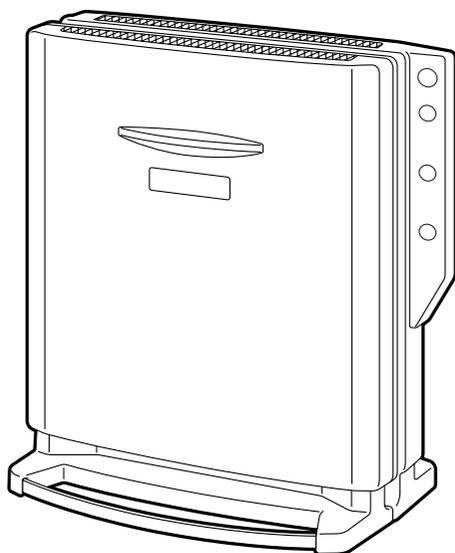


# **TÖYÖTÖMI**

## **INSTRUCTION MANUAL**



### **EPH-121**

#### **CONTENTS**

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# SAFETY PRECAUTIONS (Please read carefully and follow all instructions.)

- Items shown here are labeled “⚠ Warning!” and “⚠ Caution!”

Be sure to follow the warnings and cautions as they explain important details regarding safety.

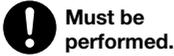
**⚠ WARNING** Improper use can cause death or serious personal injury.

**⚠ CAUTION** Improper use can cause personal injury or physical damage.

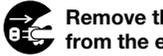
- Be sure to follow the advice in the instruction manual in order to use this unit properly.



Caution



Must be performed.



Remove the power plug from the electric outlet.

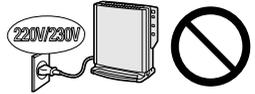


Do not disassemble.

## ⚠ WARNING

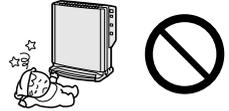
- No other current than AC 220V/230V is allowed to be used.

When used on anything other than 220V/230V mains, fire or electric shock may occur.



- Do not allow children, disabled and elderly to use this product without any attendant.

It can result in a scald injury.



- Do not leave this heater on when you leave home.

It causes a fire.



- Remove all dust and dirt from the power plug and insert it completely into the outlet to ensure proper contact.

Dust and dirt on the plug or incomplete insertion creates the danger of electrical shock and fire.



- Do not let this heater running by using an extension cord from the wall outlet and do not share the outlet with other appliances.

It causes a fire, an electrical shock and a heat generation of the plug.



- When an internal wall outlet has two outlets or more, use this outlet for this heater alone. Check if your wall outlet is for 220V/230V and 7A or more and do not share the wall outlet with other appliances.

Electrical power capacity of the interior wiring (wiring inside the wall) will exceed the acceptable range. It causes a fire, an electrical shock and a heat generation of the plug.



- Do not damage, break, modify, forcibly bend, yank, twist, or bundle the power cord.

A fire or electric shock may result if the cord is pinched or modified, or something heavy is placed on it.

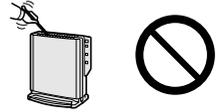


# WARNING

- Do not put this heater over the power cord.  
It causes the breakage of the power cord.  
Using the broken power cord causes a fire and an electrical shock.



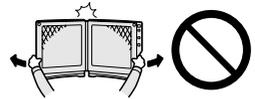
- Do not put any metals (example: pins or needles) or your finger in the heated air outlet opening or the air inlet.  
When they touches the inside, anomalous heating will occur and it causes a fire and an electrical shock and it can result in a scald injury.



- Do not use this heater as a step ladder and do not sit on or lean against this heater.  
It causes falling and can result in an injury. And also it can result in breakage of the leg portion or the damage of this heater.



- Do not force to open this heater wide.  
It can result in the damage of this heater and the wires inside the product will short out and it causes an electrical shock.



- Do not move this heater with the panels left open wide  
The product will slip out of your hands and it causes damages and can result in an injury.



- Do not let this heater off by plugging in or pulling out the power plug.  
It causes a fire and an electrical shock.



- Do not use a wire or a copper wire as a cutout switch fuse.  
It causes a breakdown and a fire.



- If there is a possibility of lightning strike, turn off the heater and pull the power cord out of the wall outlet.  
Depending on the degree of lightning strike, it causes a breakdown.



