A Geno Technology, Inc. (USA) brand name

# Economic Hotplate Stirrer

## Cat. No. BT1012

*1-800-628-7730 ♦ 1-314-991-6034 ♦ info@BTLabSystems.com*

Thanks for choosing BT Lab Systems' BT1012 Economic Hotplate Stirrer. This operation manual describes the function and operation of the instrument. In order to use the instrument properly, please read this manual carefully.

## IMPORTANT SAFETY INFORMATION

Users should understand how to use the instrument properly before operating it. Please read this operation manual carefully before using the instrument.

The operation, maintenance and repair of the instrument should comply with the basic guidelines and warning below. Ignoring these instructions will affect the life of the Instrument and safety precautions.

- This product is an indoor Instrument which conforms to Standard B style- I type- GB9706.1.
- These units are designed for laboratory use by persons knowledgeable in safe laboratory practices.
- The operator should never open or repair the instrument. Opening or repairing the instrument will void the guarantee and can cause accidents.
- The power plug should safeguard against an electric shock. Make sure the power supply voltage matches the voltage that the instrument uses.

  If the power cord is damaged, it must be replaced. When replacing, it must be replaced with the same type and size of power cord. Do not put anything else on the power cord when you use the instrument. Do not put the power cord in place where it can be a tripping hazard.

  Hold the plug when plugging in or pulling out the power cord. Ensure that the plug is fully inserted. Don't pull the power cord when pulling out the plug.

- The instrument should be used in an area with low temperature, little dust, no water, no sunshine or hard light and with good air circulation. Do not use where there is corrosive gas or a strong magnetic field. Keep far away from central heating, camp stove and other hot sources. Do not put the instrument in a wet and dusty area. The vent on the instrument is designed for aeration. Do not wall up or cover the vent.
- Power off when not in use. If the instrument will not be used for a long period, unplug, and cover with a piece of cloth to protect it from dust.
- In case of the following, unplug the instrument at once and contact BT Lab Systems.
    - The instrument comes into contact with liquid
    - The instrument gets soaked or burned
    - The instrument emits an abnormal sound or smell
    - The instrument is dropped or the outer shell damaged
    - The instrument functions abnormally.

## MAINTENANCE

The instrument and the accessories should be cleaned with a cloth dampened by alcohol.
If there are smudges on the instrument, clean it with a dry cloth.

## INTRODUCTION

The Economic Hotplate Stirrer is made of a special ceramic. With this special heating technique, the heating plate can reach temperatures of up to 340°C. It is used in industries of medical science, biochemistry, biology, chemistry, etc.

## KEY FEATURES

- The heating plate is made of a special ceramic, making it an easy cleaning feature
- Special heating technique, the heating plate can reach temperatures up to 340°C.
- Safety independent circuit, automatically stops heating when the temperature is over 350°C.
- When the temperature is over 50°C, a hot indicator flashes to remind user.
- PID for temperature control. Two display windows. High precision measurement. Single button operation.
- Use for heating and stirring standard/non-standard reaction flasks from 50ml to 1000ml.
- DC brushless motor makes stable operation with low noise, long life and no sparking.
- Metal plate shell, durable, temperature stable and corrosion-resistant
- The control panel is designed with a 30° slope for convenient operation.
- Magnetic stirring technology. Steady operation at low speed, powerful operation at high speed.

