

Ready Warm Tissue Bath

Instruction Manual



Model pictured:
Ready Warm Tissue Bath



Unpacking and Set-up

Includes:

1 Ready Warm Tissue Bath	1 Borosilicate Dish	1 24V 6A Power Adapter
1 Acrylic Lid	1 3-prong wall power cord	

Read the instruction manual in full before operating. Store the operation instructions in a safe place, easily accessible by the trained staff who will be operating the tissue bath.

- 1 Remove the tissue bath from the shipping container and inspect for any possible shipping damage. If the tissue bath appears to be damaged from shipping, please contact your distributor immediately.
- 2 Read and fill out the warranty form online: www.lwscientific.com/warranty_form. The warranty form documents your purchase. Failure to complete the warranty form may void any warranty claims on the unit.
- 3 Place the tissue bath on a sturdy, level surface. Ensure the power switch is set in the "OFF" position. Verify that there is no packaging inside the unit before placing the borosilicate dish into the unit.
- 4 Place the borosilicate dish in the unit. Fill the borosilicate dish with the required amount of water up to a minimum height of .79 inches (2 cm). Place the acrylic lid on the borosilicate dish and manipulate the probe arm until the temperature probe is placed through the circular slot on the lid and makes contact with the water.
- 5 Connect the included power adapter to the Tissue Bath, attach the provided line cord, and plug the adapter into a properly grounded electrical outlet. Use only the supplied power adapter and plug.

Caution: Take care not to touch the heated plate inside the unit while the equipment is in use. Hot surfaces can cause injury and burns.

Safety and Operation

The system starts heating when the start button is pressed and the measured temperature value is below the temperature set value. The unit will continue to heat until the water inside the borosilicate dish reaches the set temperature, then continuously maintain that temperature.

If no temperature changes are needed, the Ready Warm Tissue Bath should reach set temperature within 1 hour.

Caution: Read and follow the operating instructions before use.



Warning: Surface can become hot during use,

The Ready Warm Tissue Flotation bath with programmable PID temperature controller is designed to float paraffin sections at temperatures below its melting point at 104-122° F (40-50° F). The Ready Warm Tissue Bath is configured to not be set above 135° F (57° C).

- Do not leave the unit unattended for extended periods. Regularly monitor the unit when in use.
- Connect only to a power supply that provides a safety ground terminal.
- Ensure that the power switch is easily accessible during use.
- To avoid injury, do not check the temperature by touch. Use the temperature display or a calibrated thermometer.
- Do not block or restrict the ventilation slots.
- If liquid is spilled inside the unit, disconnect the power supply and tilt the unit to expel water using the opening located in the rear of the device. Ensure any remaining liquid has evaporated before resuming operation. If the unit encounters an issue or the liquid cannot be removed, contact LW Scientific's Service Department.
- It is the user's responsibility to carry out the appropriate decontamination if hazardous material is spilled on or inside the equipment.
- Do not turn on the heating functionality without water in the borosilicate dish. Attempting to heat the unit without water may cause damage to the unit.
- Use only with accessories provided or parts designed specifically for use with this model.
- Having water near or in contact with the power adapter may cause danger of electric shock. Exercise caution when refilling the borosilicate dish with water or removing the dish from the unit with water in it.
- Fill the borosilicate dish with water to a minimum height of 0.79 inches (2 cm). Do not overflow. Use tap, distilled, or purified water depending on user requirements.

