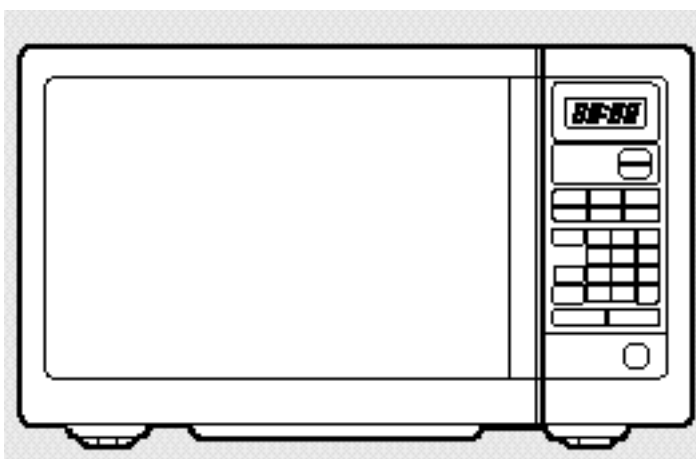


DAEWOO

Service Manual

Microwave Oven

KOG-261M, KOG-262M
KOG-281M, KOG-282M



DAEWOO ELECTRONICS CO., LTD.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not operate or allow the oven to be operated with door open.
- (b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary : (1) Interlock operation, (2) proper door closing, (3) seal and sealing surfaces (arcing, wear, and other damage), (4) damage to or loosening of hinges, (5) evidence of dropping or abuse.
- (c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, intergrity, and connections.
- (d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, or adjusted by procedures described in this manual before the oven is released to the owner.
- (e) A microwave leakage check to verify compliance with the federal performance standard should be performed on each oven prior to release to the owner.

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CAUTION : This Device is to be Serviced Only by Properly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

PROPER USE SERVICE PRECAUTIONS

1. For Safe Operation

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST. OPERATOR MUST NOT USE THE APPLIANCE. (Only a trained service personnel should make repairs.)

- 1) A broken door hinge.
- 2) A broken door viewing screen.
- 3) A broken front panel, oven cavity.
- 4) A loosened door lock.
- 5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN. The microwave Oven has concealed switches to make sure the power is turned off when the door is opened. Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. For Safe Service Procedures.

- 1) If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
- 2) If any certified oven unit is found to servicing, a microwave emission check should be performed prior to servicing the oven.
 - (a) inform the manufacturer, importer or assembler,
 - (b) repair the unit at no cost to the owner,
 - (c) attempt to ascertain the cause of the excessive leakage,
 - (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
- 3) If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer and CDRH immediately.

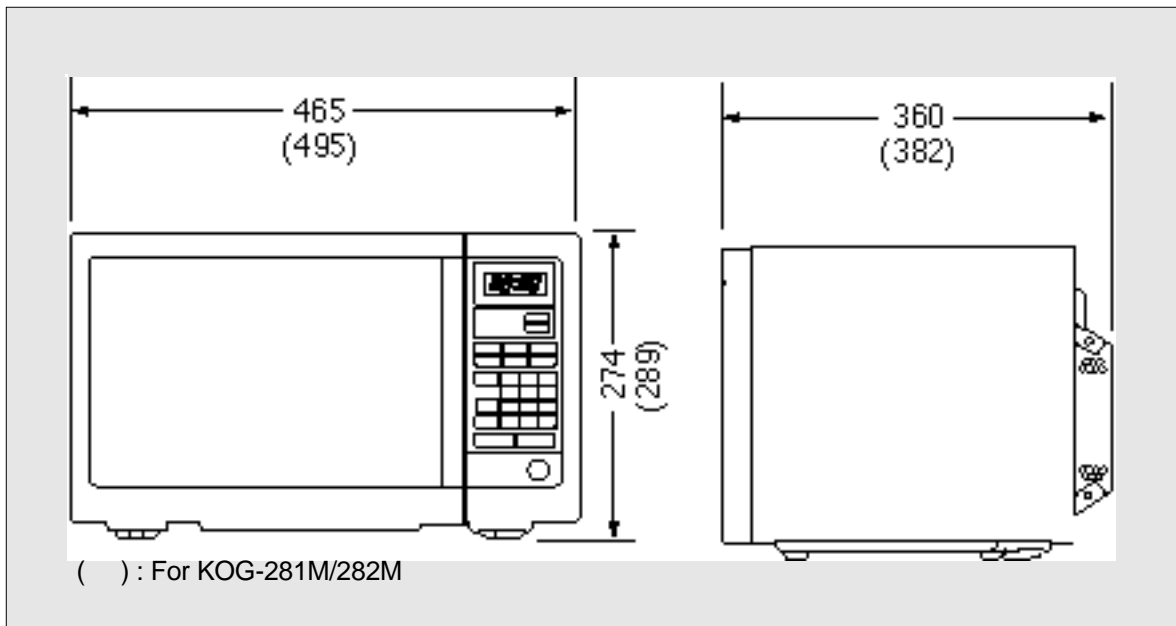
CAUTION **MICROWAVE RADIATION**

PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON OR OTHER MICROWAVE GENERATING DEVICE IF IT IS IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS. WAVEGUIDE, FLANGES AND GASKETS MUST BE SECURE. NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE ENERGY ABSORBING LOAD ATTACHED. NEVER LOOK INTO AN OPEN WAVEGUIDE OR ANTENNA WHILE THE DEVICE IS ENERGIZED.

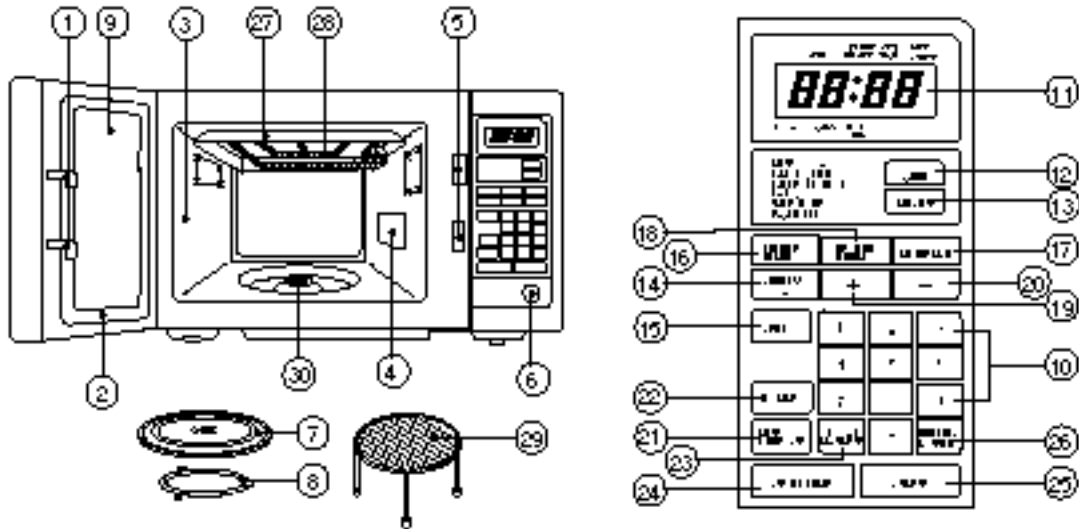
SPECIFICATIONS

		KOG-261M / 262M	KOG-281M / 282M
POWER SUPPLY		120V~60Hz, SINGLE PHASE WITH EARTHING	
POWER CONSUMPTION	MICROWAVE	920W	1200W
	GRILL	1050W	1050W
MICROWAVE ENERGY OUTPUT		600W	800W
MICROWAVE FREQUENCY		2450MHz	
OUTSIDE DIMENSIONS (W x D x H)		465 x 360 x 274 mm	495 x 382 x 289 mm
CAVITY DIMENSIONS (W x D x H)		290 x 290 x 200 mm	320 x 330 x 225 mm
NET WEIGHT		14kg	15kg
TIMER		59 min. 99 sec.	
FUNCTION SELECTIONS		MICROWAVE / GRILL	
MICROWAVE POWER LEVELS		10 – LEVELS	

* Specifications subject to change without notice.



FEATURES DIAGRAM



- 1 **Door latch**—When the door is closed it will automatically lock shut. If the door is opened while the oven is operating. The magnetron will automatically shut off.
- 2 **Door seal**—The door seal maintains the microwave within the oven cavity and prevents microwave leakage.
- 3 **Oven cavity.**
- 4 **Spatter shield**—Protects the microwave outlet from splashes of cooking foods.
- 5 **Safety interlock system**—Prevents the oven from operating while the door is opened.
- 6 **Door release button**—Pushing this button stops oven operation and opens the door.
- 7 **Glass cooking tray**—Made of special heat resistant glass. The tray must always be in proper position before operating. Do not cook food directly on the tray.
- 8 **Roller guide**—Supports the glass cooking tray.
- 9 **Door screen**—Allows viewing of food. The Screen is designed so that light can pass through, but not the microwaves.
- 10 **Time set pad**—Used to set the cooking time and the present time
- 11 **Display**—Cooking time, power level, present time are displayed.
- 12 **Menu**—Used to select foods.
- 13 **Weight**—Used to select quantity of foods.
- 14 **Speedy**—Used to set the any desired reheat setting.
- 15 **Grill**—Used to cook Grill.
- 16 **Dinner plate**—Used to reheat dinner plate.
- 17 **Beverage**—Used to reheat beverage.
- 18 **Frozen pizza**—Used to reheat frozen pizza.
- 19 **More**—Used to add on one touch cooking.
- 20 **Less**—Used to add on one touch cooking.
- 21 **Auto defrost**—Used to defrost foods.
- 22 **Power**—Used to set power level.
- 23 **Clock/A.start**—Used to set clock & Used to set auto start.
- 24 **Stop/Clear**—User to stop the oven operation or to delete the cooking data.
- 25 **Start**—Used to start a selected operation.
- 26 **Feeding bottle**—Used to disinfect bottle.
- 27 **Reflector (Insulator Heater).**
- 28 **Heating Element.**
- 29 **Metal Rack.**
- 30 **Coupler.**

EARTHING INSTRUCTIONS

This appliance must be earthed. In the event of an electrical short circuit, earthing reduces the risk of electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a earthing wire with a earthing plug. The plug must be plugged into an outlet that is properly installed and earthed.

WARNING : Improper use of the earthing plug can result in a risk of electric shock. consult a qualified electrician or serviceman if the earthing instructions are not completely understood, or if doubt extension to whether the appliance is properly earthed. If it necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade earthing plug, and a 3-slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance.

INSTALLATION

- 1 Steady, flat location**
This oven should be set on a steady, flat surface.
This oven is designed for counter top use only.
- 2 Leave space behind and side**
All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, oven failure.
- 3 Away from Radio and TV sets**
Poor television reception and radio interference may result if the oven is located close to a TV, Radio, or antenna, feeder and so on.
Position the oven as far from them as possible.
- 4 Away from heating appliances and water taps**
Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.
- 5 Power supply**
 - Check your local power source. This oven requires a current of approximately 10 amperes. 120V 60Hz.
 - Power supply cord is about 1.1 meters long.
 - The voltage used must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.
 - This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type. such a cable can be purchased from DAEWOO and must be installed by a Qualified Person.
- 6 Examine the oven after unpacking for any damage such as:**
QA misaligned door, broken door, A dent in cavity.
If any of the above are visible, DO NOT INSTALL, and notify dealer immediately.
- 7 Do not operate the oven if it is colder than room temperature.**
(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

OPERATION PROCEDURE

This section includes useful information about oven operation.

1. Plug power supply cord into a 230V 50Hz power outlet.
 2. After placing the food in a suitable container, open the oven door and put it on the glass tray.
The glass tray must always be in place during cooking.
 3. Shut the door. Make sure that it is firmly closed.
- 1 When the oven door is opened, the light turns off.
 - 2 The oven door can be opened at any time during operation by touching the door release button on the control panel. The oven will automatically shut off. To restart the oven, close the door and then touch START.
 - 3 Each time a pad is touched, a BEEP will sound to acknowledge the touch.
 - 4 The oven automatically cook on full power unless set to a lower power level.
 - 5 The display will show “ : 0” when the oven is plugged in.
 - 6 Time clock returns to the present time when the cooking time ends.
 - 7 When the STOP/CLEAR pad is touched during the oven operation, the oven stops cooking and all information retained. To erase all information retained. To erase all information (except the present time), touch the STOP/CLEAR pad once more. If the oven door is opened during the oven operation, all information is retained.
 - 8 If the START pad is touched and the oven does not operate, check the area between the door and door is closed securely. The oven will not start cooking until the door is completely closed or the program has been reset.

Make sure the oven is properly installed and plugged into the electrical outlet.

Wattage output chart

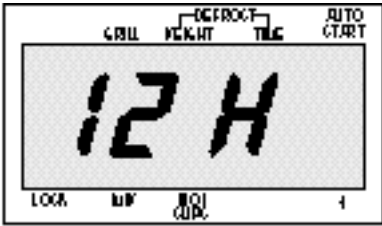
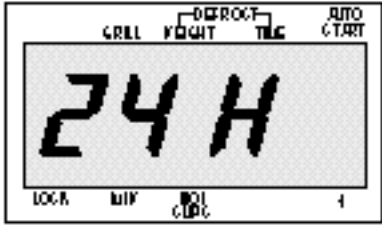

The power-level is set by pressing the POWER pad. The chart shows the display, the power level and the percentage of power.

Touch Power pad, Once the touch	Power Level (Display)	Approximate Percentage of Power
POWER	P-HI	100%
9	P-90	90%
8	P-80	80%
7	P-70	70%
6	P-60	60%
5	P-50	50%
4	P-40	40%
3	P-30	30%
2	P-20	20%
1	P-10	10%
0	P- 0	0%

CONTROLS

SETTING THE CLOCK

When the oven is first plugged in, the display will flash “ : 0” and a tone will sound. If the AC power ever goes off, the display will flash “ : 0” when the power comes back on.

DO THIS	THIS HAPPENS...
<p>CLOCK/ A.START</p> <p>1. Touch CLOCK/ A.START pad.</p>	 <p>This is a 12 hour clock system.</p>
<p>CLOCK/ A.START</p> <p>2. Touch CLOCK/ A.START pad once more.</p>	 <p>This is a 24 hour clock system.</p> <p>NOTE : This oven is multiple clock system. If you want 12 hour clock system, can be omitted this step.</p>
<p>1 2 3 0</p> <p>3. Enter the correct time of day by touching the numbers in sequence.</p>	 <p>The display will then begin blinking.</p>
<p>CLOCK/ A.START</p> <p>4. Touch CLOCK/ A.START pad.</p>	<p>The display will stop blinking and the colon starts blinking.</p> <p>If you selected 12 hour clock system this digital clock allows you to set from 1:00 to 12:59.</p> <p>If you selected 24 hour clock system, this digital clock allows you to set from 0:00 to 23:59</p>
<p>NOTE : If you attempt to enter an incorrect time, the time will not be set and a error signal tone will sound. Touch the CLOCK/A.START pad re-enter the time.</p>	

WEIGHT DEFROSTING

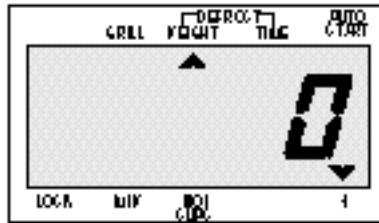
WEIGHT DEFROST lets you easily defrost food by eliminating guesswork in determining defrosting time. The minimum weight for WEIGHT DEFROST is 200 grams. The maximum weight for WEIGHT DEFROST is 3000 grams. Follow the steps below for easy defrosting.

DO THIS

AUTO
DEFROST

1. Touch **AUTO DEFROST** pad.

THIS HAPPENS...



The WEIGHT DEFROST indicator lights and "0" is displayed. And the g indicator starts blinking.

5 0 0

2. Touch number pads for the defrosting weight you want.



The display will show the numbers you pressed in the order you touched.

START

3. Touch **START** pad.

WEIGHT DEFROSTING begins. The defrosting time is automatically determined by the food category and weight entered.

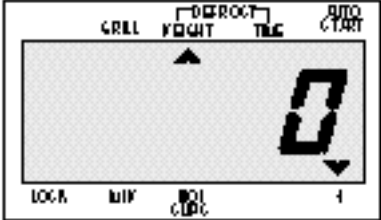
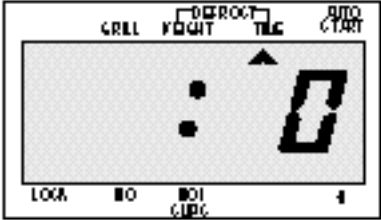
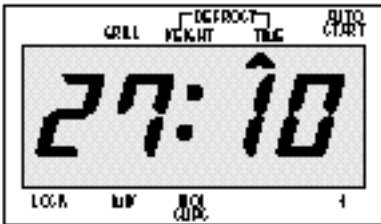
The g indicator goes off and the WEIGHT DEFROST indicator blinks and the defrosting time counts down in the display window. The oven beeps during the defrosting cycle to signal that the food needs to be turned or rearranged.

When the defrosting time ends, you will hear 3 beeps.

NOTE : To prevent over defrosting thin areas or edges can be shielded with strips of aluminum foil.

TIME DEFROSTING

When TIME DEFROST is selected, the automatic cycle divides the defrosting time into periods of alternating defrost and stand times by cycling on and off.

DO THIS	THIS HAPPENS...	
<div style="border: 1px solid black; padding: 5px; display: inline-block;">AUTO DEFROST</div>		<p>The WEIGHT DEFROST indicator lights and “0” is displayed. And the g indicator starts blinking.</p>
<p>1. Touch AUTO DEFROST pad.</p>		
<div style="border: 1px solid black; padding: 5px; display: inline-block;">AUTO DEFROST</div>		<p>The TIME DEFROST indicator lights and “ : 0” is displayed.</p>
<p>2. Touch AUTO DEFROST pad once more.</p>		
<div style="display: flex; gap: 10px;"> <div style="border: 1px solid black; padding: 2px 5px;">2</div> <div style="border: 1px solid black; padding: 2px 5px;">7</div> <div style="border: 1px solid black; padding: 2px 5px;">1</div> <div style="border: 1px solid black; padding: 2px 5px;">0</div> </div>		<p>The display will show the numbers you pressed in the order you touched.</p>
<p>3. Touch number pads for the defrosting time you want.</p>		<p>NOTE : Your oven can be programmed for 59 minutes 99 sec-</p>
<div style="border: 1px solid black; padding: 5px; display: inline-block;">START</div>	<p>When you touch START pad, the TIME DEFROST indicator starts blinking to show the oven is in the TIME DEFROST mode. The display counts down the time to show you how much defrosting time is left in the TIME DEFROST mode. The oven beeps during the defrosting cycle to signal that the food needs to be turned or rearranged. When the defrosting time ends, you will hear 3 beeps.</p>	
<p>4. Touch START pad.</p>		

NOTE : To prevent over defrosting, thin areas or edges can be shielded with strips of aluminum foil.

