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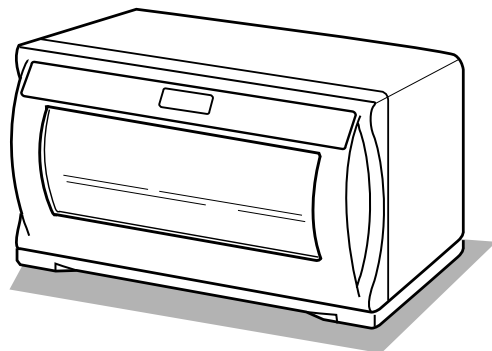
MICROWAVE OVEN

SERVICE MANUAL

MODEL : LRMM1430SW
LRMM1430SB

CAUTION

BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



CAUTION

WARNING TO SERVICE TECHNICIANS

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 the 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 and latches, (5) evidence of dropping or abuse.
 - c. Before turning on microwave for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
 - d. Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired 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.
- Proper operation of the microwave ovens requires that the magnetron be assembled to the wave guide and cavity. Never operate the magnetron unless it is properly installed.
 - Be sure that the magnetron gasket is properly installed around the dome of the tube whenever installing the magnetron.
 - Routine service safety procedures should be exercised at all times.
 - Untrained personnel should not attempt service without a thorough review of the test procedures and safety information contained in this manual.

FOREWORD

Read this Manual carefully. Failure to adhere to or observe the information in this Manual may result in exposing yourself to the Microwave Energy normally contained within the oven cavity.

MODEL LRMM1430SW LRMM1430SB

MECHANICAL SERVICE INFORMATION

TABLE OF CONTENTS

1. Adjustment Procedures	3-4
2. Precautions on Installation	5
3. General Precautions in Use.....	5
4. Trial Operation.....	5
5. Features and Specifications	5-6
6. Overall Circuit Diagram	7-8
7. Operating Procedures	9-11
8. Procedure for Measuring Microwave Energy Leakage.....	12-13
9. Disassembly Instructions.....	14-18
10. Interlock Continuity Test.....	19
11. Test and Checkout Procedures, and Troubleshooting	
A. Test Procedures.....	20-22
B. Checkout Procedures.....	23-25
C. Troubleshooting	26-30
12. Exploded View.....	31-37
13. Replacement Parts List	38-41
14. Schematic diagram of P.C.B	42
A. Printed circuit board	43
15.P.C.B Parts List	44-46

1. ADJUSTMENT PROCEDURES

To avoid possible exposure to microwave energy leakage, adjust the door latches and interlock switches, using the following procedure.

ONLY AUTHORIZED SERVICE PERSONNEL SHOULD MAKE THIS ADJUSTMENT.

The Interlock Monitor and Primary Interlock Switch acts as the final safety switch protecting the user from microwave energy. The terminals between "COM" and "NC" of the Interlock Monitor must close when the door is opened. After adjusting the Interlock Monitor Switch, make sure that it is correctly connected. See Figures 1-a and 1-b throughout this procedure.

CHECK THE DOOR LATCH AND SWITCH CLOSINGS.

NOTE: The out case of the microwave oven is removed.

- (1) Set the microwave oven on its side so that you can see the latch board and the switches, as shown in Figure 1-a.
- (2) Close the door tightly and check gaps A and B to be sure they are no more than 1/64" (0.5 mm). See Figure 1-b for close-up view of gaps A and B (door latches). If all gaps are less than 1/64" (0.5 mm), adjustment of the latch board may not be necessary. Go to Steps 5 and 6 to check the sequence of the switches.

NOTE: To correct sequence of the Primary Interlock Switch, Secondary Interlock Switch and the Interlock Monitor Switch is very important.

If any gap is larger than 1/64" (0.5 mm), you will need to adjust the latch board-U, L. Go to step 3 and follow all steps in order.

ADJUST THE LATCH AND SWITCH CLOSINGS

- (3) Loosen the screw holding the plastic latch board as shown.
- (4) With the oven door closed tightly, move the latch board upward toward the top of the oven and/or away from the door latch until the gaps are less than 1/64" (0.5 mm).

Hold the latch board tightly in this position until you check the sequence of the switches in steps 5 and 6.

TEST THE LATCH AND SWITCH SEQUENCE

- (5) Open the oven door slowly. Watch the door latch, the Primary Switch. Release Rod and Lever on the switches to make sure they are zero to the body of the switches in the following sequence:

- Primary Interlock Switch
- Secondary Interlock Switch
- Interlock Monitor Switch

Adjust the latch board until the switches operate in this sequence. See Steps 3 and 4.

- (6) Close the oven door slowly and be sure it is tightly closed. Watch the three switches to make sure they are zero to the body of the switches in the following sequence:

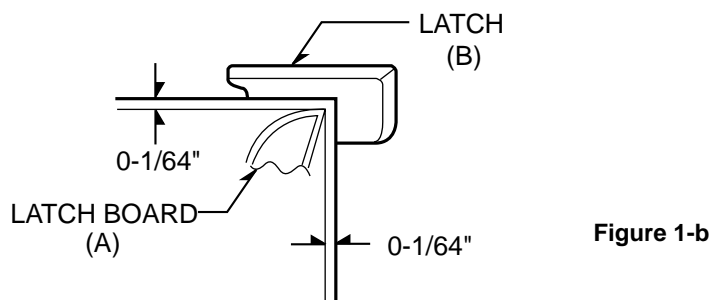
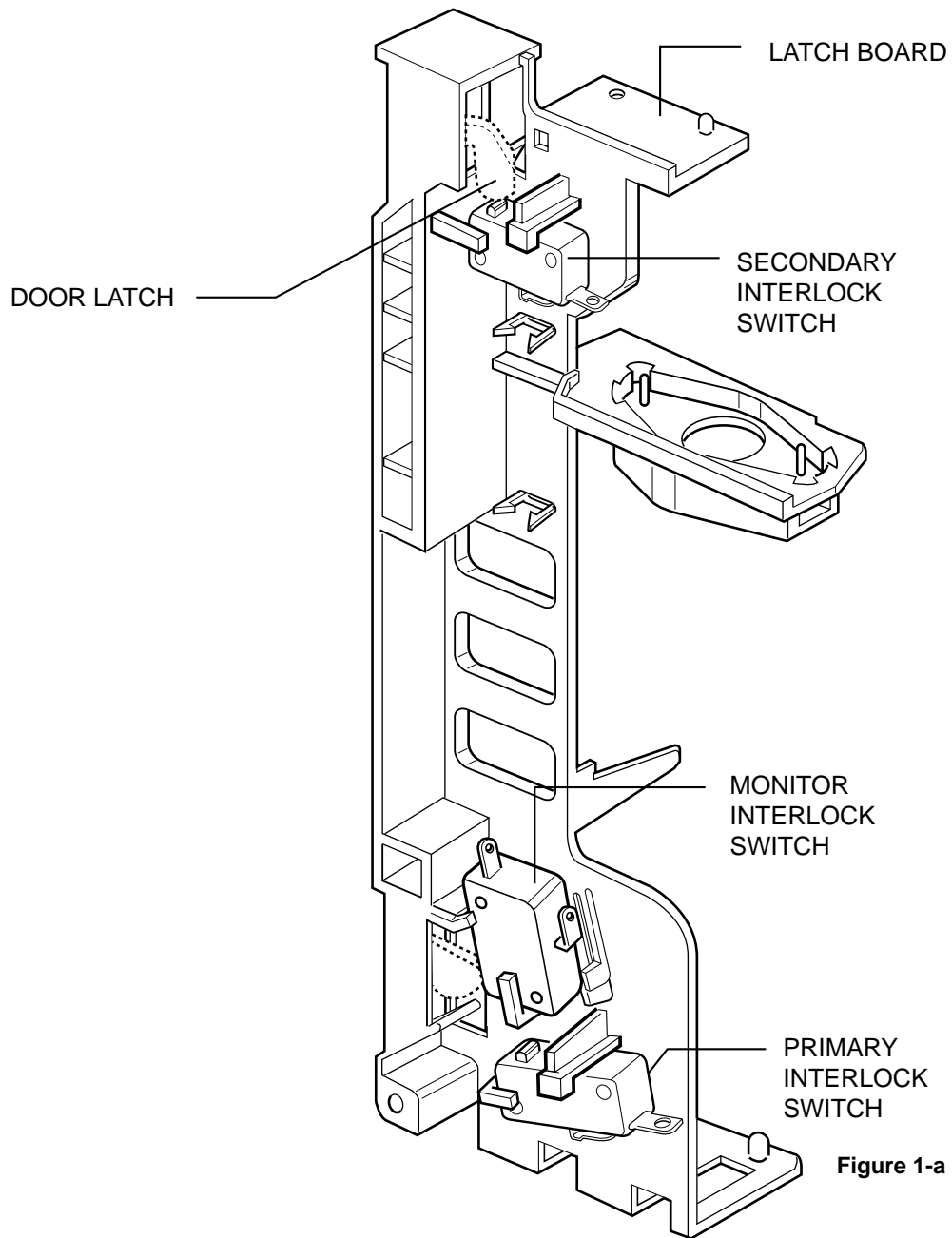
- Interlock Monitor Switch
- Primary Interlock Switch
- Secondary Interlock Switch

NOTE: The Interlock Monitor Switch is an added safety check on the Primary and Secondary Interlock Switches. If the Primary and Secondary Interlock Switches allow the oven to operate with the door open, the Monitor Switch will blow the fuse.

- (7) When you achieve the proper sequence of switches in Steps 5 and 6, tighten the latch board screws at that point.

TEST THE MICROWAVE ENERGY LEAKAGE

- (8) Using a survey meter, make sure the microwave energy is below 5 mW/cm.sq.



