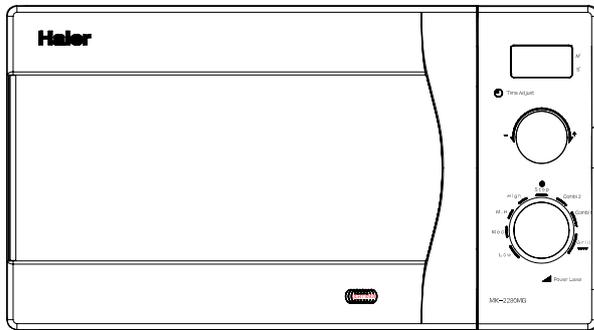


# Haier

Semi-electronic  
Microwave Oven

## Service Manual



**MK-2280M**

**MK-2280MG**

### ● Features

- Safe to use

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- Shining appearance

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- Healthy and germicidal

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- High-temperature grill (Only MK-2280MG)

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**Haier Group**

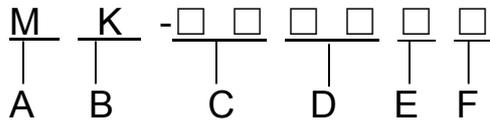
Edition:2005-11- 11

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## 2.Product Code illumination and Series Introduction

### Model Identification



**A:** Abbreviation of Microwave Oven.

**B:** Appearance

**C:** Code name of Nominal cavity capacity.

**D:** One tenth of the microwave output power consumption.

**E:** Type of operation

**M:** Mechanical    **E:** Electronic

**F**---Function    With **G:** Grill function

Examples:

**MK-2280MG:**

It represents mechanical microwave oven with grill function, the cavity volume is 21L, the microwave output power is 800w, K appearance.

**MK-2280M:**

It represents mechanical microwave oven without grill function, the cavity volume is 22L, the microwave output power is 800w, K appearance.

### 3.Features

#### **3.1 Safe to use**

The door adopts unique anti-choke structure and integrated punch forming, and thus effectively prevents the microwave from leaking.

It is controlled by two-step interlock switch. The power will be switched off automatically when the door is open, therefore it is much safer to use.

#### **3.2 Shining appearance**

The door shell and operation panel frame shell adopt in ported high-quality stainless steel material, and will never get rust and change color. It has modern appearance and superior quality, and thus becomes the best choice for the household microwave oven.

#### **3.3 Healthy and germicidal**

It is produced with antiseptic materials, and can suppress the reproduction of the bacteria effectively. The special function of the microwave oven can eliminate the germ in the food quickly and completely.

#### **3.4 Simple operation and accurate time counting**

With two knobs, one for adjusting time and another for power levels, plus LED display, on which cooking time is displayed, it has feature of simple operation of mechanical microwave oven as well as accurate time counting of electronic microwave oven.

## 4.Specifications

Item	Description	
Model	MK-2280M	MK-2280MG
Power source	~230V/50Hz	~230V/50Hz
Input Power consumption	1300W	1300W
output Power consumption	800W	800W
Power consumption For grill	-----	1000W
Oscillating frequency	2450MHz	
Timing range	30'	
Power level	4	4
Unit Dimension (W×D×H)mm	486×370×288	486×370×288
Cavity Dimension (W×D×H)mm	302×318×221	302×318×221
Carton Dimension (W×D×H)mm	538×394×350	538×394×350
Volume/ effective volume	22L	21L
Weight(unit/carton)	14Kg	14.5Kg
Accessories	Instruction manual, glass tray, turn plate-bracket groupwaregl, turn axis	

## **5.Safety Precaution**

Only professional technicians can do the maintenance. Please refer to the proper maintenance procedures in the service manual for safe operations, so as to avoid unexpected injury.

Points of attention during maintenance:

1. Do not operate the microwave oven while the door of the oven is open.
2. Please check following before operation: (1) the door lock is flexible; (2) the door works well in opening and closing; (3) the door is sealed well (without deforming and bending); (4) identify any damage and loosening of the components and accessories; (5) identify damages owing to abnormal usage or dropping.
3. Please confirm that the magnetron, microwave conductor pipe and wire are installed and connected well before switch on the power to do maintenance or check the functional components.
4. In case that the door lock, seal gasket, microwave radiating and transmission system are damaged, or something wrong in debugging, please make repair, replacement or adjustment according to the requirement of this manual before usage.

<b>Components detachable that may touch voltage higher than 250V</b>	<b>Components that may cause excessive microwave leakage</b>
<ol style="list-style-type: none"> <li>1. Magnetron</li> <li>2. High-voltage transformer</li> <li>3. High-voltage capacitor</li> <li>4. High-voltage diode</li> <li>5. H.V. FUSE</li> </ol>	<ol style="list-style-type: none"> <li>1. The magnetron is not properly installed on the wave guide;</li> <li>2. The door hook, door body and the up/down hinge are not properly adjusted;</li> <li>3. The door body or the shell is damaged;</li> </ol> <p>The above reasons may cause excessive microwave leakage.</p>

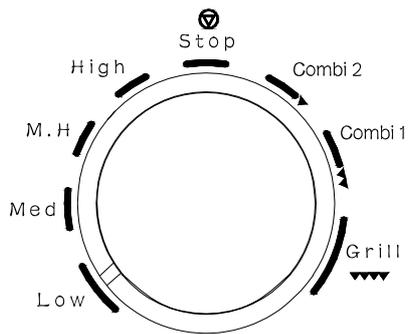
During maintenance, the technicians shall pay attention that:

<p><b>Attention</b></p> <p><b>Microwave radiation</b></p> <p>Do not expose to the radiation emitted by the microwave generator or other parts transmitting the microwave.</p>
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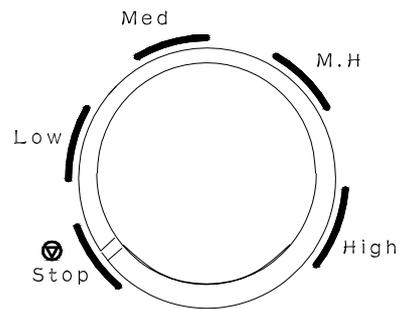
## Safety Precaution

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Attention: The mark must be exactly lined up with a power level. Otherwise there is a continuous beep tone indicating microwave can't work properly.



MK-2280MG



MK-2280M

## 6.Warning and Cautions

\* Please read the safety precautions carefully to guarantee a safe and convenient use of the Haier microwave oven.



No one except authorised service agents are permitted to disassemble the microwave oven, or it may result in electric shock.



Do not use a metal rod to enter the interlock switch hole on the front side of the cavity.



Do not apply excessive force to the door. It may cause distortion of the door and result in microwave leakage.



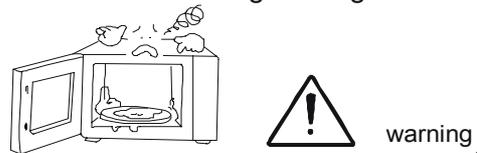
Do not use sealed containers. For those foods with skin, please prick holes on the skin.



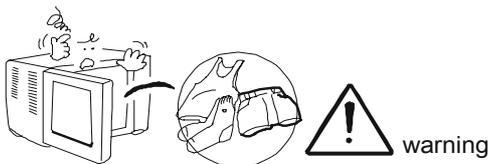
Do not cook eggs in their shell as they may burst.



Remember to clear away excess grease from the inside the cavity. Otherwise it may cause smoke or fire during heating.



Do not use the microwave oven for purposes other than for cooking food.



This appliance must be earthed.