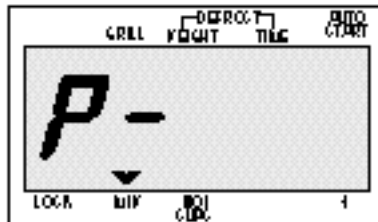
COOKING IN ONE STAGE

DO THIS...

POWER

1. Touch **POWER** pad.

THIS HAPPENS...



The M/W indicator lights and "P-" is displayed.

3

2. Touch the number pad for the power level you want.



The display will show what you touched. This example shows power level 3.

NOTE: If steps 1 and 2 are omitted, the oven will cook at full power.

5 3 0

3. Touch number pads for the cooking time.



The display will show the numbers you pressed in the order you touched.

NOTE: Your oven can be programmed for 59 minutes 99 seconds. (59:99)

START

4. Touch **START** pad.

When you touch **START** pad, the M/W indicator starts blinking to show the oven is cooking. The display counts down the time to show how much cooking time is left. When the cooking time ends, you will hear 3 beeps.

NOTE: Using lower power levels increase the cooking time which is recommended for foods such as cheese, milk and slow cooking of meats.

GRILL COOKING

This function allows you to brown food quickly.

The heating element is located in the top of the oven.

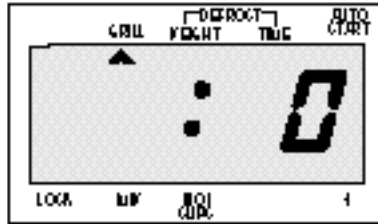
There is no pre-heating the oven for grill cooking. Place food inside the oven when setting the controls.

DO THIS...

THIS HAPPENS...

GRILL

1. Touch **GRILL** pad.



The GRILL indicator lights and “:0” is displayed.

2 5 0 0

2. Touch number pads for the cooking time.



The display will show the numbers you pressed in the order you touched.

This example shows 25 min-

NOTE: Time can be set up to 30 minutes.

START

3. Touch **START** pad.

When you touch START pad, the GRILL indicator starts blinking to show the oven is cooking.

The display count down the time to show how much cooking time is left. When the cooking time ends, you will hear 3 beeps.

AUTO START

Allows you to program cooking to start at a time you select.
The food will automatically start cooking at the desired time.

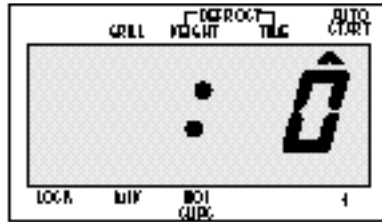
DO THIS...

THIS HAPPENS...

1. Program the desired power level and cooking time.

CLOCK/
A.START

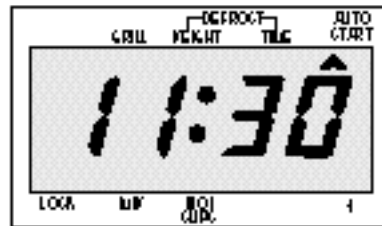
2. Touch **CLOCK/ A.START** pad.



The AUTO START indicator lights and “:0” is displayed.

1 1 3 0

3. Enter the desired start time by pressing the number pads.



The display will show the numbers you pressed in the order you touched.

This example shows 11:30

START

4. Touch **START** pad.

When you touch START pad, the present time appears in the display and the cooking program indicators come on.

The AUTO START indicator and the colon start blinking.

When the selected start time arrives the oven begins. Operating and the oven light turns on. The AUTO START indicator goes off and the next stage indicator begins to blink.

When the cooking is completed you will hear 3 beeps. The oven turns off and the present time appears in the display.

NOTE: AUTO START can be used for time cooking, if clock is set. If the oven door is opened after programming AUTO START, it is necessary to touch the START pad for the time of day to appear in the readout so that the oven will automatically begin programmed cooking at the chosen AUTO START time. Before setting, check to make sure the clock is showing the correct time of day.

TO CHECK AUTO START TIME

Once you have correctly programmed the oven for AUTO START, the present time will appear on the display.

DO THIS...

CLOCK/
A.START

1. Touch **CLOCK/A.START** pad.

THIS HAPPENS...

The programmed AUTO START time will appear on the display for 3 seconds.

SPEEDY COOK

SPEEDY COOK allows you to reheat for 30 seconds at 100% (full power) by simply touching the SPEEDY COOK pad.

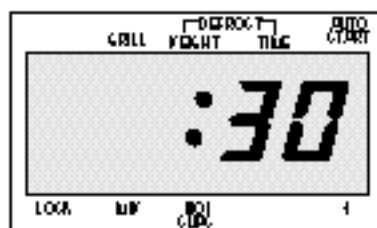
By repeatedly touching the SPEEDY COOK pad, you can also extend reheating time to 5 minutes by 30 seconds.

DO THIS...

SPEEDY
COOK

1. Touch **SPEEDY COOK** pad.

THIS HAPPENS...



When you touch SPEEDY COOK, " :30" is displayed. After 1.5 seconds, the oven starts reheating.

ONE TOUCH COOKING

One touch cook allows you to cook or reheat many of your favorite foods by touching just one pad. To increase quantity, touch chosen pad until number in display is same as desired quantity to cook. (except for DINNER PLATE)

DO THIS...

FROZEN
PIZZA

1. Touch **FROZEN PIZZA** pad.

THIS HAPPENS...



When you touch FROZEN PIZZA "200" is displayed. After 1.5 seconds, the display changed into cooking time of quantity and the oven starts cooking.

* FROZEN PIZZA *

- 200g: Touch FROZEN PIZZA once.
- 300g: Touch FROZEN PIZZA twice within 1.5 seconds.

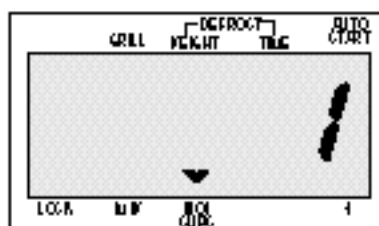
- NOTE:**
1. Use only one frozen pizza at a time.
 2. Use only frozen pizza for microwave oven.
 3. If the cheese of frozen pizza does not melt sufficiently, cook a few seconds longer.
 4. Some brands of frozen pizza may require more or less cooking time.

DO THIS...

BEVERAGE

1. Touch **BEVERAGE** pad.

THIS HAPPENS...



When you touch BEVERAGE pad, "1" is displayed. After 1.5 seconds, the display changed into cooking time of quantity and the oven starts cooking.

*** BEVERAGE * (250ml/cup)**

- 1 cup (mug): Touch BEVERAGE once.
- 2 cups (mugs): Touch BEVERAGE twice within 1.5 seconds.
- 3 cups (mugs): Touch BEVERAGE three times within 1.5 seconds.

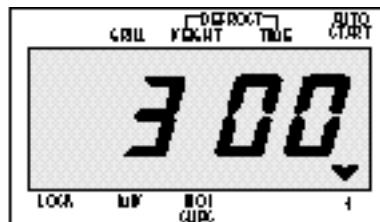
NOTE: 1. This setting is good for restoring cooled beverage to a better drinking temperature.
2. Stir after cooking.

DO THIS...

DINNER
PLATE

1. Touch **DINNER PLATE** pad.

THIS HAPPENS...



When you touch **DINNER PLATE** pad, "300" is displayed. After the 1.5 seconds, the display changed into cooking time of quantity and the oven starts cooking.

NOTE: For best results, consult the cookbook.

AUTO COOK (MENU & WEIGHT)

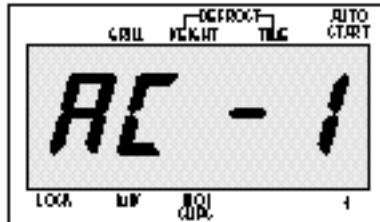
Auto cook allows you to cook or reheat many of your favorite foods by repeatedly touching menu pad. After the menu selection, touch chosen pad until number in display is same as desired quantity to cook.

DO THIS...

MENU

1. Touch **MENU** pad.

THIS HAPPENS...



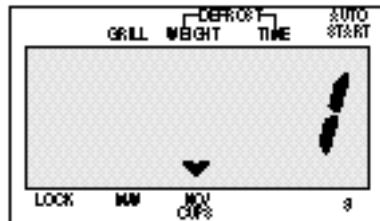
When you touch MENU pad, "AC-1" is displayed.

The display will then begin blinking. By repeatedly touching this pad, you can select other food category as shown in the chart below.

CATEGORY	FOOD	TOUCH PAD
AC-1	BAKED POTATO	Touch MENU once.
AC-2	FRESH VEGETABLE	Touch MENU twice.
AC-3	SOUP	Touch MENU three times.
AC-4	FISH FILLETS	Touch MENU four times.
AC-5	MEAT LOAF	Touch MENU five times.

WEIGHT

1. Touch **WEIGHT** pad.



"1" is displayed.

After the 1.5 seconds, the display changed into cooking time of quantity and the oven starts cooking.

* BAKED POTATO * (160~180g/ea.)

- 1 NO (ea.): Touch WEIGHT once.
- 2 NO (ea.): Touch WEIGHT twice within 1.5 seconds.
- 3 NO (ea.): Touch WEIGHT three times within 1.5 seconds.

* FRESH VEGETABLE *

- 200g: Touch WEIGHT once.
- 300g: Touch WEIGHT twice within 1.5 seconds.

* SOUP *

- 250g: Touch WEIGHT once.
- 350g: Touch WEIGHT twice within 1.5 seconds.

* FISH FILLETS *

- 300g: Touch WEIGHT once.
- 500g: Touch WEIGHT twice within 1.5 seconds.

* MEAT LOAF *

- 500g: Touch WEIGHT once.
- 700g: Touch WEIGHT twice within 1.5 seconds.

FEEDING BOTTLE

This key is for feeding bottle disinfection effect.

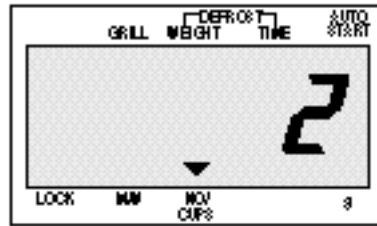
At first, detach the nipple from the bottle and pour the 30cc water into each bottle, arrange the bottle symmetrically on the glass tray and operate.

DO THIS...

FEEDING
BOTTLE

1. Touch **FEEDING BOTTLE** pad.

THIS HAPPENS...



When you touch FEEDING BOTTLE pad, "2" is displayed. After the 1.5 seconds, the display changed into sterilizing time of quantity and the oven starts sterilizing.

* FEEDING BOTTLE *

- 2 NO (ea.): Touch FEEDING BOTTLE once.
- 4 NO (ea.): Touch FEEDING BOTTLE twice within 1.5 seconds.
- 6 NO (ea.): Touch FEEDING BOTTLE three times within 1.5 seconds.

MORE, LESS

MORE pad: adds for 10 seconds to 20 seconds.

LESS pad: remove for 10 seconds to 20 seconds.

These pad only work one touch cooking and feeding bottle mode. And always input previously.

CHILD SAFETY LOCK

The safety lock prevents unwanted oven operation such as by small children.

To set, press STOP/CLEAR for 3 seconds, LOCK indicator lights.

To cancel, press STOP/CLEAR for 3 seconds, LOCK indicator goes off.

TO STOP THE OVEN WHILE THE OVEN IS OPERATING

1. Press STOP/CLEAR pad.
 - You can restart the oven by touching START pad.
 - Touch STOP/CLEAR once more to erase all instructions.
 - You must enter in new instructions.
2. Open the door.
 - You can restart the oven by closing the door and touching START.

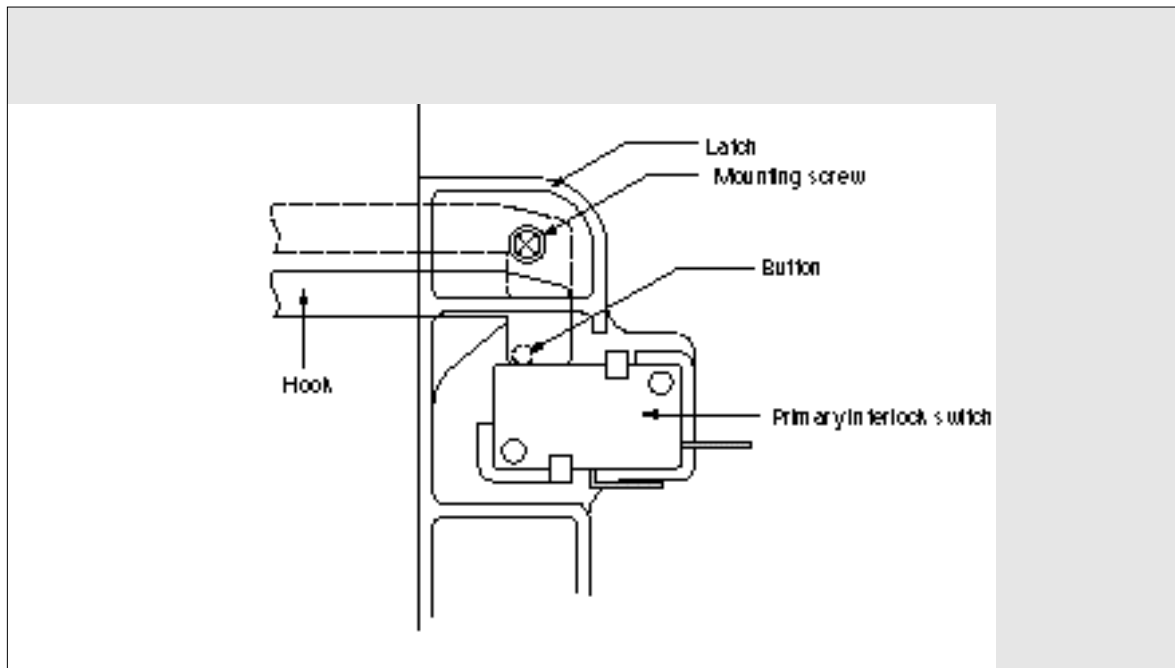
NOTE: Oven stops operating when door is opened.

INTERLOCK MECHANISM FUNCTIONS AND ADJUSTMENTS

The door lock mechanism is a device has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.

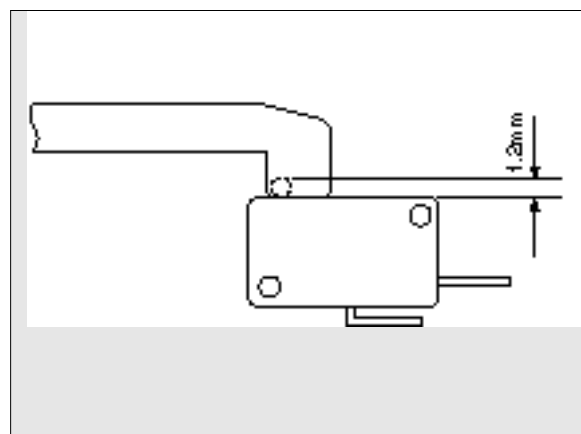
(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly the oven will not operate. When the door is closed, the hook pushes the button of the micro switch. Then the button of the primary interlock switch bring it under on condition.



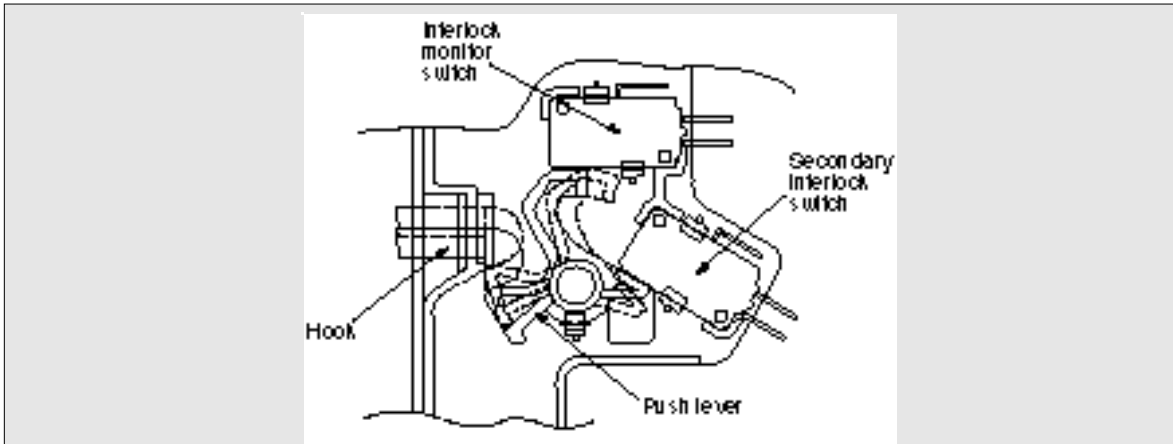
Adjustment 1.

When the door is closed, the switch button is pushed by the hook.
The movement of the switch button should exceed 1.2mm measured at the top of the button.



(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the push lever down ward, and push lever presses the button of the interlock monitor switch to bring it under “off”, condition and presses the button of the secondary interlock switch to bring it under “on”, condition.



Adjustment 2.

Interlock monitor switch

When the door is closed, the interlock monitor switch should be open before other switches close.
When the door is closed, the interlock monitor switch should be closed after other switches open.

Secondary interlock switch

The movent of the switch button should exceed 1.2mm measured at the top of the button.

