



NanoHeat[®] Laboratory Hotplate

Model No. HTL-801 / HTL-901EX

Instruction Manual

*Thank you for purchasing NanoHeat[®] Laboratory Hotplate HTL-801 / HTL-901EX
produced by Advanced Materials Enterprises Company Limited (AME).*

*To obtain the best performance from this product,
please read this manual carefully and keep it for further uses.*

Caution

- This hotplate is for laboratory use only. It is not allowed to use for any other cooking purposes.
- Unless the hotplate is unplugged from power source, do not use sharp metal object to clean or scratch the glass surface.

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This appliance is **CE** approved, applicable to most countries in Europe
and Asia but not the U.S. and Canada.

Safety Precaution

1. Safety Precaution

- Read all instructions before use.
- Close supervision is necessary when the appliance is operated near children. Do not allow children to use this appliance.
- Children should be supervised to ensure that they do not play with the appliance.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
- Do not place on or near a hot gas.
- Do not use in wet or moist area. Do not use near a sink and laundry area.
- The temperature of the heating surface is high when appliance is operating. Do not touch hot surface.
- To prevent outbreak of fire, do not place any flammable materials such as paper, cardboard or fabric near the appliance during operation.

2. Usage Environment

- Do not damage the power cord or plug.
- Remove dust and dirt from the plug regularly.
- Do not change the specification of power cord and avoid using damaged wire.
- Do not use a damaged power cord.
- Do not exceed the rating of the power outlet or connection device.
- Do not insert or pull out the plug with wet hands.
- When unplugging the appliance, pull on the plug, not on the cord.
- Do not use combustion-type appliances, such as a kerosene heater, in direct exposure to the appliance's exhaust opening.
- Do not stand on the appliance.
- Do not use it outdoor or for any commercial or industrial purposes.
- The appliance is not intended to be operated by means of an external timer or a separate remote-control system.

Caution

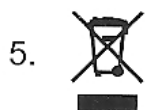
- The heating surface is hot after use and there is residual heat.
- Do not touch the ceramic glass surface when the Warning LED is on or flashes.

3. Under the following instances, pull out the plug :

- If water is accidentally spilled onto the appliance and causes malfunction.
- If you detect any malfunction or any other abnormal condition during operation.
- If the surface is cracked, switch off the appliance to avoid the possibility of electric shock.

4. Assembly and repair of the appliance:

- You should never try to take apart or repair the appliance by yourself.
- Do not remove the screws of the appliance, touching of the internal components may cause electric shock or injury.
- The appliance must only be serviced or repaired by AME authorized service centre.



- This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



- This marking indicates that **“Caution, hot surface”**.

7. Do not use the appliance without sufficient space around it. Keep the front side and either right or left side of the appliance clear. Never use the appliance on carpet or tablecloth (vinyl) or any other low-heat-resistant materials.

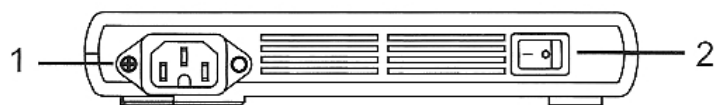
8. Set up parameters:

- Indoor use.
- Ambient operation temperature range is from 5°C to 40°C.
- Maximum altitude of operation should not exceed 2000 meters.
- Maximum ambient operation relative humidity should not exceed 80% at 31°C decreasing linearly to 50% relative humidity at 40°C