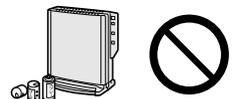
- Do not use this heater in the place where flammable gas is produced or accumulated.  
It will catch fire and causes a fire.



- Do not use this heater in the place where corrosive gas is produced or accumulated.  
It will break a heater and cables and may cause a breakdown.

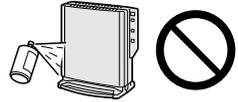


- Do not put spray cans, cartridges for a portable gas stove and carbonated drinks around or near this heater.  
Cans pressure will be getting higher by heat, and it causes an explosion and a fire.

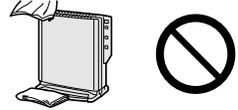


## WARNING

- Do not spray with insecticides.  
It causes change in color and crack.



- Do not use this heater near flammable items such as futons, blankets and curtains.  
It causes a fire.



- Only authorized technicians should disassemble, repair, or modify this product.  
It causes a fire, electrical shock or injury.



## CAUTION

- When unplugging the power plug, grip the plug and not the cord.  
Do not pull the cord or the wire inside the cord will be damaged resulting in heat or ignition.



- If the Panel Heater is not used for a long time, remove the power plug from the outlet.  
Caked-on dust may cause heat or ignition.



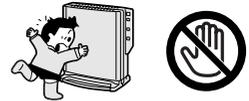
- No damaged power cord, plug, or loose plug connection is allowed to be used.  
An electric shock, short, or inflammation may otherwise be caused.



- Do not use this heater in an empty room where no one is such as glass houses and animal rooms.  
It may cause unexpected accident.



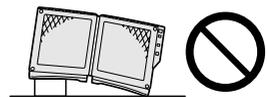
- Do not touch the heater body and the hot portion such as guarding part while the heater is running or immediately after being turned off.  
It can result in a scald injury.  
Especially pay attention to your children.



- Do not use this heater to dry clothes and for other purpose.  
(example: for industrial and business purpose)  
It causes change in body shape and a fire from over heat.



- Do not install the Panel heater on an unstable floor, shelf or wall.  
There is a fear of the Panel heater falling down.



- Do not use this heater on the thick-piled carpet.  
It can result in injury from falling and causes change in carpet color and dent.



# CAUTION

- Do not use this heater without the frame.  
The product will tip over and it can result in an injury.



- Do not use this heater to warm your pets such as dogs and cats.  
Your pets may break the body or power cord and it causes a fire.



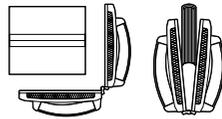
- The Panel heater is not allowed to be used in such a moist place as a bathroom.  
An electric shock or malfunction may occur.



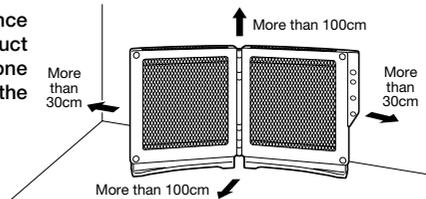
- In the early stage of use, volatile organic compound and carbonyl compound will be produced and it will smell. In that case let fresh air in sufficiently.  
The odor will be lesser by continuing to use of this heater.



- Do not put clothes or something foreign materials between front panels of the product and do not put something in front of (in a radiation direction) the front panels.  
It causes a fire and a breakdown. Keep the isolation distance between the product and the flammables.



- Use this heater by keeping each distance described on the right between the product body and the flammables. However one side or the other side shall not face to the wall or the furniture.



# INFORMATION

When this heater is left plugged in and turned on or off, the previous turn-off information is stored in the microcomputer. And when this heater is turned on again, it runs with that information stored. However when this heater is unplugged, the information stored in the microcomputer will be deleted.

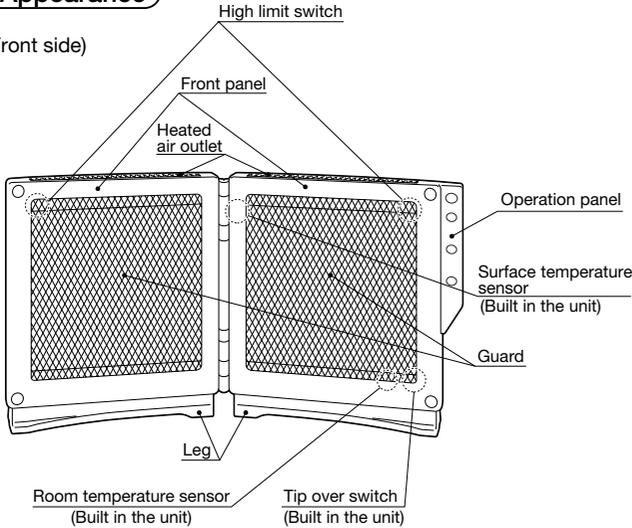
Temperature will be automatically controlled so the cricking sound will be made every time when the mica-heater is switched on or off. It is the sound to switch on or off inside the controller and it is not defect.