(3) Adjustment steps

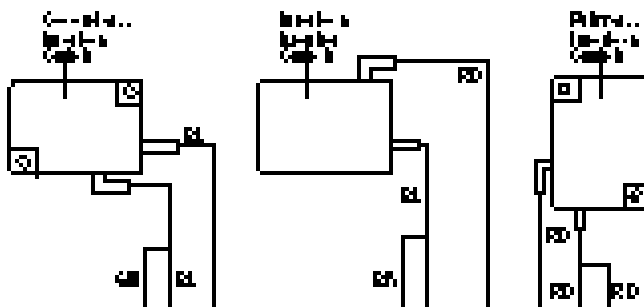
- Loosen the two mounting screws.
- Adjust interlock switch assembly position.
- Confirm the gap (1.2mm) described above.
- Make sure that push lever moves smoothly adjustments is completed.
- Completly tighten the two mounting screws.

NOTE: Microwave emission test should be performed after adjusting interlock machanism. If the microwave emission exceed $4\text{mW}/\text{cm}^2$, readjust interlock mechanism.

(4) Interlock switch resplacement

Whenever safety interlock switches are replaced:

- Refer to the following diagram.
- Check the connection of monitor switch after replacement.
- Perform the electrical continuity check of interlock switches and microwave emission test mentioned in this manual.



SYMBOL	COLOR
RD	RED
BL	BLUE
BK	BLACK
WH	WHITE
GN	GREEN

– Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is a high-voltage, high-current equipment. It is completely safe during normal operation. However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit. You are asked to observe the following precautions carefully.

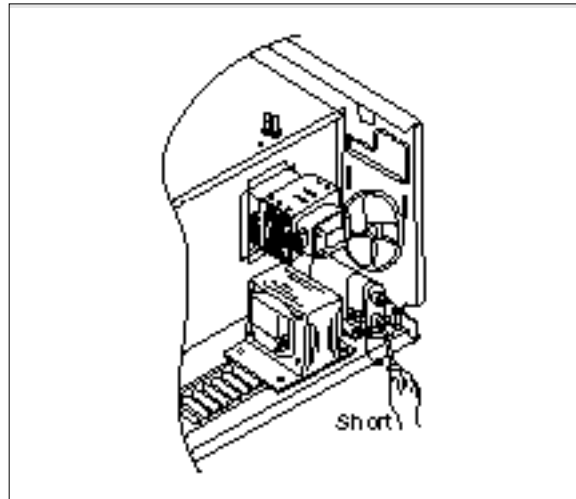
- (1) Always remove the power plug from the outlet before servicing.
- (2) Use an insulated screwdriver which is attached to iron plate, and wear rubber gloves when servicing the high voltage side.
- (3) Warning about the electric charge in the high voltage capacitor. When inspecting and repairing the high voltage side, always short the capacitor terminals and make sure of discharge.

1. Check the grounding.

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used when grounded. It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

2. Warning about the electric charge in the high voltage capacitor.

For about 30 seconds after the operation stops, electric charge remains in the high voltage capacitor. When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor, by using a properly insulated screwdriver to discharge.



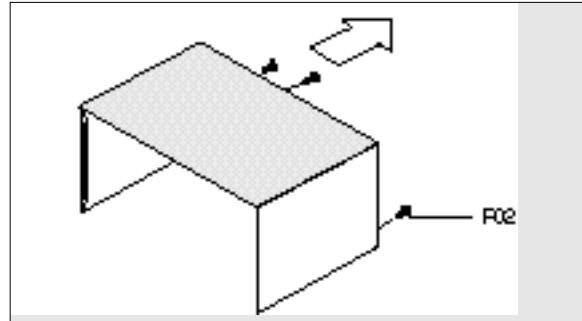
- (4) When the 12 Amp. fuse is blown out to operation of the monitor switch; replace primary, and monitor switch. Refer to 19 page for the necessary adjustment.
- (5) After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
- (6) Do not operate without cabinet.

CAUTION: Service personnel should remove their watches whenever working close to or repair-

WARNING: When servicing the appliance, need a care of touching or replacing high potential parts because of electrical shock of exposing microwave. These parts are as follows—H.V. Transformer, Magnetron, H.V. Capacitor, H.V. Diode.

1. To remove cabinet.

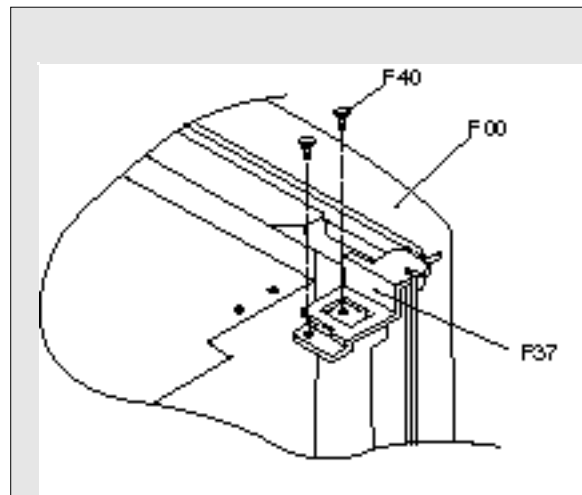
Remove three screws (F02) on cabinet back.



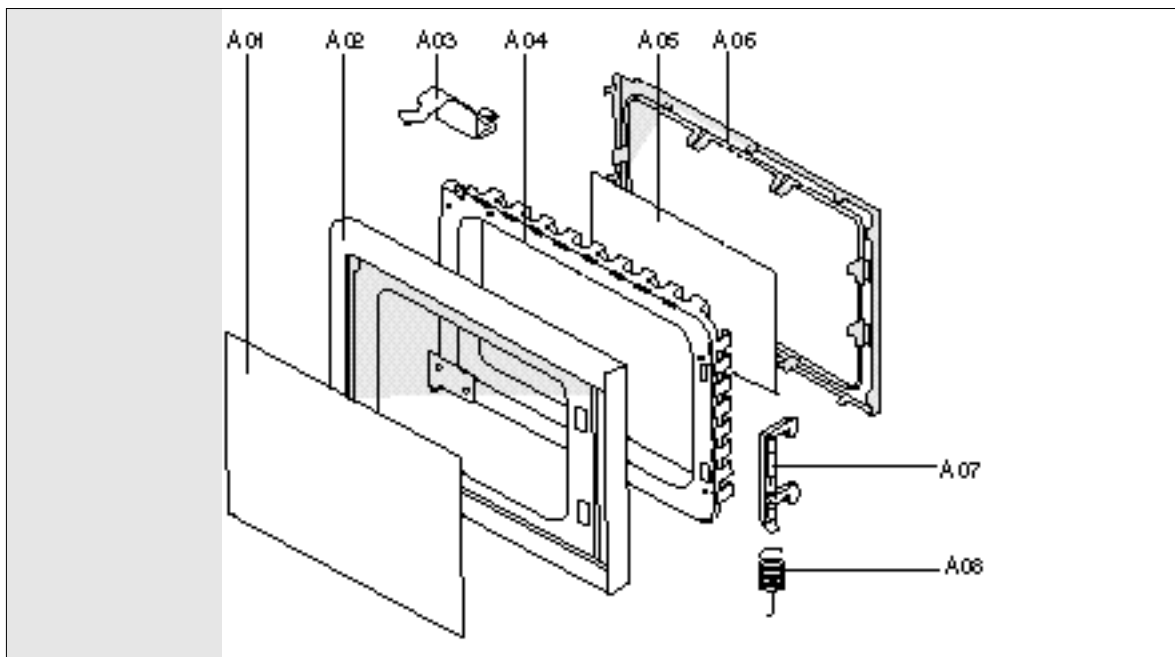
2. To remove door assembly.

- 1) Remove two screws (F40) which secure the top hinge seoppr (F37).
- 2) Remove the door assembly (F00) from the top plate of cavity.
- 3) Reverse the above for reassembly.

NOTE: After replacing the door preform a check of correct alignment with the hinge and cavity front face.



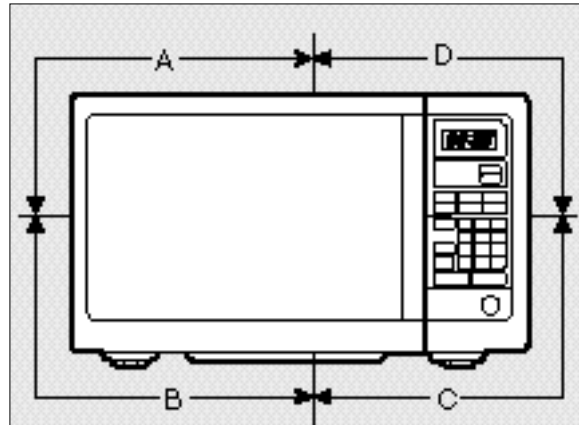
3. To remove door parts.



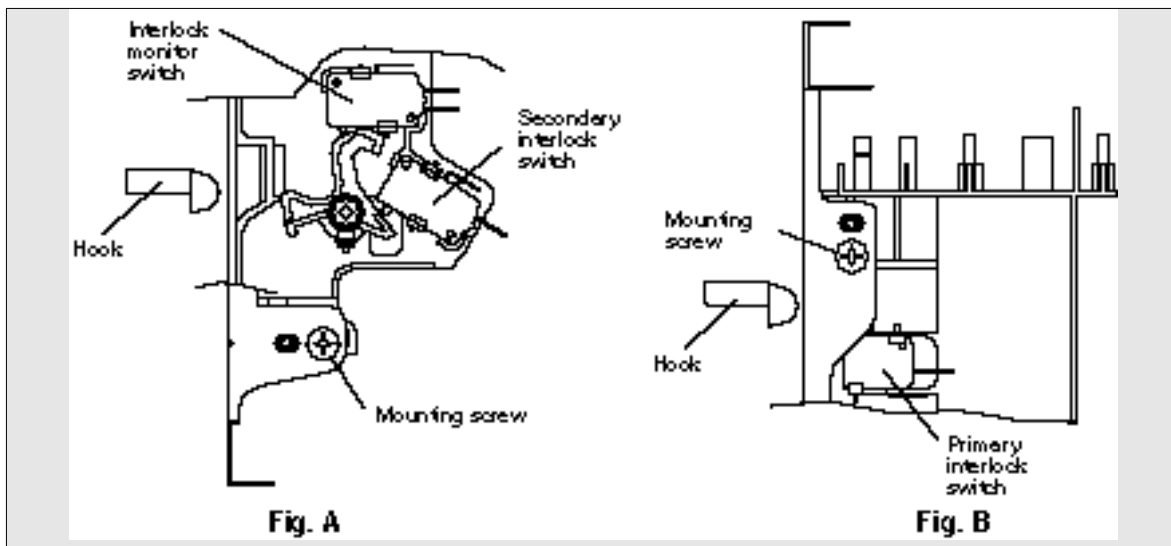
- (1) Remove the gasket door (A06) from door plate (A04).
- (2) Remove the barrier screen inner (A05) from door plate (A04).
- (3) Remove the door frame (A02) from door plate (A04).
- (4) Remove the top hinge stopper (A03) from door plate (A04).
- (5) Remove the spring (A08) and the hook (A07).
- (6) Remove the barrier screen outer (A01) from door frame (A02).
- (7) Remove the above steps for reassembly.

4. Method to reduce the gap between the door seal and the oven front surface.

- (1) To reduce gap located on part 'A'
 - 1) Loosen two screws on the top hinge stopper, and then push the door to contact the door seal to oven front surface.
 - 3) Tighten two screws.



- (2) To reduce gap located on part 'B'.
 - 1) Loosen three screws in under hinge stopper, and then the door to contact the door seal to oven front surface.
 - 2) Tighten three screws.
- (3) To reduce gap located on part 'C'. (See Fig. A)
 - 1) Loosen a screw on the interlock switch assembly located at the bottom of the oven body.
 - 2) Draw the interlock switch assembly inward as possible with hook on the door bottom.
 - 3) Tighten a screw.
- (4) To reduce gap located on part 'D'. (See Fig. B)
 - 1) Loosen a screw on the interlock switch assembly located at the top of the oven body.
 - 2) Follow step (3) 2) and 3).

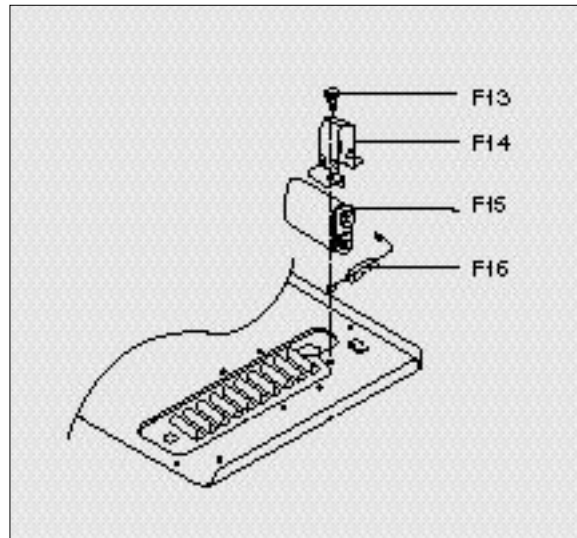


NOTE: A small gap may be acceptable if the microwave leakage does not exceed $4\text{mW}/\text{cm}^2$.

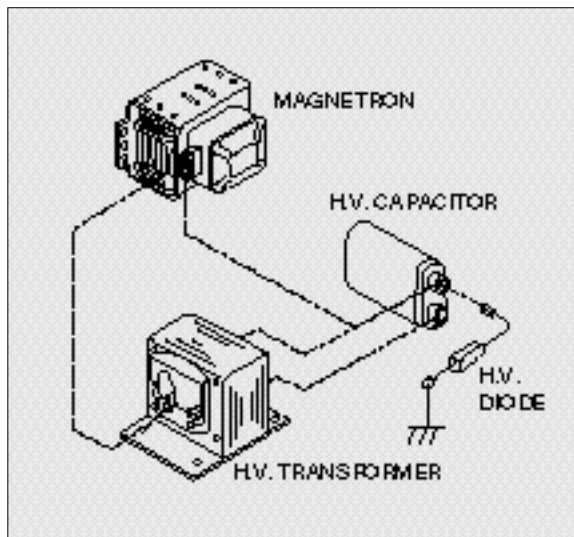


6. To remove high voltage capacitor.

- (1) Remove the screw (F13) which secure the grounding ring terminal of diode (F16) and capacitor holder (F14).
- (2) Remove the capacitor holder (F14) with capacitor (F15).
- (3) Reverse the above steps for reassembly.

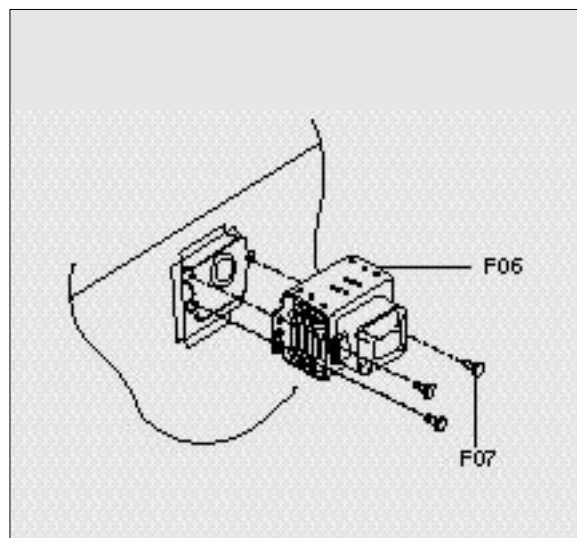


High voltage circuit wiring

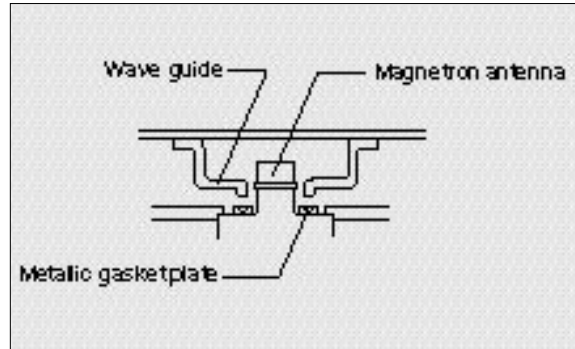
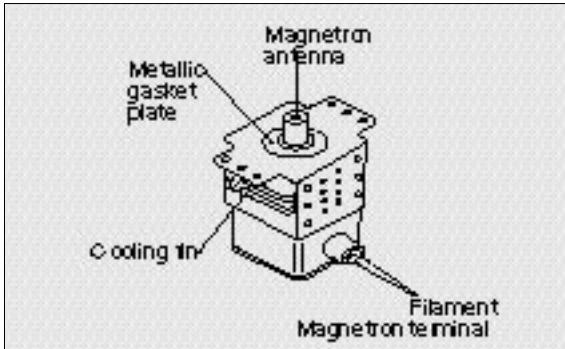


7. To remove magnetron.

- (1) Remove three screws (F07) which secure magnetron (F06).
- (2) Pull out the magnetron (F06) from the wave guide.
- (3) Reverse the above steps for reassembly.

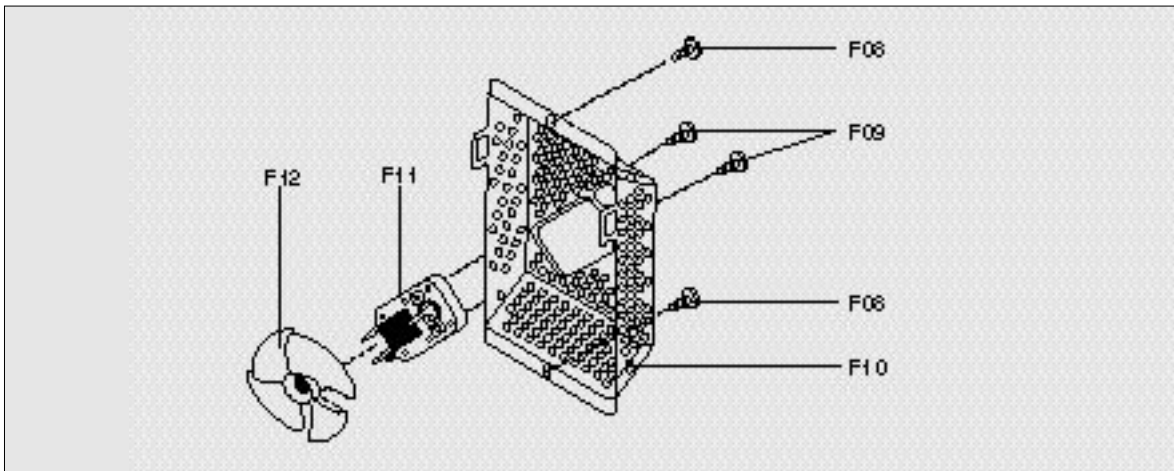


CAUTION: Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave. Whenever repair work is carried out on magnetron, check the microwave leakage.



