via app/controller	Wi-Fi not connected, Base Station off, low battery, app issue.	Ensure Base Station is on and fully charged. Verify your device is connected to the Base Station's Wi-Fi. Restart the app, Base Station, and PowerRay.
PowerRay not responding to controls	Communication cable disconnected, motor obstruction, low battery.	Check that the communication cable is securely connected at both ends. Retrieve the PowerRay and inspect propellers for debris. Ensure PowerRay battery is charged.
Poor video quality or no live feed	Weak Wi-Fi signal, camera lens dirty, low light conditions.	Ensure your device is close to the Base Station. Clean the camera lens. Operate in well-lit water or use the PowerRay's lights.
PowerRay not diving/ascending	Vertical motor obstruction, buoyancy issue.	Retrieve the PowerRay and check the vertical thrusters for any foreign objects. Ensure no external attachments are affecting buoyancy.
App crashes or freezes	Outdated app version, device memory issues, software bug.	Update the Vision+ app to the latest version. Close other apps running in the background. Restart your smartphone/tablet.

6. TECHNICAL SPECIFICATIONS

Detailed specifications for the PowerVision PowerRay Wizard:

- **Manufacturer:** PowerVision
- **Model:** PRE10
- **Dimensions (L x W x H):** 27 x 12.6 x 46.5 cm
- **Weight:** 12.4 Kilograms
- **Max Diving Depth:** 30 meters
- **Max Speed:** 4 knots (2 m/s)
- **Operating Time:** Up to 4 hours
- **Battery:** 6400 mAh (4 A - included)
- **Camera Resolution:** 4K UHD
- **Storage Capacity:** 64 GB (internal)
- **Communication Cable Length:** 70 meters
- **Operating Temperature:** 0 °C to 40 °C (32 °F to 104 °F)
- **Compatibility:** iOS and Android devices
- **Special Features:** Waterproof, Integrated Sonar (PowerSeeker), FPV with ZEISS VR One Plus Goggles, Fishing Line Attachment

7. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included with your product or visit the official PowerVision website. Warranty terms and conditions may vary by region and retailer.

For technical support, service, or further inquiries, please contact PowerVision customer service through their official website or the contact information provided in your product packaging. Always provide your product model (PRE10) and serial number when seeking support.

PowerVision Official Website: www.powervision.me