MagTool MT-2400

MagTool Wave Maker for Aquarium User Manual

Model: MT-2400
Brand: MagTool

Product Overview

The MagTool Wave Maker for Aquarium, model MT-2400, is a gyre wavemaker designed to create adjustable cross-flow water movement in aquariums. It utilizes sine wave technology for quiet operation and offers various flow modes to simulate natural ocean currents, promoting a healthy aquatic environment.

This model is suitable for tanks up to 160 gallons, providing a maximum flow rate of 2400 GPH. Its innovative crossflow design aims to eliminate dead spots in the aquarium, ensuring comprehensive water circulation.

Figure 1: MagTool MT-2400 Wave Maker and its external LCD controller.

Package Contents

Before beginning installation, please verify that all components are present and in good condition:

- MagTool Wave Maker Unit (MT-2400)
- External LCD Controller
- Power Adapter (DC 24V)
- Mounting Bracket with Rubber Buckles
- User Manual (this document)

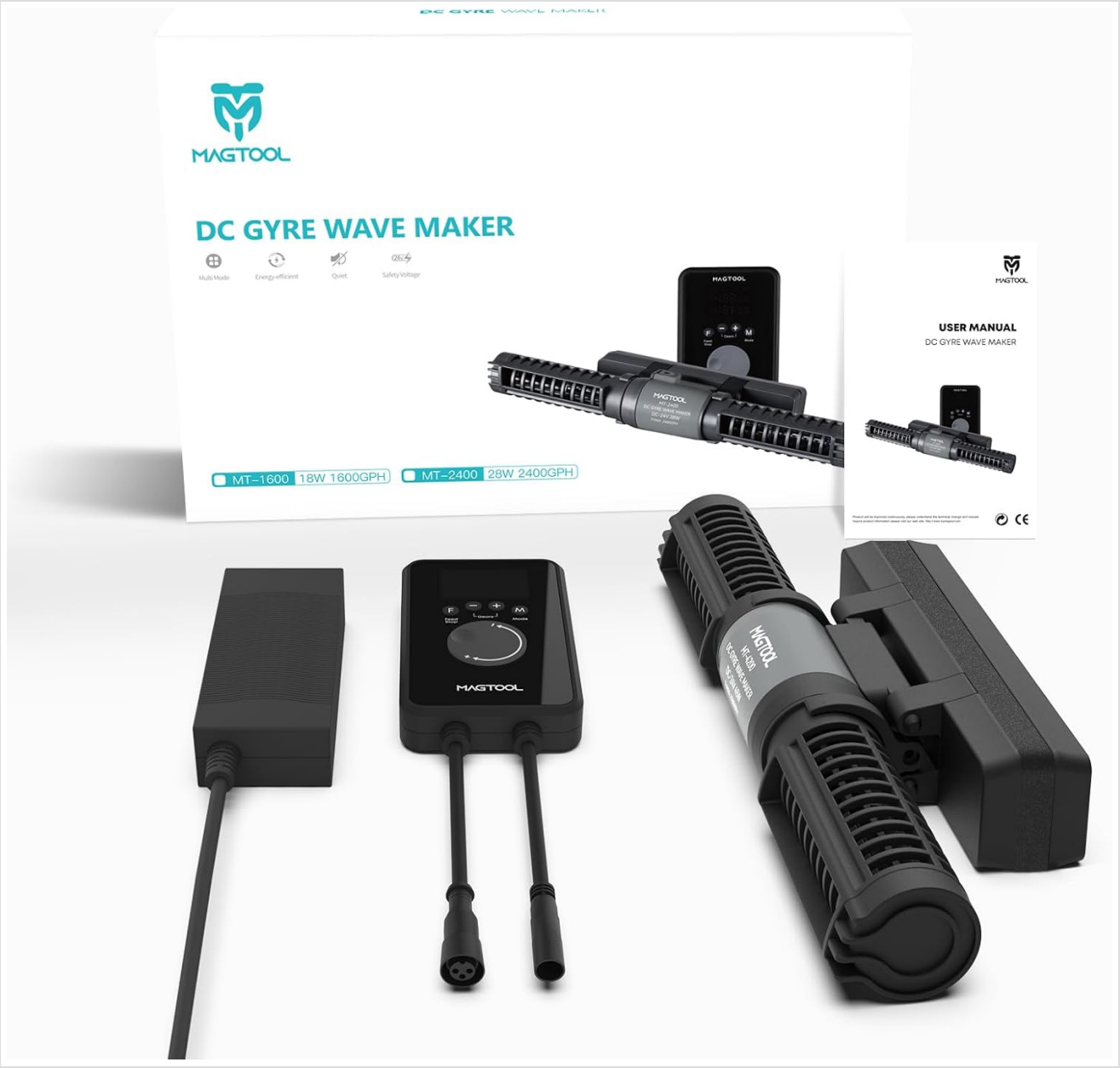

Figure 2: Contents of the MagTool Wave Maker package.

Setup and Installation

1. **Placement:** Select an optimal location within your aquarium for the wave maker. For best results, place the unit horizontally on the side or back wall of the tank, ensuring it is fully submerged and not obstructed by decorations or substrate. The crossflow design allows for wide water distribution.
2. **Mounting:** The wave maker utilizes a strong magnetic mounting system. Position the internal part of the wave maker inside the tank and align the external magnetic bracket on the outside of the tank wall. The magnets will secure the unit in place. Ensure the rubber mounts on the bracket are properly seated to minimize vibration and noise.