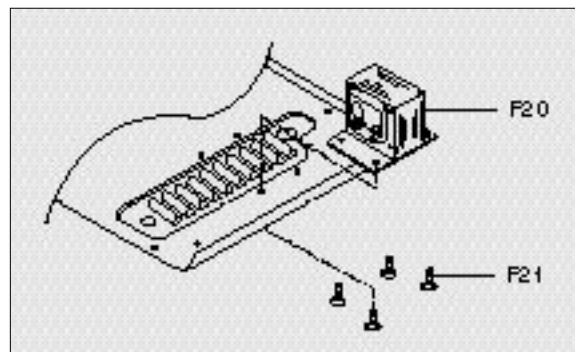
8. To remove fan motor assembly.

- (1) Remove two screws (F08) which secure the back cover (F10) from the cavity outer.
- (2) Remove two screws (F09) which secure the fan motor (F11) from the back cover (F10).
- (3) Pull out the fan (F12) from the motor (F11).
- (4) Remove the above steps for reassembly.



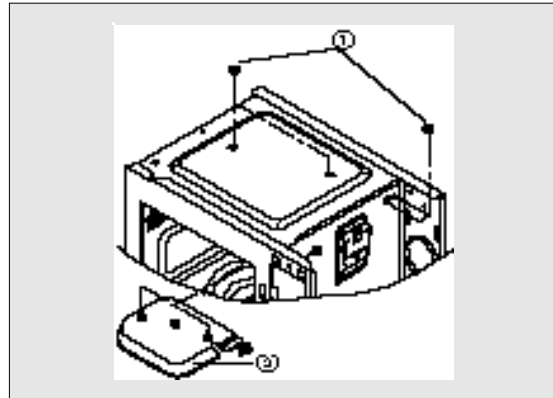
9. To remove transformer.

- (1) Remove the four screws (F21) holding the H.V. transformer (F20).
- (2) Remove the transformer (F20).
- (3) Reverse the above steps for reassembly.



10. To remove insulator Heater assembly.

- (1) Remove the four HEX NUTS 1.
- (2) Remove the insulator Heater assembly 2.
- (3) Reverse the above steps for reassembly.



11. To remove Heater Part.

KOG-26XX

KOG-28XX

NO	PART NAME	PART CODE	Q'TY	DESCRIPTION	REMARK
1	INSULATOR HEATER	3513301100	1	SPP T0.8	
2	HEATER	3512802300	1	120V1000W	
3	SCREW MACHINE	7002500613	1	TRS 5X6 MFCR	
4	NUT HEX	7392500008	1	6N-2-5 SUS	
5	SCREW MACHINE	7002400413	2	TRS 4X4 MFCR	
6	SPACER INSULATOR*	3515000700	2	C3771BD	ONLY KOG-26xx
		3514000800	2	C3771BD	ONLY KOG-28xx
7	INUT HEX	7392500411	2	6N-2-5 MFZN	

- (1) Remove the HEX NUT 4.
- (2) Remove the insulator Heater 1 and Heater 2.
- (3) Remove the two screws 5.
- (4) Reverse the above steps for reassembly.

TROUBLE SHOOTING GUIDE

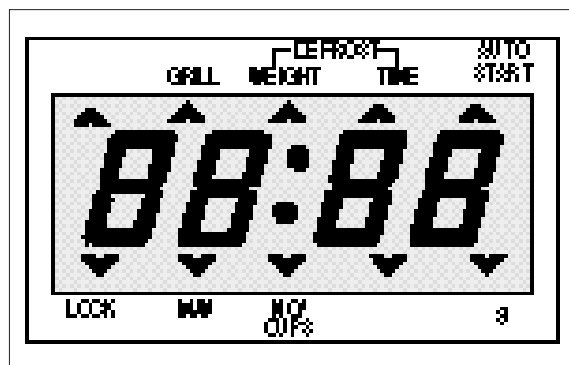
Following the procedures below to check if the oven is defective or not.

1. Check grounding before checking trouble.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor. (see page 20)
4. When checking the continuity of switches or of the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in false reading or damage to your meter.
5. Do not touch any part of the circuitry on the touch control circuit since static electric discharge may damage this control panel.
Always touch yourself to ground while working on this panel to discharge any static charge built up in your body.

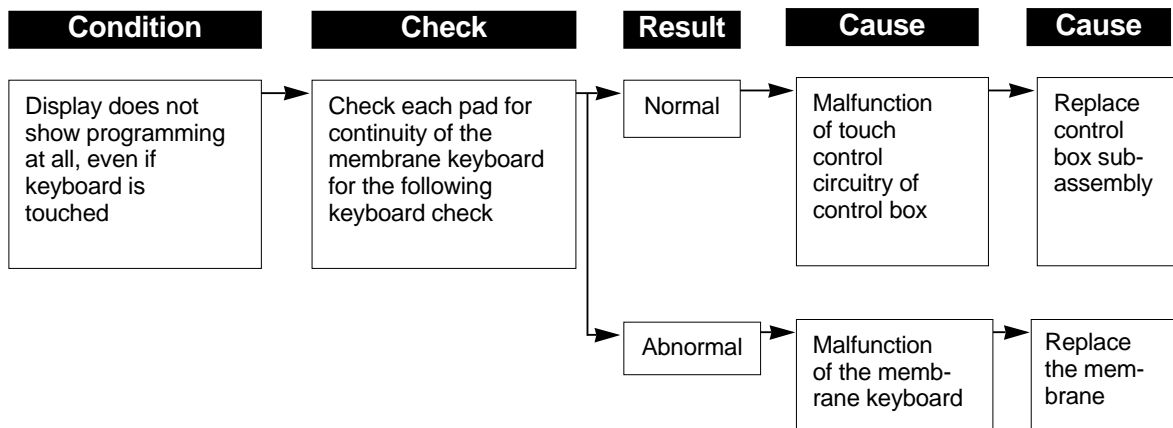
First of all operate the microwave oven following the correct operation described in pages 6~20 by time cooking, in order to find the exact cause if any trouble.

(TROUBLE 1) The following visual conditions indicate a probable defective touch control circuit or membrane switch assembly.

1. Incomplete segments.
 - (A) Segments missing.
 - (B) Partial segments missing.
 - (C) Digit flickering other than normal fluorescent slight flickering.
 - (D) "0" does not display when power is on.
2. A distinct change in the brightness of one or more numbers in the display.
3. One or more digits in the display are not on when they should be.
4. Display indicates a number different from one touched.
5. For example, touch 5 and 3 appears in the display.
6. Specific numbers (for example 5 and 3) will not display when the panel is touched.
7. Display does not count down or up with time cooking or clock operation.
8. Oven is programmable and cooks normally but no display shows.
9. Display obviously jumps in time while counting down
10. Display counts down noticeably too fast while cooking.
11. Display can not shift from the first stage cooking to the third stage cooking while 3 phase cooking (including defrost).
12. Display does not show the time of day when dear pad is touched (in clock mode).
13. Oven lamp and fan motor and turn table motor do not stop although cooking is finished.
Check if the RELAY "2" contacts close if they are close, replace touch control circuit.



(TROUBLE 2) Digital readout display does not show programming, even if the membrane keyboard is programmed by touching proper pads.



NOTE: Before following the particular steps listed above in the trouble shooting guide for the membrane keyboard, failure, please check for the continuity of each wire-harness between the membrane keyboard and control box assembly.

MEMBRANE KEYBOARD CHECK PROCEDURE

1. Check the pad termination order and nomenclature.

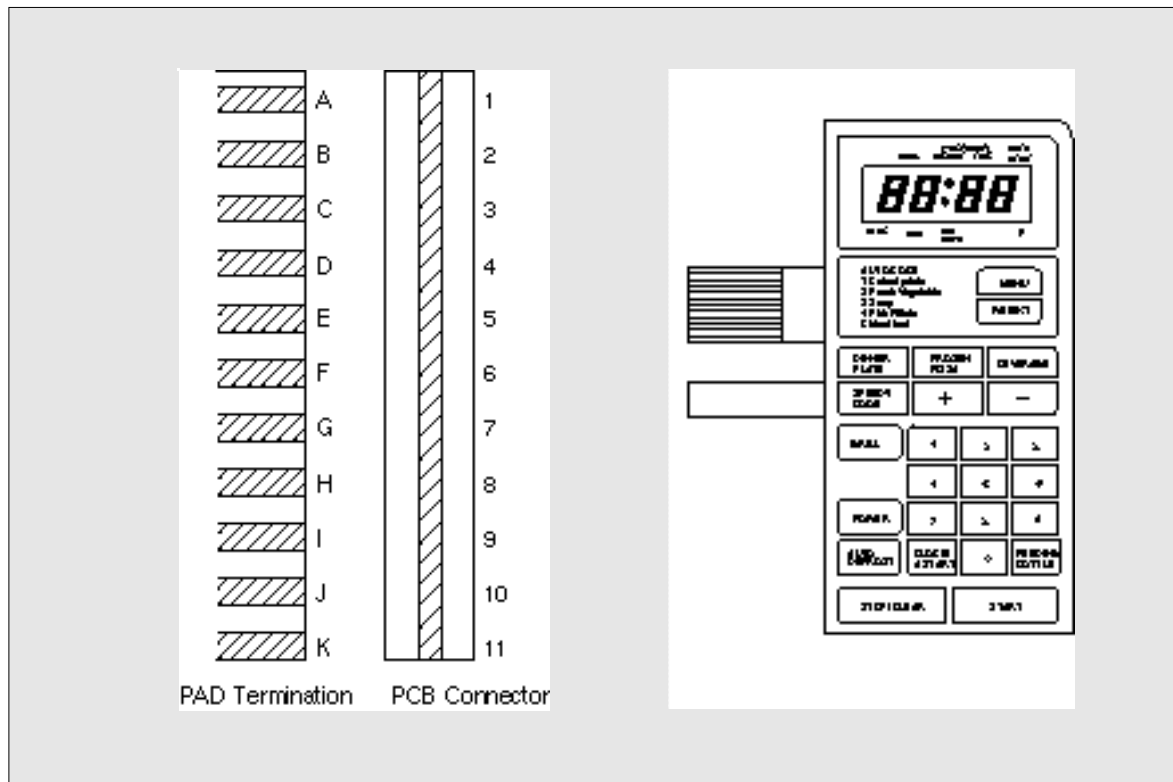


Fig. 4

2. Type of encoding and pad names.

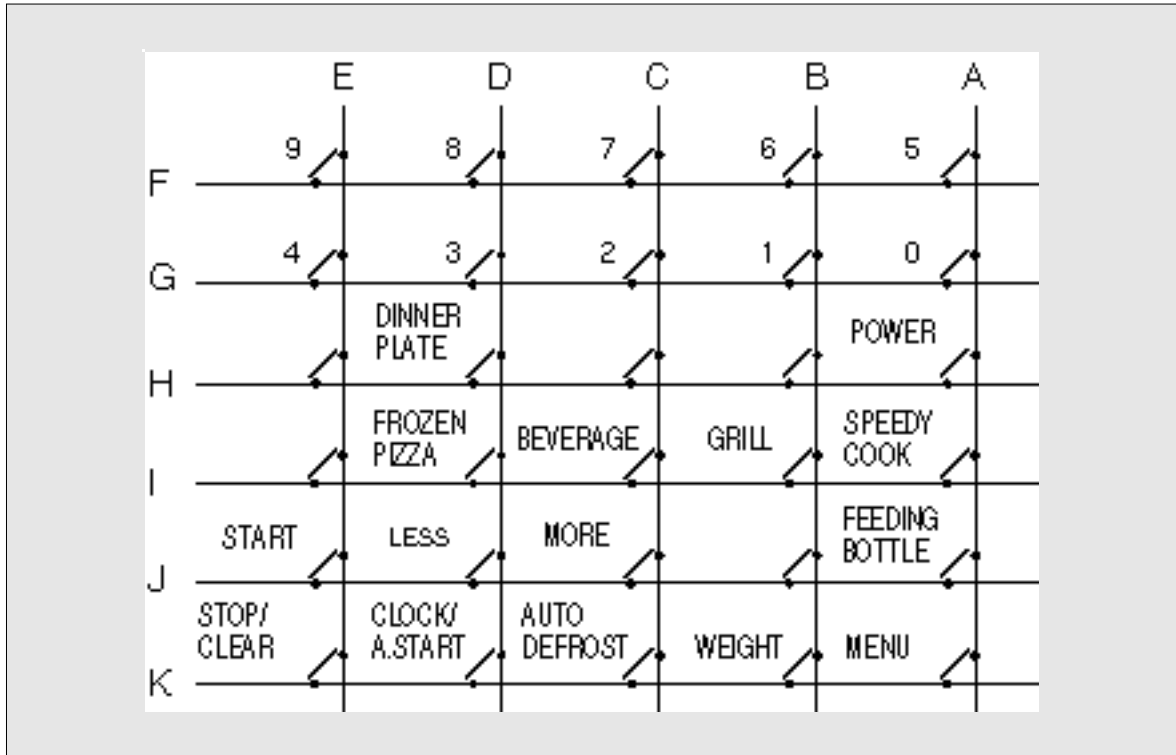


Fig. 8 Key Matrix

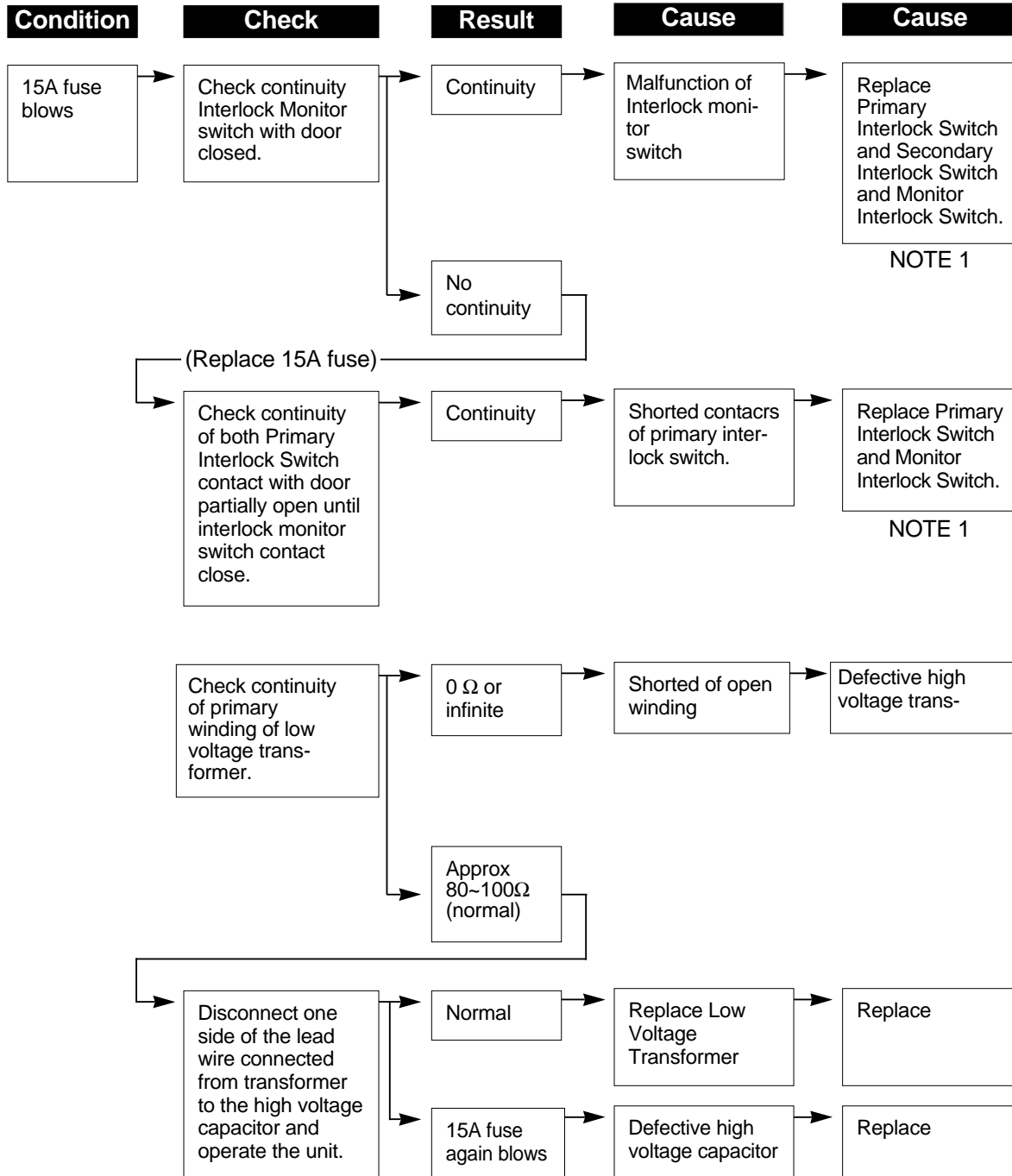
The membrane keyboard consists of 25 keys whose configurations are described above and provide 11 pad terminations to be connected to the touch control circuit as Fig. 7.

3. Key check procedure.

To determine if the membrane keyboard is defective or not, check the continuity of each pad (KEY) contacts with a multimeter.