Because this heater is used in the room where get hot easily or affected by other heating appliance or with the opening for the ventilation blocked, if inside the body is overheated, the overheat protection system will work and stop all operations. In that case, remove the overheat causes and let the product cool first, then run it again. If the overheat protection system still activates after removing the causes and all operations are stopped, contact the shop where you bought the product.

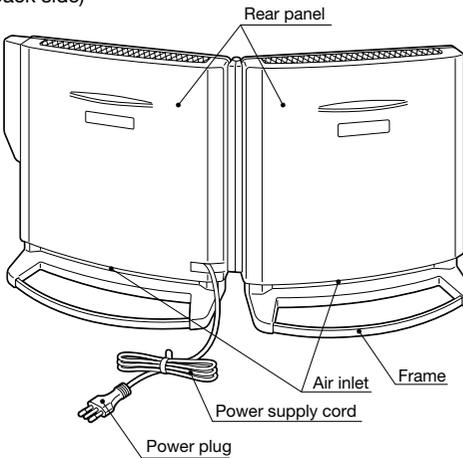
# NAME OF COMPONENT PARTS

## Appearance

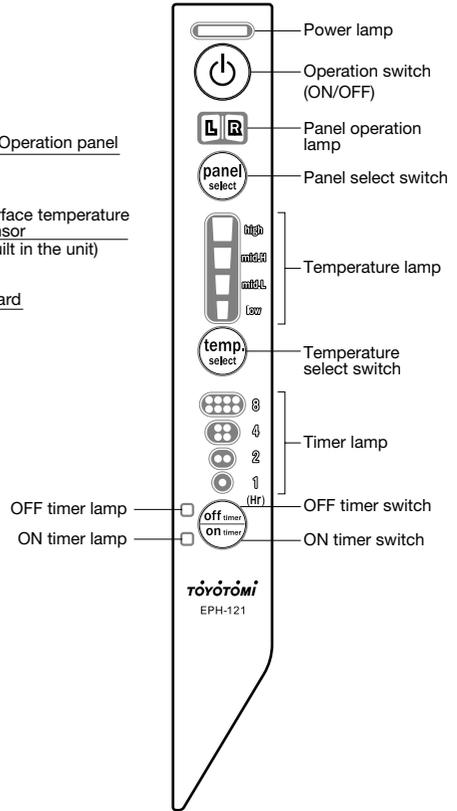
(Front side)



(Back side)



## Operation panel



## Accessories



Frame (2 pcs.)



Wing nut (4 pcs.)



Frame support (4 pcs.)

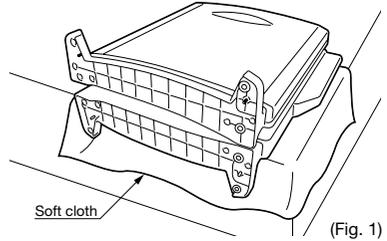
# HOW TO ASSEMBLE THE FRAME

## ⚠ CAUTION

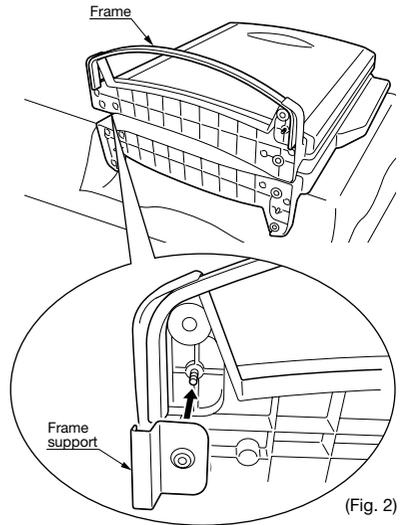
Do not insert the plug in electrical outlet before completing assembling.