2. PRECAUTIONS ON INSTALLATION

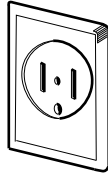
(Figure 2)

- A. Plug the power supply cord into a 120 V AC, 60 Hz, single-phase power source with a capacity of at least 20 amperes.
- B. Since the unit weights about 38 lbs., be sure to place it on a sturdy and flat surface.
- C. Avoid placing the unit in a location where there is direct heat or splashing water.
- D. Place the unit as far away as possible from TV, radio, etc. to prevent interference.

CAUTION

This unit is equipped with a 3-prong plug for your safety. If the wall outlet is a grounded 3-hole type, the unit will be grounded automatically.

Properly Polarized and Grounded Outlet



Three-Pronged(Grounding)
Plug

Figure 2

3. GENERAL PRECAUTIONS IN USE

- A. Never operate the unit when it is empty. Operating the oven with no load may shorten the life of the magnetron. Whenever cooking dry foods (dried fish, bread, etc.) or a small amount of food, be sure to put a glass of water into the cooking compartment. The turntable tray may become hot after operating, be careful when touching it.
- B. Aluminum foil should be avoided because it will disrupt cooking and may cause arcing. However, small pieces may be used to cover some parts of food to slow the cooking. Any aluminum foil used should never be closer than 2.5 cm to any side wall of the oven.

4. TRIAL OPERATION

After installation, the following sequences and results should be checked carefully.

- A. Put a container filled with water (about 1 liter) into the oven, and close the door tightly.
- B. Touch the STOP/CLEAR and the COOK TIME keys. "0" appears in the display window.
- C. Set cooking time for 10 minutes by touching "1" and then "0" three times. "10:00" appears in the display window.
- D. Touch the START key.
Make sure the cavity light comes on. The unit will begin cooking and the display window will show the time counting down by seconds.
- E. After about 5 minutes, make sure the primary interlock switch, the secondary interlock switch and the interlock monitor and oven lamp switch operate properly by opening and closing the door several times. Touch the START key each time the door is closed.
- F. Continue operating the unit. Two short and a long beep sound signal is heard when the time is up. The unit will shut off automatically.
- G. Confirm the water is hot.
- H. Finally, measure the output power according to "POWER OUTPUT MEASUREMENT" on page 13.

5. FEATURES AND SPECIFICATIONS

- A. The safety systems incorporated in this model are:
 - (1) Primary interlock switch
 - (2) Secondary interlock switch
 - (3) Interlock monitor switch
 - (4) Choke system
 - (5) Oven cavity thermostat
(Note: This thermostat located on the oven cavity will open and stop the unit from operation only if a high temperature is reached, such as, a fire created by overcooking food.)
- B. Any one of 10 power output levels ranging 0W to 1200W can be selected by the touch control and electronic computer system.
- C. Cooking time can be displayed on the digital readout.
- D. Three different cooking stages (Include Defrost) can be set. The oven remembers three cooking stages and changes from one cooking stage to another. This is made possible with the memory function of the microprocessor.

SPECIFICATIONS

Rated Power Consumption	1250W maximum
Output	1200W maximum (*IEC 60705 Rating standard) Adjustable 0W through 1200W, 10 steps
Frequency	2,450 MHz \pm 50 MHz
Power Supply	120V \pm 12V AC, 60Hz
Rated Current	11 Amp.
Magnetron Cooling	Forced Air Cooling
Microwave Stirring	Turntable
Rectification	Rectification Voltage Doubler Half-Wave (Inverter type)
Door Sealing	Choke System
Safety Devices	Thermostat: Open at 90 °C \pm 5 °C Close at 75 °C \pm 5 °C Fuse(20A) Primary Interlock Switch Secondary Interlock Switch Interlock Monitor
Magnetron	2M261
Cavity Lamp	125V, 20W
Timer	Digital, up to 99 mm. 99 sec. (in each cooking stage)
Tray	Tempered Safety Glass
Overall Dimensions	20 ³ / ₄ "(W) x 15 ¹ / ₄ "(D) x 19 ¹ / ₄ "(H)
Oven Cavity Size	17 ¹ / ₄ "(W) x 9"(D) x 16 ³ / ₄ "(H)
Effective Capacity of Oven Cavity	1.4 Cu.ft.
Accessories	Owner's Manual & Cooking Guide ,Turntable, Rotating Ring Assembly.

SWITCH CHART

SWITCH MODE	PRIMARY INTERLOCK SWITCH	SECONDARY INTERLOCK SWITCH	INTERLOCK MONITOR SWITCH
CONDITIONS	COM NO	COM NO	COM NC
DOOR OPEN	∞	∞	0
DOOR CLOSED	0	0	∞

NOTE: Use the above switch chart with circuit diagram on page 7.