1) 5	pad : Between A and F	14) AUTO DEFROST	pad : Between C and K
2) 0	pad : Between A and G	15) 8	pad : Between D and F
3) POWER	pad : Between A and H	16) 3	pad : Between D and
4) SPEEDY COOK	pad : Between A and I	G	
5) MENU	pad : Between A and K	17) DINNER PLATE	pad : Between D and H
6) 6	pad : Between B and F	18) FROZEN PIZZA	pad : Between D and I
7) 1	pad : Between B and G	19) LESS	pad : Between D and J
8) GRILL	pad : Between B and I	20) CLOCK/A.START	pad : Between D and K
9) WEIGHT	pad : Between B and K	21) 9	pad : Between E and F
10) 7	pad : Between C and F	22) 4	pad : Between E and G
11) 2	pad : Between C and	23) FEEDING BOTTLE	pad : Between A and J
G		24) START	pad : Between E and J
12) BEVERAGE	pad : Between C and I	25) STOP/CLEAR	pad : Between E and K
13) MORE	pad : Between C and J		

(TROUBLE3) The oven not operate at all; Display window does not display any figures and any inputs can not be accepted.



NOTE 1: All these switches must be replaced at the same time, please refer to page 18 and 19 for adjustment instructions.

Condition	Check	Result	Cause	Cause
Outlet has proper voltage Fuse does not open	Check continuity of oven thermostat	No Continuity	Defective oven thermostat.	Replace
	Check continuity of power supply cord.	No Continuity	Open power supply cord.	Replace
		Normal	Defective touch control circuit	Replace
	Display do not shown countdown		Malfunction of secondary interlock switch	Replace

(TROUBLE 4) Display shows all figures selected, but oven does not start cooking, even though desired program and time are and start pad is taped.

Condition	Check	Result	Cause	Cause
Turn table motor fan motor and oven lamp do	Check continuity of primary interlock switch	No Continuity	Malfunction of Primary interlock	Adjust or replace
	Check D.C. voltage being supplied to RELAY "2" coil.	OV	Defective touch control circuit	Replace
		Approx. 24VDC	Faulty contacts of RELAY "2" or open relay coil	Replace

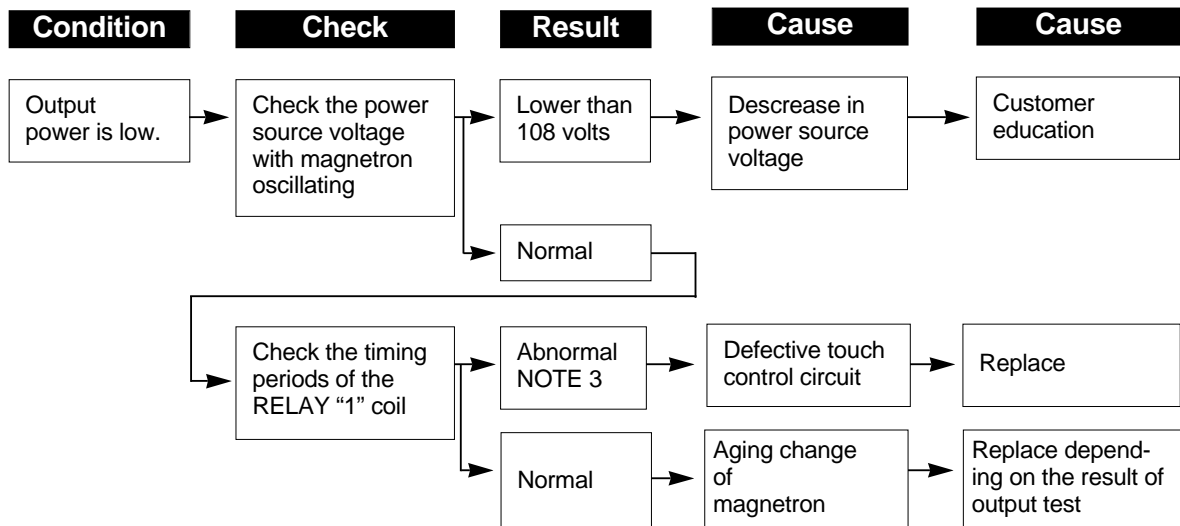
Condition	Check	Result	Cause	Cause
Turn table motor, fan motor and oven lamp turn on for a second when	Check continuity of primary winding of high voltage transformer and	No Continuity	Open winding	Replace
		Normal	Defective touch control circuit	Replace

(TROUBLE 5) No microwave oscillation even though fan motor rotates.

Condition	Check	Result	Cause	Cause	
No microwave	Check continuity of connecting wire of magnetron.	Continuity			
		Check the isolation of filament winding	No Good	Defective high voltage transformer	Replace
			Good	Defective magnetron	Replace
			No Continuity		
		Check continuity of filament of magnetron.	No Continuity	Defective magnetron	Replace
			Continuity		
		Check the isolation of filament terminal	No Continuity	Defective high voltage transformer	Replace
			Continuity		
		Check the diode for continuity in the reverse and normal directions	Continuity in the reverse direction	Defective high voltage diode	Replace

(TROUBLE 6) Microwave Output power is low .

First of all, check if output power is really low following “measurement of the microwave output power” on page 34.



NOTE 2: The following chart shows the timing periods of the RELAY “1”.

POWER	RELAY “1” ON TIME	RELAY “1” OFF TIME
0	0	29
1	3 (Seconds)	26 (Seconds)
2	5	24
3	8	21
4	11	18
5	14	15
6	17	12
7	20	9
8	23	6
9	26	3
HI	29	0

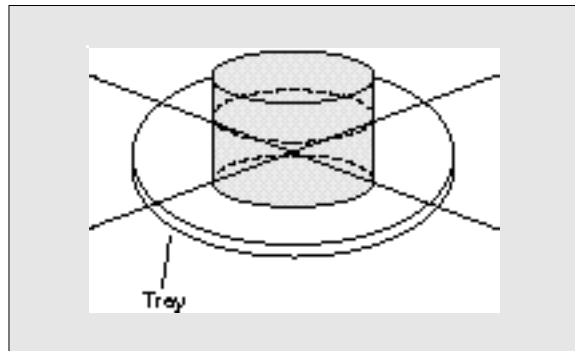
NOTE 3: Interlock monitor switch must be replaced when fuse is blown out.

MEASUREMENT OF THE MICROWAVE OUTPUT POWER

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

Procedure

1. Microwave power output measurement is made with the microwave oven supplied at rated Voltage and operated at its maximum microwave power setting with a load of $1,000 \pm 5$ cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test. The initial temperature of the water is $10 \pm 2^\circ\text{C}$ ($50 \pm 3.6^\circ\text{F}$). It is measured immediately before the water is added to the vessel. After addition of the water to the vessel, the vessel, the load is immediately placed on the center of the shelf which is in the lowest normal position.
4. Microwave power is switched on.
5. Heating time should be exactly 70(KOG-26XX) or 52(KOG-28XX)seconds. Heating time is measured while the microwave generator is operating at full power. The filament heat-up time for magnetrons is not included.
6. The initial and final water temperatures are selected so that the maximum difference between the ambient and final water temperatures is 5K.



7. The microwave power output P in watts is calculated from the following formula:

$$P=4187X\Delta T.t$$

- ΔT is actual temperature rise.
- t is the heating time.

The power measured should be 600W(KOG-26XX) or 800W(KOG-28XX) $\pm 10.0\%$

CAUTION:

1. Water load should be measured exactly to 1 liters.
2. Input power voltage should be exactly 120 volts as specified.
3. Ambient temperature should be $20 \pm 2^\circ\text{C}$ ($68 \pm 3.6^\circ\text{F}$)

MICROWAVE RADIATION TEST

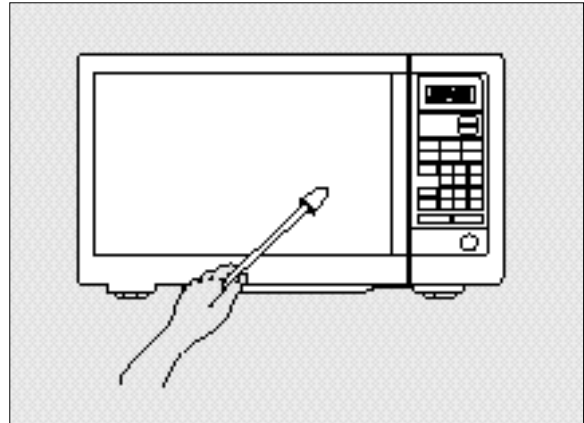
WARNING

Make sure to check the microwave leakage before and after repair or adjustment.

- Always, start measuring of an unknown field to assure. Safety for operating personnel from microwave energy.
- Do not place you hands into any suspected microwave radiation field unless the safe density level is known.
- Care should be taken not to place the eyes in direct line with the source of microwave energy.
- Slowly approach the unit under test until the radiometer reads an apperaciable microwave leakage from the unit under the test.

Procedure

- A) Prepare Microwave Energy Survey Meter, 600cc glass breaker, glass thermometer 100°C or 212°F.
- B) Pour 275cc±15cc of tap water initially at 20±5°C (68±9°F) in the 600cc beaker with an inside diameter of approx. 8.5 cm (3.5 in).
- C) Place it at the center of the tray and set it in a cavity.
- D) Close the door and operate the oven.
- E) Measure the leakage by using microwave energy survey meter with dual ranges, set to 2,450 MHz.
 - Measured radiation leakage must not exceed the values prescribed below.
 - Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm².
 - When measuring the leakage, always use the 5cm space cone with probe. Hold the probe perpendicular to the cabinet, door, place the space cone of the probe on the door, cabinet, door seam, along the seam, the door viewing window, the exhaust air vents, the suction air vents.
 - Measuring should be in a counter-clockwise direction at a rate of 1 inch/sec. If the leakage of the cabinet door seam is unknown, move the probe more slowly.



- When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 inches from any metal. If it does, erroneous reading may result.

CIRCUIT DESCRIPTION

Refer to the "WIRING DIAGRAM" on page 36.

MICROWAVE COOKING

TIME COOKING

1. When the food is placed inside the oven and door is closed.

- 1) The low voltage transformer supplies the necessary voltage to the touch control circuit when the power cord is plugged in.
- 2) The contacts of the interlock monitor switch open.
This switch creates short circuit to blow 12A fuse and stop magnetron oscillation when door is opened during operation under abnormal condition (i.e. the contacts of primary interlock switch do not open the circuit).
- 3) The contacts of primary interlock switch close the primary circuit.

2. When cooking cycle, power and time are set by touching the function pads and the desired numerical pads.

- 1) The function indicating bars are located on the digitron light to indicate that function have been set.
- 2) The time you set appears in the display window.
- 3) The touch control circuit memorizes the cooking program you set.

3. When the start pad is touched.

* The RELAY "1", "2" are controlled by the touch control circuit.

- 1) 120VAC is applied to the high voltage transformer through the contacts of RELAY "1".
- 2) Fan motor starts rotating and cools the magnetron by blowing the air coming from the intake on the rear plate hold.
- 3) The oven lamp light the inside of the oven.
- 4) Indicator light turns on to indicate function operation. Cooking time starts count down.
- 5) 3.3 Volts Ac is generated from the filament winding of the high voltage transformer. This filament voltage is applied to the magnetron to heat the magnetron filament through two noise preventing choke coils.
- 6) A high voltage of 2000 Volts Ac is generated in the secondary of high voltage transformer and this secondary voltage is increased by the action of the diode and the charging of the high voltage capacitor. This resultant DC voltage is then applied to the anode of the magnetron. As shown in Fig. 2 the first half cycle of the high voltage produced in the high voltage transformer secondary charges the high voltage capacitor. Current flow is in the direction of the dotted-line during the second half cycle, the voltage produced by the transformer secondary, and the charge of the high voltage capacitor are combined and applied to the magnetron as shown by the solid line so that oscillations begin. The disturbance wave generated by the magnetron is prevented by the choke coils of 3.2 μ H, filter capacitor of 16pF and the magnetron's shielded case so that TV and radio programs are not impaired by noise.

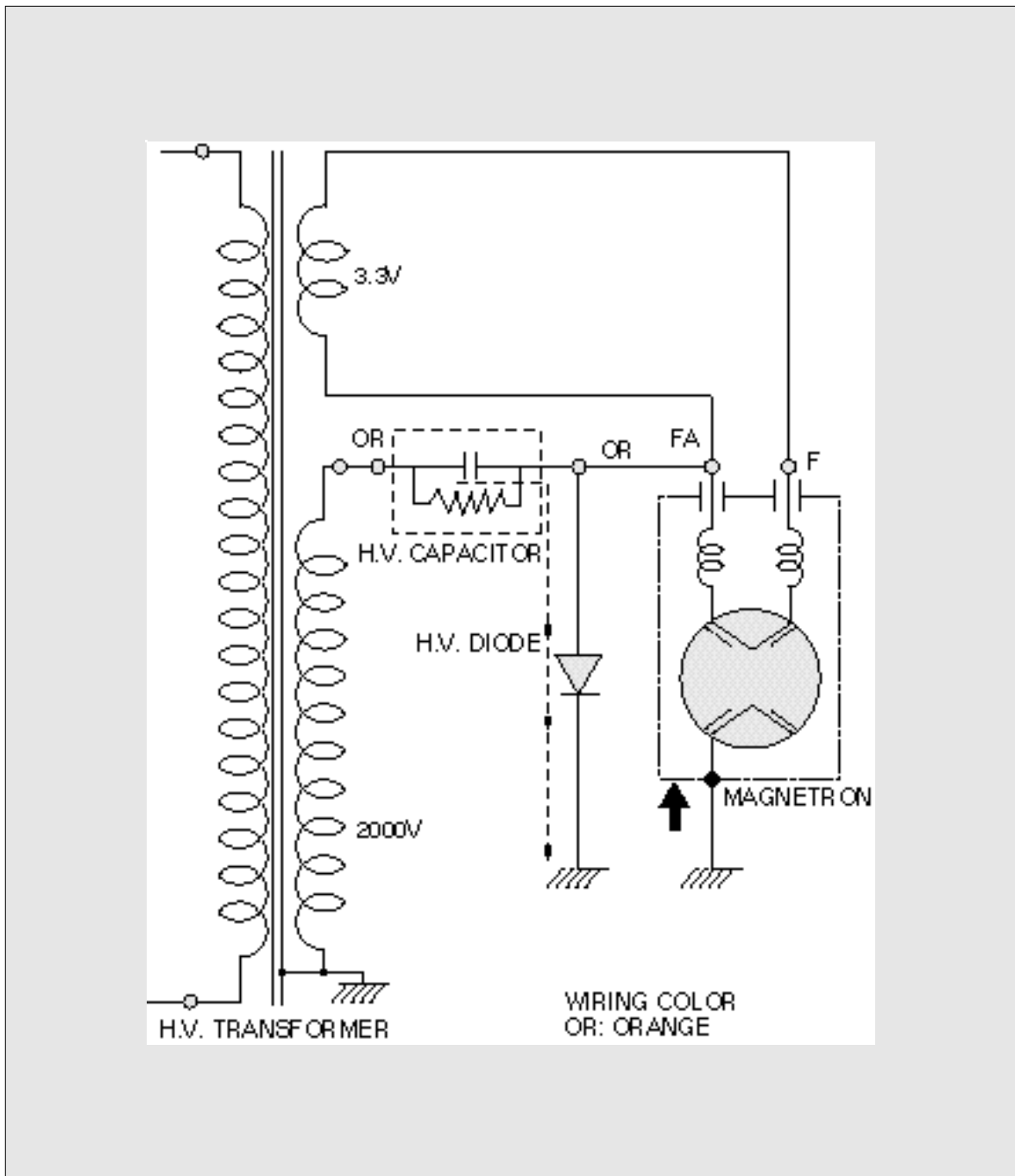


Fig. 2

The touch control circuit controls the ON-OFF time of RELAY "1" in order to vary the output power of the microwave oven from "power level 1" to "HI (100%) power".

One complete ON and OFF cycle of the RELAY "1" is 29 seconds. The relation between indications on the control panel and the output of the microwave oven is as shown in Fig. 3

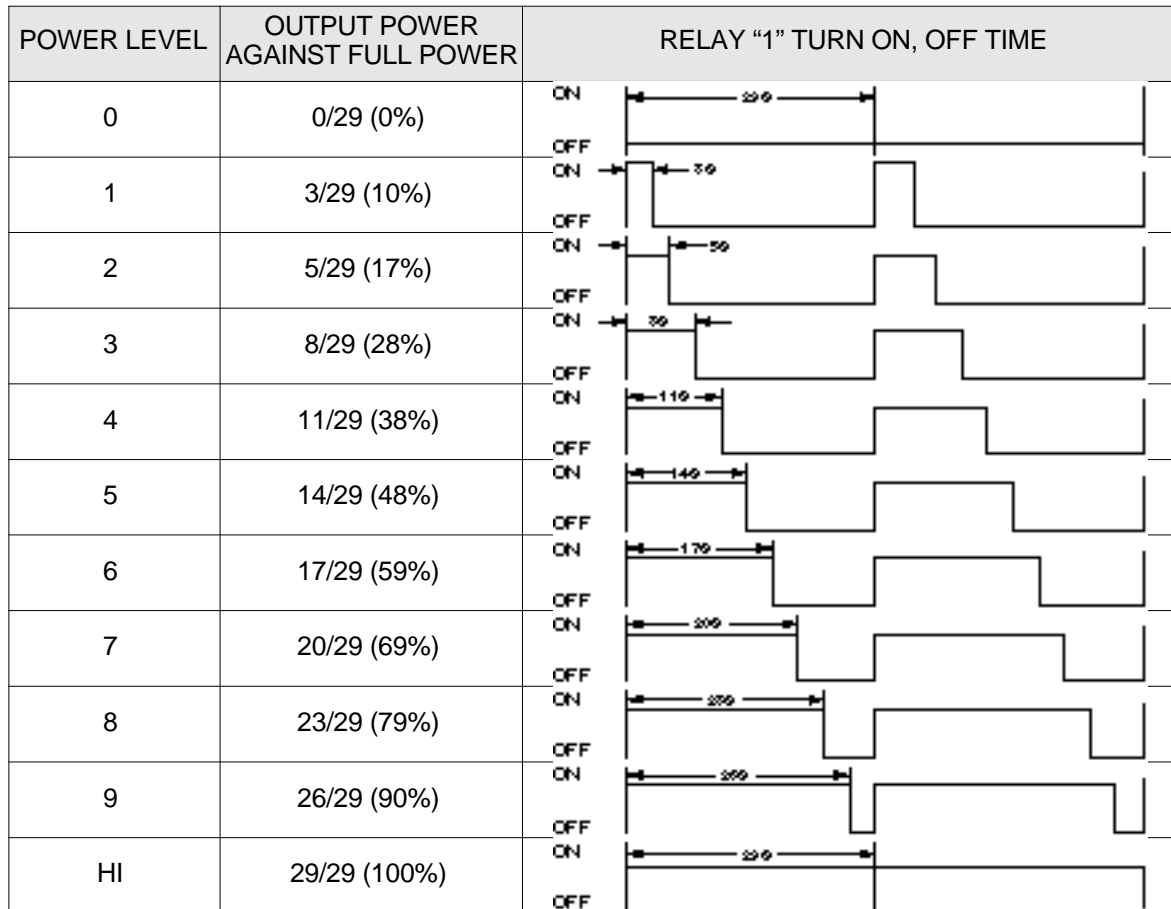


Fig. 3

AUTO DEFROST CYCLE

When auto defrost is selected and the desired defrosting time is chosen, the automatic cycle divides the defrosting time into 5 periods of alternating defrost and stand times, by cycling on and off.