1. Keep the heater closed position and lay the unit down on the stable table spread the soft cloth. (Fig. 1)

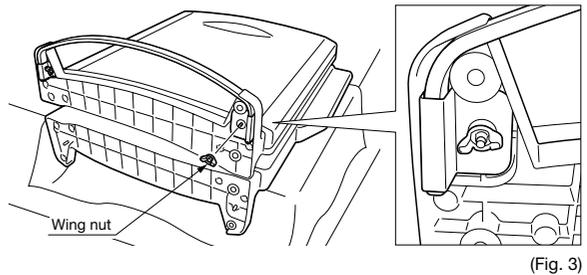


2. Assemble the frames to the legs and attach the frame supports on right and left side. (Fig. 2)



3. Fix the frame and frame support with Wing nut tightly. (Fig. 3)

4. Turn the heater upside down and assemble the frame to the legs with Wing nut the same way as the above. (Fig. 1-3)



5. Set up the heater carefully and be sure that the frames are fixed firmly.

# OPEN AND CLOSE THE PANELS

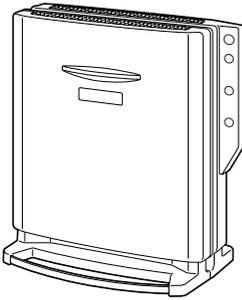
## ⚠ WARNING

Do not open the panel forcibly to avoid the damage of the heater or breaking of wire.

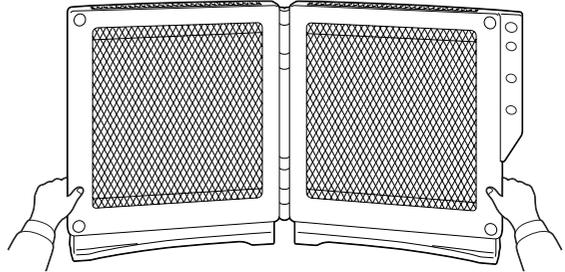


## ⚠ CAUTION

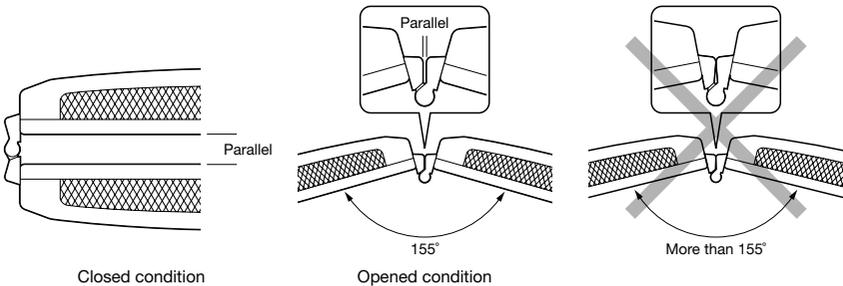
Do not open and close the panels during operation and be careful not to touch the heated part such as surface of the panel and heated air outlet.



Closed condition



Opened condition



Closed condition

Opened condition

This product is built to be run with the range from closed position (0 degree) to opened position (155 degrees). Hold both ends of the panels securely as described above, and open or close slowly.

## INFORMATION

Lift the front sides of the product a little (approx. 5cm), and open the panel with the hinge segment centered, so you can open the panels smoothly.



# OPERATION

- ① Insert the plug in electrical outlet.
- ② Press the Operation switch.  
Power lamp, Panel operation lamp and Temperature lamp will be lit.
- ③ Press the Temperature select switch to choose your desired temperature setting.

→ [high] ⇒ [mid. H] ⇒ [mid. L] ⇒ [low] →

## NOTE

Set temperature: [ high ] = approximately 30°C  
 [ mid.H ] = approximately 26°C  
 [ mid.L ] = approximately 22°C  
 [ low ] = approximately 18°C

The heater will be turned on and off automatically when the temperature reaches set temperature.

The heater will be turned off automatically when the Room temperature exceeds the selected setting by approx. 1.5°C. When the room temperature drops the selected setting by approx. 0.5°C, the heater will be turned on automatically to maintain the desired temperature.

When the heater is turned off, Panel operation lamp will go off and Panel select switch cannot be used.

## NOTE

Room temperature display may not indicate the true room temperature depending on the usage environment.