Touchscreen Operation

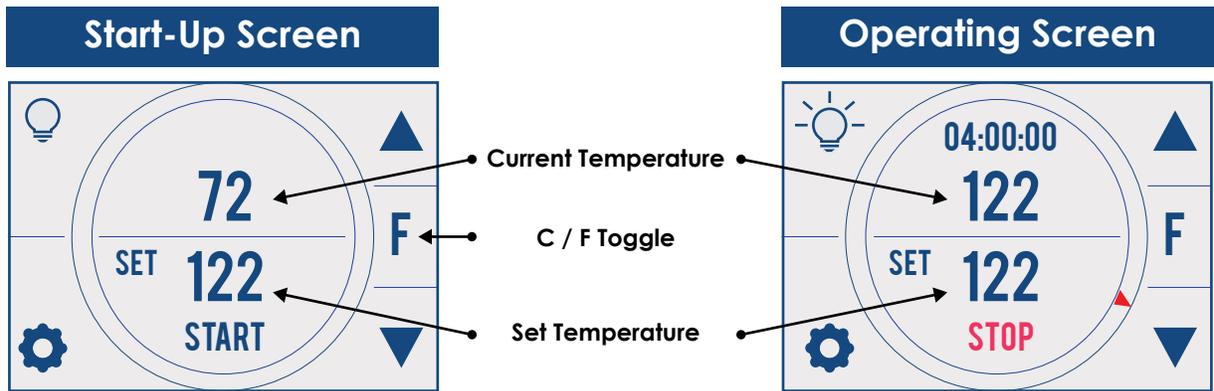
The following instructions describe the operation of the Ready Warm Tissue Flotation Bath. Upon plugging in the unit and flipping the power switch to ON (discernible by the switch being illuminated), the touchscreen will activate and display the Home Page.

The various display pages are noted throughout the Operation instructions and refer to corresponding sections. Please refer to these sections for guidance depending on the currently displayed page of the touchscreen.

Idling at any page for 30 seconds, if the sleep screen option is turned ON, will activate the sleep screen. Touching the screen or turning the unit off and on and will return the user back to the page the unit was on before it went to sleep.

1 Home Page

The **Home Page** shows the following sections. Additionally, if the Timer is set, a variation of the Home Page in which the current timer is included will be displayed.



LED Light Control

Controls the light intensity and on/off state.



Current Temperature

Current temperature shows the actual temperature of the water. This reading is based on the temperature where the temperature probe is in contact with the water. Placing the temperature probe outside of the water will result in an inaccurate temperature reading.

Set Temperature

Set temperature indicates the desired water temperature. The unit will run until the water reaches this temperature then remain stabilized at that temperature.

Settings Cog

Brings the user to the settings page.



Increase Temperature / Decrease Temperature

Increases or decreases the set temperature by 1 degree.



Celsius - Fahrenheit Toggle

Switch the unit between Celsius and Fahrenheit units of temperature.

C/F

Start/Stop Button

Pressing this button will begin the heating process to the set temperature. Pressing this button will also start the timer if the timer is set. If the heating process is currently underway, this button will display as "Stop". Pressing "Stop" will stop the heating process.

START / STOP

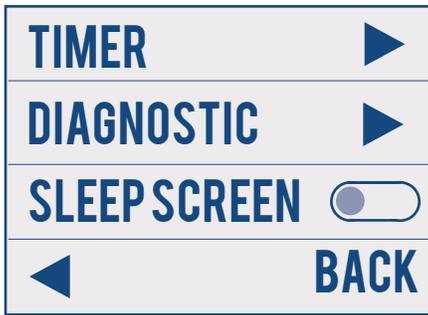
Timer

If the timer has been set by the user, the timer will appear above the current temperature, in hours, minutes, and seconds. This timer will automatically begin counting down when the Start Button is pressed. Additionally, pressing the Timer itself will pause or unpauses the timer. When the Timer reaches zero, the unit will stop running.

04:00:00
H M S

2 Settings Page

The Settings Page shows the following sections.



- Timer
- Diagnostic
- Sleep Screen
- Back Button

Timer

Pressing this will take the user to the timer page.

Diagnostic

Pressing this will take the user to the diagnostics page.

Sleep Screen

Pressing the toggle will activate or deactivate the sleep screen functionality. It is recommended to leave the sleep screen functionality activated when leaving the unit turned on for an extended period of time. The sleep screen only activates if the unit is not heating.