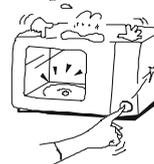
## Warning and Cautions

When roasting, the face of the door and the top of the cabinet may become hot to touch.



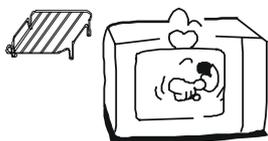
warning

Do not use the microwave with the cavity empty. It will damage the microwave oven.



warning

Do not use metallic dishware to cook as it will cause internal arcing.



warning

Allow the cavity to cool after long cooking processes (i.e. Roasting) before starting another cook cycle.



warning

### Warning

1. If the door seal or the door body is damaged, please do not use the appliance until it is repaired by an authorised service agent.
2. Before use, please check if the cooking containers are suitable for the microwave oven.
3. If you find smoke in the oven, leave the door in the closed position, and switch off the power supply of the microwave (remove the plugtop from the supply socket).
4. We do not recommend the use of plastic, paper or other combustible containers for cooking, Please be sure to observe the operating instruction for the microwave oven, in order to avoid accidents.
5. When you heat liquid in the oven, please take care of delayed bubbling because of boiling liquid.
6. Do not use the microwave oven if there is no food inside.
7. Children should not operate the microwave oven without the supervision of an adult.

Do not use product for any industrial and commercial purpose.

## **Warning and Caution**

1 Baby food or drink should be shaken or stirred evenly so that the heat is distributed and may only be handed to your child after having checked the temperature of the food or drink.

2 .Never put combustible materials near the microwave oven. Watch the cooking condition while the microwave oven is working. Set cooking time correctly, for over time setting may cause fire.

## **POINTS OF ATTENTION**

Not like the other household appliances, the microwave oven is a kind of high-voltage appliance. Although common operations will not risk the user in hazard, please operate it carefully.

1. Do not use duplex receptacle in usage and maintenance.
2. Do not touch any components and circuit when the microwave is running.
3. Be sure to switch off the power before you touch the inside structure of the oven.
4. The high-voltage capacitor may still maintain electricity even 30 seconds after the microwave oven stops working. To make replacement or checking at this time, be sure to use insulated screwdriver to short out the two ends of the capacitor and discharge the stored electricity.
5. Prevent the wristwatch from touching the microwave oven.
6. Do not operate the microwave oven when there is no food or water inside.
7. Protect the seal gasket and front board of the oven door from damage.
8. Do not put metal tools on the magnetron.
9. Do not put any items into the hole of the door lock or the door lock switch.
10. Confirm that the magnetron is installed properly and firmly.

**Only professional technicians can do the maintenance of this microwave oven.**

## 7. Installation and Accessory Parts

### 7.1 Installation

Ventilation space is required in the installation of the microwave oven.



attention

Do not install the microwave oven in an environment that is humid or with high temperature.



Attention

### 7.2 key Point In Installation Adjustment

Please read following before installation.

#### 7.2.1 Install the microwave oven

1. Clear all of the items inside the oven, then wipe the cavity with wet soft cloth. Check if the door is even, and if there's damage on the inner/outer side of the door.
2. The microwave oven, the food and the cooking tools shall be placed on firm and stable table, desk or shelf. During delivery please note that the side with control panel is much heavier.
3. Do not block the ventilation hole and air inlet. Otherwise it may damage the oven or cause poor cooking. Confirm that the oven shelf is placed properly to guarantee the ventilation.
4. Avoid high temperature and vapor. Protect the appliance and the mechanical part from damages.
5. The ambient temperature shall be lower than 40°C.
6. The plane bearing the oven shall be even and firm.
7. Keep the microwave oven away from the TV, radio, computer, etc. to avoid interference.

#### 7.2.2 Installation of the earth wire

The microwave oven must be earthed before use. Please pay special attention on that.

Warning: This microwave oven must be earthed.

## Installation and Accessory Parts

### Hint:

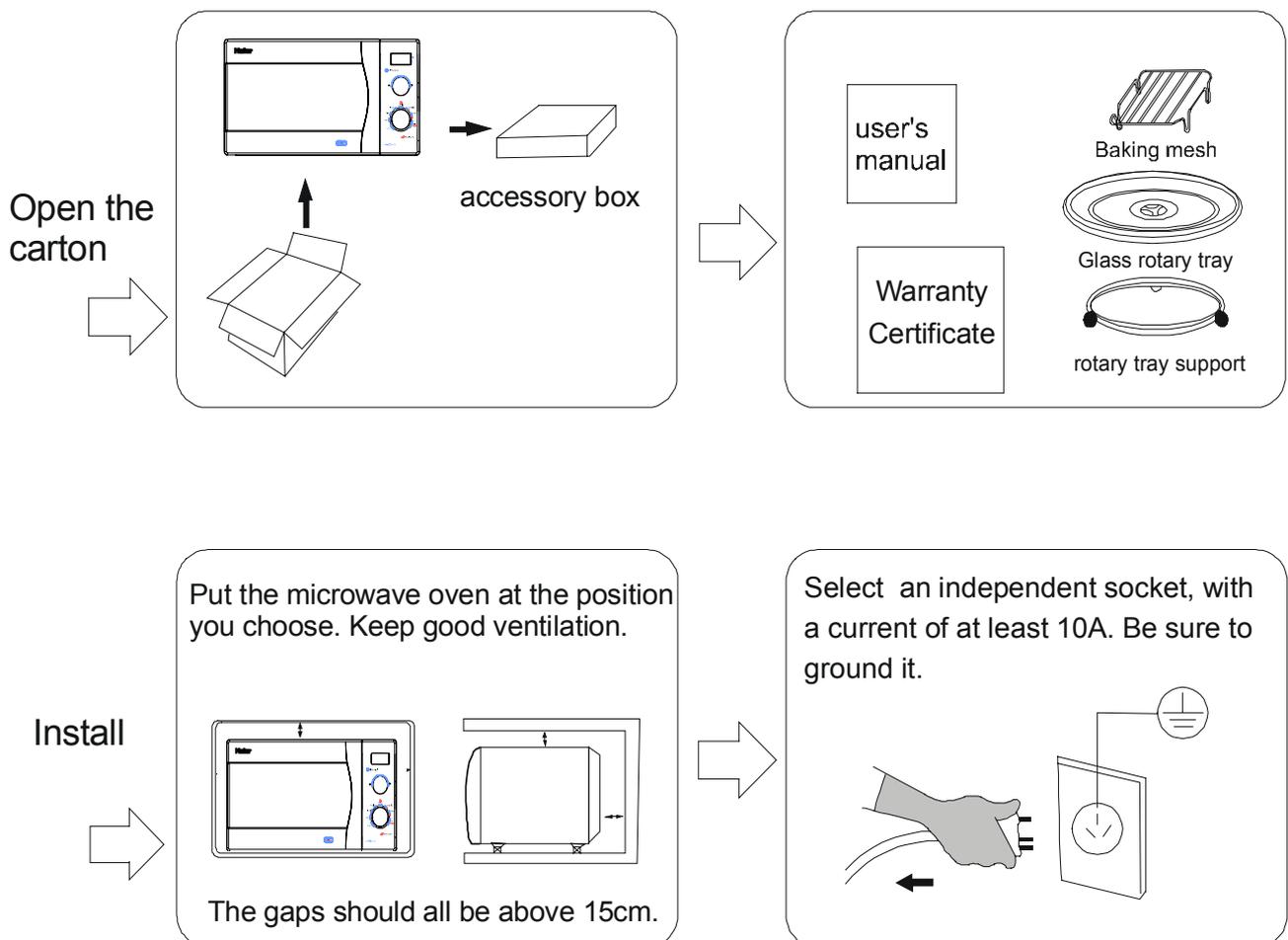
Connect the wires as indicated below:

The yellow/green wire is earth wire; the blue wire is null wire; the brown wire is live wire.