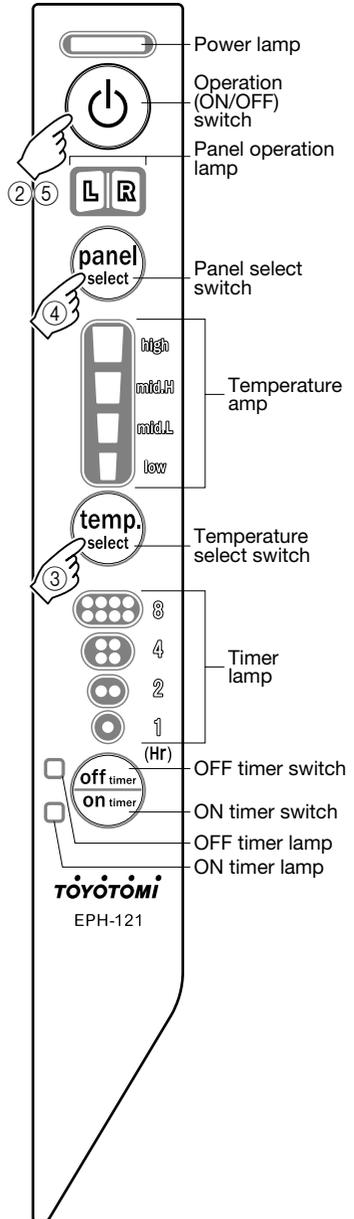
- ④ Press the Panel select switch to select the panel operation.  
Panel operation lamp will be changed → [R] ⇒ [L] ⇒ [LR] repeatedly.

[R]: Right panel is operated when opened position.

[L]: Left panel is operated when opened position.

[LR]: Both left and right panels are operated

- ⑤ Press the Operation switch to turn the unit off.  
Power lamp, Panel operation lamp and Temperature lamp will go off.
- ⑥ Be sure that Power lamp goes off before unplugging after using the heater.



# TIMER OPERATION

## NOTE

EPH-121 is equipped ON and OFF timer function, but could not be set ON and OFF timer at the same time. The latest set timer (ON or OFF) will be given preference.

## OFF TIMER

You can set the OFF timer to turn off automatically at the set time by pressing the OFF timer switch during operation and shutdown.

### During operation

- Press the OFF timer switch during operation. OFF timer lamp will be blinking for a few seconds.
- Press the OFF timer switch to select the timer when OFF timer lamp is blinking. Timer lamp will be lit  $\rightarrow$  [1(h)]  $\Rightarrow$  [2(h)]  $\Rightarrow$  [4(h)]  $\Rightarrow$  [8(h)] repeatedly.  $\leftarrow$  [cancel]  $\leftarrow$  OFF timer lamp will be lit after blinking for a few seconds and the OFF timer function is set completely.

## NOTE

The OFF timer can be changed by pressing OFF timer switch even if it is set completely.

If you wish to cancel the OFF timer, press the OFF timer switch until OFF timer lamp goes off.

- The heater will shut down the operation at the set time. All lamps will go off.

### During shutdown

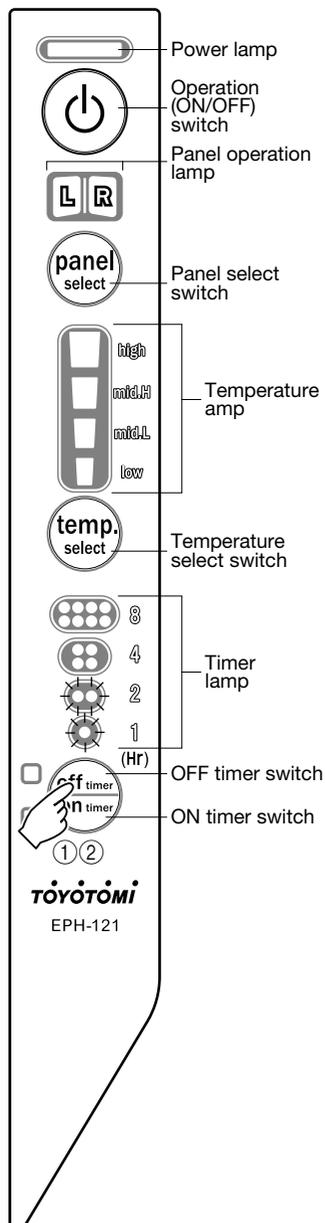
- Press the OFF timer switch during shutdown. Your heater will be turned on and start the heating operation. OFF timer lamp will be blinking for a few seconds.
- Press the OFF timer switch to select the time when OFF timer lamp is blinking. Timer lamp will be lit  $\rightarrow$  [1(h)]  $\Rightarrow$  [2(h)]  $\Rightarrow$  [4(h)]  $\Rightarrow$  [8(h)] repeatedly.  $\leftarrow$  [cancel]  $\leftarrow$  OFF timer lamp will be lit after blinking for a few seconds and the OFF timer function is set completely.

