

BAOSHISHAN MJZ-16E

BAOSHISHAN MJZ-16E Magnetic Stirrer Hot Plate User Manual

Model: MJZ-16E

1. INTRODUCTION

Thank you for choosing the BAOSHISHAN MJZ-16E Magnetic Stirrer Hot Plate. This device is designed for precise heating and stirring of liquids in laboratory environments. It features accurate temperature control up to 300°C, adjustable stirring speeds from 100 to 1500 RPM, and a programmable timer. This manual provides essential information for safe and efficient operation, setup, maintenance, and troubleshooting.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the equipment.

- **Electrical Safety:** Ensure the power supply matches the device's requirements (110V). Do not operate with damaged power cords or plugs. Disconnect power before cleaning or maintenance.
- **Heat Hazard:** The ceramic plate can reach high temperatures (up to 300°C / 572°F). Always use appropriate personal protective equipment (PPE) such as heat-resistant gloves. Allow the plate to cool completely before touching or storing.
- **Overheat Warning:** The device includes an overheat warning system that activates by default when the plate surface exceeds 320°C. This threshold can be customized. Do not bypass safety features.
- **Chemical Safety:** Use caution when handling chemicals. Ensure proper ventilation. Avoid spilling corrosive liquids on the device.
- **Stirring Safety:** Do not stir highly viscous liquids such as epoxy resin, as this may damage the stirring mechanism or cause instability. Ensure beakers and vessels are stable on the plate during operation.
- **Probe Detection Alarm:** The device features a probe detection alarm. Ensure the temperature probe is correctly inserted when external temperature control is desired.
- **Safety Lock:** Utilize the safety lock feature to prevent accidental changes to settings during operation.
- **Placement:** Place the device on a stable, level, heat-resistant surface away from flammable materials.

3. PRODUCT OVERVIEW

3.1 Components

The BAOSHISHAN MJZ-16E Magnetic Stirrer Hot Plate comes with the following components:

- Main Unit (Magnetic Stirrer Hot Plate)
- Stir Bar
- Clamp Set (for support rod and temperature probe)
- Temperature Probe (PT1000)
- Power Cord

PACKAGE LIST



• Stir Bar



• Clamp Set



• Temperature Probe



• Power Cord



Figure 3.1: Package Contents

3.2 Device Layout and Controls

The main unit features a ceramic-coated heating plate and an intuitive control panel.