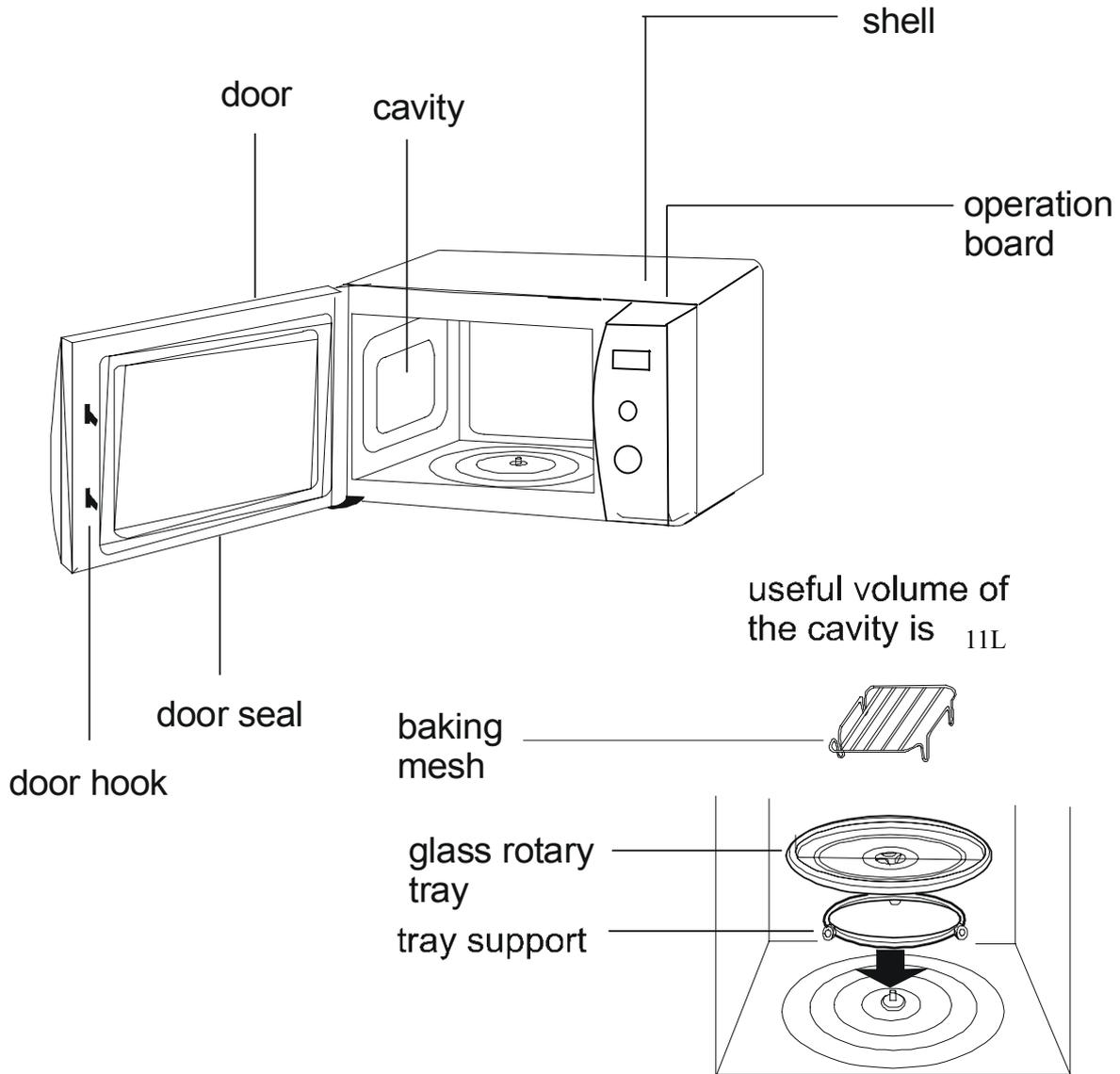
If the colors of the wires are not in accordance with the power source terminals, please operate as per below:

Connect the yellow/green wire to the wire marked with "E" or the green wire; connect the blue wire to the wire marked with "N" or the black wire; connect the brown wire to the wire marked with "L" or the red wire.

### 7.3 Accessory parts



### 8.Parts and Functions



h b d

diagrammatic sketch for

## 9.Maintenance Service and Trouble Shooting

### 9.1SERVICE GUIDE AND REPLACING PARTS

#### 9.1.1 Tools and gauges

#### 9.1.2 Necessary tools

Generally, the tools used in maintenance of the TVs are suitable for the maintenance of the microwave oven. The standard set of tools is:

- (1) Angle pliers
- (2) Nipper pliers
- (3) Cross Screwdriver
- (4) Monkey-spanner
- (5) Iron, solder
- (6) 6mm box spanner

Leakage test of the microwave oven

Points of attention:

- (1) Please first check the leakage of the Microwave oven after maintenance and before usage.
- (2) If the microwave oven can operate while the door is open, STOP ANY OPERATION OF THE OVEN.
- (3) The leakage standard of the microwave

oven is  $<5\text{mW} / \text{cm}^2$ .

#### 9.1.3 Necessary gauges

- (1) Universal meter
- (2) Microwave leakage detector:
- (3) Ruler
- (4) Glass thermometer 100°C

Measurement

- (1) Set the gauge according to the user's manual.
- (2) Add 15-275ml, 5°C-20°C water into a container, and put the container at the center of the tray.
- (3) Set the oven at the highest power level to start working.
- (4) Measure the leakage with the

leakage detector. The detecting gasket is 5mm thick, and the probe shall be perpendicular against

measured part.

## 9.2. Checking under decomposed condition 9.3 Installation and adjustment

In replacing the magnetron, after all the Parts are replaced and measured, and before the shell is installed, check the energy leakage of the microwave oven. Please pay special attention to the following parts:

- Around the magnetron
- Wave guide pipe

**Warning: Do not touch any high-voltage parts.**

### 2. Checking under fully installed condition

(1) After all of the parts are installed to proper Position including the shell, the parts needed Checking are: the view window, air outlet and air inlet.

(2) During working, pull the door slightly to do checking.

(3) The leakage of the microwave shall not exceed the standard in any cases.

### 3. Record and notice of the checking result

(1) After checking of the leakage, the result data shall be recorded as reference and input into the service record.

(2) If the checking result is: all of the parts are normal and work well. At the same time the replaced parts are chosen as per this manual, the leakage shall not exceed the standard.

(3) Please check the leakage of the microwave oven with microwave leakage detector in a year.

### A. Dismantle the shell

① Switch off the power.

② First loosen the rear screw. Take off the shell towards upper rear side.

**Attention: Be sure to pull off the power plug**

### B. Power cord

① After dismantle the shell, loosen the two earth screws.

② Pull off the two jointers on the filter seat.

③ Lift it up slightly to take off the power cord.

**Attention: The power cord must be replaced with the special power cord offered by the manufacturer.**

### C. Control panel

① Dismantle the plug wire of the control panel.

② Loosen the fixing screw with the cross screwdriver. Take out the control panel from the microwave

### D. Dismantle of the oven door

① Loosen the two hexagonal screws of the up hinge with monkey-

spanner or  $\Phi 5$  box spanner.

② Loosen the two screws of the down hinge with cross screwdriver.

