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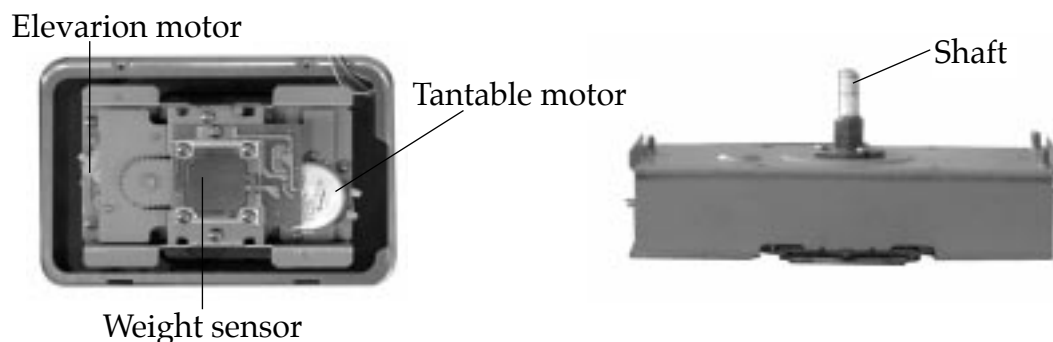
## 7. Troubleshooting

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### 7-1 Checking the Weight Sensor

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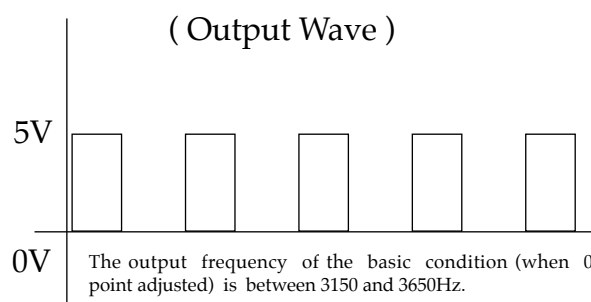
#### 7-1-1. Overview



#### 7-1-2. Operation

1. If the weight of the food is less than 1.5Kg (including the cooker), the rotating dish automatically moves to the optimum location by the elevation motor.  
(If the weight is more than 1.5Kg the cooking is done in the basic location)
2. When defrosting, the weight sensor detects the weight and moves the food to the appropriate height. (The elevation operates when the weight is less than 1.1Kg or less (including the dish)).
3. When reheating food 700g or less (including the dish), it swings once and then cooks in the basic location. (If the weight is 700g the cooking is done in the basic location)
4. Manual cooking is done in the basic location with only the rotating motor operating.

#### 7-1-3. Operating Principle of the Height Sensor



The weight sensor converts the weight of the food into a series of pulses that are compared to the "zero point" waveform. This frequency difference determines the cooking time.

### 7-1-4. Zero point and Inclination Adjustment

1. Turn the power on again and set time initial condition to "8888".
2. Put a dish inside the cooking space.
3. Press the Power level+defrost keys simultaneously until "0000" is displayed (about 5 seconds). At this time lamp and the rotating dish motor are on.
4. After 10 seconds, A normal reading is between 3150 and 3650.
5. Put the 1Kg standard weight at the center of the ceramic dish and close the door.  
(When setting the 1Kg weight, put the assy rack wire, tray oil, assy shaft barbecue and four shaft barbecue on the ceramic tray. Then do the zero point adjustment.)




6. Press the Power level+Reheat keys simultaneously until the "1111" is displayed (about 5 seconds). At this time lamp and the rotating dish motor are on.
7. After 10 seconds, A normal reading is between 0350 and 0650.
8. Press the cancel key to complete the adjustment.

### 7-1-5. Error codes

Error indication	Cause of occurrence	Management method	Remarks
E0	Gas sensor open/short (sensor value between 6 and 211)	Check the connection and cooking reheating Put the power switch again and use it after 10 minutes.	Automatic reheating
E1	Exceeds of T1 time limit (gas sensor)	First press the cancel key and check if the food is positioned	Automatic reheating
E3	Sensor Thermistor Open/Short	Exchange the sensor thermistor check the wire connection	
E4	Problem with the weight sensor (Output frequency=0Hz)	Exchange the weight sensor Check the wire connection	
E6	Excess of maximum allowed time with maximum load (When cooking food that weight less than 300g the maximum time is 10 minutes.)	When cooking 300g or less, cook within 10 minutes.	
E9	Fire in cavity or overheated.	Operate oven after cooling down.	
E10	Problem with the EEPROM	Replace the PCB assy	

### 7-1-6. Hidden key

1. Check the gas sensor : Press the defrost and reheat keys simultaneously.  
(Display : Between 5 and 210).
2. Child lock function : Press the clock and defrost keys simultaneously.(  )
3. Cooking completion remind function : If the food is not removed after cooking,  
the buzzer sounds every minute.
4. Sound ON/OFF : Hold the STOP/CANCEL button down over 7sec.

