



A Geno Technology, Inc. (USA) brand name

Dry Bath, Circular

Cat. No. BT1107

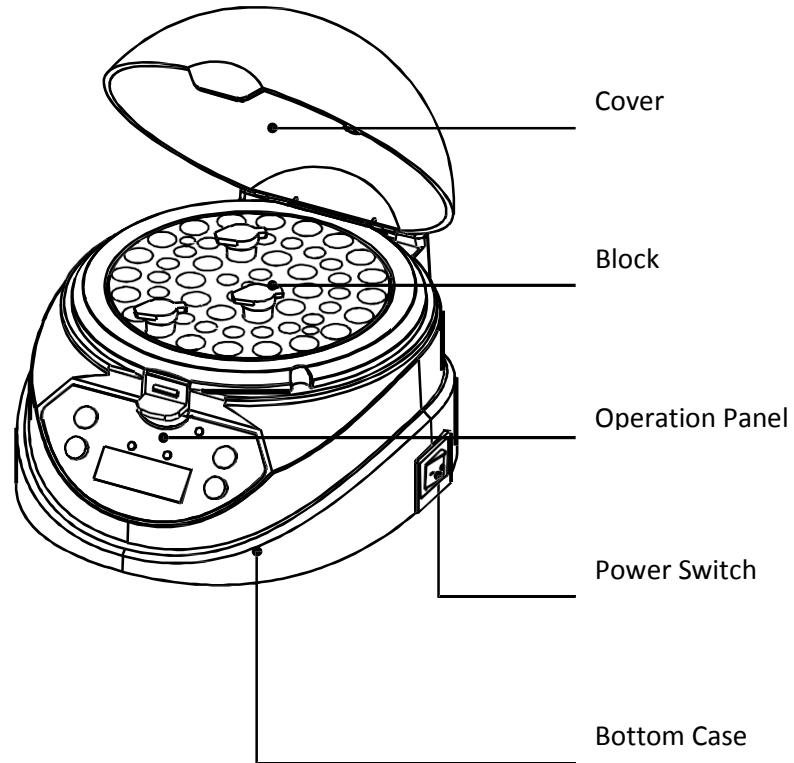
Thanks for choosing BT Lab Systems' Dry Bath, Circular. This operation manual describes the function and operation of the instrument. In order to use the instrument properly, please read this manual carefully.

INTRODUCTION

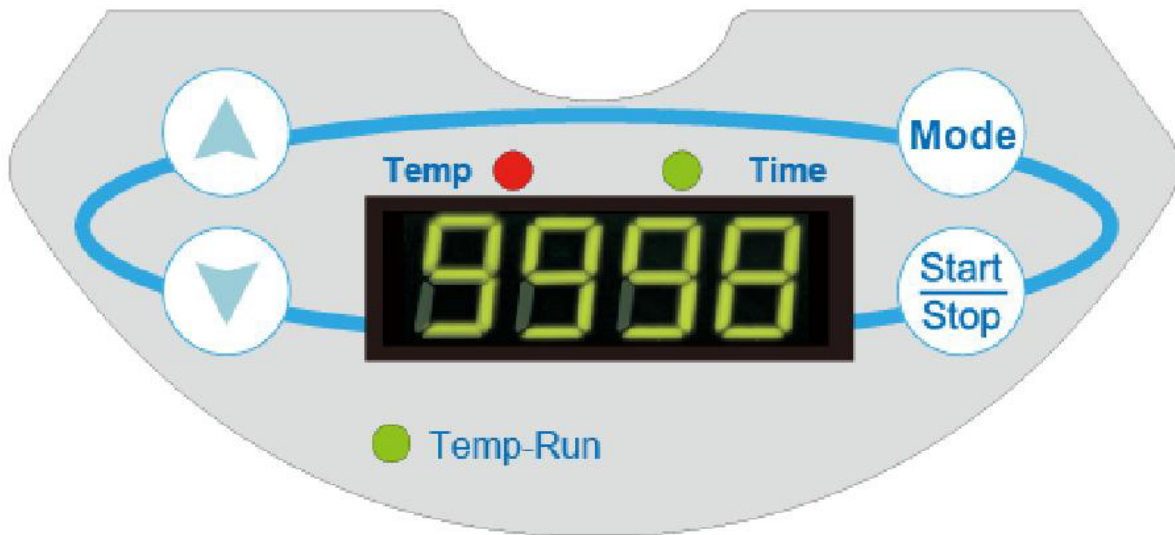
The Dry Bath, Circular is designed with a microprocessor controller. It is used for preservation and reaction of samples, DNA amplification and electrophoresis, etc.

Please read this operation manual carefully before using the instrument.

OVERVIEW



OPERATION PANEL



KEY FUNCTION

1. Press the “UP” arrow key to increase the time or temperature.
2. Press the “DOWN” arrow key to decrease the time or temperature.
3. Press “MODE” to switch the display and setting between time and temperature. The time or temperature light will come on when mode switches to it.

TO START OR STOP THE PROGRAM

1. When finished setting the time and temperature, press the start/stop key to start the program.
2. Press the start/stop key for 2 seconds to stop the program when the instrument is running.