4. When the door is opened during cooking.

- 1) The primary interlock switch is opened to cut off primary voltage to the high voltage transformer to stop microwave oscillation.
- 2) The secondary interlock switch is opened to give the door open information to touch control circuit. The contacts of the RELAY "1" and "2" open, the display stops counting down.
- 3) Fan motor and turn table stop rotating.
- 4) The oven lamp turns off.
- 5) As soon as the door is opened, the interlock monitor switch contacts close and creates the short circuit.
- 6) If the contacts of primary interlock switch malfunction the 12A fuse blows open due to the large current surge caused by the short circuit activation, and this in turn stops magnetron oscillation (Fig. 1).

5. When the STOP/CLEAR pad is touched during cooking.

- 1) The touch control circuit cuts the voltage supplied to the RELAY "1" coil and causes the magnetron to stop oscillating.
- 2) RELAY "2" turns off.
- 3) The display will show the time of day. If you don't set the clock, the display will show a colon.
- 4) The oven lamp turns off.
- 5) Fan motor and turn table motor stop rotating.

COMPONENT TEST PROCEDURE

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor (see page 20).

1. High voltage transformer

- (A) Remove connections from the transformer terminals and check continuity.
- (B) Normal readings should be as follows:
Secondary windingApprox. $90\Omega \pm 10\%$
Filament winding.....Approx. 0Ω
Primary windingApprox. 0Ω

2. High voltage capacitor

- (A) Check continuity of capacitor with meter on the highest OHM scale.
- (B) A normal capacitor will show continuity for a short time, and then indicate $9M\Omega$ once the capacitor is charged.
- (C) A shorted capacitor will show continuous continuity.
- (D) An open capacitor will show constant $9M\Omega$.
- (E) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

- (A) Isolate the diode from the circuit by disconnecting the leads.

- (B) With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals.

Reverse the meter leads and again observe the resistance reading. meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read in both directions. A normal diodes resistance will be infinite in one direction and several hundred $K\Omega$ in the other direction.

4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Output Power". (Page 34) Continuity checks can only indicate and open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.

- (A) Isolate magnetron from the circuit by disconnecting the leads.
- (B) A continuity check across magnetron filament terminals should indicate ohm or less.
- (C) A continuity check between each filament terminal and magnetron case should read

5. Interlock monitor switch

The interlock switch can be checked with an ohmmeter. Isolate the switch and then connect the meter leads to the common (COM) and normally close (NC) terminals of the switch. The meter should indicate an open circuit with the door closed and a closed circuit with the door opened.

6. Primary and secondary interlock switch

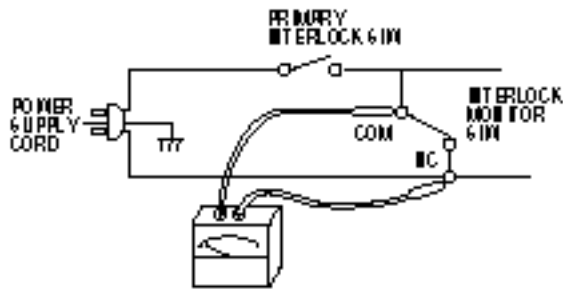
The primary and secondary interlock switch can be checked with an ohmmeter. Isolate the switch and connect the meter leads to the common (COM) and normally open (NO) terminals of the switch.

The meter should indicate an open circuit with the door opened and a closed circuit with the door closed. In case improper operation is indicated, make the necessary switch adjustment or replacement.

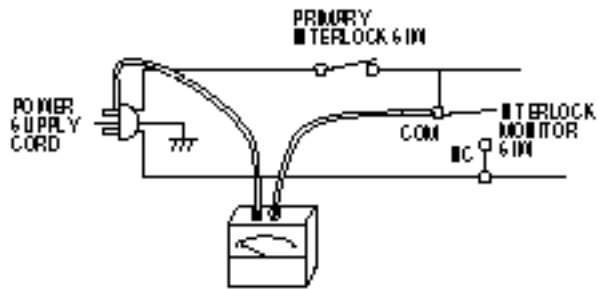
SAFETY INTERLOCK CONTINUITY TEST

- Disconnect the oven from the power supply.
- You can test continuity of safety interlocks and monitor switch by using switch tester or ohmmeter.
- The switch operation is checked by the lamp on/off of resistance zero/unlimited.
- The sequence of check is interlock monitor switch; primary and secondary interlock switches check.
- Make circuits like Fig. a, Fig. b, tests.

1) In case of interlock monitor check.
(Lamp on or zero resistance)

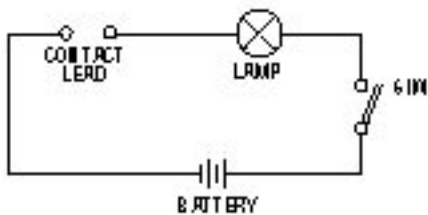


2) In case of primary interlock check.
(Lamp on or zero resistance)



(

* (Schematic diagram of S/W tester)



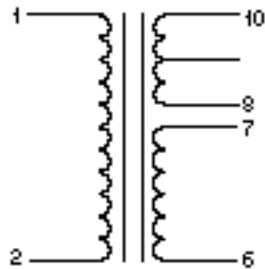
PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1) Low Voltage Transformer (DMR-604P) Check.

The low voltage transformer is located on the P.C.B.

Measuring condition: Input voltage: 120V
Frequency: 60Hz



Terminal	Voltage	LOAD	NO LOAD
6-7		24V	30V
8-10		2.4V	2.5V

NOTE 1: Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.

NOTE 2: The allowable tolerance of the secondary voltage is within $\pm 5\%$ of nominal voltage.

2) Voltage Check

Key check point

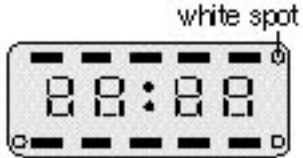
NO.	CHECK POINT	REMARK
1	IC1 PIN 6, 10, 11	-5VDC
2	IC1 PIN 1	-20VDC
3	IC1 PIN 22	 T:16.67ms (60HZ)
4	IC1 PIN 8 OR 9	 T:250ns
5	DP1 PIN 1 & 25	2.4VAC (DISPLAY FILAMENT VOLTAGE)

CHECK METHOD

NO.	MEASURE POINT Fig. 6	WAVE FORM	REMEDY	REMARK
1	MP1	DC -5V \pm 0.25	Replace ZD2, EC1, EC2	NO LOAD
2	MP2	DC -30V \pm 1.0	Replace R21, ZD3	NO LOAD
3	MP3	DC -27V \pm 1.0	Replace R21, R22, EC5	NO LOAD

NOTE: Each measure point must be measured with GND points.

3) Display problems

NO.	CAUSE	MEASUREMENT	RESULT	REMEDY
1	Poor contact between P.C.B. and display filament.	Check the voltage of PIN 1 & PIN 25.	2.4 VAC	Fix the PIN 1 & 25 on the P.C.B.
2	Defective Display	Refer to "The display trouble shooting data" below.		Replace P.C.B. assembly.
3	Loss of vacuum in the display		White spot is generated on the display	Replace P.C.B. assembly

The display trouble shooting data

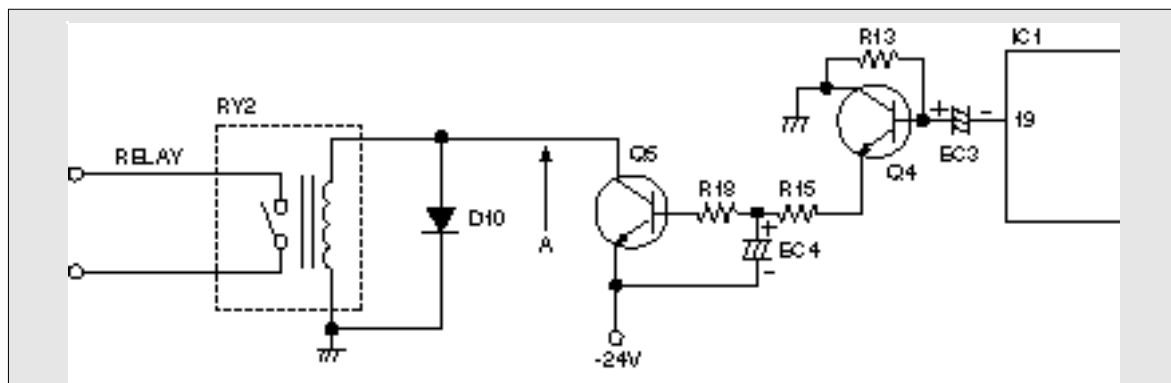
TROUBLE	DISPLAY NAME & PIN NO.	MICOM OUTPUT IN PIN NO.
LOCK doesn't come on.	GRID1 (G1), 21	30
GRILL, M/W don't come on.	GRID2 (G2), 17	29
WEIGHT DEFROST, NO/CUPS don't come on.	GRID3 (G3), 9	26
TIME DEFROST doesn't come on.	GRID4 (G4), 10	28
AUTO START, g don't come on.	GRID5 (G5), 4, 7	27
SEGMENT "a" doesn't come on from G1 to G5.	SEGMENT d, 19	39
SEGMENT "b" doesn't come on from G1 to G5.	SEGMENT e, 18	40
SEGMENT "c" doesn't come on from G1 to G5.	SEGMENT f, 16	41
SEGMENT "d" doesn't come on from G1 to G5.	SEGMENT a, 23	36
SEGMENT "e" doesn't come on from G1 to G5.	SEGMENT b, 22	37
SEGMENT "f" doesn't come on from G1 to G5.	SEGMENT c, 20	38
SEGMENT "g" doesn't come on from G1 to G5.	SEGMENT g, 15	42
LOCK, M/W, NO/CUPS, g don't come on.	UPPER BAR h, 5	33
GRILL, TIME DEFROST, WEIGHT DEFROST, AUTO START don't come on.	LOWER BAR i, 6, 8, 9, 11	34

4) When there is no microwave oscillation.

(1) When touching "START" pad, oven lamp does not turn on.

Fan motor and turntable motor do not rotate, but cook indicator in display comes on.

* Cause: RELAY "2" does not operate.



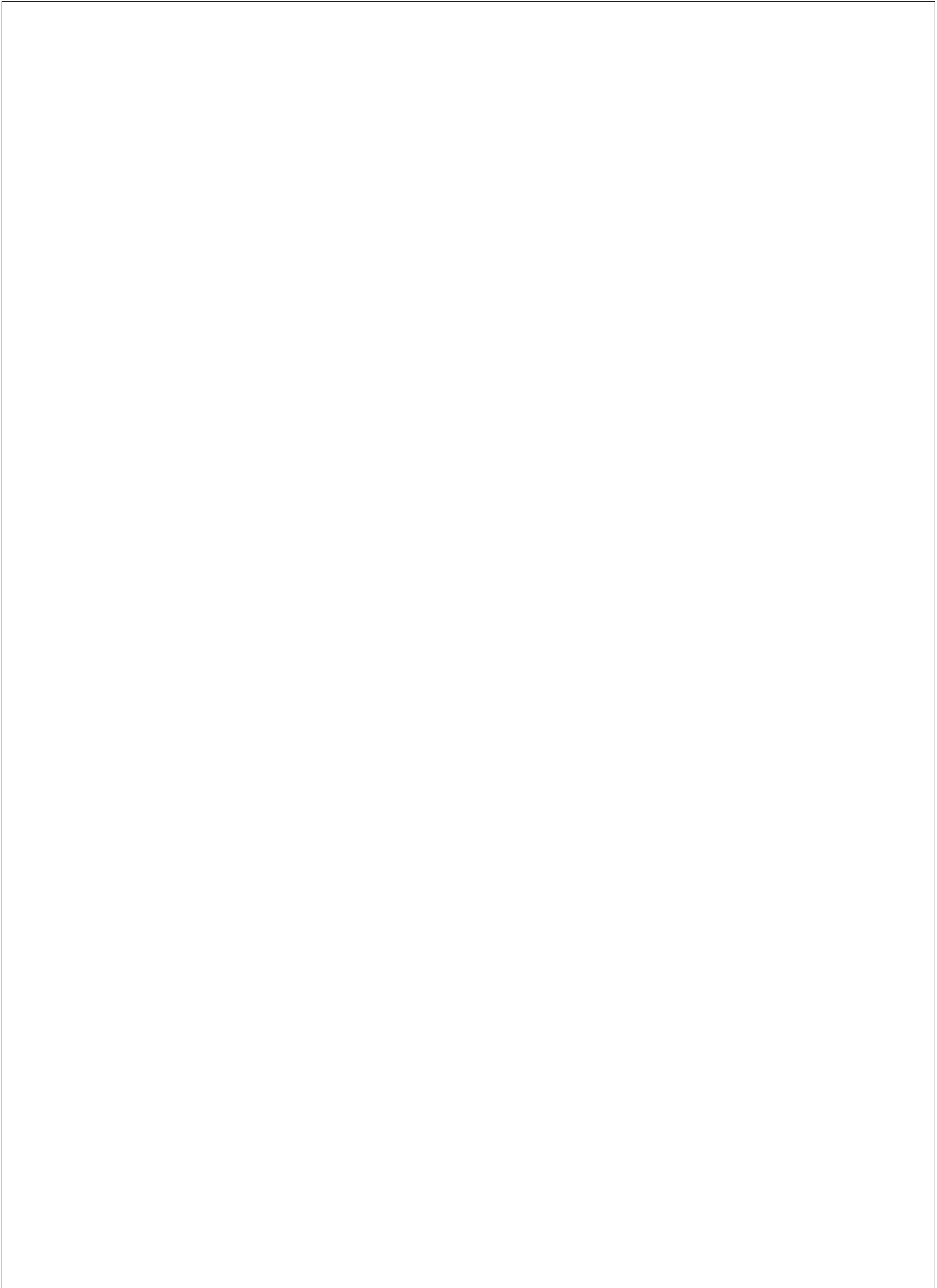


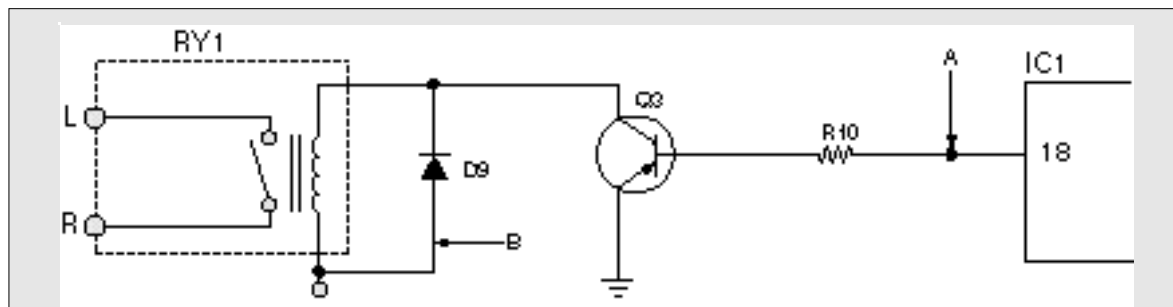
Fig. 6 Measurement Point



CHECK METHOD

STAGE \ POINT	A
RELAY "2" ON	-24VDC
RELAY "2" OFF	GND

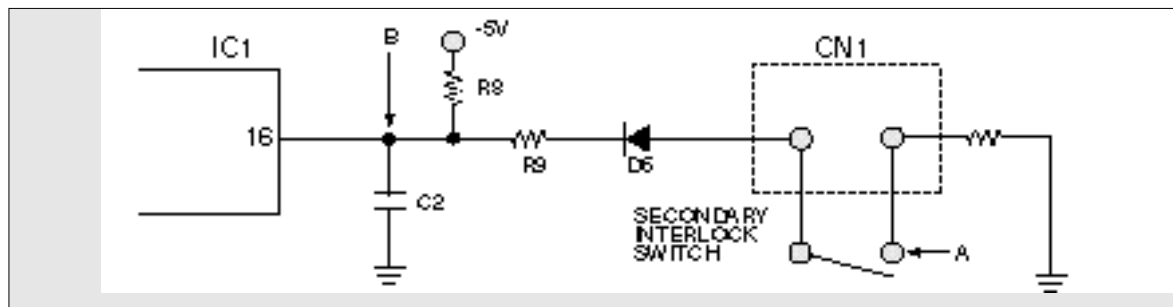
- (2) When touching "START" pad, oven lamp turns on.
 Fan motor and turntable rotate and cook indicator in display comes on.
 * Cause: RELAY "1" does not operate.



CHECK METHOD

STAGE \ POINT	A	B
RELAY "1" ON	-5VDC	-24VDC
RELAY "1" OFF	GND	GND

- 5) When the door is opened during operation, the Count down timer does not stop.