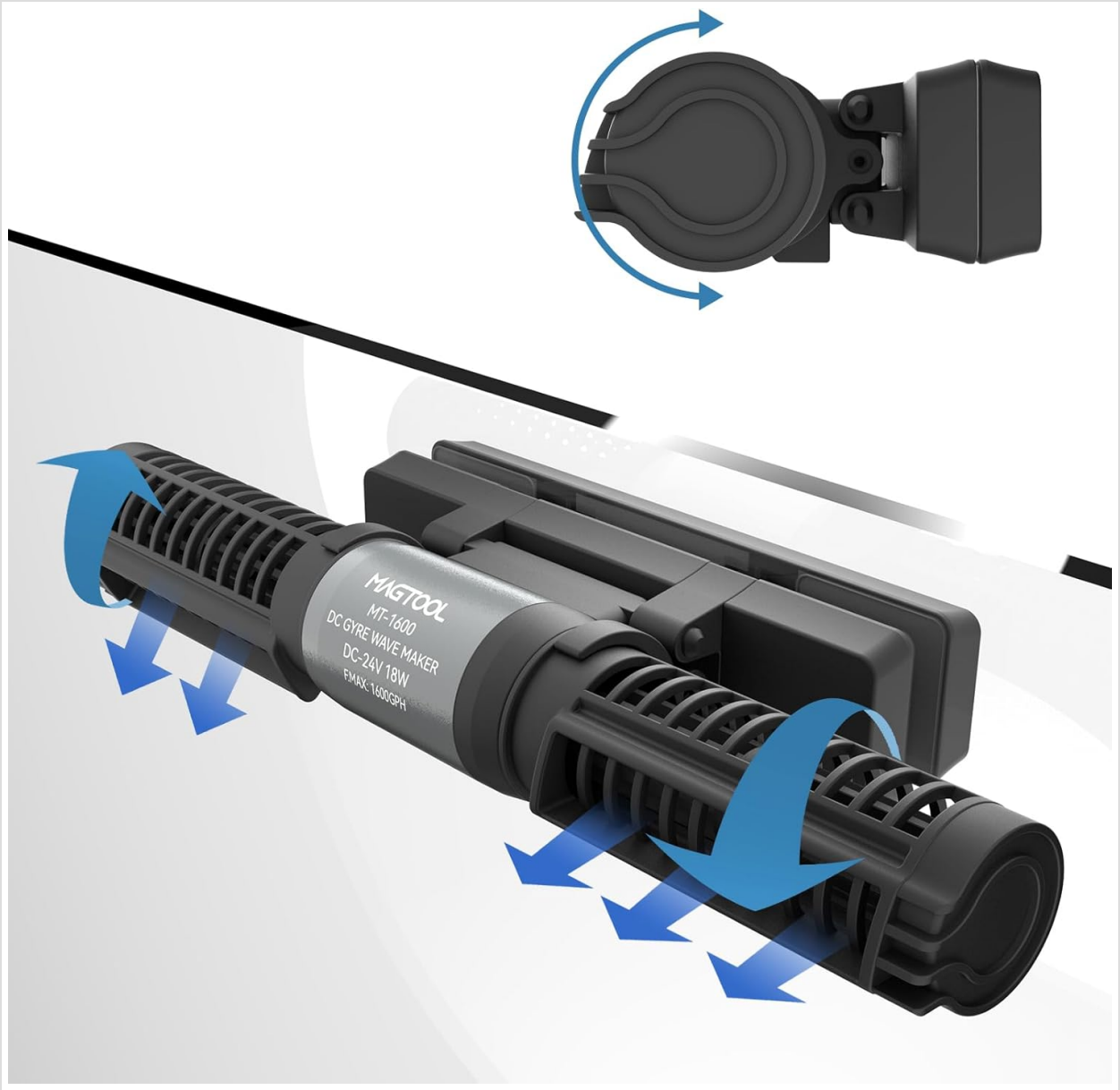

Figure 3: Proper placement and magnetic mounting of the wave maker, illustrating crossflow water movement.

3. **Controller Connection:** Connect the wave maker unit to the external LCD controller. Ensure the connection is secure.
4. **Power Connection:** Connect the power adapter to the controller, then plug the adapter into a suitable power outlet. The LCD screen will illuminate, indicating the unit is ready for operation.

Operating Instructions

The MagTool Wave Maker features an intuitive LCD controller for easy operation and customization of water flow.

Controller Functions:

Figure 4: Overview of the LCD controller and its functions.

- **LED Display:** Shows current mode, power intensity (Watt), and wave frequency (Gear).
- **Intensity Buttons (+/-):** Adjust the power output (flow intensity) of the wave maker.
- **Mode Button (M):** Cycles through the available flow modes.
- **Frequency Adjustment Knob:** Fine-tunes wave frequencies in Pulse and Tidal modes.
- **Feeding Button (F/Feed Stop):** Activates a 10-minute pause for feeding. Press again to resume normal operation.

Flow Modes:

The wave maker supports four distinct flow modes to replicate various aquatic environments:

- **Constant Flow:** Provides a steady, continuous water flow. Ideal for general circulation.
- **Pulse:** Generates rhythmic pulses of water flow, simulating wave action. Wave frequency is adjustable.
- **Tidal:** Creates alternating high and low flow periods, mimicking tidal movements. Wave frequency is adjustable.
- **Turbulent (Random Mode):** Produces unpredictable and chaotic water movement, simulating natural reef

conditions.

Figure 5: Visual representation of the four wave-making modes.

Official Product Video:

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Video 1: An official overview of the MagTool DC Gyre Wave Maker, demonstrating its features and operation in an aquarium setting.

Maintenance

Regular cleaning of your MagTool Wave Maker is essential to ensure optimal performance and longevity. Buildup of algae and detritus can reduce efficiency and increase noise.

