Mxmoonant 2KW 110V Spa Bathtub Heater Thermostat

Mxmoonant 2KW 110V Hot Tub Thermostat Instruction Manual

Model: 2KW 110V Spa Bathtub Heater Thermostat
Brand: Mxmoonant

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Mxmoonant 2KW 110V Hot Tub Thermostat. This device is designed to maintain a constant water temperature in hot tubs, whirlpool bathtubs, and small pools up to 400 US gallons. Please read these instructions carefully before installation and use to ensure safe and efficient operation.

Image 1: Mxmoonant Hot Tub Thermostat in a typical installation environment.

2. Safety Information

Always prioritize safety during installation and operation. Failure to follow these instructions may result in electric shock, fire, or property damage.

- **Electrical Connection:** The thermostat is a high-power device and does not come with a plug. It must be connected to a dedicated 25A GFCI (Ground Fault Circuit Interrupter) circuit breaker. It is strongly recommended that a qualified professional electrician performs all electrical connections.
- **Water Flow:** Ensure proper water flow through the heater. Insufficient water flow can lead to overheating and damage to the unit.
- **Circulation Pump:** The spa heater must be connected to a circulation pump with a power of more than 0.5 HP (approximately 370W). Smaller pumps may not provide enough water flow to activate the heater. Do not use booster pumps or submersible pumps with this thermostat.
- **Plumbing:** Use SCH 40 1.5-inch PVC pipe for plumbing connections. Using smaller pipe sizes can restrict water flow.
- **Water Capacity:** For optimal heating performance, limit the water capacity to no more than 400 US gallons.
- **Insulation:** Use an insulation cover to retain heat and improve heating efficiency, especially when starting with cold water.

3. Product Overview

The Mxmoonant Hot Tub Thermostat is designed for efficient water heating and temperature maintenance in various small water features. Key features include:

- **Constant Temperature Control:** Allows setting and maintaining water temperature from 0 to 45°C (32 to 113°F).
- **Overheat Protection:** Built-in safety mechanism to prevent overheating.
- **Dry Burning Prevention:** Protects the heating element if water flow is insufficient.
- **Durable Construction:** Features a 304 stainless steel heating element.

Image 2: Key features of the Mxmoonant Hot Tub Thermostat, including constant temperature, high temperature protection, and extending the swimming season.

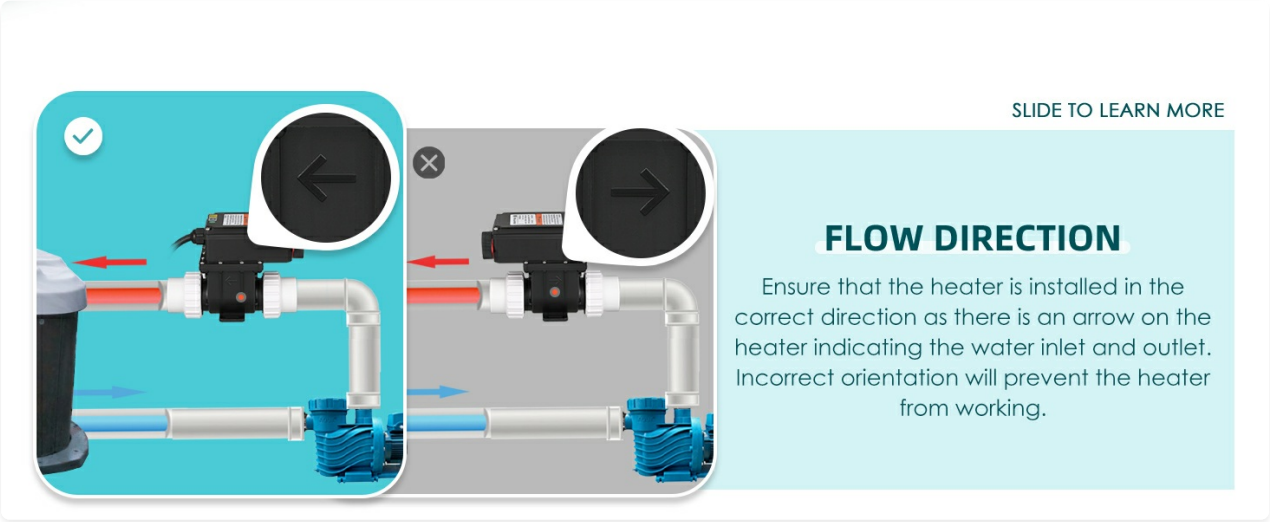

Image 3: Applicable types of water features for the thermostat: hot tubs, whirlpool bathtubs, and small pools.