6. OVERALL CIRCUIT DIAGRAM
 A. SCHEMATIC DIAGRAM

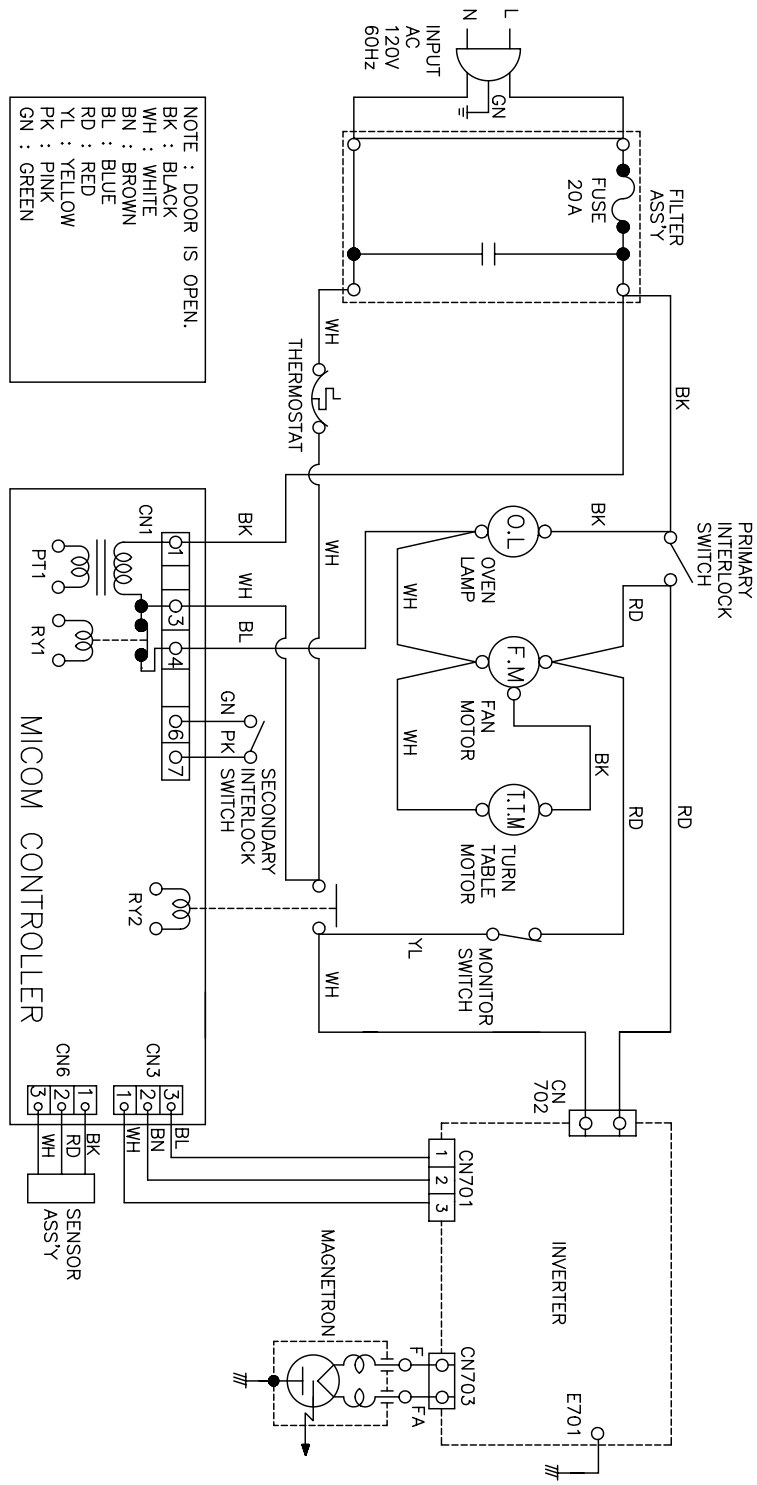


Figure 3

B. MATRIX CIRCUIT FOR TOUCH KEY BOARD

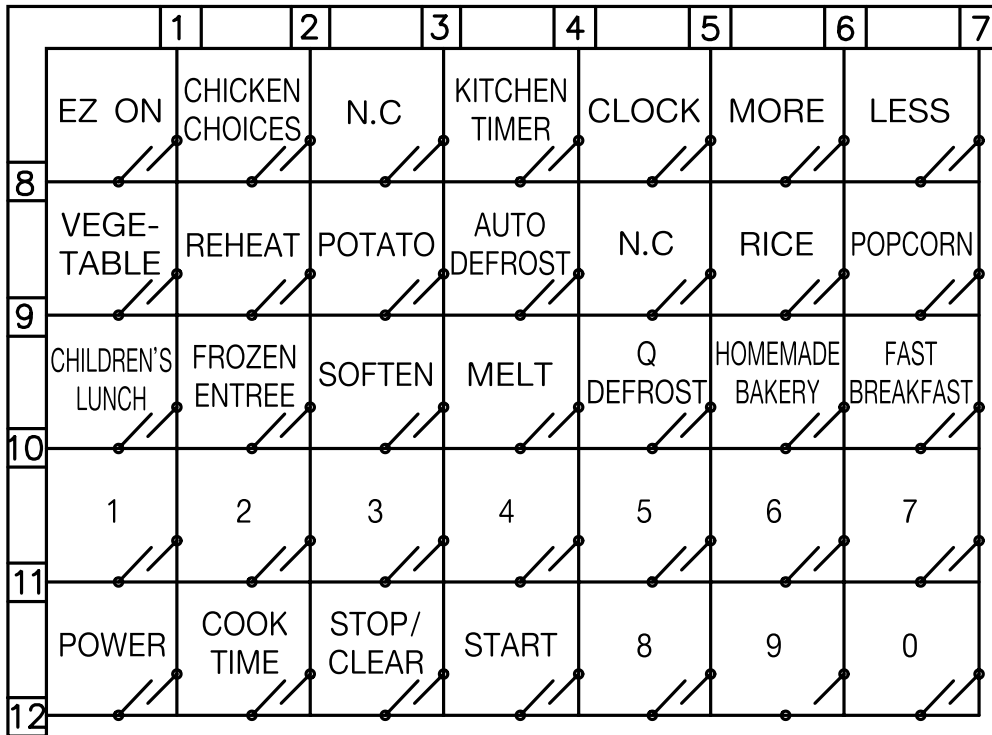


Figure 4

7. OPERATING PROCEDURES

A. CONTROL PANEL

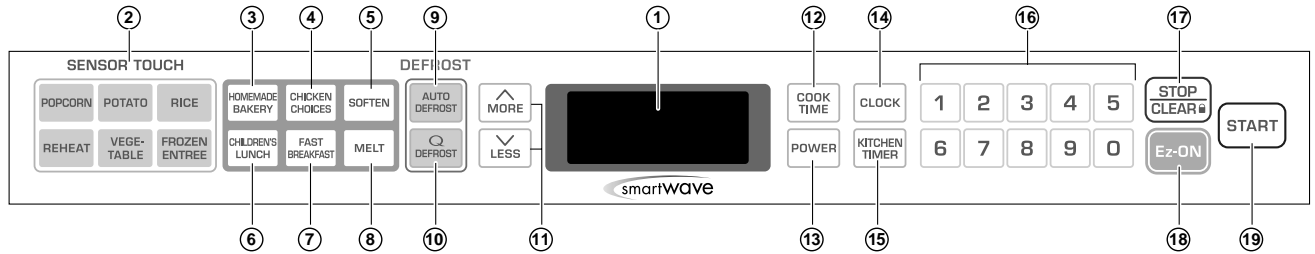


Figure 5.

- 1. Display.** The Display includes a clock and indicators that tell you time of day, cooking time settings, and cooking functions selected.
- 2. Sensor Touch.** This pad allows you to cook most of your favorite foods without having to select cooking times and power levels.
- 3. Homemade Bakery.** Homemade bakery has 3 food categories of preset cooking time and power level.
- 4. Chicken Choices.** Chicken Choices has 4 food categories of preset cooking time and power level.
- 5. Soften.** Touch this pad to soften ice cream, cream cheese, butter or frozen juice.
- 6. Children's Lunch.** Children's Lunch has 3 food categories of preset cooking time and power level.
- 7. Fast Breakfast.** Fast Breakfast has 3 food categories of preset cooking time and power level.
- 8. Melt.** Touch this pad to melt chocolate, cheese, butter or marshmallows.
- 9. Auto Defrost.** This pad is an accurate defrosting method for meat, poultry, fish and bread.
- 10. Q-Defrost.** Touch this pad to defrost foods quickly.
- 11. More / Less.** Touch these pads to adjust cooking time in 10 second increments.
- 12. Cook time.** Touch this pad to set a cooking time.
- 13. Power.** Touch this pad to set a cooking power.
- 14. Clock.** Touch this pad to enter the time of day.
- 15. Kitchen Timer.** Touch this pad to use your microwave oven as a kitchen timer.
- 16. Number pads.** Touch Number pads to enter cooking time, Power level, quantities, or weights.
- 17. Stop/Clear.** Touch this pad to stop the oven or clear entries. Also used to turn Child Lock on and off.
- 18. Ez-ON.** You can extend cooking time in multiples of 30 seconds by repeatedly touching this pad during cooking.
- 19. Start.** Touch this pad to start the oven.

B. PANEL INSTRUCTIONS (Figure 5)

The entire operation is done by simple touch control pads.

(1) Display Window

Numbers and letters explained in Figure 5 are shown in the display window (Vacuum Fluorescent Tube).

- (a) The Time in four digits (12-hour indication): 00 Hour 00 Minute.
- (b) Cooking Time of Day in four digits 00 Minutes 00 Seconds.
- (c) Power Control Level in three digits: P-000
- (d) Each Indicator Light shows which function is set and involved in the course of cooking by turning itself on. Indicator Lights automatically go out upon completion of cooking.

(2) SENSOR COOK key

Use humidity sensor for certain food item.

(3) HOMEMADE BAKERY key

3 food categories of preset cooking time and power level.

(Roll/Muffin, Pancake & French Toast)

(4) CHICKEN CHOICES key

4 food categories of preset cooking time and power level.

(Chicken Wings, Chicken Nuggets, Spicy Chicken & Mexican Chicken)

(5) CHILDREN'S LUNCH key

3 food categories of preset cooking time and power level.

(Hot Dog Buns, Frozen Pizza & Canned Pasta)

(6) FAST BREAKFAST key

3 food categories of preset cooking time and power level.

(Oatmeal, Bacon & Scrambled Eggs)

(7) CLOCK Key

Used in setting Time of Day.

(8) COOK TIME Key

The TIME key is used to set the cooking time. Touch the TIME key and then the number keys that correspond to the desired cooking time. The remaining time is continuously displayed during cooking.

(9) STOP/CLEAR Key

Used to stop the oven or clear all entries except CLOCK.

(10) AUTO DEFROST key (DEFROST MEAT, POULTRY, FISH & BREAD)

Used in setting AUTO DEFROST.

(11) Q DEFROST key

Used in setting QUICK DEFROST.

(12) KITCHEN TIMER Key

Used as a kitchen timer.

(13) POWER Key

Used to select cooking power level.

(14) Ez-ON Key

It will add 30 seconds up to 3 minutes 30 seconds: after 3 minutes 30 seconds, every touch will add 1 minute up to 99 minutes 59 seconds.

(15) START Key

Touch the START key after setting the desired cooking times etc. Also touch the START key to resume cooking after the cooking is temporarily stopped by opening the door. The key will not function unless the door is closed.

(16) Soften

Used to soften ice cream, cream cheese, butter or frozen juice.

(17) Melt

Used to melt chocolate, cheese, butter or marshmallows.

(18) More/Less

Used to adjust cooking time in 10 second increments.

C. EASY USE CHART

(1) CLOCK

1. Touch STOP/CLEAR.
2. Touch CLOCK.
3. Touch numbers for correct time of day.
4. Touch CLOCK.

(2) "HI-POWER" COOKING

1. Touch STOP/CLEAR.
2. Touch COOK TIME.
3. Touch numbers for desired cooking time.
4. Touch START.

(3) "MULTI-STAGE" COOKING

1. Touch STOP/CLEAR.
2. Touch COOK TIME.
3. Touch numbers for cooking time.
4. Touch POWER.
5. Touch number for cooking power level.
6. Repeat steps 2-5 to set 2nd cooking stage.
7. Touch START.

(4) CHILD LOCK

To set:

1. Touch STOP/CLEAR.
2. Hold STOP/CLEAR more than 2 seconds.

To cancel:

1. Touch STOP/CLEAR.
2. Hold STOP/CLEAR more than 2 seconds.

(5) SOFTEN

1. Touch STOP/CLEAR.
2. Touch SOFTEN.
Four different soften menus are provided.
3. Select Menu 1 to 4- See cooking guide.
4. Enter the amount of the Category.

(6) MELT

1. Touch STOP/CLEAR.
2. Touch MELT.
Four different melt menus are provided.
3. Select Menu 1 to 4- See cooking guide.
4. Enter the amount of the Category.

(7) AUTO DEFROST

1. Touch STOP/CLEAR.
2. Touch AUTO DEFROST.
Three different defrosting category are provided.
(MEAT, POULTRY, FISH, BREAD)
3. Enter the weight of your food.
4. Touch START
5. At beeping, turn food over by following the instructions in the manual.
6. After turning food over, touch START to resume defrosting.

(8) Q DEFROST

1. Touch STOP/CLEAR.
2. Touch Q DEFROST.

(9) KITCHEN TIMER

1. Touch STOP/CLEAR.
2. Touch KITCHEN TIMER.
3. Touch correct numbers for time.
4. Touch START.

8. PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

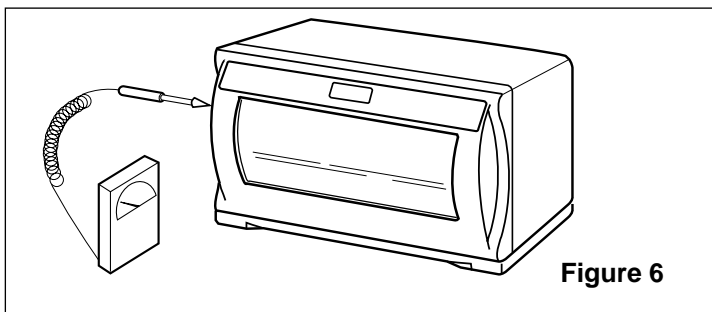
A. CAUTIONS

- (1) Be sure to check a microwave emission prior to servicing the oven if the oven is operative prior to servicing.
 - (2) The service personnel should inform the manufacturer, importer, or assembler of any certified oven unit found to have a microwave emission level in excess of 5mW/cm.sq. and should repair any unit found to have excessive emission levels at no cost to the owner and should ascertain the cause of the excessive leakage. The service personnel should instruct the owner not to use the unit until the oven has been brought into compliance.
 - (3) If the oven operates with the door open, the service personnel should;
 - Tell the user not to operate the oven
 - Contact the manufacturer and CDRH (Center for Devices and Radiological Health) immediately.