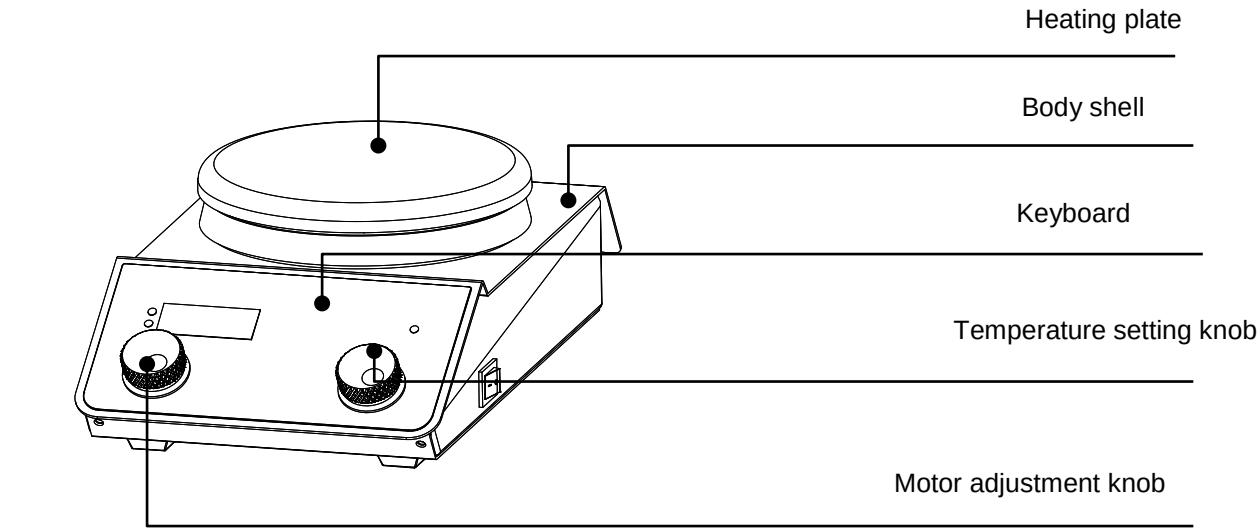
## NORMAL OPERATING CONDITIONS

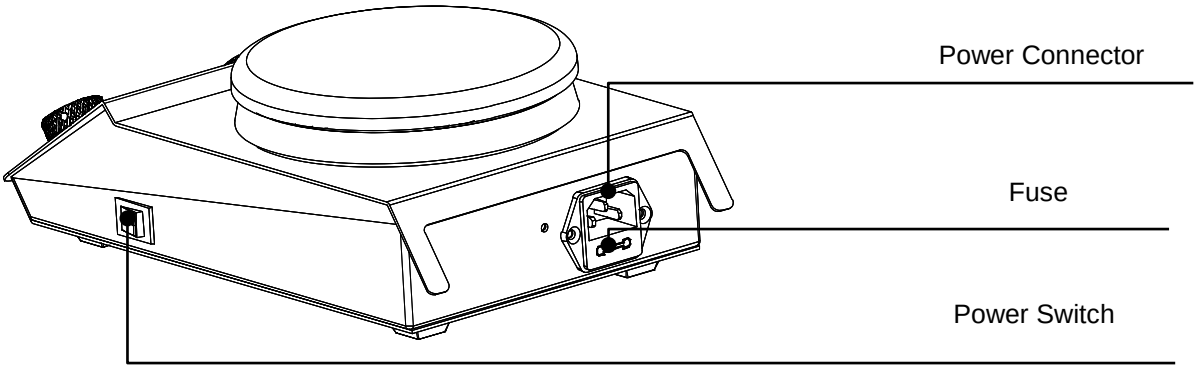
- Ambient Temperature: 4°C ~45°C
- Relative Humidity: ≤70%
- Power: AC220V 5A/AC10V 10A 50-60 Hz