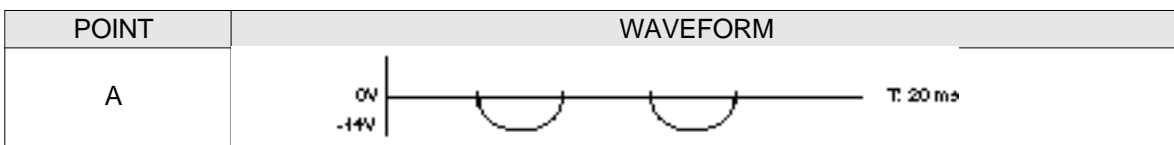
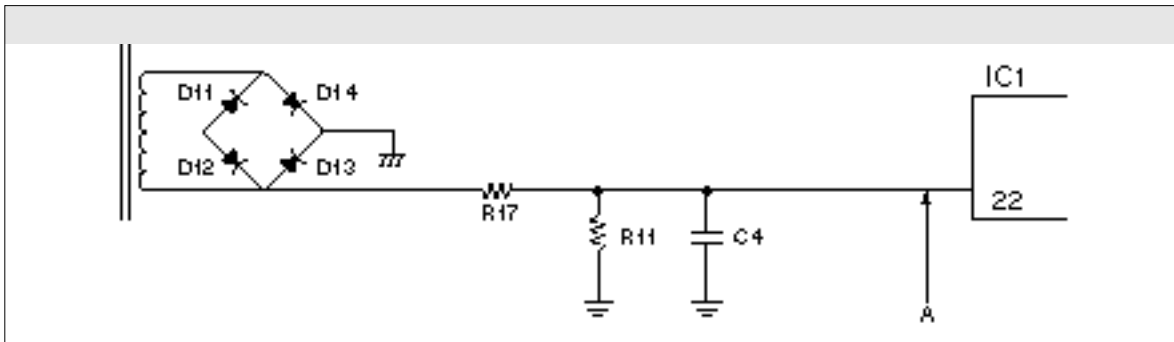


CHECK METHOD

STAGE \ POINT	A	B
1) DOOR OPEN	OPEN	-5VDC
2) DOOR CLOSED	CLOSE	GND

CHECK NO.	METHOD	REMEDY
1	Check the stage (ON, OFF) of the secondary Interlock switch by resistance measurement.	Replace secondary interlock switch

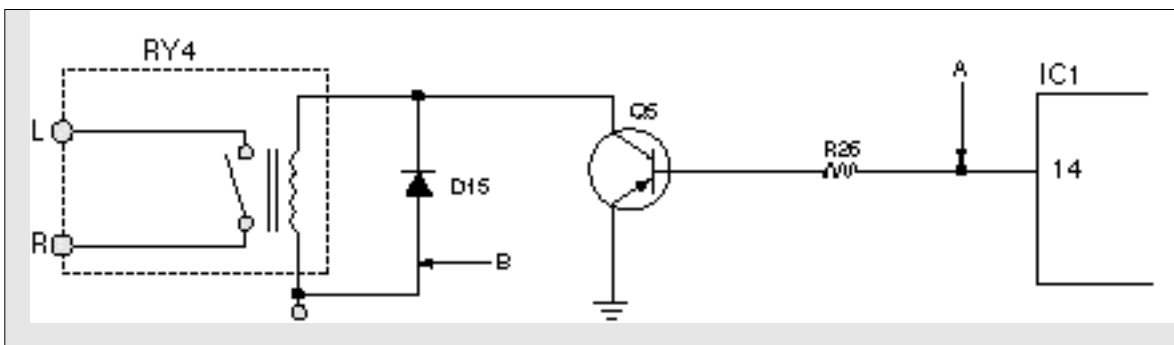
5) When the digital clock does not operate properly.



If clock does not keep exact time, you must check resistor R11, R17.

7) When there is not grill heat.

When touching "START" pad, oven lamp turns on.
 Fan Motor and turntable rotate and cook indicator in display comes on.
 * Cause: RELAY "4" does not operate.

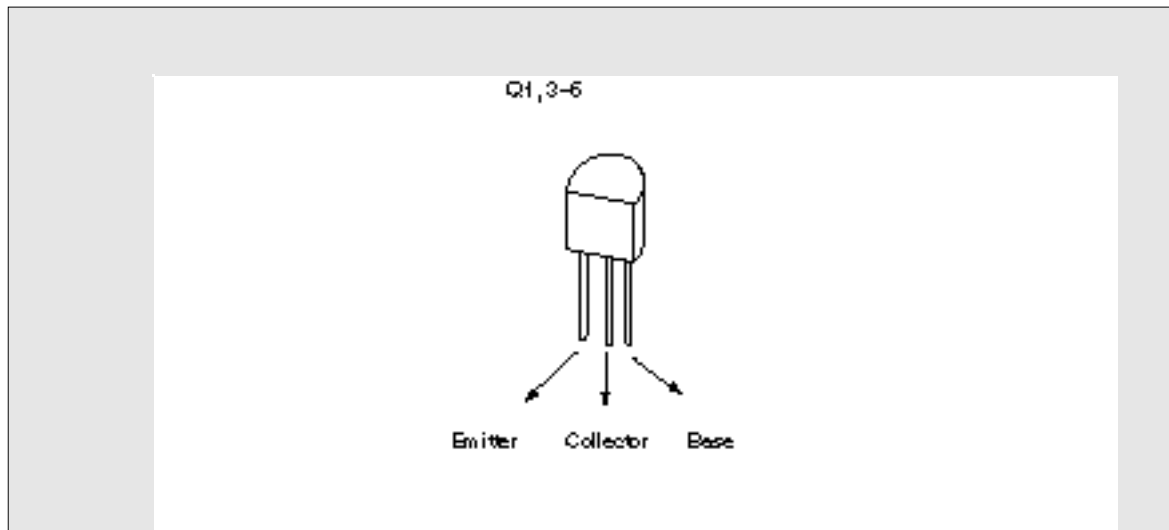


CHECK METHOD

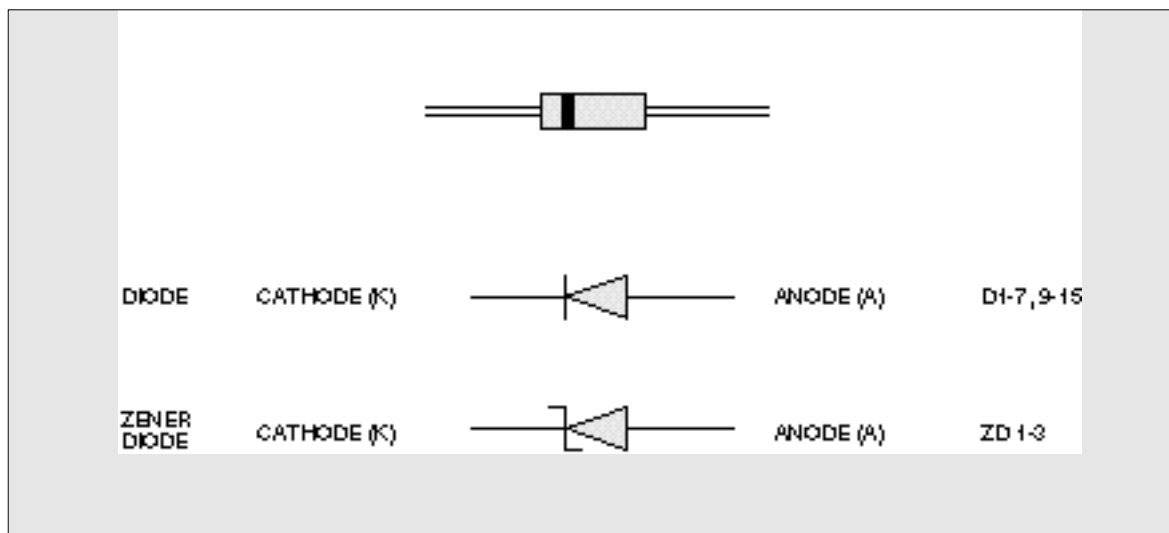
STAGE	POINT	A	B
RELAY "4" ON		-5VDC	-24VDC
RELAY "4" OFF		GND	GND