## NOTE

The OFF timer can be changed by pressing OFF timer switch even if it is set completely.

If you wish to cancel the OFF timer, press the OFF timer switch until OFF timer lamp goes off.

- The heater will shut down the operation at the set time. All lamps will go off.



## ON TIMER

You can set the ON timer to turn on automatically at the set time by pressing the ON timer switch during operation and shutdown.

### During operation

- Press the ON timer switch during operation.  
Your heater will stop the heating operation and will be standby condition for ON timer function.  
ON timer lamp will be blinking for a few seconds.
- Press the ON timer switch to select the time when ON timer lamp is blinking.  
Timer lamp will be lit → [1(h)] ⇒ [2(h)] ⇒ [4(h)] ⇒ [8(h)] repeatedly.  
[cancel] \_\_\_\_\_  
ON timer lamp will be lit after blinking for a few seconds and the ON timer function is set completely.

<b>NOTE</b>	The ON timer can be changed by pressing ON timer switch even if it is set completely.
	If you wish to cancel the ON timer, press the ON timer switch until ON timer lamp goes off.
	Your heater can be operated with Panel select switch and Temperature select switch when ON timer lamp is blinking.

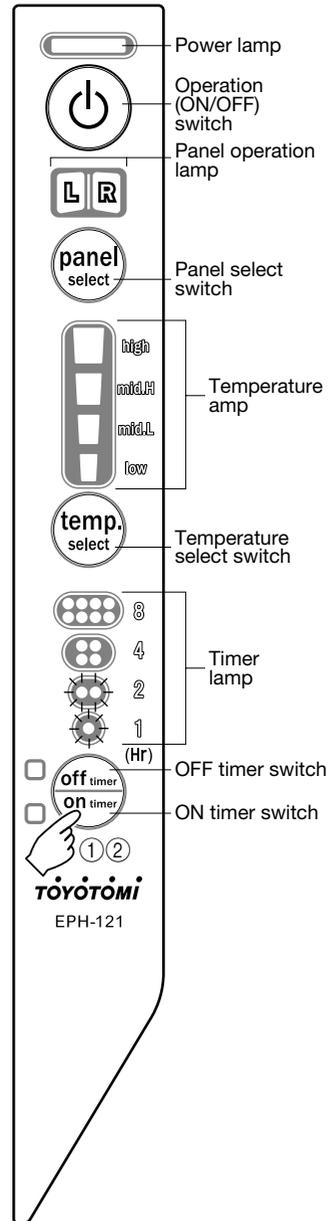
- Power lamp, ON timer lamp and Timer lamp will be lit and the heater will turn on at the set time.

### During shutdown

- Press the ON timer switch during shutdown.  
ON timer lamp will be blinking for a few seconds.
- Press the ON timer switch to select the time when ON timer lamp is blinking.  
Timer lamp will be lit → [1(h)] ⇒ [2(h)] ⇒ [4(h)] ⇒ [8(h)] repeatedly.  
[cancel] \_\_\_\_\_  
ON timer lamp will be lit after blinking for a few seconds and the ON timer function is set completely.

<b>NOTE</b>	The ON timer can be changed by pressing ON timer switch even if it is set completely.
	If you wish to cancel the ON timer, press the ON timer switch until ON timer lamp goes off.
	Your heater can be operated with Panel select switch and Temperature select switch when ON timer lamp is blinking.

- Power lamp, ON timer lamp and Timer lamp will be lit and the heater will turn on at the set time.



## SHUTDOWN

- Press the Operation switch to turn the unit off.  
Operation lamp, Panel operation lamp and Temperature lamp will go off.
- Be sure that the Power lamp goes off before unplugging after using the heater.
- Pull out the Power plug from the electrical outlet.