NOTE: Address on CDRH
Office of Compliance (HFZ-312)
Center for Devices and Radiological Health
1390 Piccard Drive Rockville, Maryland 20850
 - (4) The service personnel should check all surface and vent openings for microwave emission testing.
 - (5) Check for microwave energy leakage after every servicing. The power density of the microwave radiation leakage emitted by the microwave oven should not exceed 1mW/cm.sq. And always start measuring of an unknown field to assure safety for operating personnel from radiation leakage.
- NOTE:** The standard is 5mW/cm.sq. while in the customer's home. 1mW/cm.sq. stated here is manufacturer's own voluntary standard for units in customer's home.

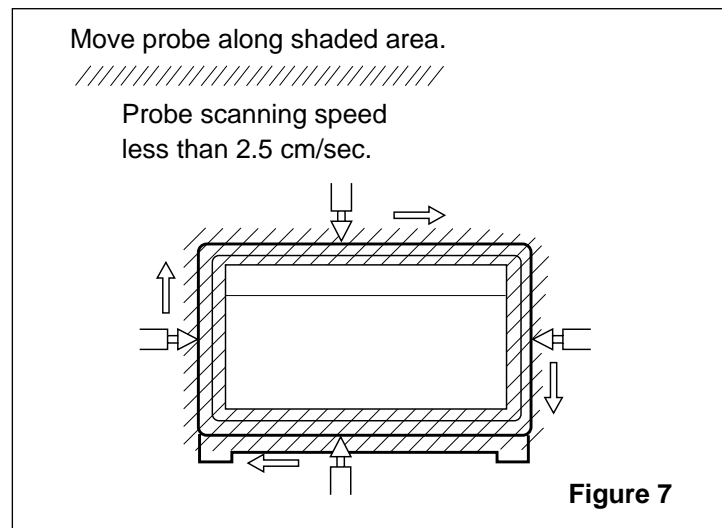
EQUIPMENT

- Electromagnetic energy leakage monitor (NARDA 8100B, HOLADAY HI 1501)
- 600cc glass beaker
- Glass thermometer 100°C



B. MEASURING MICROWAVE ENERGY LEAKAGE

- (1) Pour 275 ± 15 cc of 20 ± 5 °C water in a beaker which is graduated to 600 cc, and place the beaker in the center of the oven.
- (2) Set the energy leakage monitor to 2,450 MHz and use it following the manufacturer's recommended test procedure to assure correct result.
- (3) When measuring the leakage, always use the 2 inch (5 cm) spacer supplied with the probe.
- (4) Operate the oven at its maximum output.
- (5) Measure the microwave radiation using an electromagnetic radiation monitor by holding the probe perpendicular to the surface being measured. (See Figure 7)



C. MEASUREMENT WITH THE OUT CASE REMOVED

- (1) When you replace the magnetron, measure for microwave energy leakage before the outer case is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring the following parts.
 - Around the magnetron
 - The waveguide

WARNING: AVOID CONTACTING ANY HIGH VOLTAGE PARTS.

D. MEASUREMENT WITH A FULLY ASSEMBLED OVEN

- (1) After all components, including the outer panels, are fully assembled, measure for microwave energy leakage around the door viewing window, the exhaust opening and air inlet openings.
- (2) Microwave energy leakage must not exceed the values prescribed below.

NOTES:

Leakage with the outer panels removed - less than 5mW/cm.sq. Leakage for a fully assembled oven (Before the latch switch (primary) is interrupted) with the door in a slightly opened position - less than 1 mW/cm.sq.

E. NOTE WHEN MEASURING

- (1) Do not exceed meter full scale deflection.
- (2) The test probe must be removed no faster than 1 inch/sec (2.5cm/sec) along the shaded area, otherwise a false reading may result.
- (3) The test probe must be held with the grip portion of the handle. A false reading may result if the operator's hand is between the handle and the probe.
- (4) When testing near a corner of the door, keep the probe perpendicular to the surface making sure the probe horizontally along the oven surface, this may possibly cause probe damage.

F. RECORD KEEPING AND NOTIFICATION AFTER MEASUREMENT

- (1) After adjustment and repair of any microwave energy interruption or microwave energy blocking device, record the measured values for future reference. Also enter the information on the service invoice.
- (2) Should the microwave energy leakage not be more than 1mW/cm.sq. after determining that all parts are in good condition, functioning properly and genuine replacement parts which are listed in this manual have been used.
- (3) At least once a year, have the electromagnetic energy leakage monitor checked for calibration by its manufacturer.

G. POWER OUTPUT MEASUREMENT

**Be sure oven cavity is clean and cool .
(not used recently)**

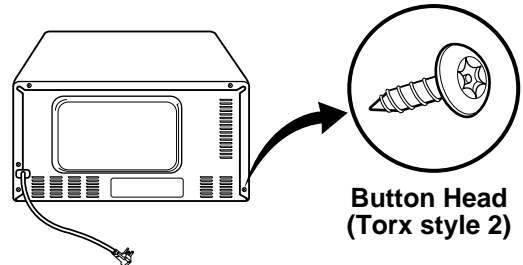
- (1) Fill the test beaker with 59 °F(15 °C) ~ 75 °F(24 °C) 1 liter tap water.
- (2) Stir the water in the beaker with thermometer (°F or °C) and measure temperature as T1.
- (3) Place the beaker on the center of turntable.
- (4) Set for one (1) minute.
- (5) When the heating is finished, stir the water again with thermometer and measure the temperature of water as T2.
- (6) Subtract T1 from T2, this will give you the temperature rise.
- (7) The microwave power output is within specification, if the temperature rise is as shown below:

Voltage (VAC under load)	Temperature Rise	
	°C	°F
120V	13 - 15	23.4 - 27
108V	11.5 - 13.5	20.7 - 24.3

- (8) Power output will be influenced by line voltage of power supply. Consequently, correct power output must be measured within 120V AC \pm 1 Volt while unit is operating.

SPECIAL TIP

- This oven used the button head screws.



- When you remove the screws, using the tamper-resistant Torx driver have a pin-in-head.

9. DISASSEMBLY INSTRUCTIONS

IMPORTANT NOTES:

UNIT MUST BE DISCONNECTED FROM ELECTRICAL OUTLET WHEN MAKING REPAIRS, RE-PLACEMENTS, ADJUSTMENTS AND CONTINUITY CHECKS. WAIT AT LEAST ONE MINUTE, UNTIL THE HIGH VOLTAGE CAPACITOR IN THE HIGH VOLTAGE POWER SUPPLY HAS FULLY DISCHARGED.

THE CAPACITOR SHOULD BE DISCHARGED BY USING INSULATED WIRE - I.E. TEST PROBE CONNECTED TO 10K-OHM RESISTOR IN SERIES TO GROUND.

WHEN RECONNECTING THE WIRE LEADS TO ANY PART, MAKE SURE THE WIRING CONNECTIONS AND LEAD COLORS ARE CORRECTLY MATCHED ACCORDING TO THE OVERALL CIRCUIT DIAGRAM. (ESPECIALLY SWITCHES AND HIGH VOLTAGE CIRCUIT.)

A. REMOVING OUT CASE (Figure 8)

- (1) Unfasten five screws from the rear section.
- (2) Unfasten two screws from the side section.
- (3) Push the out case back about 1 inch (3cm).
- (4) Lift the case from the set.

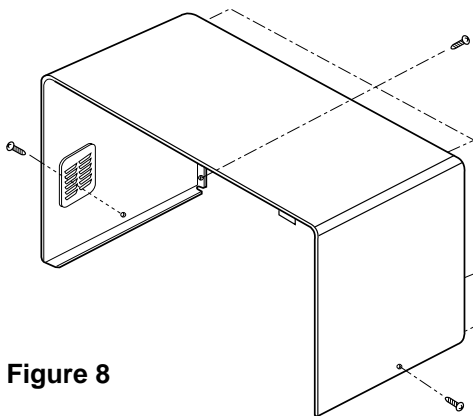


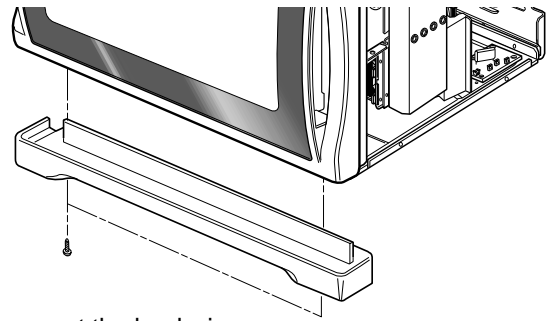
Figure 8

B. DOOR ASSEMBLY REMOVAL (Figure 9)

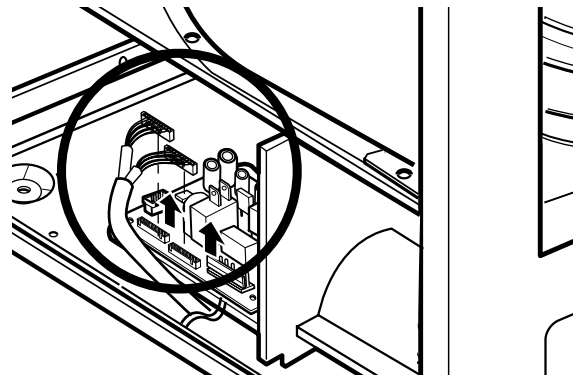
- (1) Remove out case.
- (2) Unfasten two screws for removing deco front.
- (3) Disconnect the lead wires from main board and pull that out from the cavity.
- (4) Remove the choke cap very carefully with a flat-blade screw driver.
- (5) Lift up and pull out Door assembly carefully from the cavity.