4. Specifications

Feature	Specification
Power	2KW
Voltage	110V
Amps	18A
Breaker Size (Recommended)	25A GFCI
Wire Gauge (Recommended)	12 AWG
Temperature Control Range	0-45°C (32-113°F)
Plumbing Connection Size	1.5" PVC pipe fittings
Max Water Capacity (Recommended)	400 US Gallons
Item Weight	3.76 pounds
Package Dimensions	8.94 x 7.48 x 7.17 inches

5. Setup

5.1 Plumbing Connection

The thermostat is equipped with 1.5-inch PVC pipe fittings. You must use SCH 40 1.5-inch PVC pipe for all plumbing connections to ensure adequate water flow. Smaller pipe sizes may lead to insufficient water flow and affect heater performance.

- Connect the heater to a circulation pump with a power of more than 0.5 HP.

- Ensure the water flow direction is correct. The heater has an arrow indicating the water inlet and outlet. Incorrect orientation will prevent the heater from functioning properly.

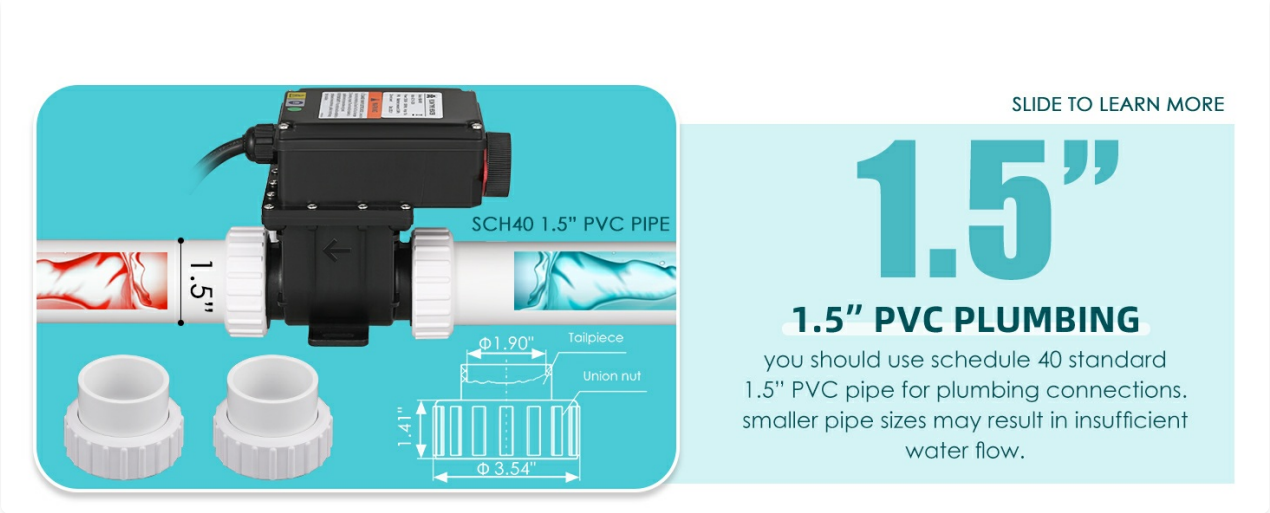

Image 4: Proper plumbing installation, showing the correct water flow direction from inlet to outlet.