# ROUTINE MAINTENANCE

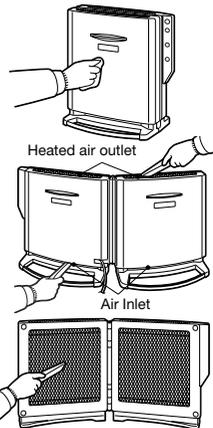
## BEFORE MAINTENANCE

<b>⚠ WARNING</b>	Only authorized technicians should disassemble, repair, or modify this product. Ignition or malfunction may occur, causing injury.	
	Be sure to remove the power plug from the electrical outlet when performing maintenance. Do not remove or insert the plug with wet hands. Failure to heed this warning may result in electric shock or burns.	

<b>⚠ CAUTION</b>	Before cleaning, the power plug shall be pulled out from the wall outlet and wait till the body and the guard portion cooled enough. Without this way, it causes an electrical shock and can result in a scald injury.	
	Do not wash this heater with water and get it wet. It causes an electric leakage and an electrical shock.	
	Wear the gloves when you clean this heater. Without the gloves, it causes an injury.	
	Do not wipe the unit with benzene or paint thinner. Also, do not spray insecticides on the unit. Cracking, electrical shock and / or fire may occur as a result.	 

<Cleaning of the main unit>

1. Wipe the dirt and stain off from the body with a soft cloth.
2. Vacuum off the dirt from the heated air outlet and the air inlet with a vacuum cleaner.
3. Vacuum off the dirt from the body guard portion with a vacuum cleaner.



<Cleaning of the power plug and the wall outlet>

Once or twice a month, pull out the power plug from the wall outlet and wipe the dirt and stain off from the plug and the outlet.

<b>⚠ WARNING</b>	Take a look at the power plug and check for dirt. Without this check, it will catch a fire and causes a fire.	
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## TROUBLESHOOTING

Problem	Check point / causes	Measures and the method
Does not work	Is the power out?	Check the other appliances are on.
	The power plug is inserted to the wall outlet securely?	Insert the power plug to the wall outlet securely.
Does not heat	The set temperature is adjusted to the low or gentle heat level?	Current-carrying may be stopped when the temperature of the temperature detecting portion reaches to the preset temperature. Adjust the set temperature to the middle or high heat level.
Odor	—	In the early stage of use, volatile organic compound and carbonyl compound will be produced and it will smell. In that case let fresh air in sufficiently. The odor will be lesser by continuing to use of this heater.
Makes noises	—	Clicking sound: it is the sound of the heater current-carrying switch and it is not defect. Ticking sound: It is the sound of the heater expansion and contraction by heating and it is not defect. Buzzing sound: It is the sound of the heater slight vibration by heating and it is not defect.
Power plug is hot	The power plug is inserted to the wall outlet securely? Or the plug inserted to the outlet is not loose?	Insert the power plug to the wall outlet securely. And if the plug is still loose, contact an electrician and replace the outlet with new one.

## DEFECT ALARM

When the defect in the production is detected, the safety device will work.

Problem	Check point / causes	Measures and method
Operation light is flashing	Inside the product may be anomalous overheated.	Check if the body is covered with something and the inlet is blocked. Remove the causes of overheat and let the product cooled first then start it again.
	Does the body incline?	Does not work because the tilting switch works.
	Did you incline the body during current-carrying or timer setting?	Use it on a flat and stable surface. Press the start switch to cancel the starting time or timer setting. Restart the product and set the timer again.
Panel current-carrying lights, both L & R, are flashing.	Temperature sensor may be broken.	Contact the shop where you bought this product.
All temperature lights are flashing.	Temperature sensor of the product surface may be broken.	

## STORAGE

### ⚠ CAUTION

Be sure the product is unplugged when it is not used or stored. It causes an electric leakage and an electrical shock and can result in an injury.



Store this product in a place where kids or the person who don't know how to use this product can not reach this product. It causes an accident and can result in an injury.



## SPECIFICATIONS

MODEL	EPH-121	OUTER DIMENSIONS	Opened	W:920 D:212 H:507 (mm)
POWER SOURCE	AC220/230v 50Hz		Closed	W:490 D:322 H:507 (mm)
POWER CONSUMPTION	Both-panels: 1500 (w)	WEIGHT		7.3 (kg)
	One-panel: 600 (w)	POWER SUPPLY CORD LENGTH		2.0 (m)
RANGE PANEL CAN BE OPENED	0 to 155 (degree)	SAFETY DEVICES		High limit switch, Surface temperature sensor Room temperature sensor Tip over switch



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