CAUTION: Be careful not to damage door seal plate with the screw driver.

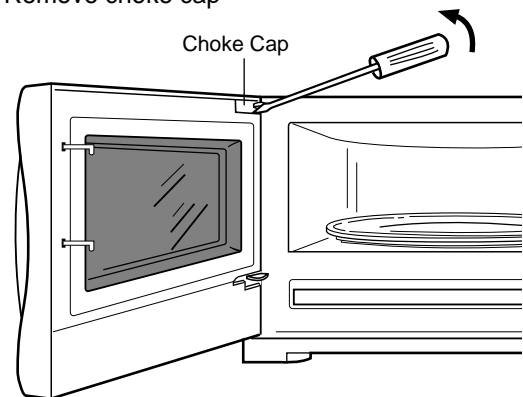
Remove deco front



Disconnect the lead wires



Remove choke cap



Remove door

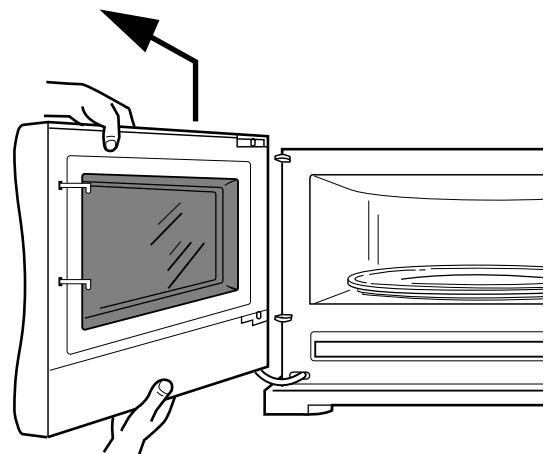
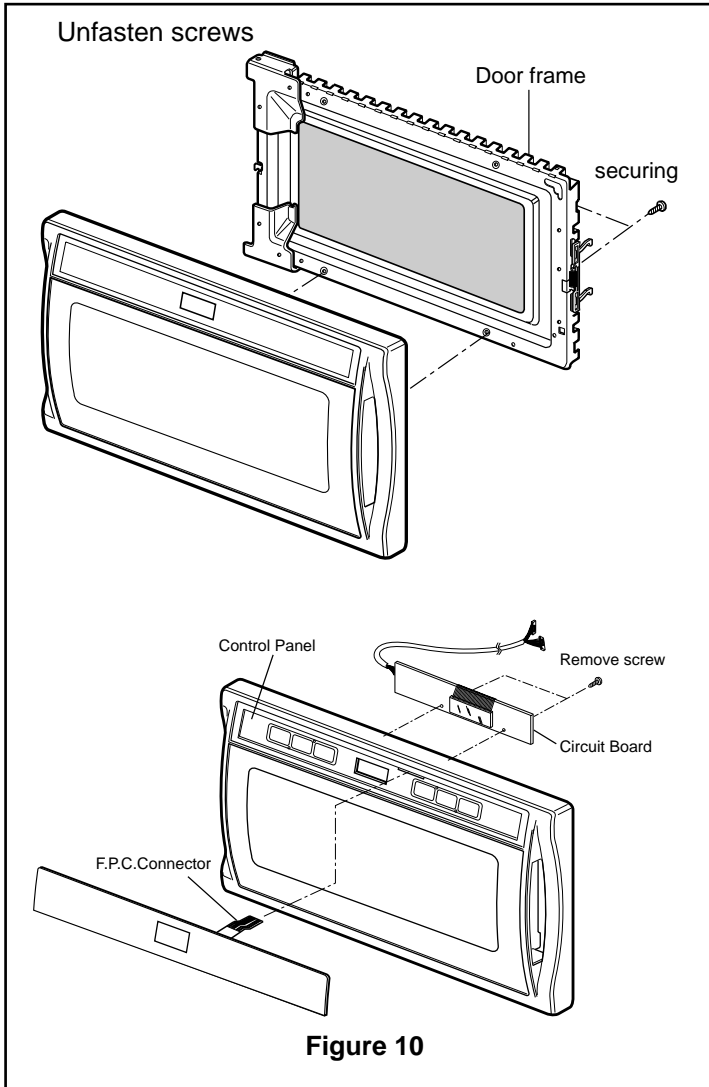


Figure 9

C. REMOVING CONTROL CIRCUIT BOARD (Figure 10)

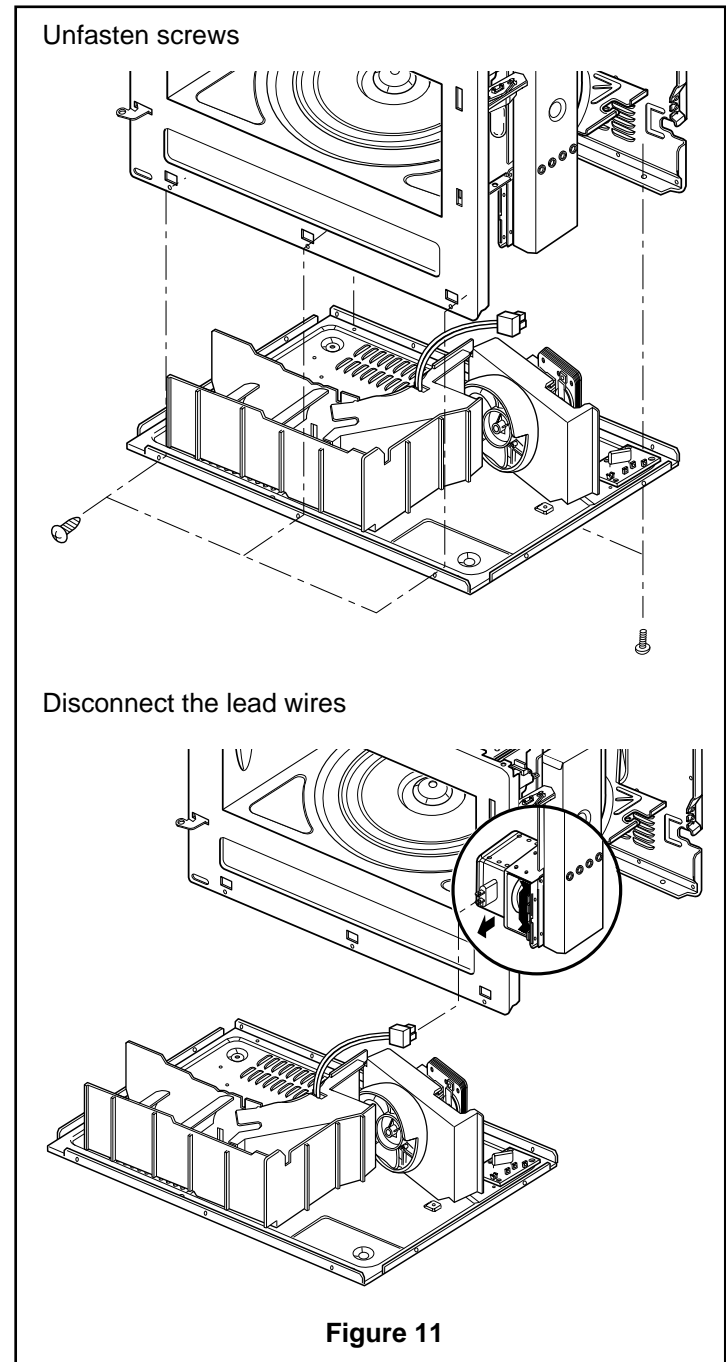
- (1) Remove out case.
- (2) Remove door assembly.
- (3) Unfasten two screws.
- (4) Lift up and pull out control panel assembly carefully from the cavity.
- (5) Remove door frame.
- (6) Remove the F.P.C connector from the terminal socket.
- (7) Unfasten two screws which tighten the circuit board.
- (8) Remove control circuit board from the door panel assembly.



D. SEPARATE CAVITY AND BASE PLATE (Figure 11)

- (1) Remove out case.
- (2) Remove Door Assembly.
- (3) Remove five screws at the base plate.
(Front 3 EA, Back 2 EA).
- (4) Disconnect the lead wires from filter.
- (5) Disconnect all the lead wires from main board.
- (6) Disconnect the MGT high voltage lead wire and turn table motor lead wire.
- (7) Lift up the cavity and disconnect the fan motor lead wire.

CAUTION: BE CAREFUL NOT TO DAMAGE LEAD WIRE.

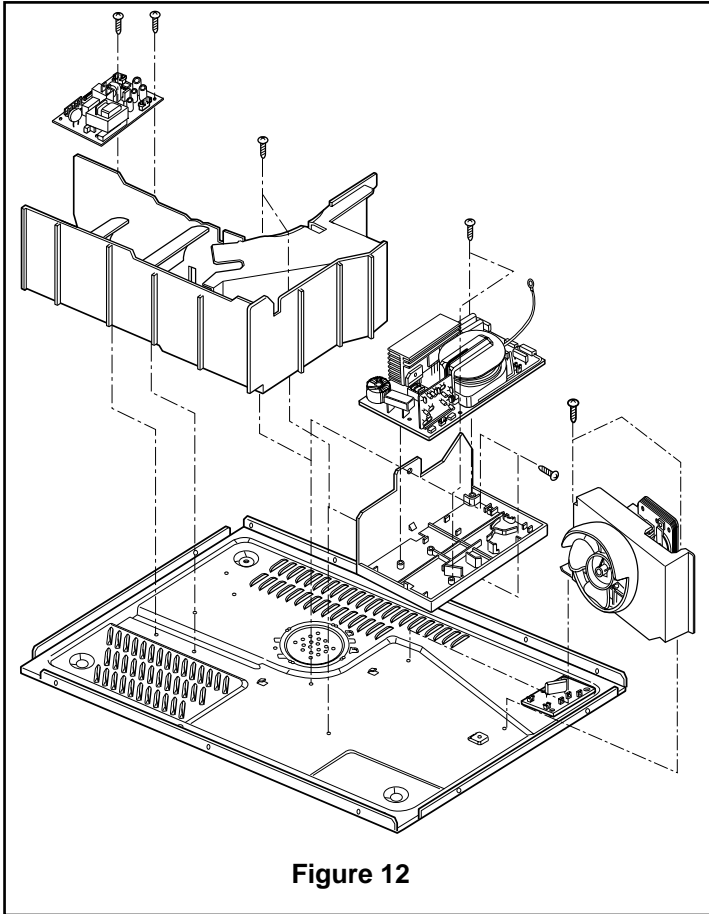


E. AIR GUIDE REMOVAL (Figure 12)

- (1) Separate cavity and base plate.
- (2) Unfasten the screws which hold the air guide in the base plate.
- (3) Unfasten the air guide from hook.