## Maintenance Service and Trouble Shooting

- ② Pull up the door towards you to take off it.

### **Attention:**

After installation of the oven door, please check if the first/second lockout switch and monitoring switch work well.

After oven door is installed, check the leakage with leakage detector.

**Attention:** In installation, please install gasket on the up/down hinge. In installing the door, the position of the door can be calibrated by adjusting the up/down hinge. At the same time please note that 0.4mm gap is required between the inside surface of the door and the front board of the cavity. (You can add 3-4 pieces of paper between the door and the front board. Too big gap may cause excessive leakage of microwave; too small gap may cause overheating of the door and the front board.)

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### **E. Dismantling of the high-voltage transformer**

- ① Discharge the electricity of the high-voltage capacitor.
- ② Dismantle the connecting high-voltage wires of the magnetron, the high-voltage transformer and the high-voltage capacitor.
- ③ Loosen the four screws connecting the high-voltage transformer to the bottom plate with cross screwdriver.

### **F. Dismantling of the fan motor**

- ① Discharge the electricity of the high-voltage capacitor.
- ② Dismantle the connecting wires between the fan motor, filter and high-voltage capacitor.
- ③ Loosen the screw connecting the high-voltage diode to the bottom plate with cross screwdriver.
- ④ Loosen the four screws connecting the flare, fan motor and rear board.
- ⑤ Lift the flare up to take out the flare group. Pull off the fin and take out the fan motor backward.

### **G. Dismantling of the high-voltage capacitor, diode and AK rectifier**

- ① Take off the flare group
- ② Loosen the screw connecting the flare to the high-voltage capacitor.
- ③ Take off the high-voltage group
- ④ Pull off the plug of the high-voltage diode and the AK rectifier with nipper pliers.

## **Maintenance Service and Trouble Shooting**

**Attention: Be sure to discharge the high-voltage capacitor to do dismantling immediately after working.**

### **H: Dismantling of the duct and lamp**

- (1) Cut off the connecting wire of the lamp
- (2) Loosen the screw fixing the duct and the magnetron
- (3) Open the hook at the middle of the duct connecting to the magnetron installation board with a screwdriver
- (4) Move outward slowly to take out the duct
- (5) Nip the barb fixing the lamp with nipper pliers to take out the lamp upward

### **I: Dismantling the magnetron**

- (1) Cut off the connecting wire between the high-voltage transformer and the capacitor
- (2) Loosen the four screws fixing the magnetron
- (3) Move outward slowly to take out the magnetron

**Attention: Never damage the ends of the magnetron**

### **J: Dismantling of the rotary tray motor**

- (1) Take out all of the accessories in the cavity
- (2) Put the oven upside down
- (3) Cut off the die part of the bottom plate with angle pliers and take it off
- (4) Cut off the connecting wire of the tray motor
- (5) Loosen the two screws fixing the tray motor with a cross screwdriver. Take off the tray motor
- (6) In installing, first fix the motor. Connect the wire. Then invert the die block of the bottom plate. Put one end into the interface on the bottom plate, and fix the other end with M4 screw.

**Attention: When dismantling the leading wire, remember to nip the connecting terminal to pull out. Do not nip the wire.**

### **K. Dismantling of the timer**

- (1) Pull off the two knobs on the control panel with nipper pliers.

### **Dismantling of the control panel**

- (1) Loosen the two screws fixing The computer board with cross

- (2) Loosen the four screws fixing the timer with a cross screwdriver. screwdriver.  
 (2) Pull off the interface of the film

### **Maintenance Service and Trouble Shooting**

- (3) Take off the timer from the rear of the control panel. switch on the computer board.  
 (3) Take off the computer board from the rear of the control panel.

#### L: Dismantling of the lockout device

1. Function of the lockout mechanical structure: The door lockout is a special design to stop the microwave emission completely when the door is open, so that it can prevent the hazard of microwave leakage.
2. Installation position of the first/second/monitoring switch is indicated in the figure
3. Connection between the lockout board and the oven body:
  - ① Install the lockout group on the door body. Twist the two screws on the installation holes with cross screwdriver without fastening.
  - ② Close the oven door. Adjust the lockout to guarantee that there's no gap between the door and the front board after the door is closed.
  - ③ Fasten the screws.
  - ④ Open the door to check. The loosen range shall not exceed 0.5mm. the micro-switch shall be closed normally. The door shall be opened and closed smoothly. The micro-switch shall act as following: Open the door → the first lockout switch (micro-motion switch1) → the second lockout switch (micro-motion switch2) → monitoring switch (micro-motion switch3) act in turn. The turn is in counter sequence when closing the door. Please observe carefully.

#### M: Dismantling of the heater pipe

- (1) Cut off the connecting wire of the heater pipe.
- (2) Loosen the three hexagonal screws fixing the heater pipe with M6 hexagonal box spanner.
- (3) Take off the heater pipe from the cavity slowly.

**Attention: In installing the heater pipe, be sure to fix the screw tightly. Otherwise it may cause microwave leakage.**

### 8.4. Components Test

Attention:

1. Be sure to switch off the power any time before dismantling the shell; discharge the high-voltage capacitor before test; cut off the primary circuit connecting to the high-voltage transformer.
2. All of the test on the emission of the microwave shall be performed in the container with one liter water.

#### A. Conduction test of the lockout switch

## Test of the lockout switches

If trouble appears in use of the oven, please first check the mode of the lockout

### **Maintenance Service and Trouble Shooting**

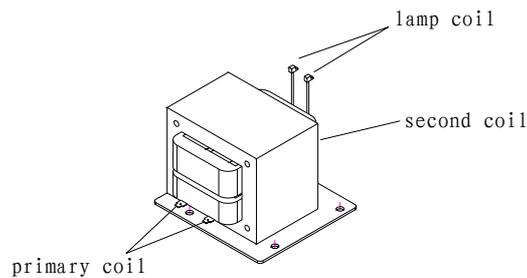
switches:

When the door is open, the first/second lockout switch is off. The monitoring switch is on. When the door is close, the switches are in counter mode. You can observe by sight. If you are not sure, please measure with gauges.

In maintenance, pull the door with hands as slowly as possible to see if the micro switches act in following turn: in opening: the first lockout switch – the second lockout switch – monitoring switch; in closing: monitoring switch – the second lockout switch – the first lockout switch.

If there's abnormal phenomenon, please adjust the lockout holder.

## B. Test of the high-voltage transformer

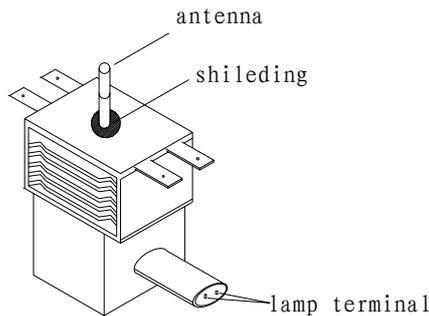


Item	Position	Normal value
Resistance value	Primary coil	About 1-2 $\Omega$
	Secondary coil	About 100-200 $\Omega$
	lamp winding	About 0 $\Omega$
	Primary coil – shell of the transformer	Infinite
	lamp winding – shell of the transformer	Infinite

## C. Test of the magnetron

## Maintenance Service and Trouble Shooting

Item	Position	Normal value
	Two ends of the heater	About less than 1 $\Omega$



	End and shell of the heater	Infinite
Attention: In test of the magnetron, confirm that the gasket is in good condition and installed well.		

### D. Test of the high-voltage capacitor

- Under normal condition:
1. The resistance value of the two terminals shall be several ohm at the beginning of the test, then return to infinite.
  2. The resistance value between the terminal and the shell is infinite.