2. COMPONENT INFORMATION

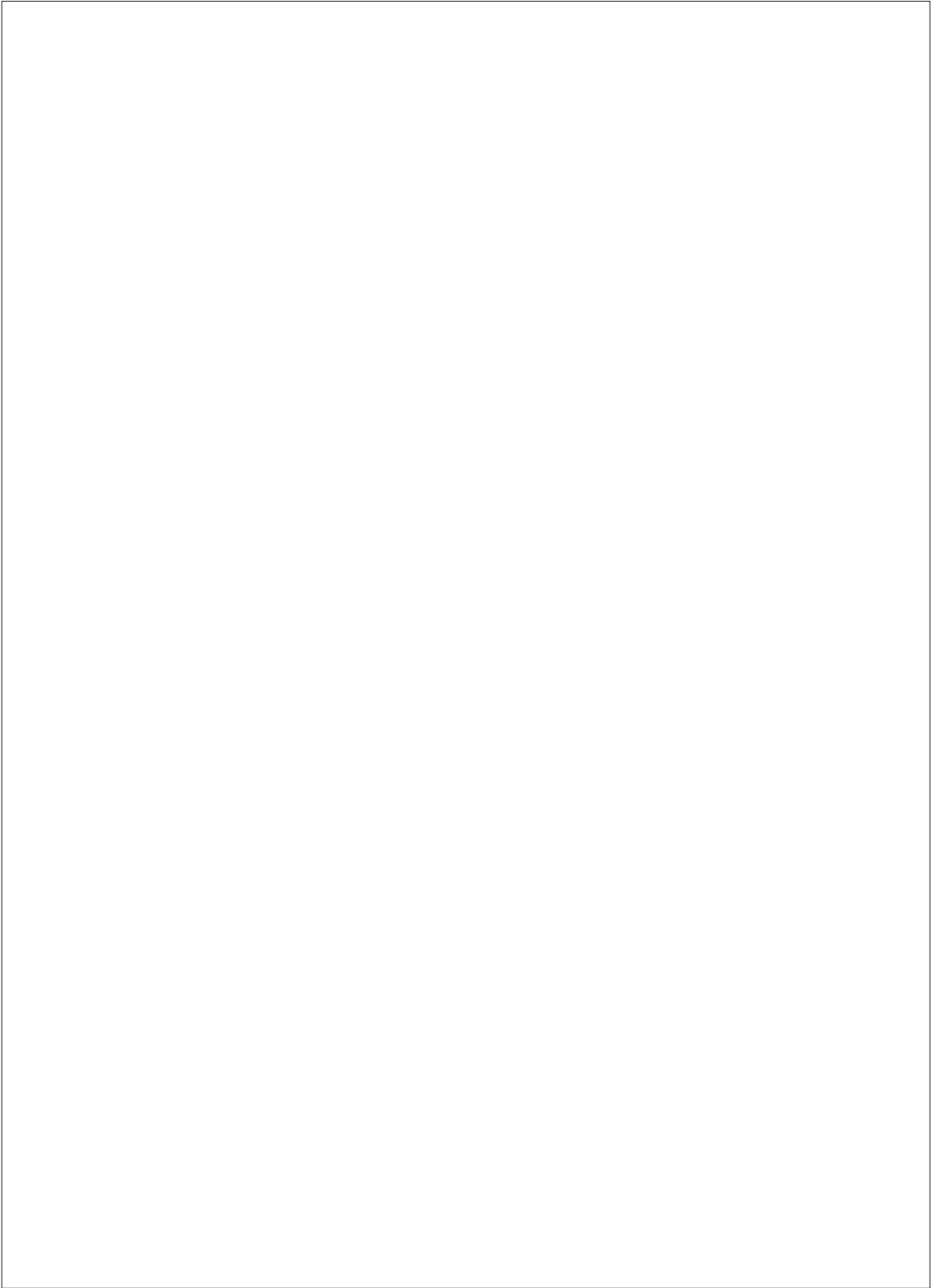
1) Transistor



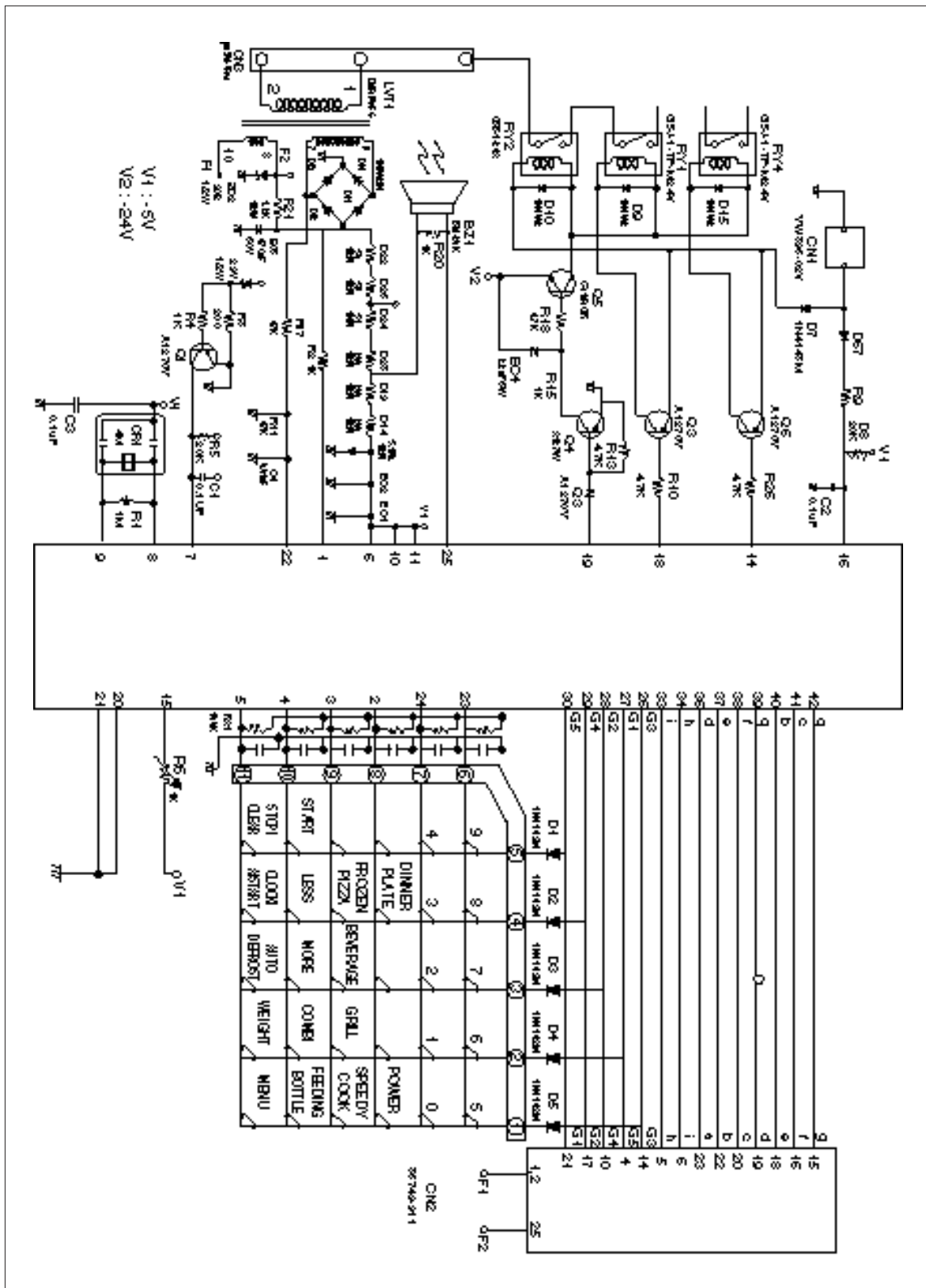
2) Diode and Zener Diode



3. PRINTED CIRCUITS BOARD



4. P.C.B. CIRCUIT DIAGRAM

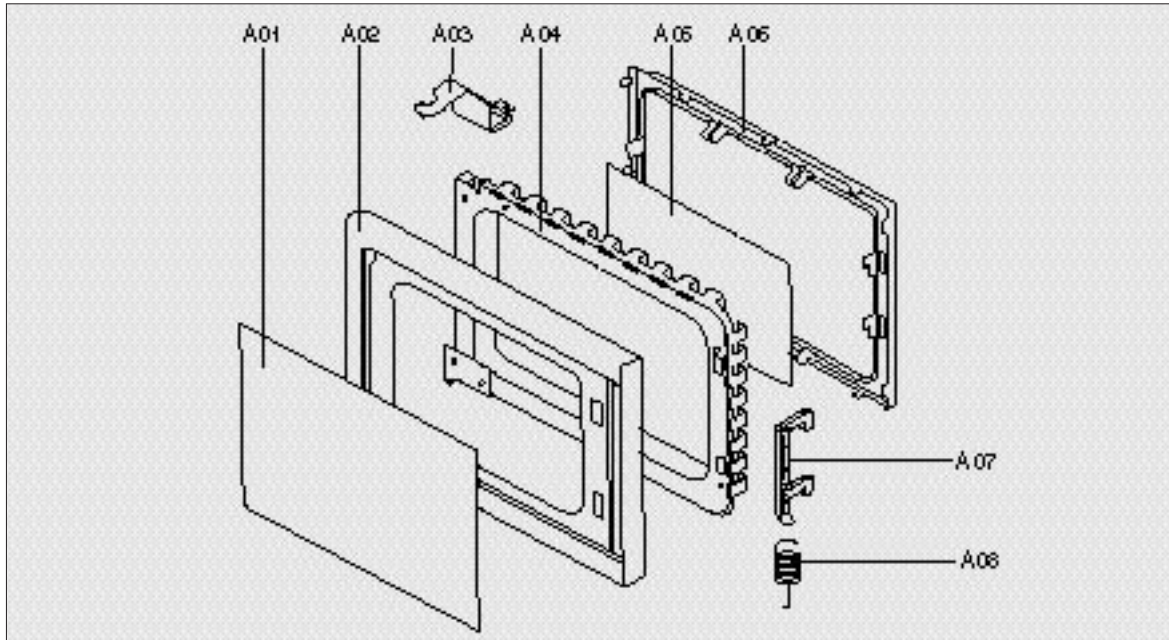


5. P.C.B. LOCATION No.

REF No.	PART CODE	PART NAME	DESCRIPTION	REMARK
R10, 13, 18, 26	RD-AZ472J-	RESISTOR	4.7 Kohm, 1/6W, 5%	
R3	RD-AZ201J-	RESISTOR	200 ohm, 1/6W, 5%	
R5, 8	RD-AZ203J-	RESISTOR	20 Kohm, 1/6W, 5%	
R1	RD-AZ105J-	RESISTOR	1 Mohm, 1//6W, 5%	
R2, 4, 6, 9, 15, 20	RD-AZ102J-	RESISTOR	1 Kohm, 1/6W, 5%	
R24	RD-4Z510J-	RESISTOR	51 ohm, 1/4vW, 5%	
R11, 17	RD-AZ473J-	RESISTOR	47 Kohm, 1/6w, 5%	
R22, 25	RD-2Z560JS	RESISTOR	56 ohm, 1/2W, 5%	
R23, 14, 19	RD-2Z210JS	RESISTOR	150 ohm, 1/2W, 5%	
R21	RD-2Z122JS	RESISTOR	1.2 Kohm, 1/2W, 5%	
D1~7	DZN4148M--	DIODE SWITCHING	1N4148M	
D9~15	DZN4002A--	DIODE RECTIFY	1N4002A	
ZD1	DZT3R9B--	DIODE ZENER	3.9VB, 1/2W	
ZD2	DZT5R1B--	DIODE ZENER	5.1VB, 1/2W	
ZD3	DZT20B---	DIODE ZENER	20VB, 1/2W	
Q5	TZTC3198GR	TRANSISTOR	KTC3198GR (1815GR)	
Q1, 3, 4, 6	TZTA1270Y-	TRANSISTOR	KTA1270Y (562Y)	
RA1	RA-87X104J	RESISTOR ARRAY	RGLD6X104J	
C4	CCXF1H103Z	CAPACITOR CERAMIC	HIKF 50V 0.01uF Z	
C1~3	CBXF1H104Z	CAPACITOR CERAMIC	HIKF 50V 0.1uF Z	
EC5	CEXF1H471V	CAPACITOR ELECTROLYTIC	470uF, 50V, RSS	
EC1~2	CEXE1C470A	CAPACITOR ELECTROLYTIC	47uF, 16V, RS	
EC3	CEXE1H108A	CAPACITOR ELECTROLYTIC	0.1uF, 50V, RS	
EC4	CEXE1H229A	CAPACITOR ELECTROLYTIC	2.2uF, 50V, RS	
CA1	CN6XB-102M	CAPACITOR ARRAY	1000pF, 2.54MM, M50V	
BZ1	3515600100	BUZZER	BM-20K	
CR1	5PCST400MG	RESONATOR CERA	CST4.00MGW	
CN2	441M36716	CONNECTOR FILM	FCZ254-11	
CN3	3519150510	CONNECTOR WAFER	YW396-05VA	
CN1	3519150520	CONNECTOR WAFER	YW396-02V	
DP1	DSVM5MS06-	DIGITRON	SVM-5MS06	
DPH	3513000500	HOLDER VFD	NYLON66	
J1~7, 9~12,R16	85801052GY	WIRE COPPER	1/0.52 TIN COATING	
M145-1	3514311351	PCB MAIN	159.5X82	
LVT	5EPV041304	TRANS POWER	DMR-604FS	
RY1, 4	5SC0101107	RELAY	G5J-1-TP-M24V	
RY2	5SC0101109	RELAY SW	G5B-1 (DC24V) IC IP	
IC1	147S811Q00	IC MICOM	HD404314B09S	

EXPLODED AND PARTS LIST

1. Door Assembly



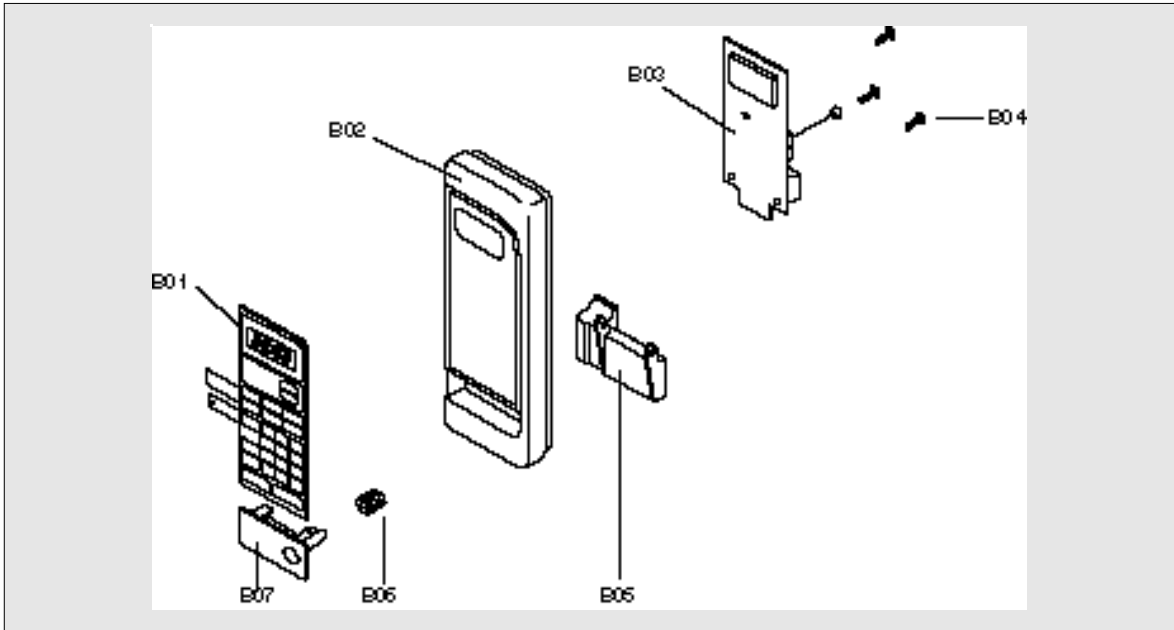
KOG-26XX

REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
	3511707300 3511707310	DOOR ASSEMBLY	KOG-36150S KOG-36250S	1	ONLY KOG-261M ONLY KOG-262M
A01	3517003000 3517003020	BARRIER-SCREEN *O	PMMA	1	ONLY KOG-261M ONLY KOG-262M
A02	3512202000 3512202010	FARME DOOR	ABS	1	ONLY KOG-261M ONLY KOG-262M
A03	3515201000	STOPPER HINGE *T	SCP-1 T2.5	1	
A04	3511705510	DOOR WELD AS	KOR-64150A	1	
A05	3517002810	BARRIER-SCREEN *I	PE T0.1	1	
A06	3512300200	GASKET DOOR	PP	1	
A07	3513100700	HOOK	POM	1	
A08	3515101300	SPRING HOOK	PW1	1	

KOG-28XX

REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
	3511706402 3511706422	DOOR ASSEMBLY	KOR-81150S KOG-81250S	1	ONLY KOG-281M ONLY KOG-282M
A01	3517003100 3517003120	BARRIER-SCREEN *O	PMMA T1.5	1	ONLY KOG-281M ONLY KOG-282M
A02	3512202200 3512202210	FARME DOOR	ABS	1	ONLY KOG-281M ONLY KOG-282M
A03	3515201500	STOPPER HINGE *T	SCP-1 T2.5	1	
A04	3511705600 3511705620	DOOR WELD AS	KOR-814Q0A KOR-81250S	1	ONLY KOG-281M ONLY KOG-282M
A05	3517002900	BARRIER-SCREEN *I	PE T0.1	1	
A06	3512300400	GASKET DOOR	PP	1	
A07	3513100700	HOOK	POM	1	
A08	3515101300	SPRING HOOK	PW1	1	

2. Control Panel Assembly

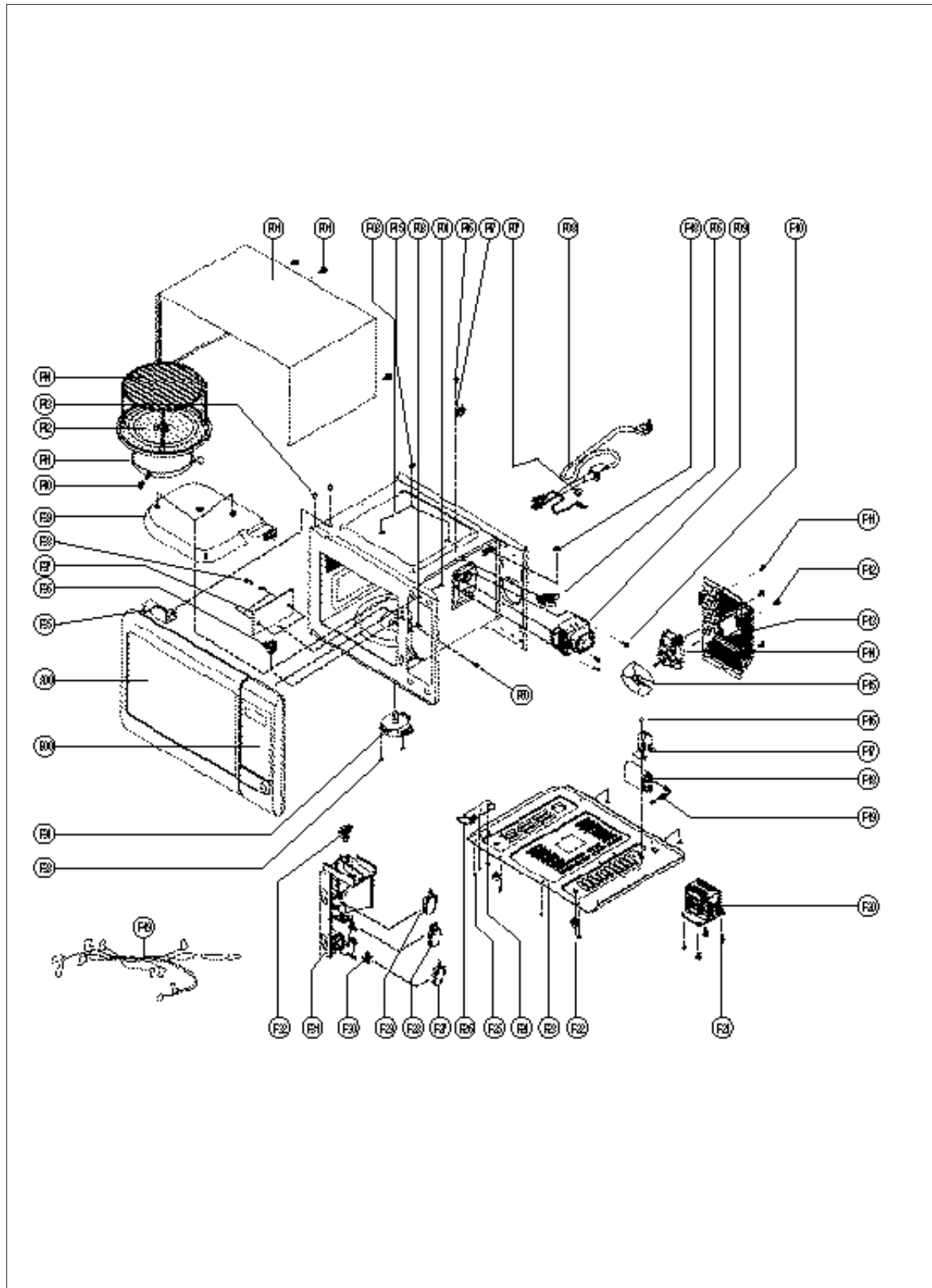


KOG-26XX

REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
		CONTROL PANEL AS		1	ONLY KOG-261M
B01	3518514000	SWITCH MEMBRANE	KOG-261MOS	1	ONLY KOG-261M
	3518514800		KOG-262MOS		ONLY KOG-261M
B02	3516710900	CONTROL PANEL	KOG-361QOS ABS	1	ONLY KOG-261M
	3516710710		KOG-262QOS ABS		ONLY KOG-262M
B03	PKMPMSSA00	PCB MAIN AS	KOG-261QOS	1	
B04	7621401211	SCREW TAPPING	T2S PAN 4X12 PW MFZN	3	
B05	3513701400	LEVERL DOOR OPEN	POM	1	
B06	441B655072	SPRING DOOR BUTTON	HSWR	1	
B07	3516903600	BUTTON DOOR OPEN	ABS	1	ONLY KOG-261M
	3516903620				ONLY KOG-262M

KOG-28XX

REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
	PKCPSWTT00	CONTROL PANEL AS	KOG-281MOA	1	ONLY KOG-281M
B01	3518514100	SWITCH MEMBRANE	KOG-281MOS	1	ONLY KOG-281M ONLY KOG-282M
B02	3516710900	CONTROL PANEL	KOG-281MOS	1	ONLY KOG-281M
	3516710910		KOG-282MOS		ONLY KOG-282M
B03	PKMPMSTA00	PCB MAIN AS	KOG-281MOS	1	
B04	7821401211	SCREW TAPPING	T2SPAN 4X12 PW MFZN	3	
B05	3513701400	LEVERL DOOR OPEN	POM	1	
B06	441B655072	SPRING DOOR BUTTON	HSWR	1	
B07	3518903600	BUTTON DOOR OPEN	ABS	1	ONLY KOG-281M
	3516903620				ONLY KOG-282M



REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
F01	3510801300	CABINET	PCM T0.6	1	ONLY KOG-26XX
	3510801400				ONLY KOG-26XX
F02	7S312X4081	SCREW TAPPING	T1 TRS 4X8 SE MFZN	3	
F03	3516105010	CAVITY WELD AS	KOG-381QOS	1	ONLY KOG-26XX
	3516104910		KOG-361QPS	1	ONLY KOG-26XX
F04	7S342X40B1	SCREW SPECIAL	T2S TRS 4X12 SE MFZN	2	
F05	7X342X40B1	SCREW SPECIAL	T2S TRS 4X12 SE MFZN	1	
F06	4413A90012	CLAMP POWER CORD	66 NYLON	1	
F07	7112400811	SCREW TAPPING	T1 TRS 4X8 MFZN	3	
F08	35113NBND5	CORD POWER AS	3X0.75 60X60X200 RTML	1	
F09	3518002200	MAGNETRON	2M218H(MF)I	1	
F10	7112401011	SCREW TAPPING	T1 TRS 4X10 MFZN	3	
F11	7112400811	SCREW TAPPING	T1 TRS 4X8 MFZN	2	
F12	7172400811	SCREW TAPTITE	TT1 TRS 4X8 MFZN	2	
F13	3511402500	COVER*B	SBHG T0.8	1	
F14	3963820110	MOTOR SHADED POLE	120V 17W MW10XA-R01	1	
F15	3511800300	FAN	PP+30% GLASS	1	
F16	7172400811	SCREW TAPTITE	TT2 TRS 4X8 MFZN	1	
F17	3513001900	HOLDER HV CAPACITOR	SECC T0.8	1	
F18	44IL267010	CAPACITOR HV	2100VAC 0.7 μ F	1	ONLY KOG-26XX
	3518300800		2100VAC 0.82 μ F	1	ONLY KOG-26XX
F19	4416V24000	DIODE HV	HVR-1X-32B(D5.3)	1	
F20	3518106640	TRANS HV	JY-N60A0-61T	1	ONLY KOG-26XX
	518106910		DH-N80A0-81T		ONLY KOG-28XX
F21	7112401011	SCREW TAPPING	T1 TRS 4X10 MFZN	4	
F22	3512100900	FOOT	PP DASF-130	2	
F23	3510308700	BASE	SBHG T0.8	1	ONLY KOG-26XX
	3510308900				ONLY KOG-26XX
F24	7172400811	SCREW TAPTITE	TT2 TRS 4X8 MFZN	2	
F25	7112401011	SCREW TAPPING	T1 TRS 4X10 FMZN	6	
F26	3515201100	STOPPER HINGE *U	SCP-1 T2.5	1	
F27	5S762S10G0	SW MICRO	V16-FA-63 SPNO #187	1	
F28	5S762M10G0	SW MICRO	V16-FA-62 SPNC #187	1	
F29	5S762S10G0	SW MICRO	V16-FA-63 SPNO #187	1	
F30	3513701300	LEVER LOCK	POM	1	

REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
F31	3513805700	LOCK	POM BLACK	1	
F32	3513601500	LAMP	BL 125V 25W T25 C7A H1	1	
F33	7121400811	SCREW TAPPING	T2S PAN 4X8 MFZN	2	
F34	3966820200	MOTOR SYNCRO	120V 2W GM-16-12F17	1	
F35	3515201500	STOPPER HINGE *T AS	KOR-61150OS	1	
F36	3517400600	COUPLER	PPS	1	
F37	3511403500	COVER WAVEGUIDE	MICA	1	
F38	4078502031	BUTTOM LOCKING	PP HONAM A 353	2	
F39	3513301450	INSULATOR HEATER AS	KOG-261QOA	1	ONLY KOG-26XX
	3513301430		KOG-281QOA	1	ONLY KOG-28XX
F39-1	3512802300	HEATER	1000W 120V	1	
F39-2	3513301100	INSULATOR HEATER	SPP T0.8	1	
F40	3514700900	ROLLER	TEFLON	3	
F41	3512509200	GUIDE ROLLER	PP	1	
F42	3517203600	TRAY	GLASS	1	ONLY KOG-28XX
	3517203500		GLASS	1	ONLY KOG-28XX
F43	7172400811	SCREW TAPTITE	TT2 TRS 4X8 MFZN	2	
F44	3517204410	TRAY RACK AS	KOG-361QOS 100 MM	1	ONLY KOG-28XX
	3517201800		KOR-1825OS 120MM	1	ONLY KOG-28XX
F45	7292500411	NUT SUS	M5	2	
F46	7279300611	SCREW TAPTITE	TT2 TRS 3X6 MFZN	1	
F47	3518902200	THERMOSTAT	OFF:130 ON:115	1	
F48	7S627W50X1	NUT HEX	M5 FLANGE	2	
F49	3512711310	HARNESS MAIN	KOG-281QOA	1	
F50	7172400811	SCREW TAPTITE	TT2 TRS 4X8 MFZN	1	
B00		CONTROL PANEL AS	REFER TO EXPLODED VIEW		page 54
A00		DOOR AS	REFER TO EXPLODED VIEW		page 53



S/M NO.; G261AMU010

DAEWOO

DAEWOO ELECTRONICS CO., LTD.

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