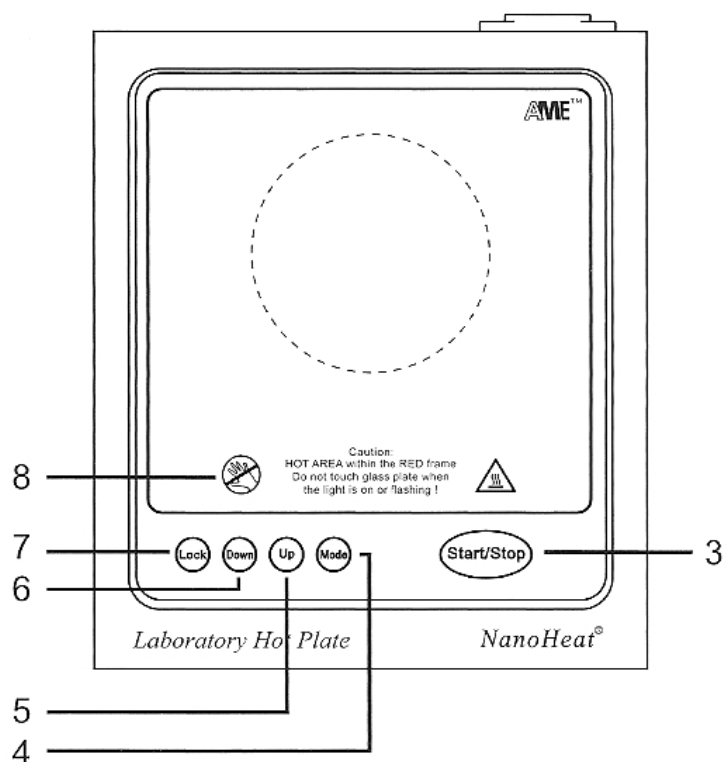
9. This unit operates at 220 – 240 volts AC $\pm 10\%$. Take the normal care and precaution one would use with any electrical appliance. Transient overvoltages typically present on the MAINS supply.

Name of Parts

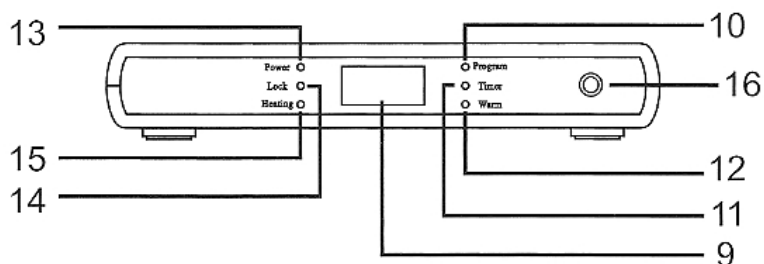
1. AC Socket
2. On / Off Switch



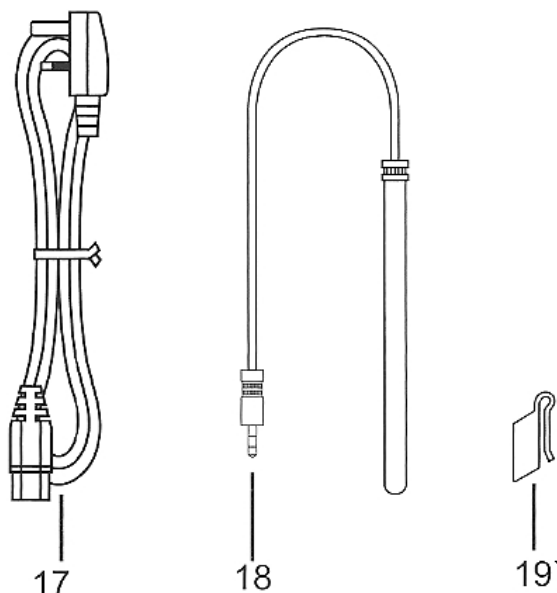
3. Start / Stop Key
4. Mode Key
5. Up Key
6. Down Key
7. Lock Key
8. Warning LED



9. Display LED
10. Program LED
11. Timer LED
12. Warm LED
13. Power (Standby) LED
14. Lock LED
15. Heating LED
16. External Port (model HTL-901EX)



17. AC Power Cord
18. External Probe (model HTL-901EX)
19. External Probe Holder (model HTL-901EX)



Function Keys

On/Off Switch

This key turns on or off the appliance. As the appliance powered on, a beep sound is heard and the Power LED lights up in red.

Mode Key

This key selects the 3 different heating modes and warming mode.

If the probe is inserted, it toggles between idle mode and external probe mode (model HTL-901EX)

Start/Stop Key

This key starts or stops an operation of a selected mode.