### E. Test of the high-voltage diode

Measure with RX1000 range. The conduction resistance value shall be several ohm. No matter which step is used in the measurement, the result shall be infinite.

### F. Measurement of the fan motor

The resistance value of the two terminals shall be 200~300ohm

### G. Measurement of the rotary tray

motor

### Maintenance Service and Trouble Shooting

The resistance value of the two terminals shall be 14k~15kohm

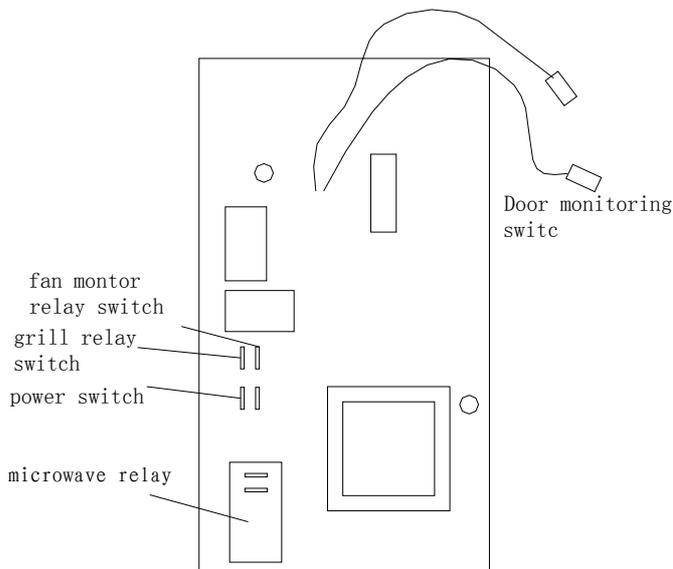
#### Measurement of the H.V. fuse

Under normal condition, it is short circuit to measure in two condition.

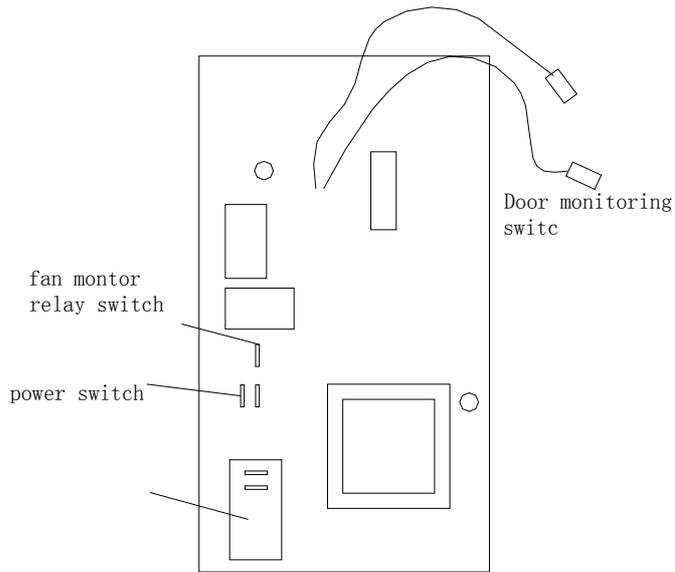
Attention: If the MWO can not make the food warmer, it is probably breakdown by the HV fuse. If there is open-circuit between the two condition, Please check the HVT and HVD according to this manual. And replace the HV fuse.

Attention: All of the tests shall be performed after the H: Test of the filter stubs are pulled off.

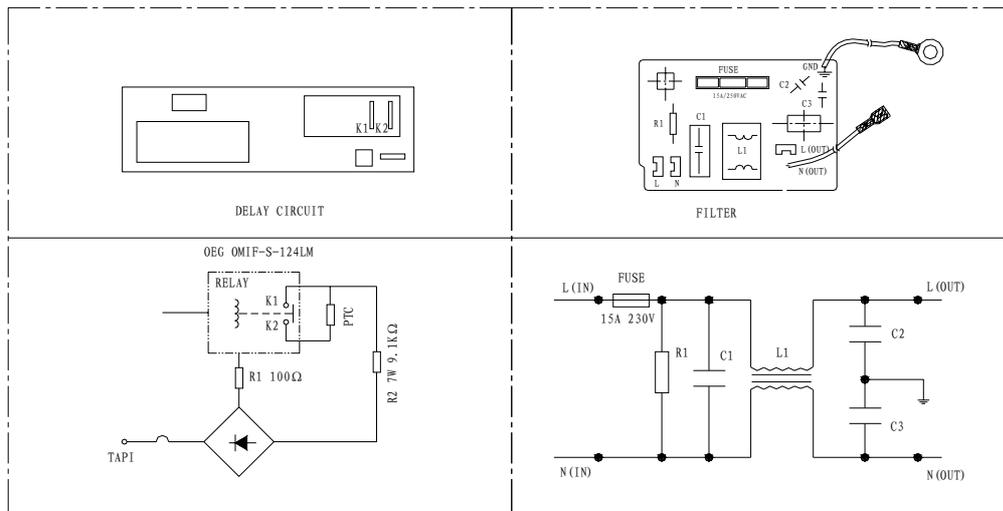
#### I:PC BOARD:



MK-2280MG



I:TEST OF THE FILTER:



## Maintenance Service and Trouble Shooting

### 9.5. Trouble-Shooting

In case that there are complaints from the customers, please study the reported troubles carefully. For the problems listed below, please introduce the proper usage to the customers to avoid necessary troubles.

**Attention:**

- (1) Please first check the installation of the earth wire before trouble-shooting.
- (2) Be extremely careful to touch the high-voltage circuit.
- (3) Discharge the high-voltage capacitor.
- (4) In checking the continuity of the controller or the high-voltage transformer, you shall do the checking under the condition that the AC power source is switched off, and one wire is cut off from the part. Otherwise the result is not accurate, or even damages the measure device.
- (5) Do not touch the IC die on the PCB board to protect it from the damage of the static electricity.

**1. The oven doesn't work**

reason:

- A. The power terminal box has too many plugs and over load, Avoid sharing one line with other electric appliances.
- B. The power plug is not tightly inserted, Confirm the plug is inserted tightly.

**2. The microwave output power consumption is too low**

reason:

- A. The input Ac voltage is too low, connect the microwave oven to power source with sufficient voltage.
- B. The temperature to cook the food is too low ,Prolong the cooking time .

### 3. **Lighting and sparking**

reason:

- A. Metal container is used in cooking and touches the cavity, please use containers stipulated in the operation instructions.
- B. Containers embedded with metal or silver head are used in cooking

### 4. **Uneven cooking**

reason:

The microwave intensity is uneven

- A. pack the thinner part with aluminum foil.
- B. Use preservative file or cover.
- C. When cooking soup, drink or milk, please stir once or twice during cooking.

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## **Maintenance Service and Trouble Shooting**

<b>Trouble 1</b> The oven works normally, but the heating is too slow.
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#### **(1).the output power consumption is too small**

Check the power voltage:

If 90% lower than the normal voltage, the voltage is too low, adjust the power supply.

If normal, check the output power of the microwave ,find the magnetron has trouble ,replaced it.

#### **(2).The fan motor and the lamp do not work.**

Check the fan motor、 lamp:

If abnormal ,the motor、 lamp is bad, replaced it.

If normal, the timer is bad , replaced it.

Attention: a simple method to check the output power of the microwave is :Put one liter water into the oven and heat one minter with the highest power level ,If the output is normal, the water temperature shall raise at least 8.5℃
--

<b>Trouble 2</b> The lamp and the fan motor work normally, But there's no microwave emission(no other abnormal phenomenon)
--

1.Check the conduction of the power switch of the timer ,if abnormal, the timer has trouble ,replaced it.