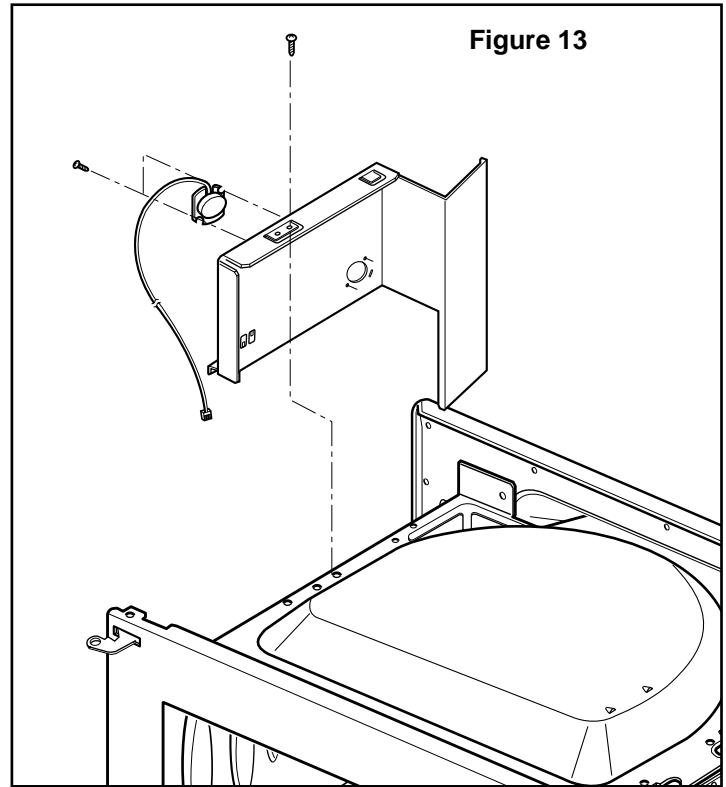
F. POWER BOARD AND INVERTER MODULE AND SUCTION GUIDE (Figure 12)

- (1) Separate cavity and base plate.
- (2) Remove air guide.
- (3) Unfasten the screws.
- (4) Lift up the power board, inverter module and suction guide.



G. SENSOR DUCT REMOVAL (Figure 13)

- (1) Remove out case.
- (2) Unfasten the sensor duct screw.
- (3) Disconnect sensor lead wire.
- (4) Pull the sensor duct out.



H. MAGNETRON REMOVAL

- (1) Disconnect the leadwire from the magnetron.
- (2) Carefully remove the mounting screws holding the magnetron at the waveguide.
- (3) Remove the magnetron from the waveguide.

NOTE:

1. When removing the magnetron, make sure its dome does not hit any adjacent parts, or it may be damaged.
2. When replacing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.
3. After replacing the magnetron, check for microwave leakage with a survey meter around the magnetron. Microwave energy must be below the limit of 5 mW/cm². (With a 275 ml. water load).

Make sure that gasket is rigidly attached to the magnetron. To prevent microwave leakage, tighten the mounting screws properly, making sure there is no gap between the waveguide and the magnetron.

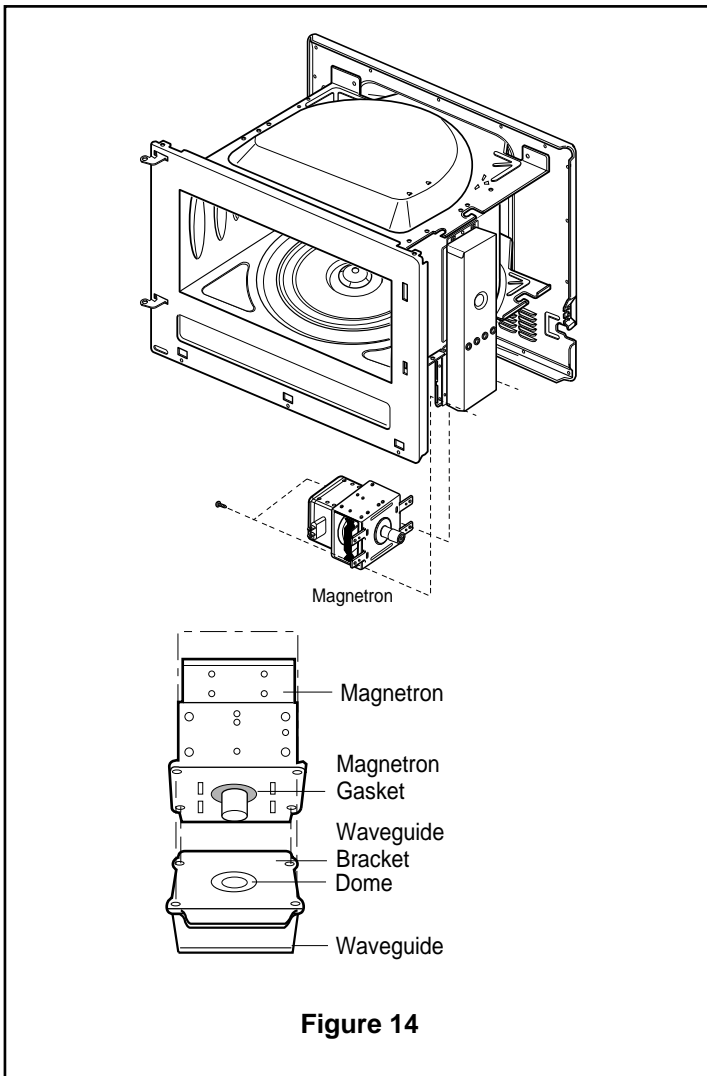


Figure 14

I. REMOVING THE TURNTABLE MOTOR

- (1) Remove the turntable and turntable roller rest.
- (2) Lay the unit down on its back.
- (3) Remove the turntable motor cover. The turntable base cover is easily removed by pinching the four parts with a wire cutting.
- (4) Disconnect the leadwire from the turntable motor terminals.
- (5) Remove the screw securing the turntable motor to the oven cavity ASSEMBLY.
- (6) After repairing the motor, rotate the removed turntable motor cover.
- (7) Fit the turntable motor cover's projecting part to the base plate slit.

NOTE:

1. Remove the lead wires from the turntable motor VERY CAREFULLY.
2. Be sure to grasp the connector, not the wires, when removing.

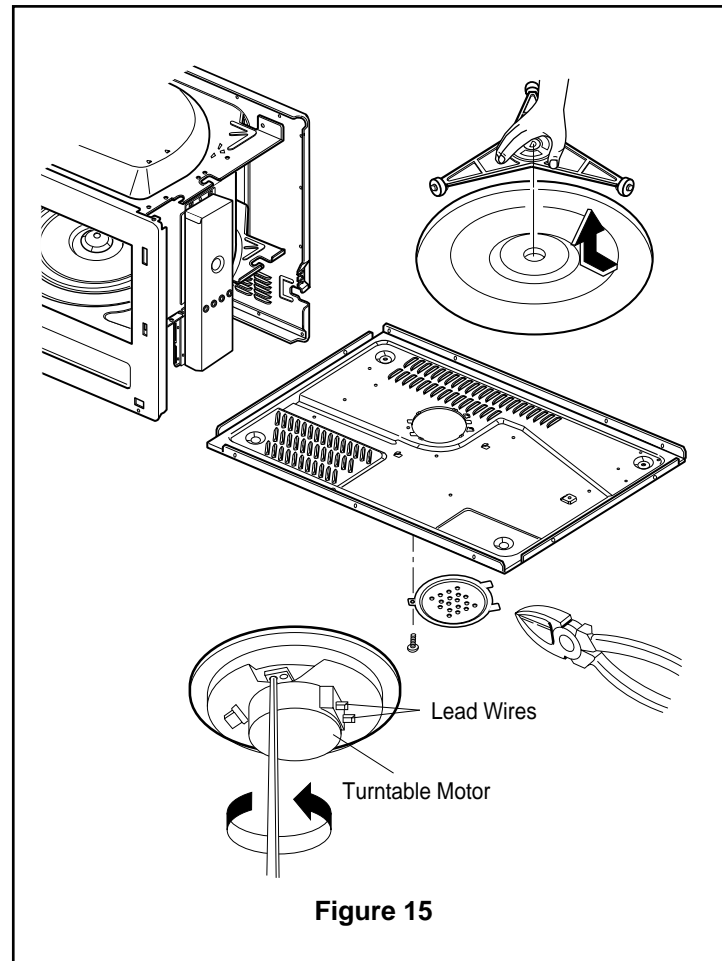
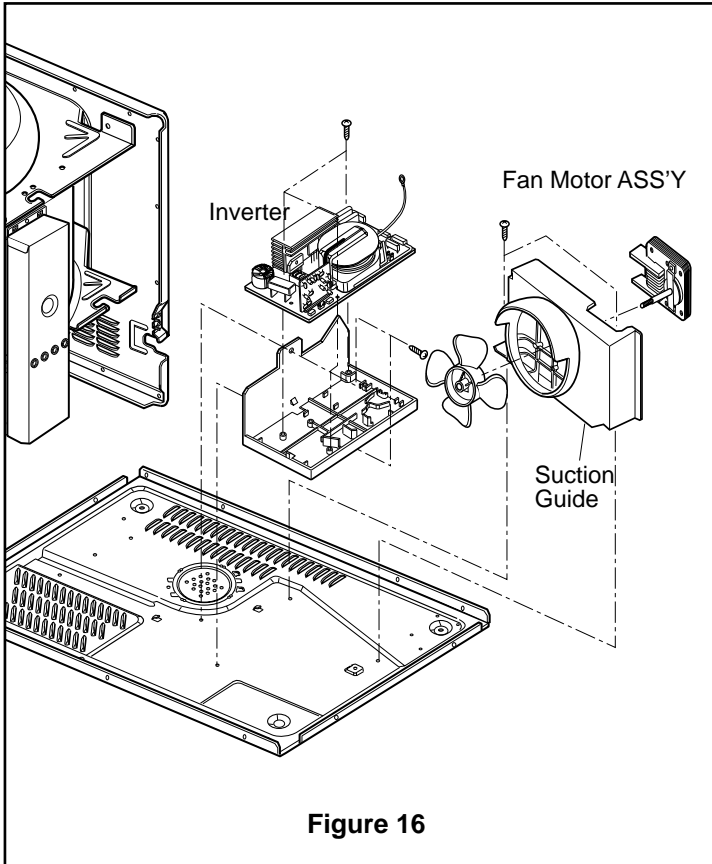