After the operation is stopped, the Warning LED flashes and the in-built fan stays on until temperature of the heating area drops below 40°C.

Up Key/Down Key

This key selects timer setting in Heating mode or temperature setting in Keep Warm mode.

Lock Key

This key activates key lock. All other keys are restricted except for the Start/Stop Key.

How to Use

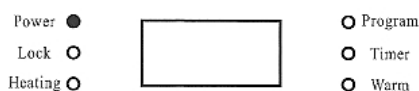
Basic features:

There are 3 different modes (model HTL-801)
4 different modes (model HTL-901EX)

1. Idle (Standby) Mode
2. Heating Mode
3. Keep Warm Mode
4. External Probe Mode (model HTL-901EX)

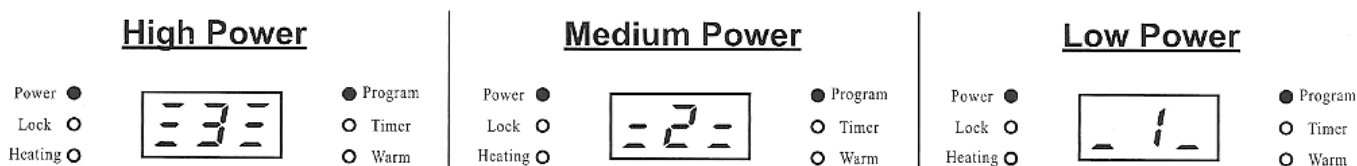
1. Idle (Standby) Mode

Power LED is in red



2. Heating Mode

There are 3 different heating modes.



Timer can be set (1-180 minutes) with 1 minute interval using the Up Key or the Down Key

3. Keep Warm Mode

This mode allows the appliance to maintain at a pre-selected temperature.
The temperature ranges from 30°C-90°C, and can be set using the Up key or Down Key.

4. External Probe Mode (model HTL-901EX)

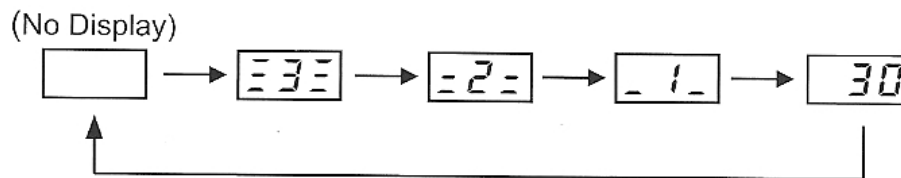
To keep the temperature of the solution under warming by the External Probe.
The temperature ranges from 30°C-90°C, and can be set using the Up key or Down Key.
The accuracy is +/- 1°C for 30°C-80°C and +/- 2°C for 81°C-90°C.

On/Off the appliance

1. Plug in AC power cord to AC socket.
2. Turn on the On/Off Switch, the Power LED lights up as red and the appliance goes into Idle mode.
3. To completely switch off the appliance after use, ensure the On/Off Switch is turned off and the Power LED lights off.

Mode Selection

1. To select different modes, press the Mode Key and the Program LED lights up.
2. Each time when the Mode Key is pressed, mode changes from Idle mode, to High power, to Medium power, to Low power, to Keep Warm mode, then repeat.
3. The Display LED shows:



4. After mode is selected, press the Start/Stop Key to start the operation.
5. The Power LED changes from red to green to indicate the appliance is operating.

Timer Setting

1. In Heating mode, timer can be set using the Up Key or the Down Key.
2. Once the Up Key or the Down Key is pressed, the Timer LED lights up and the Display LED shows the set time.
3. Each time when the Up Key or the Down Key is pressed, timer setting increases or decreases 1 minute at a time.
4. When the Up Key or the Down Key is pressed and held over 3 seconds, timer setting increases or decreases continuously until it reaches the max. or min. time range (i.e. 1-180 mins).
5. The Display LED keeps switching the display to show the selected Heating mode and the time remaining alternatively.
6. When the set time is reached, a beep sound is heard and the appliance will be switched to Idle mode.
7. To disable the timer, press and hold the Down Key until the Display LED shows "0".