MAGNETIC STIRRER



RT–300°C
temperature range



100–1500 RPM
speed range



0–99h59m
timer

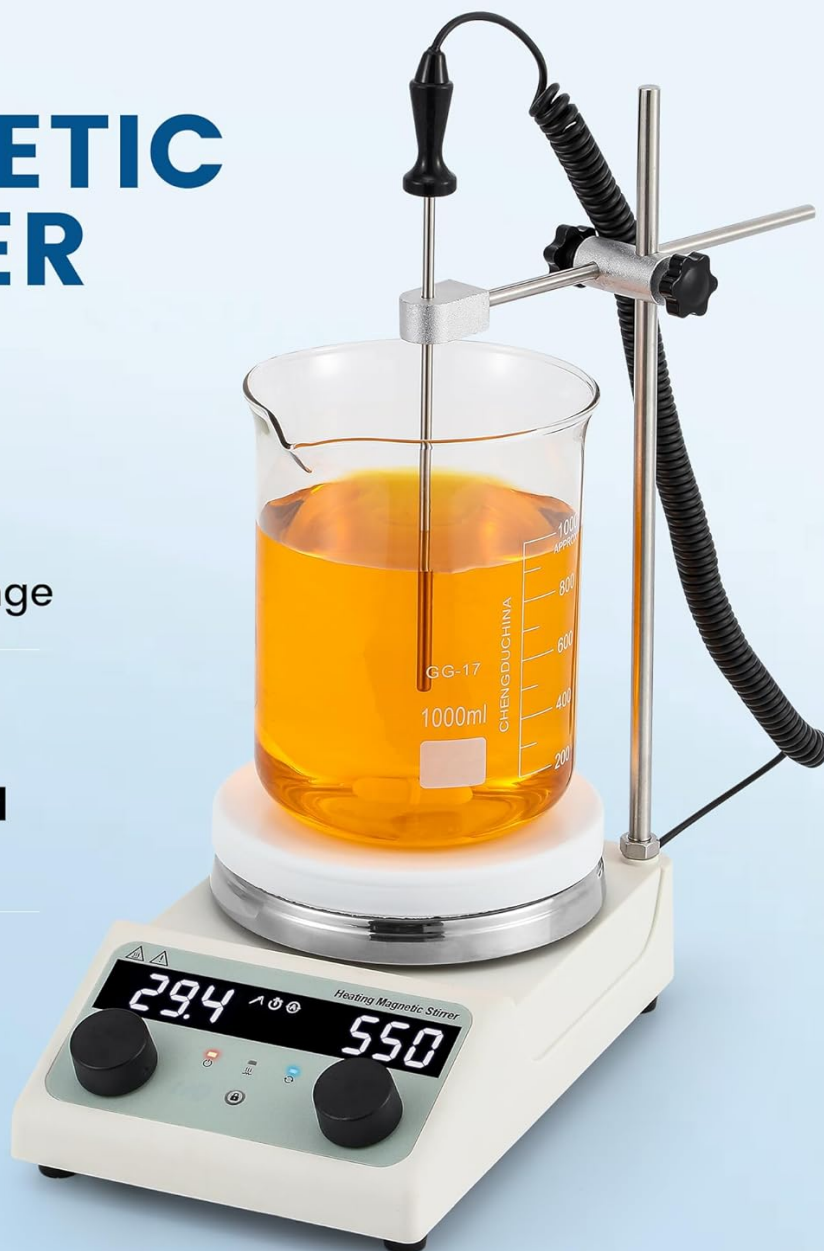


Figure 3.2: Magnetic Stirrer Hot Plate Overview

LCD DISPLAY



Figure 3.3: Control Panel

- **LCD Display:** Shows current temperature, stirring speed, and timer settings.
- **Left Knob:** Used for temperature adjustment (0.1°C resolution).
- **Right Knob:** Used for stirring speed adjustment (10 RPM resolution).
- **Ceramic-Coated Plate:** 140 mm (5.5 inch) diameter, durable, chemical-resistant, and easy to clean.