Figure 15

J. FAN MOTOR ASSEMBLY REMOVAL

- (1) Separate cavity and base plate.
- (2) Remove air and suction guide..
- (3) Remove the two screws holding the fan motor ASSEMBLY to the suction guide ASSEMBLY.
- (4) Disconnect the wires and unfasten the screws.
- (5) Pull out the Fan motor from the suction guide.



K. INTERLOCK SYSTEM

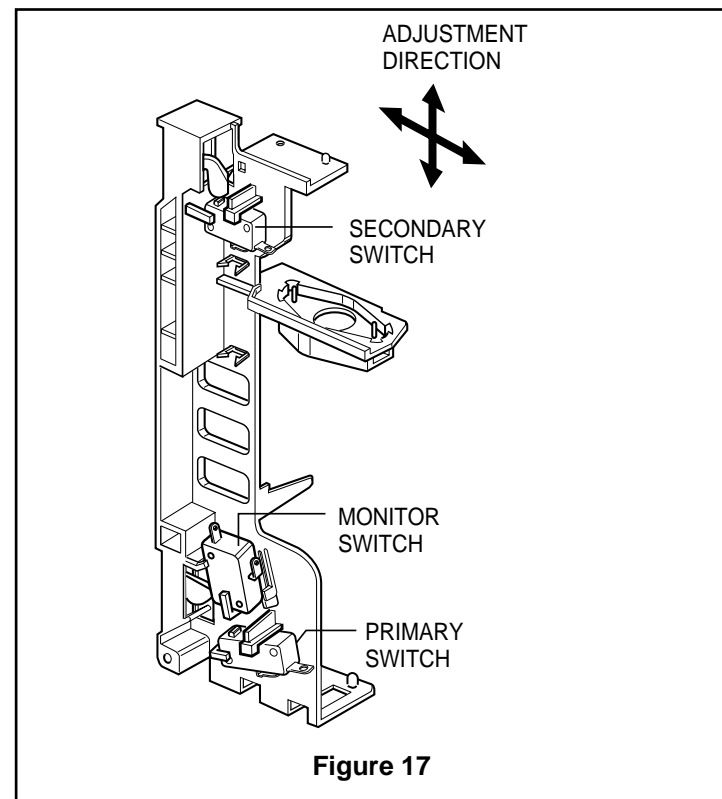
(1) INTERLOCK MECHANISM

The door lock mechanism is a device which has been specially designed to eliminate completely microwave activity when the door is opened during cooking and thus to prevent the danger resulting from the microwave leakage.

- (2) MOUNTING OF THE PRIMARY/MONITOR/SECONDARY SWITCHES TO THE LATCH BOARD
- (3) INSTALLATION AND ADJUSTMENT OF THE LATCH BOARD TO THE OVEN ASSEMBLY

- Mount the latch board to the oven assembly.
- Adjust the latch board in the arrow direction so that oven door will not have any play in it when the door is closed.
- Tighten the mounting screw.
- **Check for play in the door by pushing the door release button. Door movement should be less than 0.5 mm. (1/64 inch)**

Don't push the door release button while making this adjustment. Make sure that the latch moves smoothly after adjustment is completed and that the screws are tight. Make sure the primary, monitor, and secondary switches operate properly by following the continuity test procedure.



10. INTERLOCK CONTINUITY TEST

WARNING : FOR CONTINUED PROTECTION AGAINST EXCESSIVE RADIATION EMISSION, REPLACE ONLY WITH IDENTICAL REPLACEMENT PARTS.

TYPE NO. SZM-V 16-FA-63 OR VP-533A-OF OR V-5230Q FOR PRIMARY SWITCH
 TYPE NO. SZM-V 16-FA-62 OR VP-532A-OF OR V-5220Q FOR MONITOR SWITCH
 TYPE NO. SZM-V 16-FA-63 OR VP-533A-OF OR V-5230Q FOR SECONDARY SWITCH

A. PRIMARY INTERLOCK SWITCH TEST

When the door release button is depressed slowly with the door closed, an audible **click** should be heard at the same time or successively at intervals. When the button is released slowly, the latches should activate the switches with an audible **click**.

If the latches do not activate the switches when the door is closed, the switches should be adjusted in accordance with the adjustment procedure. Disconnect the wire lead from the primary switch. Connect the ohmmeter leads to the common (COM) and normally open (NO) terminal of the switch. The meter should indicate an open circuit in the door open condition. When the door is closed, the meter should indicate a closed circuit.

When the primary switch operation is abnormal, make the necessary adjustment or replace the switch only with the same type of switch.

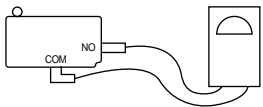


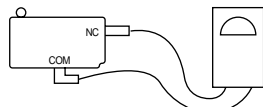


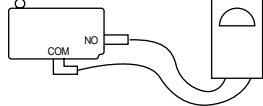


B. SECONDARY INTERLOCK SWITCH TEST

Disconnect the wire lead from the secondary switch. Connect the ohmmeter leads to the common (COM) and normally open (NO) terminals of the switch. The meter should indicate a open circuit in the door open condition. When the door is closed, meter should indicate an closed circuit. When the secondary switch operation is abnormal, make the necessary adjustment or replace the switch only with the same type of switch.

C. MONITOR SWITCH TEST

Disconnect the wire lead from the monitor switch. Connect the ohmmeter leads to the common (COM) and normally closed (NC) terminals of the switch. The meter should indicate closed circuit in the door open condition. When the door is closed, meter should indicate an open circuit. When the monitor switch operation is abnormal, replace with the same type of switch.

NOTE: After repairing the door or the interlock system, it is necessary to do this continuity test before operating the oven.

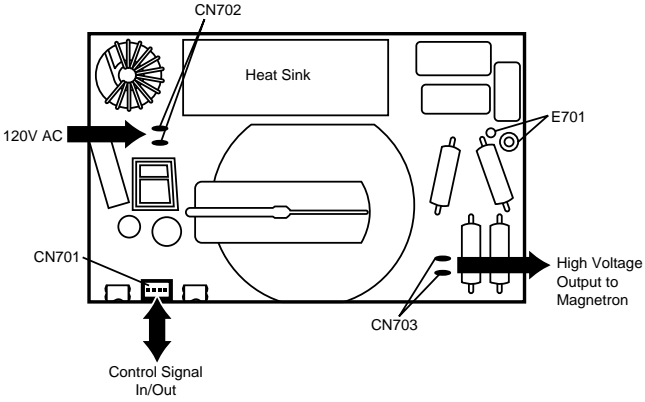
COMPONENTS	TEST PROCEDURE		RESULTS	
SWITCHES (Lead wires removed)	Check for continuity of the switch with an Ohm-meter		Door open	Door closed
	Primary Switch			
	Monitor Switch			
	Secondary Switch			
<p>NOTE : After checking for the continuity of switches, make sure that they are connected correctly.</p>				

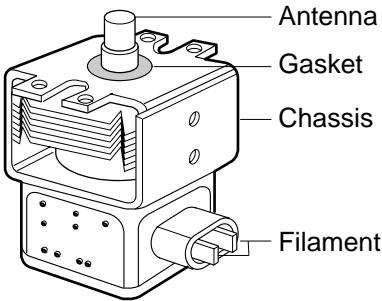
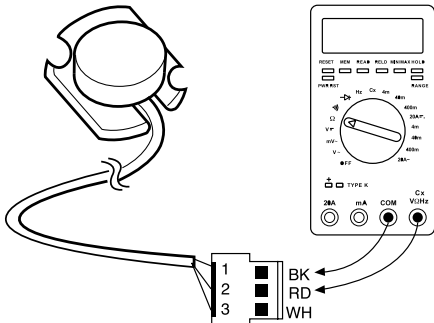
11. TEST AND CHECKOUT PROCEDURES, AND TROUBLESHOOTING