2.Cut off the connecting wire of the microwave relay, and check the conduction of it.

If not conduct ,the control panel has trouble, replaced it.

If normal, check the conductor wire of the high-voltage transformer I

## Maintenance Service and Trouble Shooting

abnormal ,replaced it. If normal, Replace the fuse ,cut off the connection wire between the transformer and the high-voltage capacitor ,then start the oven .If normal, the AK rectifier ,is bad, replace it.

1. The fuse is not broken  
Check the conduction of the thermostat1and thermostat2,if wrong, replace it.

### **Trouble 4After start, The oven keeps running and, can't stop.**

1. Cut off the connecting wire of the microwave relay and check the conduction .If always in conduction ,The control panel has trouble ,replace it.
2. Check the conduction of the timer motor ,If abnormal ,the timer motor has trouble ,replace it .If normal, Check the timer knob, find interfere with the control panel frame ,that is because the knob is blocked and can't rotate, adjust it.

### **Trouble5After a period in baking ,the power is switch off.**

Check the thermostat 3,If always in conduction during baking ,because the thermostat is bad, replace it .If normal, check the thermostat 2,it is off, that is because the protective thermostat has misoperation .Remind the user to pay attention to the environment of the oven.

### **Trouble 6:After starting, the noise of the oven is too large.**

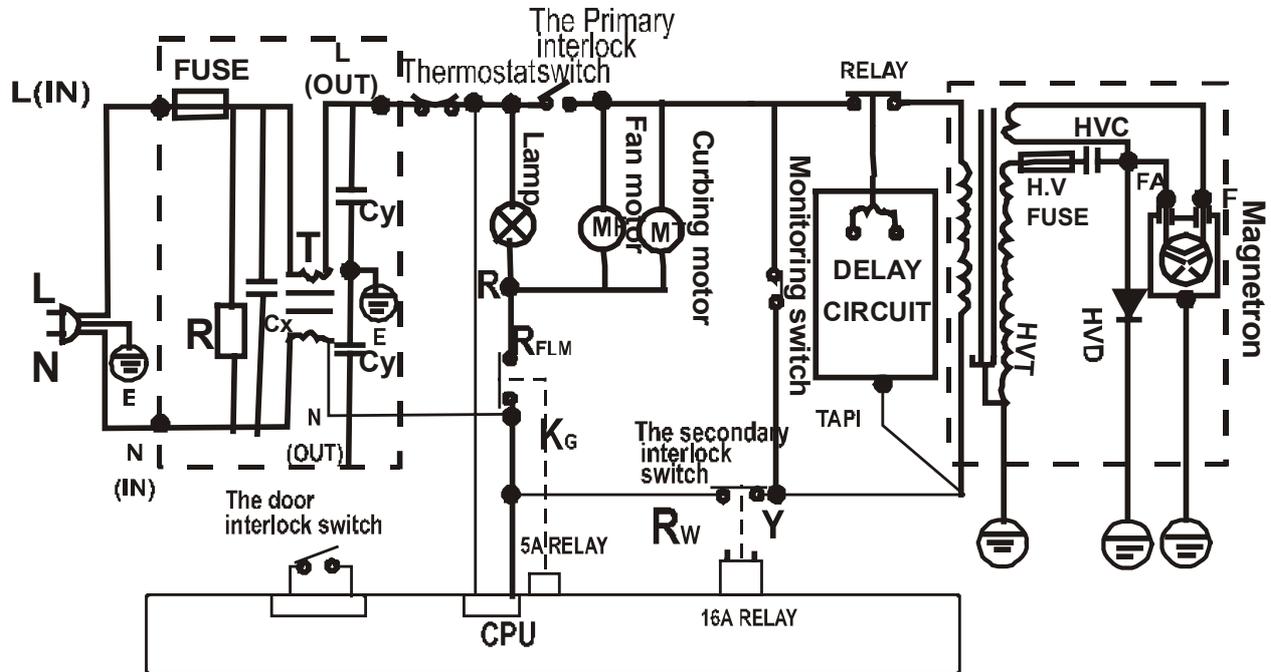
Dismantle the shell to see

1. if the fan bumps other parts ,The fan rotates with high speed, and cause the loose parts vibrate and make noises.
2. The electromagnetic field attracts the shell to vibrate and bump other parts to make noises. Increase the thickness of the sponge strip or shock-resistance rubber to avoid the vibration of the shell.

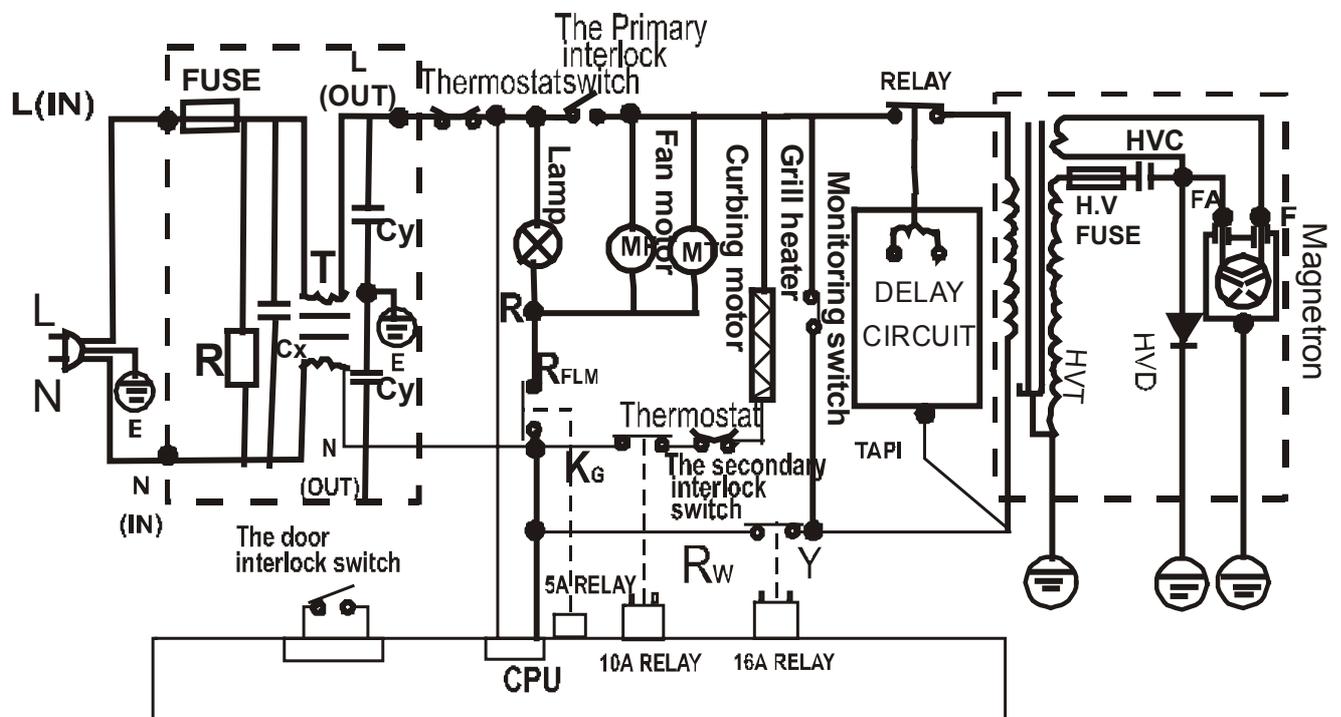
Attention: The working sound of the microwave oven contains two parts:

1. The fan rotates with high speed (near 3000 r.p.m.). The fin rubs the air and makes rubbing noises.
2. The high-voltage transformer will output 2000V high-voltage during work, and produce a strong magnetic field. It will attract the shell to vibrate slightly and make some noises.