Cleaning Procedure:

1. **Disconnect Power:** Always unplug the power adapter from the electrical outlet before performing any maintenance.
2. **Remove from Tank:** Carefully remove the wave maker unit from the aquarium.
3. **Disassemble:**
    - Undo the rubber buckles on both sides of the unit to detach the main pump body from the magnetic mount.
    - Unscrew the small screws on both sides of the pump body to separate the two halves.
    - Gently twist and pull to remove the impellers from both ends of the pump. Note that the impellers are distinct for the left and right sides; keep them separate to avoid incorrect reinstallation.
4. **Clean Components:** Use a soft brush and clean water (or a diluted vinegar solution for stubborn buildup) to thoroughly clean all disassembled parts, including the impellers, pump housing, and grates. Ensure all debris, algae, and mineral deposits are removed.
5. **Reassemble:** After cleaning, carefully reassemble the wave maker in reverse order of disassembly.
    - Insert the impellers into their correct respective sides.
    - Reattach the two halves of the pump body and secure them with the screws.
    - Re-engage the rubber buckles to secure the pump body to the magnetic mount.
6. **Reinstall and Test:** Place the cleaned wave maker back into the aquarium, ensuring it is fully submerged before reconnecting power. Test all modes to confirm proper operation.

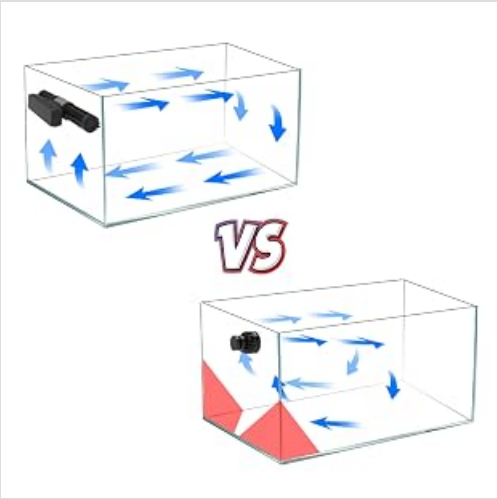

Figure 6: Disassembled components of the wave maker for thorough cleaning.

Troubleshooting

Problem	Possible Cause	Solution
Wave maker not operating.	No power, loose connection, or unit malfunction.	Check power outlet and all cable connections. Ensure the power adapter is functioning. If issues persist, contact customer support.
Reduced flow or weak waves.	Impellers or housing are clogged with debris/algae, or incorrect mode/intensity setting.	Clean the wave maker thoroughly as per the Maintenance section. Adjust intensity settings on the controller. Ensure the unit is fully submerged.
Unusual noise or vibration.	Air bubbles trapped in the impeller, debris in the impeller, or improper mounting.	Gently shake the unit to dislodge air bubbles. Disassemble and clean the impellers and housing. Ensure the magnetic mount is securely and correctly attached to the tank wall with the rubber mounts in place.
Controller display is blank or erratic.	Power issue or controller malfunction.	Check power connections. Disconnect and reconnect the controller. If the problem persists, contact customer support.

Specifications

Feature	Detail
Brand	MagTool

Feature	Detail
Model	MT-2400
Maximum Flow Rate	2400 GPH
Recommended Tank Size	Up to 160 Gallons (90-150cm / 35-59inch tanks)
Power Source	DC 24V
Material	Plastic
Product Dimensions	2.75"L x 11.81"W x 1.97"H
Item Weight	2.61 pounds (1.19 Kilograms)
Technology	Sine Wave Technology, Crossflow Design
Control	External LCD Controller

	voltage	Max.Power	Min.Power	Max. Flow (GPH)	sizes			
					A	B	C	D
MT-1600	DC 24V	18W	7.2W	1600	16CM	26CM	7CM	3.4CM
MT-2400	DC 24V	28W	11.2W	2400	18CM	30CM	7.2CM	3.8CM
MT-4200	DC 24V	45W	18W	4200	18CM	30CM	7.2CM	3.8CM

Figure 7: Detailed specifications and dimensions for various MagTool Wave Maker models.

Warranty and Support

MagTool products are designed for reliability and performance. For warranty information, technical support, or assistance with troubleshooting beyond the scope of this manual, please contact MagTool customer service through the retailer where the product was purchased or visit the official MagTool website for contact details.

Please retain your proof of purchase for warranty claims.