CERAMIC -COATED PLATE

Durable | Chemical Resistant | Easy to Clean

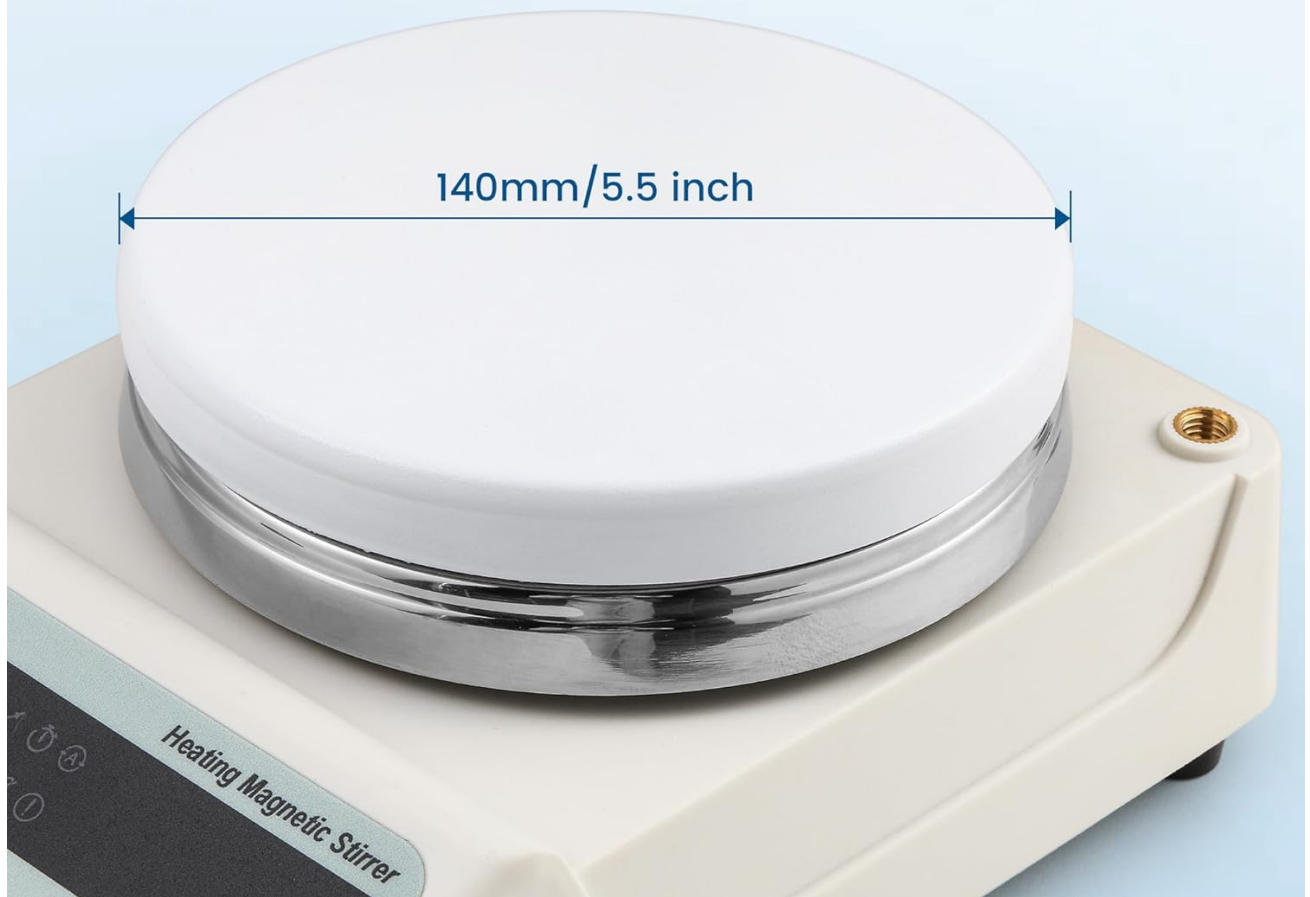


Figure 3.4: Ceramic-Coated Plate

4. SETUP

4.1 Unpacking and Inspection

1. Carefully remove all components from the packaging.
2. Inspect the device and accessories for any signs of damage during transit. If damage is found, contact customer support immediately.
3. Retain packaging materials for future transport or storage.

4.2 Assembly of Support Stand and Temperature Probe

1. Screw the support rod into the threaded hole at the rear of the main unit.
2. Attach the clamp set to the support rod.
3. Insert the temperature probe into the clamp and position it within the liquid to be heated/stirred, ensuring it does not interfere with the stir bar.