### 10.Circuit Diagram and Circuit Explanation



MK-2280M ELECTRICITY SCHEMATIC DIAGRAM



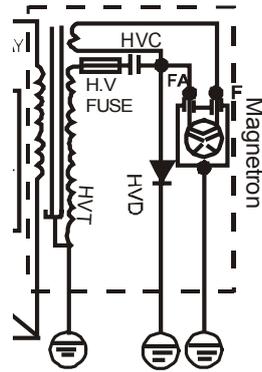
MK-2280MG ELECTRICITY SCHEMATIC DIAGRAM

## Circuit Diagram and Circuit Explanation

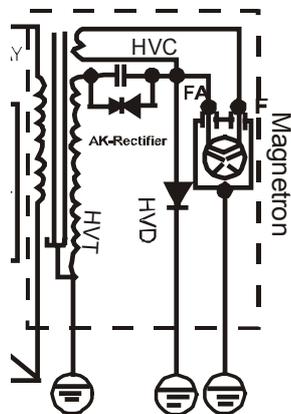
Circuit description:

1. This is the mode that the door is open and the timer is not set yet.
2. Now set the time. The Timer Switch 1 is closed. The lamp is on. But the other parts do not start because the door lock 1 and 2 are open.
3. Now close the door. The timer switch 1 and 2 are closed. There is voltage between the two ends then starts working. The rotary tray , the fan start rotating. The lamp is on. The timer motor also starts.
4. The function of the timer switch 2 is to control the power consumption by regular on/off.
5. The monitoring surface is used to offer protection in case that the lockout switch 1 and 2.
6. The thermostat offers protection against overheating in abnormal cases.

## Circuit Diagram and Circuit Explanation



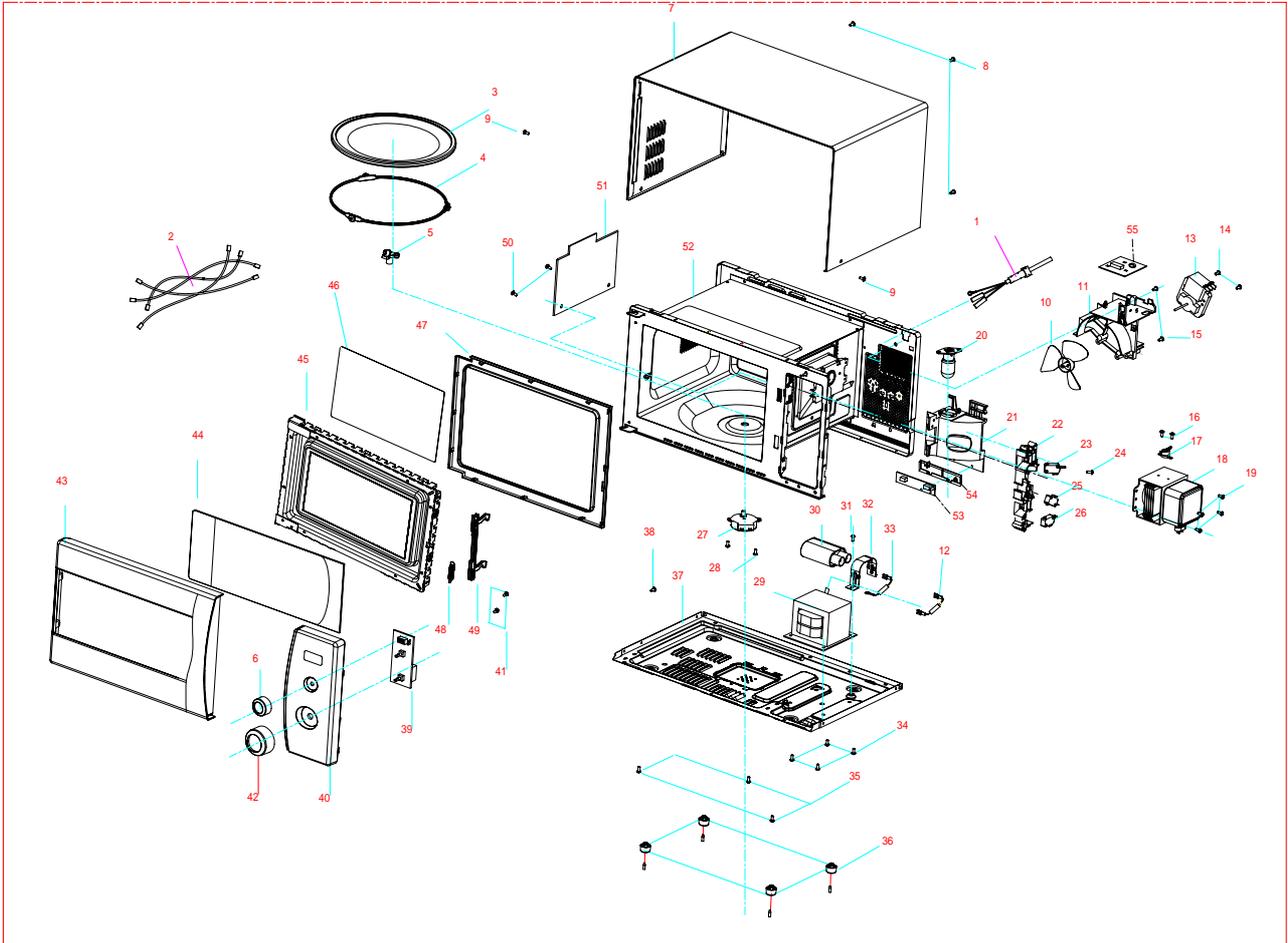
(A)



(B)

1. The figure A. is applicable for the MWO that were produced before June 2003, the figure B is applicable for the MWO that were produced after June 2003.
2. After the oven start working, a 230V AC voltage is added between the two ends of the high-voltage transformer.
3. The 230V voltage will make 2000V induction voltage between the two ends of the high-voltage coil, and 3.5V low-voltage between the two ends of the heater winding.
4. The 2000V voltage will be doubled by the high-voltage capacitor, then be rectified by the high-voltage diode, finally become a 4000V negative high-voltage to ground at the FA end of the magnetron.
5. One end of the heater coil is connected to the negative high-voltage, the other end to the F end of the magnetron. Therefore the working condition of the magnetron is made up: low-voltage and high electric potential.