### 7-1-7. Precautions

1. Do not apply heavy load or pressure on the rotating dish  
(The elevation and the weight sensor directly contact the rotating dish).  
Putting food that exceeds 4kg(Total) can damage the weight sensor.
2. Use only genuine replacements that fit the model(C.E., rotating dish and supporter).
3. When food exceeding 300g(Total) is put on the rotating dish, the oven operates for only 10 minutes.  
(Error E6.)

### 7-1-8. Repairing Parts

1. Discharge the capacitor for about 5 to 6 minutes after cutting the power, and then continue the work.
2. Do not damage the coating on the wires.
3. When removing the wire the terminal, hold the positive lock case with the finger and assemble it.  
Otherwise use a tool (such as long nose pliers)
4. If you remove the tie during servicing, do not damage the wire. Adjust and arrange the wire and tie(heat proof insulated tie) after the repairs have been completed.

### PRECAUTION

1. FIRST CHECK THE GROUND CONNECTIONS.
2. BE CAREFUL OF THE HIGH VOLTAGE CIRCUIT.
3. DISCHARGE THE HIGH VOLTAGE CAPACITOR.
4. WHEN CHECKING THE CONTINUITY OF THE SWITCHES OR TRANSFORMER, DISCONNECT ONE LEAD WIRE FROM THESE PARTS AND THEN CHECK CONTINUITY WITHOUT THE POWER SOURCE ON. OTHERWISE YOU MIGHT DAMAGE THE METER OR GET APTISE READING.
5. DO NOT TOUCH ANY PART OF THE CIRCUIT OR THE CONTROL CIRCUIT BOARD, SINCE STATIC DISCHARGE MAY DAMAGE IT. ALWAYS TOUCH GROUND WHILE WORKING ON IT TO DISCHARGE ANY STATIC CHARGE BUILT UP.

## 7-2 Simple Troubleshooting Chart

Item	Checking Procedwre
Inspection of microwave oven cooking	<ol style="list-style-type: none"> <li>a. Put about 200cc of tap water (water temperature 10-18°) on the rotating dish.</li> <li>b. Do the following :. Microwave oven high ; time setting 5 minute ; start cooking</li> <li>c. The water temperature should be about 80°</li> </ol>
Inspection of grill cooking	<ol style="list-style-type: none"> <li>a. Put the applicable " cooker" for grill cooking inside</li> <li>b. Do the following grill ; time setting 5 minutes ; start cooking.</li> <li>c. Normal : The seize heater is red.</li> </ol>

## 7-3 Problem Analysis

### 7-3-1 When inserting the power plug (function selection, door on/off)

Problem	location	Cause	Measures
No alphivumeric display	a. Fuse (250V, 10A) b. Magnetron and case, temperature switch c. Power plug and socket d. 1st and 2nd of LVT e. Connector of PCB board f. Highlight indication plate g. Circuit within the PCB board	Open bad contacts  Bad contacts Cut-off Bad insertion Poor Board DC fect on	Exchange Exchange  Exchange,repair Exchange Repair Exchange PC Board exchange
Fuse is damaged (short circuit)	a. Power transformer b. Safety switch c. Monitor switch (short switch) d. HVC e. Latch operation	Short circuit Fusion and poor Poor operation Short circuit Poor operation	Exchange Exchange Latch adjustment Exchange Latch adjustment

### 7-3-2 When operating

Problem	location	Cause	Measures
Electrical shock	a. Grounding wire b. AC 230V power line is the chassis	Bad grounding Lead wire not connected Exposed part of the power line is shorting the chassis	Inspection  Adjustment
Lamp is not on	a. Lamp and lead wire b. Check the lamp relay c. Thermostat 2EA d. LVTransformer	Disconnected Coil disconnected Bad contact point Is the LVT wire normal?	Exchange/adjustment Exchange Exchange Exchange/adjustment
Elevation action unsatisfactor	a. Check the connections to the elevation assembly b. Continuity between terminals of the elevation motor (Measure after removing the power leads)	Poor wire connection  Disconnection	Adjustment  Exchange/ Assembly exchange