4. Plug the temperature probe cable into the designated port on the rear of the main unit.

EXTERNAL TEMPERATURE PROBE INCLUDED

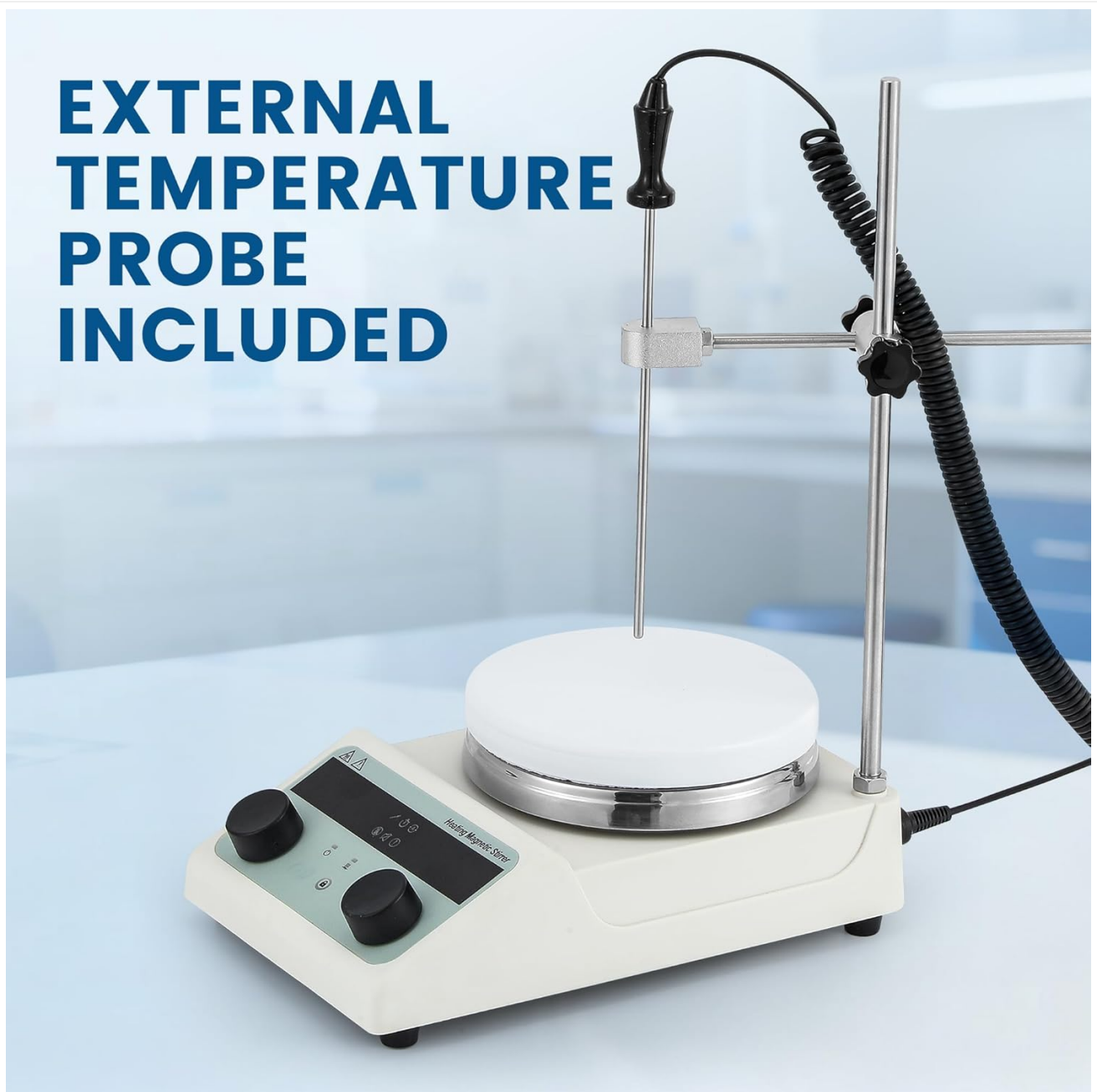


Figure 4.1: External Temperature Probe Assembly

4.3 Power Connection

1. Ensure the device is switched off.
2. Connect the power cord to the power inlet on the rear of the unit.
3. Plug the power cord into a grounded 110V AC outlet.

5. OPERATION

5.1 Basic Operation

1. Place the vessel containing the liquid and a stir bar onto the ceramic plate. Ensure the vessel is centered and stable. The maximum stirring capacity is 3 liters for aqueous solutions.
2. Turn on the main power switch located on the side or rear of the unit. The LCD display will illuminate.