## TECHNICAL SPECIFICATIONS

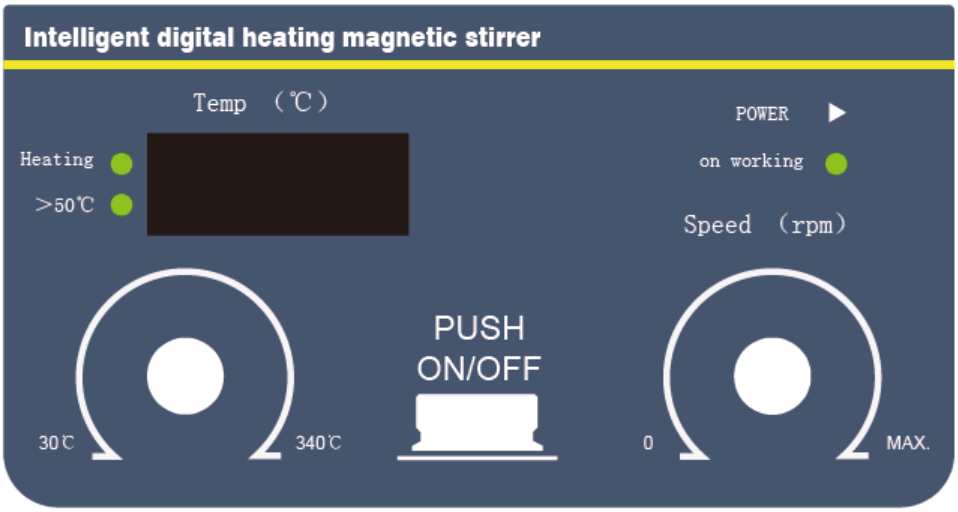
- Diameter of Heating Plate: ϕ135mm
- Heating Plate Material: Ceramic
- Motor Type: DC Brushless Motor
- Power: 10W
- Speed Range: 0 ~1800 rpm
- Temp. Range: R.T. +5 ~340 °C
- Display Min Temp: 30°C
- Time Range: continuous
- Stirrer Point: 1
- Max. Stir Capacity (H2O): 3 L
- Max. Length of Stirrer Bar: 80mm
- Heating Output Power: 600 W
- Max. Adjusted Safety Temperature Loop: 350°C
- Digital Display
- Dimension (WxDxH): 270×156×70 mm
- Net Weight: 2.3 kg
- Voltage: 110V AC
- Frequency: 50/60 Hz
- Environment Temperature(°C) 5-40°C
- Relative Humidity: 80%

## EQUIPMENT OVERVIEW



## KEYBOARD AND DISPLAY PANEL




## KEY FUNCTION

Rotate the left knob clockwise to increase temperature. Rotate the knob counterclockwise to decrease temperature. Press the knob to start operation.

Rotate the right knob clockwise to increase speed/time, rotate the knob counterclockwise to decrease speed/time. Press the knob to start operation.

## OPERATION GUIDE

***Speed, Time and Temperature Setting***

1. Switch on the instrument, the LED displays all "8". The instrument will beep.
2. The LED displays the last temperature. Rotate the left knob clockwise to increase the temperature. Rotate the speed knob counterclockwise to decrease the temperature.
3. The speed is continuously variable. Rotate the right knob clockwise to increase speed, rotate the knob counterclockwise to decrease speed.
4. Temperature support. The instrument accepts setting new target value while instrument is operating.
5. When heating plate over 50°C, the LED keeps display status even when switched off, and the indicator of "hot" will keep lighting to remind user of hot plate to avoid injury.
6. The indicator of "heat" flickers when it is heating. The indicator of "heat" stays lit while instrument holds temperature.

   The indicator "stir" stays lit while stirrer is working.

***Stop / Start***

Press temp knob to start heating. Press knob again to stop heating. Beep alarm will sound.

## TROUBLE SHOOTING

| Issue | Possible Causes | Solution |
|---|---|---|
| No signal display when the power is on. | No power | Check the power |
| | Broken switch | Exchange the switch |
| | Other | Contact BT Lab Systems |
| Shaking heavily | Sample not put in center | Put the samples in center position |
| Actual speed and displayed speed are not matching | Broken controller | Contact BT Lab Systems |
| Err displays | Speed out of control | Contact BT Lab Systems |
| No heating from heating plate | Broken temperature sensor –Broken heating wire | Contact BT Lab Systems |
| Knob not working | Broken knob | Contact BT Lab Systems |

## WARRANTY

The instrument is warranted against defects in materials and workmanship for 1 year. If any defects occur in the instrument or accessories during this warranty period, BT Lab Systems will repair or replace the defective parts at its discretion without charge.

For any inquiry or request for repair service, contact your local BT Lab Systems office. Inform BT Lab Systems of the model and serial number of your instrument.

## TECHNICAL SUPPORT

BT Lab Systems offers technical support for all of its products. If you have any questions about the product's use or, operation, please contact BT Lab Systems at the following:

E-Mail: info@BTLabSystems.com