Keep Warm

1. After Keep Warm mode is selected, the Warm LED lights up and the Display LED shows the selected temperature.
2. The default temperature of Keep Warm Mode is set as 30°C.
3. Temperature can be set by using the Up key or the Down Key.
4. Each time when the Up key or Down Key is pressed, temperature setting increases or decreases 10°C (keep warm temperature ranges from 30°C-90°C).

External Probe Keep Warm (model HTL-901EX)

1. Insert External Probe into the External Probe Port on the front panel.
All operations stop and change to External Probe Mode.
The Warm LED lights up and the Display LED shows “ 30 ” as the default temperature.
A beep sound is heard.
2. Temperature can be set by using the Up key or the Down Key.
3. Each time when the Up key or the Down Key is pressed, temperature setting increases or decreases 1°C (keep warm temperature ranges from 30°C-90°C).
Holding down the key can select continuously.
4. After temperature is set, press the Start/Stop Key to start the warming process.
5. The display shows the temperature of solution measured by the probe, in 0.5°C intervals. A beep alert sound is heard when the solution reaches the setting temperature at the first time.
6. To show the set temperature again, press the Mode key once.
After 2 seconds, the Display LED reverts to show the temperature reading.
If the Mode key is pressed again within the 2 seconds, the warming process will be stopped and the appliance will be switched to Idle mode.

- Important:
- A. Do not remove External Probe from the External Probe Port while the appliance is in operation. This improper way may damage the software.
The proper way is to press the Start/Stop key to put the unit into 'Idle' mode. Then remove the probe plug.
 - B. Do not exchange or replace External Probe with another same model appliance as this will need recalibration.
 - C. Do not take External Probe out of the solution during the warming process, as this will give a false measurement to External Probe.
 - D. Do not remove the vessel (containing the solution and the probe) from the appliance during warm keeping operation, as this will result in continuous heat generation from the appliance.

Key Lock

1. When the appliance is operating, key lock can be applied to prevent unintentional key press.
2. Once the Lock Key is pressed, the Lock LED lights up.
3. All other keys are locked EXCEPT for the Start/Stop Key.
4. To release key lock, press and hold the Lock Key over 3 seconds. Then the Lock LED lights off.
5. In case of emergency, press the Start/Stop Key to stop an operation during key lock.

Note: For the best heating and warming effects, bottoms of containers (e.g. beakers, flasks, etc.) that contain solution should be as flat as possible.

Product Care and Storage

1. Storing the appliance

- Keep the appliance clean and away from places of high humidity.

2. Cleaning the appliance

- Wipe off dust and any dirt from the appliance with a piece moist cloth and detergent for oil marks (if any) after use.
- Before cleaning, ensure that the power plug is disconnected from the electrical outlet and let it cool completely.
- Do not use abrasive cleaning agents or thinner to clean the appliance.

3. Cleaning the touch panel of the appliance

- Use only a piece of dry cloth to clean the touch panel.

Trouble-Shooting

If users encounter problems operating the appliance, please check the following table for possible remedial actions.

Problem	Possible Causes
Unit does not operate.	The power plug is loose or fuse is broken.
No response on the touch keys.	The unit is locked. Press and hold the Lock key over 3 seconds to unlock the unit.

Specifications

Model: *NanoHeat*[®] Laboratory Hotplate
Model No.: HTL – 801 / HTL– 901EX
Electrical Rating: 220 ~ 240VAC, 50/60 Hz
Power output: 1200 Watts
Dimension: Width : 200 mm
 Length : 230 mm
 Height : 30 mm
Gross Weight : 1.75 Kg
Net Weight : 1.15 Kg

Customer Service

Advanced Materials Enterprises Company Limited (AME)
Service Centre: Room 03-04, 2/F, Block A, Shatin Industrial Centre, 5-7 Yuen Shun Circuit,
Shatin, N.T., Hong Kong
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