MAX STIRRING VOLUME

- Speed: 100-1500RPM
- Quick liquid stirring
- Forward & Reverse stirring



Note:

Please do not stir high-viscosity liquidssuch as epoxy resin.



Figure 5.1: Max Stirring Volume

5.2 Setting Temperature

1. Rotate the left knob to adjust the target temperature. The display will show the set temperature.
2. Press the left knob to confirm the setting or to toggle between plate temperature control and external probe temperature control (if the probe is connected).
3. The device will begin heating, and the current temperature will be displayed. The fuzzy PID control ensures stable heating.

5.3 Setting Stirring Speed

1. Rotate the right knob to adjust the desired stirring speed (100-1500 RPM). The display will show the set speed.
2. Press the right knob to start or stop the stirring function.

5.4 Using the Timer

1. Access the timer settings through the control panel (refer to the specific button for timer, usually indicated by a clock icon).

2. Set the desired operation time from 0 to 99 hours and 59 minutes.
3. The device will automatically stop heating and/or stirring when the set time expires.

5.5 Auto-Reverse Function

The auto-reverse mode can be configured to alternate between forward stirring and stopping intervals. This feature is useful for more thorough mixing of certain samples. Consult the device's menu for specific settings and activation of this function.

5.6 Safety Lock

To prevent accidental changes to settings during operation, activate the safety lock feature. This is typically done by pressing and holding a specific button (often indicated by a lock icon) for a few seconds. Repeat the action to unlock.

6. MAINTENANCE

6.1 Cleaning

- Always disconnect the power cord before cleaning.
- Allow the ceramic plate to cool completely.
- Wipe the ceramic plate and exterior surfaces with a soft, damp cloth. For stubborn stains, use a mild detergent.
- Do not use abrasive cleaners or solvents that could damage the ceramic coating or plastic housing.
- Ensure no liquid enters the internal components of the device.

6.2 Storage

When not in use, store the device in a clean, dry place at room temperature. Protect it from dust and direct sunlight. If possible, use the original packaging for storage.

7. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, please contact technical support.

Problem	Possible Cause	Solution
Device does not power on.	No power supply; power cord loose; main switch off.	Check power outlet, ensure power cord is securely connected, turn on main power switch.
Heating not working or unstable.	Temperature probe not connected or faulty; incorrect temperature setting; overheat protection activated.	Ensure temperature probe is correctly inserted. Verify set temperature. Check for overheat warning on display.
Stirring not working or weak.	Stir bar not present or stuck; stirring speed set too low; liquid too viscous.	Ensure stir bar is in the vessel and free to move. Increase stirring speed. Do not stir highly viscous liquids.
Display shows error code.	Specific internal fault.	Refer to the device's on-screen error messages for specific meanings. If persistent, contact technical support.
Annoying beeping sound.	Audible alerts enabled.	Access the device's menu settings to disable or adjust audible alerts.

8. SPECIFICATIONS

Parameter	Value
Model Number	MJZ-16E
Temperature Range	Room Temperature to 300°C (572°F)
Temperature Resolution	0.1°C
Stirring Speed Range	100 – 1500 RPM
Stirring Speed Resolution	10 RPM
Max. Stirring Capacity	3 Liters (aqueous solutions)
Plate Material	Ceramic-Coated Aluminum
Plate Diameter	140 mm (5.5 inches)
Timer Range	0 – 99 hours 59 minutes
Power Supply	110V
Item Weight	4.44 pounds
Package Dimensions	11.77 x 8.23 x 6.57 inches

9. WARRANTY AND SUPPORT

The BAOSHISHAN MJZ-16E Magnetic Stirrer Hot Plate is covered by a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. Additionally, lifetime technical support is provided.

For technical assistance, warranty claims, or any questions regarding your product, please contact BAOSHISHAN customer service. Please have your model number (MJZ-16E) and purchase information ready when contacting support.