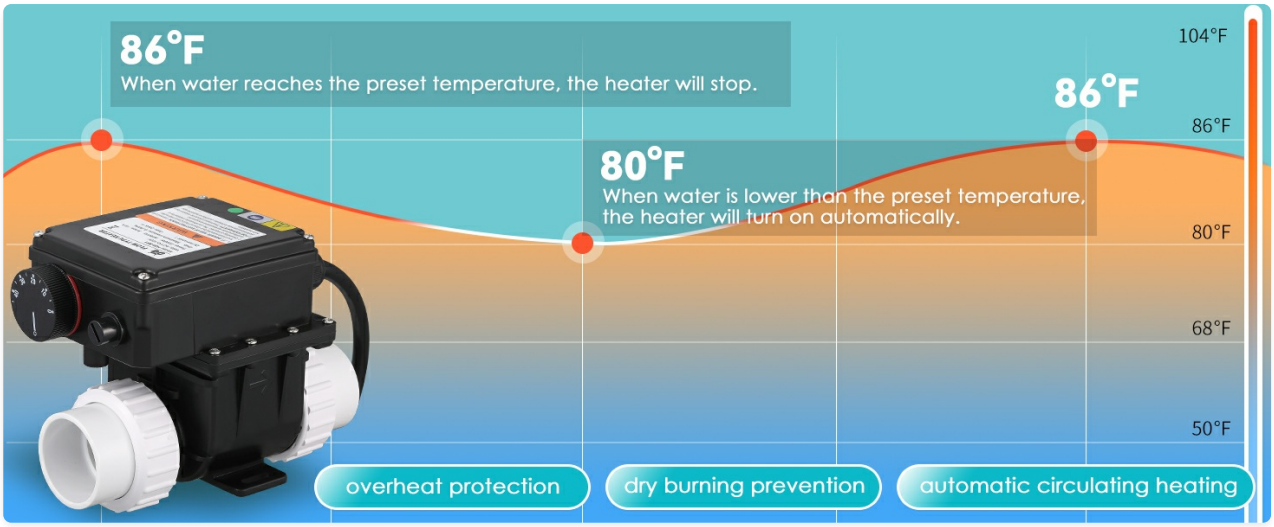

Image 5: Guidance on circulation pump types. Only circulation pumps with 0.5 HP or more are suitable; filter, booster, or submersible pumps are not.

5.2 Electrical Connection

The thermostat is a high-power device and does not include a plug. It requires a direct connection to a 25A GFCI circuit breaker. For safety and compliance, it is highly recommended to have a professional electrician complete the circuit connection.

- Connect the two hot wires (L1, L2) and a ground wire to the appropriate terminals within the heater's electrical box.
- Ensure all connections are secure and meet local electrical codes.

Image 6: Electrical wiring diagram, showing connections for live, neutral, and ground wires. A 25A GFCI breaker is required.

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Video 1: A user demonstrating the installation of the hot tub heater, including electrical connections and plumbing setup. This video provides a practical example of the installation process.

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Video 2: A test setup for the pool thermostat and spa pump, illustrating the water circulation and heating process. This video helps visualize the system in operation.

6. Operating Instructions

Once installed, operating the Mxmoonant Hot Tub Thermostat is straightforward:

- **Set Temperature:** Use the temperature knob on the unit to set your desired water temperature within the 0 to 45°C (32 to 113°F) range.
- **Automatic Operation:** The thermostat will continuously monitor the water temperature and activate the heating element as needed to maintain the set temperature.
- **Initial Heating:** When starting with cold water, it may take a significant amount of time to reach the desired temperature, especially if the water volume is large or insulation is poor.

Image 7: Temperature control dial and the automatic heating cycle, including safety features like overheat and dry burning prevention.

6.1 Heating Tips

- **Start with Warm Water:** It is recommended to fill the hot tub or pool with hot water instead of cold water to significantly improve heating performance and reduce heating time.
- **Use an Insulation Cover:** Always use an insulation cover to retain heat and minimize heat loss, especially in colder environments. This helps maintain temperature and reduces energy consumption.
- **Water Capacity:** Ensure the water capacity does not exceed 400 US gallons for efficient heating. Larger volumes may take an extremely long time to heat or may not reach the desired temperature.

Image 8: Important heating tips: fill with hot water and use an insulation cover for better performance.