# Exploded View MK-2280M



## Part of list (MK-2280M)

No.	SPARE PARTS NUMBER	SPARE PARTS DESCRIPTION IN ENGLISH	Q.TY	MODEL
1	0050400385	POWER SUPPLY CORD	1	MK-2280M
2	0050400465	WIRING HARNESS	1	MK-2280M
3	0050900056	GLASS TRAY	1	MK-2280M
4	0050200532	TURNPLATE-BRACKET GROUPWAREGL	1	MK-2280M
5	0050200531	TURN AXIS	1	MK-2280M
6	0050800344	TIME KNOB ASYY	1	MK-2280M
7	0050100473	OUTER CASING	1	MK-2280M
8	0057109128	ST4*12 BOLT	4	MK-2280M
9	0050600033	ST4*10 BOLT	2	MK-2280M
10	0050201517	FAN	1	MK-2280M
11	0050201397	FLARE	1	MK-2280M
12	0050400480	H.V. RECTIFIER	1	MK-2280M
13	0050400373	FAN MOTOR	1	MK-2280M
14	004HR2501G	ST4*19 BOLT	2	MK-2280M
15	0057109128	ST 4*12BOLT	2	MK-2280M
16	0057109123	M3*8BOLT	2	MK-2280M
17	0050400489	THERMOSTAT	1	MK-2280M
18	0050400622	MAGNETRON	1	MK-2280M
19	0050600033	ST4*10 BOLT	1	MK-2280M
20	0056200109	LAMP	1	MK-2280M
21	0050200468	WIND DUCT	1	MK-2280M
22	0050800554	CHAIN-SWITCH HOLDER GROUP	1	MK-2280M
23	0050400323	MOCROMOTION SWITCH	1	MK-2280M
24	0057109128	ST4*12 BOLT	1	MK-2280M
25	0050400605	MOCROMOTION SWITCH ( NORMAL OFF )	1	MK-2280M
26	0050400604	MOCROMOTION SWITCH ( NORMAL OPEN )	1	MK-2280M
27	0050400597	TURNPLATE MOTOR	1	MK-2280M
28	0050600033	ST4*8 BOLT	2	MK-2280M
29	0054500063	HV-TRANSFORMER	1	MK-2280M
30	0057100104	HV-CAPACITOR 1.03uF	1	MK-2280M
31	0050600033	ST4*8 BOLT	1	MK-2280M

32	0050100273	HV-CAPACITOR HOLDER	1	MK-2280M
33	0050400479	H.V. DIODE	1	MK-2280M
34	0057109128	ST4*12 BOLT	4	MK-2280M
35	0057109128	ST4*12 BOLT	3	MK-2280M
36	0056201102	FOOT	4	MK-2280M
37	0050100268	BASE-PLANE	1	MK-2280M
38	0057109128	ST4*12 BOLT	1	MK-2280M
39	0050400459	PC BOARD	1	MK-2280M
40	0050200876	CONTROL EST	1	MK-2280M
41	0050600008	ST 3*8 BOLT	2	MK-2280M
42	0050800343	POWER KNOB ASYY	1	MK-2280M
43	0050201076	DOOR CASE	1	MK-2280M
44	0050900064	OUTER SCREEN (GLASS)	1	MK-2280M
45	0050801303	DOOR JOINING GROUP	1	MK-2280M
46	0050200525	INSIDE SCREEN	1	MK-2280M
47	0050200471	DOOR SEAL	1	MK-2280M
48	0050600027	DOOR-HOOK SPRING	1	MK-2280M
49	0050200470	DOOR-HOOK	1	MK-2280M
50	0050600033	ST4*8 BOLT	2	MK-2280M
51	0050300121	WAVE GUIDE COVER	1	MK-2280M
52	0050800331	CAVITY ASSY	1	MK-2280M
53	0050400395	DELAY CIRCUIT	1	MK-2280M
54	0050201001	DELAY CIRCUIT FIXED BOARD	1	MK-2280M
55	0050400394	FILTER	1	MK-2280M



## Part of list (MK-2280MG)

No.	SPARE PARTS NUMBER	SPARE PARTS DESCRIPTION IN ENGLISH	Q.T Y	MODEL
1	0050400385	POWER SUPPLY CORD	1	MK-2280MG
2	0050400466	WIRING HARNESS	1	MK-2280MG
3	0050900056	GLASS TRAY	1	MK-2280MG
4	0050200532	TURNPLATE-BRACKET GROUPWAREGL	1	MK-2280MG
5	0050200531	TURN AXIS	1	MK-2280MG
6	0050800344	TIME KNOB ASYY	1	MK-2280MG
7	0050100335	OUTER CASING	1	MK-2280MG
8	0057109128	ST4*12 BOLT	4	MK-2280MG
9	0050600033	ST4*10 BOLT	2	MK-2280MG
10	0050200683	FAN	1	MK-2280MG
11	0050201397	FLARE	1	MK-2280MG
12	0050400480	H.V. RECTIFIER	1	MK-2280MG
13	0050400373	FAN MOTOR	1	MK-2280MG
14	004HR2501G	ST4*19 BOLT	2	MK-2280MG
15	0057109128	ST 4*12BOLT	2	MK-2280MG
16	0057109123	M3*8BOLT	2	MK-2280MG
17	0050400489	THERMOSTAT	1	MK-2280MG
18	0050400622	MAGNETRON	1	MK-2280MG
19	0050600033	ST4*10 BOLT	1	MK-2280MG
20	0056200109	LAMP	1	MK-2280MG
21	0050200468	WIND DUCT	1	MK-2280MG
22	0050800554	CHAIN-SWITCH HOLDER GROUP	1	MK-2280MG
23	00504003604	MOCROMOTION SWITCH	1	MK-2280MG
24	0057109128	ST4*12 BOLT	1	MK-2280MG
25	0050400605	MOCROMOTION SWITCH ( NORMAL OFF )	1	MK-2280MG
26	0050400604	MOCROMOTION SWITCH ( NORMAL OPEN )	1	MK-2280MG
27	0050400597	TURNPLATE MOTOR	1	MK-2280MG
28	0050600033	ST4*8 BOLT	2	MK-2280MG
29	0054500063	HV-TRANSFORMER	1	MK-2280MG
30	0057100104	HV-CAPACITOR 1.03uF	1	MK-2280MG

31	0050600033	ST4*8 BOLT	1	MK-2280MG
32	0050100273	HV-CAPACITOR HOLDER	1	MK-2280MG
33	0050400479	H.V. DIODE	1	MK-2280MG
34	0057109128	ST4*12 BOLT	4	MK-2280MG
35	0057109128	ST4*12 BOLT	3	MK-2280MG
36	0056201102	FOOT	4	MK-2280MG
37	0050100268	BASE-PLANE	1	MK-2280MG
38	0057109128	ST4*12 BOLT	1	MK-2280MG
39	0050400460	PC BOARD	1	MK-2280MG
40	0050200877	CONTROL EST	1	MK-2280MG
41	0050600008	ST 3*8 BOLT	2	MK-2280MG
42	0050800343	POWER KNOB ASYY	1	MK-2280MG
43	0050201076	DOOR CASE	1	MK-2280MG
44	0050900064	OUTER SCREEN (GLASS)	1	MK-2280MG
45	0050801303	DOOR JOINING GROUP	1	MK-2280MG
46	0050200525	INSIDE SCREEN	1	MK-2280MG
47	0050200471	DOOR SEAL	1	MK-2280MG
48	0050600027	DOOR-HOOK SPRING	1	MK-2280MG
49	0050200470	DOOR-HOOK	1	MK-2280MG
50	0050600033	ST4*8 BOLT	2	MK-2280MG
51	0050300121	WAVE GUIDE COVER	1	MK-2280MG
52	0050800245	CAVITY ASSY	1	MK-2280MG
53	0050400493	THERMOSTAT	1	MK-2280MG
54	0050600033	ST4*8 BOLT	2	MK-2280MG
55	0050100288	HEATER HOLDER	2	MK-2280MG
56	0050400476	HEATER (LIGHT WAVE)	2	MK-2280MG
57	0050400395	DELAY CIRCUIT	1	MK-2280MG
58	0050201001	DELAY CIRCUIT FIXED BOARD	1	MK-2280MG
59	0050400394	FILTER	1	MK-2280MG
60	0050100555	GRIDIRON	1	MK-2280MG
61	0050501358	BAKING MESH FIXED BOARD	1	MK-2280MG

# Sincere Forever

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