Back Arrow Button

Pressing the Back Arrow Button will return the user to the Home Screen.

3 Timer Screen

The **Timer Screen** shows the following sections:



- Set Time
- Back Button
- Set Button
- Discard Button

Set Time

Pressing the up and down buttons will allow the user to set the timer in the order of minutes:seconds

Back Button

Pressing the Back Button will return the user to the settings page. Leaving the timer page in this manner will not result in any changes to the timer itself or the activation/deactivation of the timer.

Set Button

Pressing the Set Button will return the user to the home page with the timer activated to the set time. Returning to the Timer Page and pressing the Set Button again will result in the timer being reset to the set time.

Discard Button

Pressing this will return the user to the home page and deactivate the timer if it is activated.

If the timer counts down to 00:00 while the unit is heating, the unit will stop heating.

The timer functions as an optional failsafe to allow the user to stop the unit from heating after a set amount of time.

4 Diagnostics Page

The Diagnostics Page shows the following sections:



- Version
- PID Settings
- Back

Version

Displays the version date and number

PID Settings

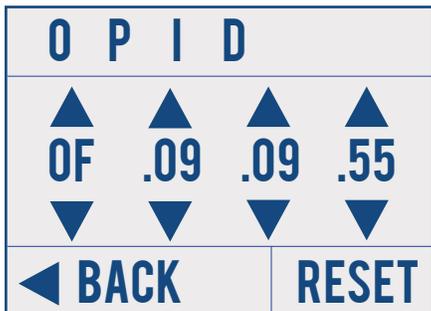
Pressing this will take the user to the PID Settings page.

Back

Pressing this will return the user to the Settings page.

5 PID Settings Page

The Ready Warm Tissue Bath arrives with the offset value calibrated to accurately reflect the actual temperature of water in the unit. If temperature readings with a calibrated thermometer determine that additional changes to the offset are needed, the **PID Settings Page** contains the following relevant sections:



- O (Offset)
- P (Proportional)
- I (Integral)
- D (Derivative)

O (Offset)

Displays the current value of offset. Use the offset to align the temperature reading with the actual temperature of the water.

Example:

The temperature has been set to 115° F, and the current temperature reading is 115° F. However, the actual temperature when read by a calibrated thermometer has stabilized at 113° F, and the offset is 0 °F. Changing the offset to -2 °F will offset the current temperature reading to 113° F, driving the unit to stabilize the actual temperature of the water at 115° F.

P (Proportional)

Displays the current value of the proportional term.

I (Integral)

Displays the current value of the integral term.

D (Derivative)

Displays the current value of the derivative term.

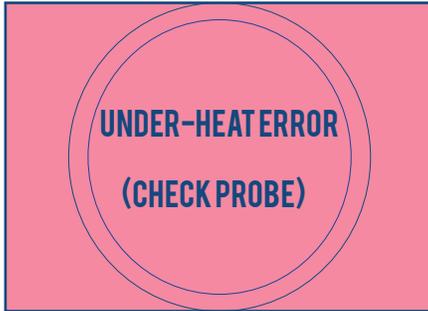
Each value can be edited by pressing the up and down arrows under each term. The default values of O, P, I, and D can be obtained by pressing the "RESET" button in the bottom right corner of the screen. It is recommended to use the default values for P, I, and D.

6 Error Screens

2 types of Error Screens may appear in the event of misuse or failure of the device: Underheat Error and Overheat Error.

Underheat Error:

If the unit is heating, fails to detect an increase in temperature within a certain amount of time, and is outside the range of the set temperature, the unit will display an Underheat Error.



In the event of an Underheat Error, the unit will stop heating. Unplug the unit and contact LW Scientific's Service Department.

Overheat Error:

If the unit reaches a temperature above the set temperature by a certain amount, the unit will display an Overheat Error.



In the event of an Overheat Error, the unit will stop heating. Unplug the unit and contact LW Scientific's Service Department.