

## Jebao ELW-20M

# Jebao ELW Smart Wave Maker Circulation Pump User Manual

Model: ELW-20M, 2641 GPH

## 1. INTRODUCTION

The Jebao ELW Smart Wave Maker Circulation Pump is designed to create natural water movement within your aquarium, promoting a healthier environment for aquatic life. This pump features advanced SINE wave technology for ultra-quiet operation and high stability. It offers flexible control options, including a manual LCD display controller and Wi-Fi connectivity for control via a smartphone app (iOS and Android compatible).

The ELW series pumps are suitable for both marine and freshwater aquariums, featuring no exposed copper elements. The magnetic base allows for easy and secure positioning, and the pump head offers a 3D rotation angle to direct water flow precisely where needed.

## 2. IMPORTANT SAFETY INSTRUCTIONS

**WARNING: To avoid injury, basic safety precautions should be observed, including the following:**

1. Read and follow all instructions carefully before using this appliance. Failure to do so may result in damage or injury.
2. **DANGER** – To avoid possible electric shock, special care should be taken since water is used in the use of aquarium equipment. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.
3. If the appliance falls into the water, **DO NOT** reach for it. First, unplug it and then retrieve it. If electrical components get wet, unplug the appliance immediately.
4. Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
5. To avoid the possibility of the appliance plug or receptacle getting wet, position the aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A “drip loop” should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The “drip loop” is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water from traveling along the cord and coming into contact with the receptacle. If the plug or receptacle does get wet, **DO NOT** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for the presence of water in the receptacle.
6. Close supervision is necessary when any appliance is used by or near children.
7. To avoid injury, do not contact moving parts or hot parts such as heaters, reflector, lamp bulbs, and so on.
8. Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before

cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.

9. Do not use the appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
10. Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
11. Ensure the appliance is securely installed before operating it.
12. Read and observe all important notices on the appliance.
13. If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
14. This appliance has a polarized plug (one blade is wider than the other). As a safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

### 3. PACKAGE CONTENTS

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Carefully unpack all components and ensure everything listed below is present and undamaged. If any items are missing or damaged, please contact your retailer.

- Jebao ELW Smart Wave Maker Pump
- Controller with LCD Display
- AC Power Adapter
- Magnetic Base
- User Manual



Figure 3.1: Contents of the Jebao ELW Smart Wave Maker package.

## 4. SETUP AND INSTALLATION

1. **Prepare the Aquarium:** Ensure your aquarium glass is clean and free of algae or debris where you intend to mount the pump.
2. **Mount the Pump:**
  - Place the pump unit inside the aquarium, ensuring it is fully submerged.
  - Align the external magnetic base on the outside of the aquarium glass, directly opposite the pump unit. The strong magnets will hold the pump securely in place.



Figure 4.1: Side view of the ELW pump, illustrating the magnetic base attachment point.

3. **Adjust Pump Direction:** The pump head can be rotated in 3D to adjust the output water direction. Position it to create optimal flow patterns in your tank, avoiding direct blasts onto corals or substrate.
4. **Connect the Controller:** Connect the pump's cable to the designated port on the controller.
5. **Connect Power:** Plug the AC power adapter into the controller, then plug the adapter into a suitable electrical outlet. Ensure a drip loop is formed with the power cord to prevent water from reaching the outlet.
6. **Wi-Fi Setup (Optional):** For Wi-Fi control, download the Jebao App from your smartphone's app store (available for iOS and Android). Follow the in-app instructions to connect your pump to your 2.4GHz Wi-Fi network.

## 5. OPERATING INSTRUCTIONS

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The Jebao ELW pump can be operated using its manual LCD controller or through the Jebao smartphone application.

### 5.1 Manual Controller Operation

The LCD display controller allows for direct adjustment of pump settings. Refer to the specific button functions on your controller for detailed operation. Typically, you can adjust flow intensity and select various wave modes (if available) directly from the controller.

### 5.2 Wi-Fi App Control

Once connected to your Wi-Fi network via the Jebao App, you can access advanced control features:

- **Mode Selection:** Choose from various wave patterns and flow modes to simulate natural ocean currents.

- **Flow Adjustment:** Precisely control the pump's output intensity.
- **Scheduling:** Set daily or weekly schedules for different flow patterns and intensities.
- **Feed Mode:** Temporarily pause the pump for feeding, allowing food to settle before circulation resumes.

For detailed instructions on using the app, please refer to the in-app guide or the official Jebao website.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your Jebao ELW pump.

1. **Disconnect Power:** Always unplug the pump from the power outlet before performing any maintenance or cleaning.
2. **Remove from Aquarium:** Carefully detach the pump from the magnetic base and remove it from the aquarium.
3. **Disassemble the Pump Head:** Gently twist or unclip the front cover of the pump to access the impeller.
4. **Clean Impeller and Housing:** Remove the impeller and clean it thoroughly, along with the impeller housing, using a soft brush and clean water. Remove any algae, detritus, or mineral deposits. A solution of vinegar and water can help dissolve stubborn mineral buildup.
5. **Inspect Components:** Check the impeller for any signs of wear or damage. Ensure the ceramic shaft (if applicable) is intact. Inspect the power cord for any fraying or damage.
6. **Reassemble:** Carefully reassemble the pump, ensuring all parts fit correctly.
7. **Reinstall:** Mount the pump back in the aquarium and reconnect the power.

Perform this cleaning routine at least once a month, or more frequently if you notice reduced flow or increased noise from the pump.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump does not start or operate.	No power; loose connection; impeller jammed.	Check power outlet and connections. Ensure controller is properly connected. Unplug, disassemble, and clean the impeller.
Reduced water flow.	Impeller or pump intake blocked by debris/algae; mineral buildup.	Perform thorough cleaning of the impeller and pump housing as described in the Maintenance section.
Pump is noisy or vibrating excessively.	Debris in impeller; improper mounting; worn impeller.	Clean the impeller. Ensure the pump is securely mounted to the aquarium glass. Inspect the impeller for damage and replace if necessary.
Cannot connect to Wi-Fi.	Incorrect Wi-Fi password; connecting to 5GHz network; router issues.	Ensure you are connecting to a 2.4GHz Wi-Fi network. Double-check the Wi-Fi password. Restart your router and try again. Refer to the app's troubleshooting guide.
Magnetic base does not hold securely.	Glass too thick for magnet strength; magnet damaged.	Ensure the aquarium glass thickness is within the recommended range for the pump's magnetic base. Inspect magnets for damage.

## 8. SPECIFICATIONS

Technical specifications for the Jebao ELW-20M Smart Wave Maker Circulation Pump:

Feature	Detail
Model	ELW-20M
Maximum Flow Rate	2641 GPH (Gallons Per Hour)
Recommended Tank Size	60-100 Gallons
Power Source	AC (via included adapter)
Voltage	DC 24V
Power Consumption	20W
Frequency	60Hz
Material	Plastic, Stainless Steel
Color	Black
Dimensions (Pump, no magnet)	2-3/4" diameter x 1-3/4"
Item Weight	1.5 pounds
Control	Wi-Fi (iOS + Android) + Manual LCD Controller



Figure 8.1: Model number and specifications printed on the pump's base.

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact your original retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

For the latest product information, firmware updates, and app support, please visit the official Jebao website or contact their customer service department.