### 7-3-2 When operating (Continued)

Problem	Inspecting location	Cause	Measures
Fuse blows out	<ul style="list-style-type: none"> <li>a. Resistance between high voltage condenser terminals (Measure it after cutting the power and pulling the terminal)</li> <li>b. High voltage transformer (See precautions)</li> <li>c. High voltage transformer (Cut the power)</li> </ul>	<p>The resistance should be about 10<math>\Omega</math></p> <p>Fuse is blown if secondary winding is open</p> <p>Resistance readings should be:  A=about 96<math>\Omega</math>  B=about 0.0<math>\Omega</math>  C=about 1.58<math>\Omega</math>  D= <math>\infty</math> ~  but between c</p>	. Exchange
Sparks occur during cooking	<ul style="list-style-type: none"> <li>a. Quality of the "cooker" being used</li> <li>b. Left-over food</li> <li>c. Placement of the supporter</li> </ul>	<p>Misuse of metallic material</p> <p>Carbonization of food left over</p> <p>Poor placement of rotating shaft</p>	<p>Explanation</p> <p>Explanation / and cleaning</p> <p>Explanation/ and adjustment</p>
Microwave leakage during operation	<ul style="list-style-type: none"> <li>a. Condition of the door Assembly</li> <li>b. The surface contacting the front of the cooking room and the door</li> </ul>	<p>Not enough contact in the front side of the cooking room and the door</p> <p>Deformation</p>	<p>Adjust the door hinge.</p> <p>Check the operating condition of the safety switch.</p> <p>Adjustment or exchange</p>
Food does not heat	<ul style="list-style-type: none"> <li>a. Continuity between magnetron terminals</li> <li>b. High voltage transformer 1st coil continuity (Measure it after cutting the power lead).</li> <li>c. Continuity of high voltage diode (Measure it after cutting the power leads).</li> <li>d. Continuity between the magnetron</li> <li>e. High frequency emissions</li> <li>f. Power relay operation</li> <li>g. Continuity of high voltage fuse</li> </ul>	<p>Disconnection</p> <p>Disconnection</p> <p>Forward direction =about 0<math>\Omega</math></p> <p>Reverse direction =500<math>\Omega</math></p> <p>Bad continuity</p> <p>Bad magnetron</p> <p>Bad contact points</p> <p>Disconnection</p>	Exchange

### 7-3-2 When operating (Continued)

Problem	Inspecting location	Cause	Measures
Turntable motor doesn't rotate	a. Continuity between terminals (Measure after removing the power leads) b. Lead (terminal) c. Alien substance in the motor	Disconnection  Needs cleaning	Exchange Adjustment  Adjustment
Fan motor doesn't rotate	a. Continuity between terminals (Measure after disconnecting the power and lead wire) b. Lead (terminal) c. Rotate the fan by hand	Disconnection Poor insertion and disconnection Bad contacts needs cleaning	Exchange Adjustment  Adjustment or exchange
Poor defrosting	a. Check the connections to the weight sensor b. Readjust the 0 point	Poor connection  0 point not adjusted	Adjustment  Taking measures according to the error list.

## 7-4 After-Repair Check Listd

No	Check item	Checking and judging method	Remarks
1	Insulation resistance	When measuring the insulation resistance between the power plug and the grounding wire(with the power plug disconnected from the socket and the door closed) the resistance should be greater than 1 $\Omega$ or above. When to check : a. When the electric field parts are exchanged b. If the MWO is used in a very humid environment c. Unit is older than 5 years	DC 500V Megatester
2	Safety switch operation	Check that the safety switch is operating correctly when opening and closing the door	Safety switch Monitor switch Door detection switch
3	Applicability of parts	Check that exact replacement parts are being used	AC 230V
4	Placement of lead wire	Check for looseness, jamming or terminal insertion of the lead wire. (check that there are no shorts to ground.	
5	Connection of screw and bolt	Check the connection between the screw and bolt.	
6	Alien substance insertion check	Check for a cut line within the equipment, combustible foreign matter, or loose hardware.	
7	Power cord check	Check that there is no damage to the cord, plug, socket etc. Also check that power rating is adequate.	
8	Grounding check	Check that the main body is grounded to the PCB.  Explain to the customer that the following are dangerous hazards :  a. Connection to the gas pipe b. Connection to the vinyl water pipe c. Connection to the telephone line.	For the PCB ground wire and power cord ground wire, Check the continuity to ground.