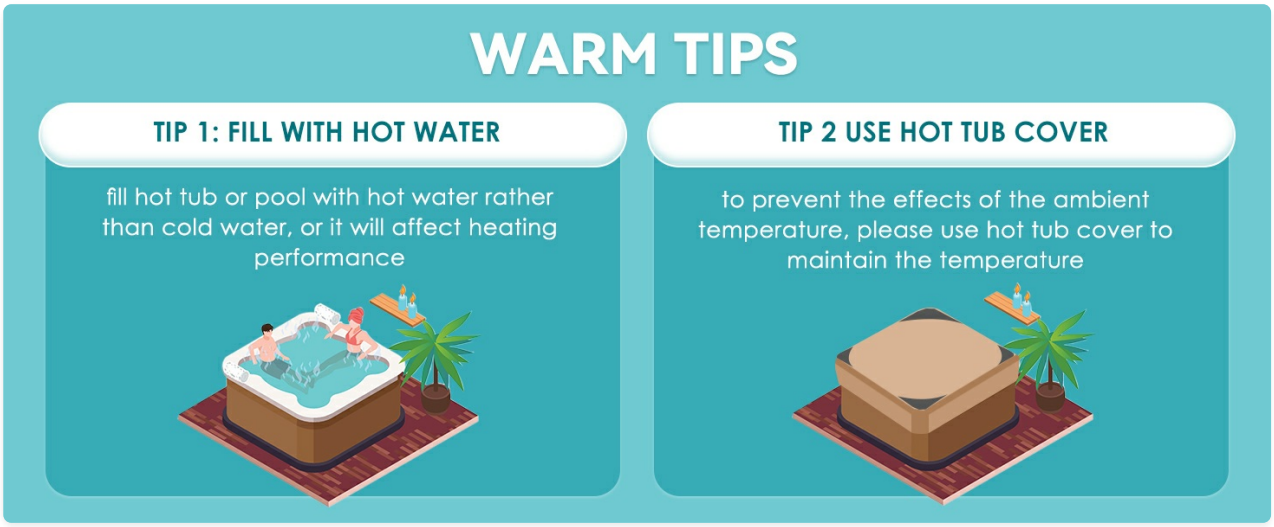

Image 9: The heater is designed for water capacities not exceeding 400 US gallons. Larger pools are not recommended.

7. Maintenance

Regular maintenance ensures the longevity and efficient operation of your hot tub thermostat.

- **Inspect Plumbing:** Periodically check all plumbing connections for leaks or damage. Tighten any loose fittings.
- **Clean Filters:** If your circulation system includes filters, clean or replace them regularly according to the pump manufacturer's instructions to maintain optimal water flow.
- **Electrical Inspection:** Annually inspect electrical connections for any signs of wear, corrosion, or loose wiring. This should ideally be done by a qualified electrician.

- **Winterization:** In cold climates, ensure the system is properly drained and winterized to prevent freezing and damage to the heater and plumbing.

8. Troubleshooting

If you encounter issues with your Mxmoonant Hot Tub Thermostat, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Heater not turning on	No power; GFCI tripped; insufficient water flow; temperature set too low.	Check power supply and circuit breaker. Reset GFCI. Ensure circulation pump is running and water flow is adequate. Increase set temperature.
Water not heating sufficiently	Large water volume; poor insulation; cold initial water; low ambient temperature; circulation pump issue.	Ensure water capacity is within recommended limits (400 US gallons). Use an insulation cover. Start with hot water if possible. Verify circulation pump is operating correctly.
Heater cycles on/off frequently	Temperature sensor issue; minor water flow fluctuations.	Ensure temperature sensor is clean and properly submerged. Check for any blockages or air in the plumbing system.
Water leaking from unit/connections	Loose plumbing connections; damaged seals or pipes.	Inspect all connections and tighten as necessary. Replace any damaged seals or pipes. If the leak is from the unit itself, discontinue use and contact support.

If the problem persists after attempting these solutions, please contact Mxmoonant customer support for further assistance.

9. Warranty and Support

Mxmoonant products are designed for quality and reliability. For specific warranty details, including coverage period and terms, please refer to the warranty card included with your product or visit the official Mxmoonant website.
For technical support, troubleshooting assistance, or to inquire about replacement parts, please contact Mxmoonant customer service. Contact information can typically be found on the product packaging, the official website, or through your retailer.

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Video 3: An overview video of the Mxmoonant Hot Tub Thermostat, showcasing its features and potential applications.

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Video 4: Another promotional video highlighting the benefits and functionality of the Hot Tub Thermostat.