TECHNICAL SPECIFICATIONS

Input Power: AC220V/AC 110V

Maximum Power: 150W

Average Power Consumption: 50 W

Block Temp. Control Range: $RT+5^{\circ}\text{C} \sim 100^{\circ}\text{C}$

Timing Range: 1min ~ 999min

Block Temp. Accuracy: $\leq \pm 0.5^{\circ}\text{C}$

Display Accuracy: 0.1°C

Heating Time: (from 20°C to 100°C) $\leq 15\text{min}$

Ambient Temperature: $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$

Dimension: (W x D x H) 175 x 155 x 118 (mm)

Net Weight: 3.5Kg

IMPORTANT SAFETY INFORMATION

- This product is an indoor Instrument.
- Please read this operation manual carefully before using the instrument.

- The operator should never open or repair the instrument. Opening or repairing the instrument will void the guarantee and can cause accidents.
- 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.
- Main switch is on the right side of the device, push “I” to power on the device, and push “O” to power off the device.
- 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.

OPERATION

Temperature and Time Setting

1. Power on. LED displays “888.8” and beep alarm sounds. After 3 seconds, LED displays the temperature setting of the last operation.
2. Press the “UP” or “DOWN” arrow key to set a new value. Holding the key down will change the value quickly.
3. After setting the temperature it will save and display the current temperature.
4. Press Mode to switch display from temperature to time. LED displays the setting value in the last operation.
5. Press “UP” or DOWN” to set a new value. Press and hold will change the value quickly.

Program Start and Stop

1. When finished setting the time and temperature, press the start/stop key to start the program.
2. When the indicator light of temperature is on it means the LED is displaying the current temperature. When the indicator light of Time is on it means the LED is displaying the remaining time.
3. Press “MODE” to switch the display and setting between time and temperature.
4. When it is heating, the temperature indicator light is flickering. When the temperature reaches the setting value, the temperature indicator light remains on.
5. When program timing ends, the alarm beeps 5 times and display reads “OVER”. The program keeps the current temperature.
6. Press any key to return to the operation setting to reset for a new program.
7. Press “Start/Stop” for 1 second to end the program.

TEMPERATURE CALIBRATION

If there is deviation between the actual temperature and the displayed temperature, you can do as follows to calibrate it.

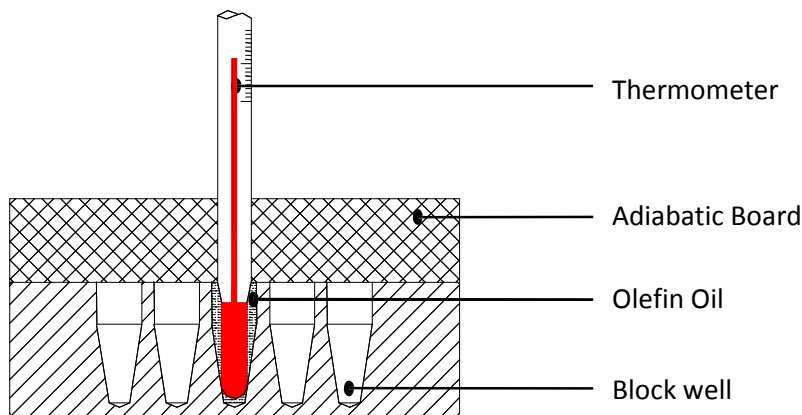
NOTICE:

The instrument uses two temperature adjustments to ensure its accuracy. It is linearly adjusted on 40 ° C, and 100 ° C. The temperature accuracy will be within ± 0.5 ° C after the double temperature adjustment. Both the circumstances and the block temperature should be lower than 35 ° C when calibrated.

Notice: The temperature of the instrument has been adjusted before it is sold.

Adjustment Methods

1. Start up the instrument, it enters waiting interface.
2. Inject olefin oil into one of the cone-shaped wells. Put a thermometer into this well (the precision of the thermometer should be 0.1. The temperature ball should be immersed into the cone-shaped well). Heat insulation material is needed on the block to separate it from the oil.



3. Press the up arrow and down arrow simultaneously under no operating status. The program turns to the right interface. The program auto controls temp. to 40 ° C, symbol “*” displays and flickers. When it achieves 40 ° C, cursor displays under decimal, “Adj” and symbol “*” flicker together.
4. After 20 minutes, the temperature value of the thermometer is 38.8 ° C, press up arrow or down arrow to amend the display value to 38.8. Press “Start” to confirm. Program saves the value and the temperature rises to 100 ° C automatically. The display “Temp-Run” flickers. Press Start. When temperature achieves 100 ° C, the indicators for “Temp” and “Time” are on.
5. Keep the display temperature for 20 minutes, e.g. the value of thermometer is 99.0 ° C, press “UP” or “down” arrow key to amend the display value to 99.0. Press “Start” to confirm.

Program turns to interface.

After temperature calibration, the temperature display is the same as the temperature of the block.

NOTICE! To ensure temperature accuracy, keep the temperature 20 minutes when it achieves adjusted temperature.

NOTICE! During temperature calibration, press up arrow and down arrow simultaneously to cancel the calibration. The system keeps the former calibration. Do not press up arrow and down arrow simultaneously unless needed.

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.

Power off before cleaning the instrument. Do not put cleaning fluid into the well of the block.

TROUBLE SHOOTING

Issue	Possible Causes	Solution
No signal display when the power is on.	No power	Check the power
	Broken switch	Contact BT Lab Systems
	Broken Controller	Contact BT Lab Systems
“EER” display in temp. position of LED with beep alarm.	Block temperature sensor is broken.	Contact BT Lab Systems
Great discrepancy between display temp. and actual temp.	Broken sensor or bad block connection.	Contact BT Lab Systems
Not heating	Broken sensor Broken SSR Broken heater	Contact BT Lab Systems
Key does not work when pressed	Broken key	Contact BT Lab Systems

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