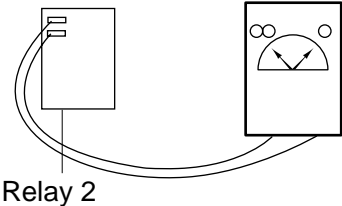
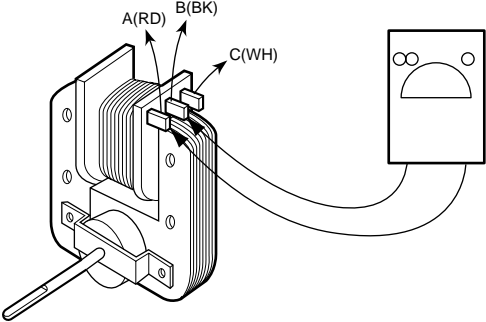
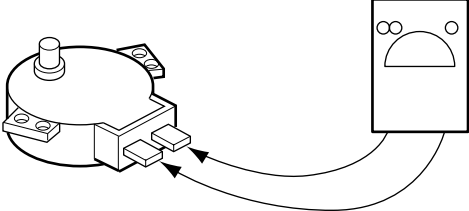
CAUTIONS

1. DISCONNECT THE POWER SUPPLY CORD FROM THE OUTLET WHENEVER REMOVING THE OUTER CASE FROM THE UNIT. PROCEED WITH THE TEST ONLY AFTER DISCHARGING THE HIGH VOLTAGE CAPACITOR AND REMOVING THE LEAD WIRES FROM THE INVERTER MODULE.
2. ALL OPERATIONAL CHECKS WITH MICROWAVE ENERGY MUST BE DONE WITH A LOAD (1 LITER OF WATER IN CONTAINER) IN THE OVEN.

A. TEST PROCEDURES

COMPONENTS	TEST PROCEDURE	RESULTS
<p>INVERTER (Lead wires removed)</p>	 <p>Note: Do not try to repair the inverter board, nor try to make any adjustments to the board.</p> <p>Check wiring to the inverter:</p> <ol style="list-style-type: none"> 1. Unplug the oven's main power supply. 2. Visually inspect 4 connectors on the inverter board: CN701, CN702, CN703, E701 to see whether there are any signs of failure due to loose wires, bad crimping, sign of overheating, etc. 	
<p>MAGNETRON (Lead wires removed)</p>	<ol style="list-style-type: none"> 1. Measure the resistance. (Ohm-meter scale: Rx1) • Filament terminal 2. Measure the resistance. (Ohm-meter scale: Rx1000) • Filament to chassis 	<p>Normal: Less than 1 ohm</p> <p>Normal: Infinite</p>

COMPONENTS	TEST PROCEDURE	RESULTS
	 <p data-bbox="531 561 1469 625">NOTE: When testing the magnetron, be sure to install the magnetron gasket in the correct position and be sure that the gasket is in good condition.</p>	
<p data-bbox="100 655 215 683">SENSOR</p>	<ol data-bbox="547 672 1046 800" style="list-style-type: none"> 1. Disconnect sensor connector from micom computer board. 2. Measure resistance terminal to terminal (Select the ohm scale on the meter)  <p data-bbox="547 1253 1066 1442">NOTE: MAKE SURE THE LEAD WIRES ARE IN THE CORRECT POSITION. WHEN REMOVING THE LEAD WIRES FROM THE PARTS, BE SURE TO GRASP THE CONNECTOR, NOT THE WIRES.</p>	<p data-bbox="1150 672 1410 768">Normal: Approximately BK-RD: 5.2 Kohms RD-WH: 2.1 Kohms BK-WH: 2.1 Kohms</p> <p data-bbox="1150 804 1347 859">Abnormal: Infinite or several</p> <p data-bbox="1150 895 1449 923">*Sensor cooking condition</p> <ol data-bbox="1150 932 1517 1315" style="list-style-type: none"> 1. Oven should be plugged in at least 5 minutes before sensor cooking. 2. Room temperature should not exceed 95° F. 3. Be sure the exterior of the cooking container and the interior of the oven are dry. 4. The oven will not generate microwave energy for the first 28 seconds of the sensor cooking cycle.

COMPONENTS	TEST PROCEDURE	RESULTS
<p>RELAY</p>	<p>Check for continuity of relay with an ohm-meter. (Remove lead wires from relay and operate the unit.)</p> 	<p>Normal: Approx. ON: 0 ohm OFF: ∞ ohms Abnormal: Infinite or several ohms.</p>
<p>FAN MOTOR (Wire leads removed)</p>	<p>Measure the resistance. (Ohm-meter scale: R x 100)</p> 	<p>Normal: Approx. 50 ~ 150 ohms Abnormal: Infinite or several ohms.</p>
<p>TURNTABLE MOTOR (Wire leads removed)</p>	<p>Measure the resistance. (Ohm-meter scale: R x 1000)</p> 	<p>Normal: Approx. 2 ~ 4K ohms Abnormal: Infinite or several ohms.</p>
<p>NOTE : • A MICROWAVE LEAKAGE TEST MUST ALWAYS BE PERFORMED WHEN THE UNIT IS SERVICED FOR ANY REASON. • MAKE SURE THE WIRE LEADS ARE IN THE CORRECT POSITION. • WHEN REMOVING THE WIRE LEADS FROM THE PARTS, BE SURE TO GRASP THE CONNECTOR, NOT THE WIRES.</p>		

B. CHECKOUT PROCEDURES

(1) CHECKOUT PROCEDURES FOR FUSE BLOWING

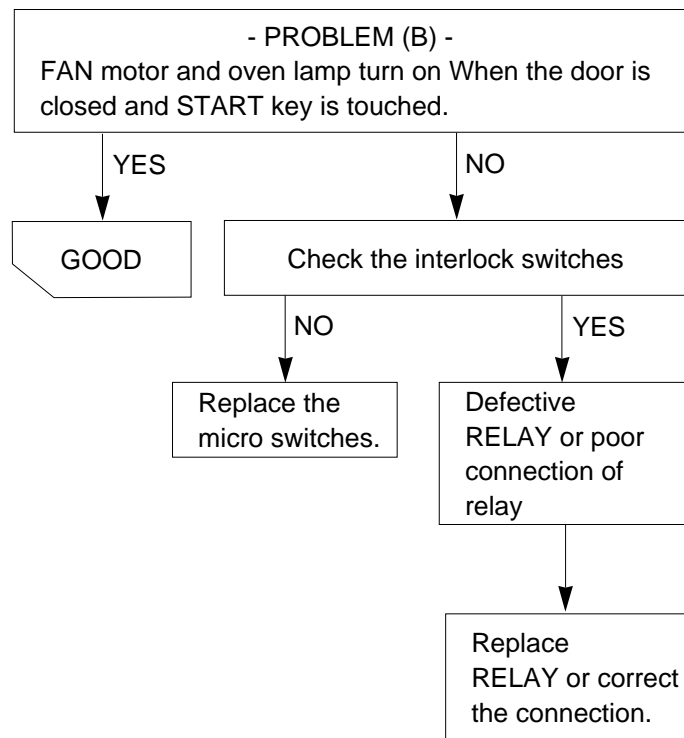
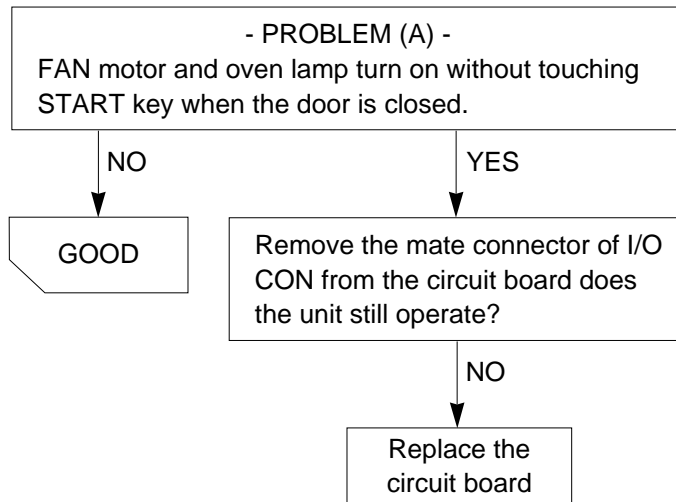
CAUTION: REPLACE BLOWN FUSE WITH 20 AMPERE FUSE.

PROBLEMS	CAUSES
Fuse blows immediately after the door is closed.	Improper operation of the primary interlock, secondary interlock switches and/or the interlock monitor switch.
Fuse blows immediately after the door is opened.	
Fuse blows when the door is closed and START key is touched.	Malfunction of the Inverter, the magnetron, the fan motor or the circuit board.

NOTES:

- If the fuse is blown by an improper switch operation, replace the defective switches and the fuse at the same time. After replacing the defective switches with new ones, make sure that they are correctly connected.
- Check for microwave energy leakage according to "1. ADJUSTMENT PROCEDURES" on page 3, when the primary interlock, secondary interlock switches and/or the interlock monitor switches are adjusted or replaced.

(2) CHECKOUT PROCEDURES FOR RELAY



(3) CHECKOUT PROCEDURES FOR CIRCUIT BOARD

The following symptoms indicate a defective circuit board.

- (1) Check the input current. If the input current is more than 20A, check the magnetron and wiring. If the input current is less than 0.5 A, there is no input to the inverter.
- (2) The start function fails to operate but the interlock switches, the door sensing and the relay check good.
- (3) The unit with a normal relay continuously operates.
- (4) The buzzer does not sound or continues to sound.
- (5) Some segments of one or more digits do not light up, or they continue to light up, or segments light when they should not.
- (6) Wrong figures appear.
- (7) The figures of all digits flicker.
- (8) Some of the indicators do no light up.
- (9) The clock does not keep time properly.

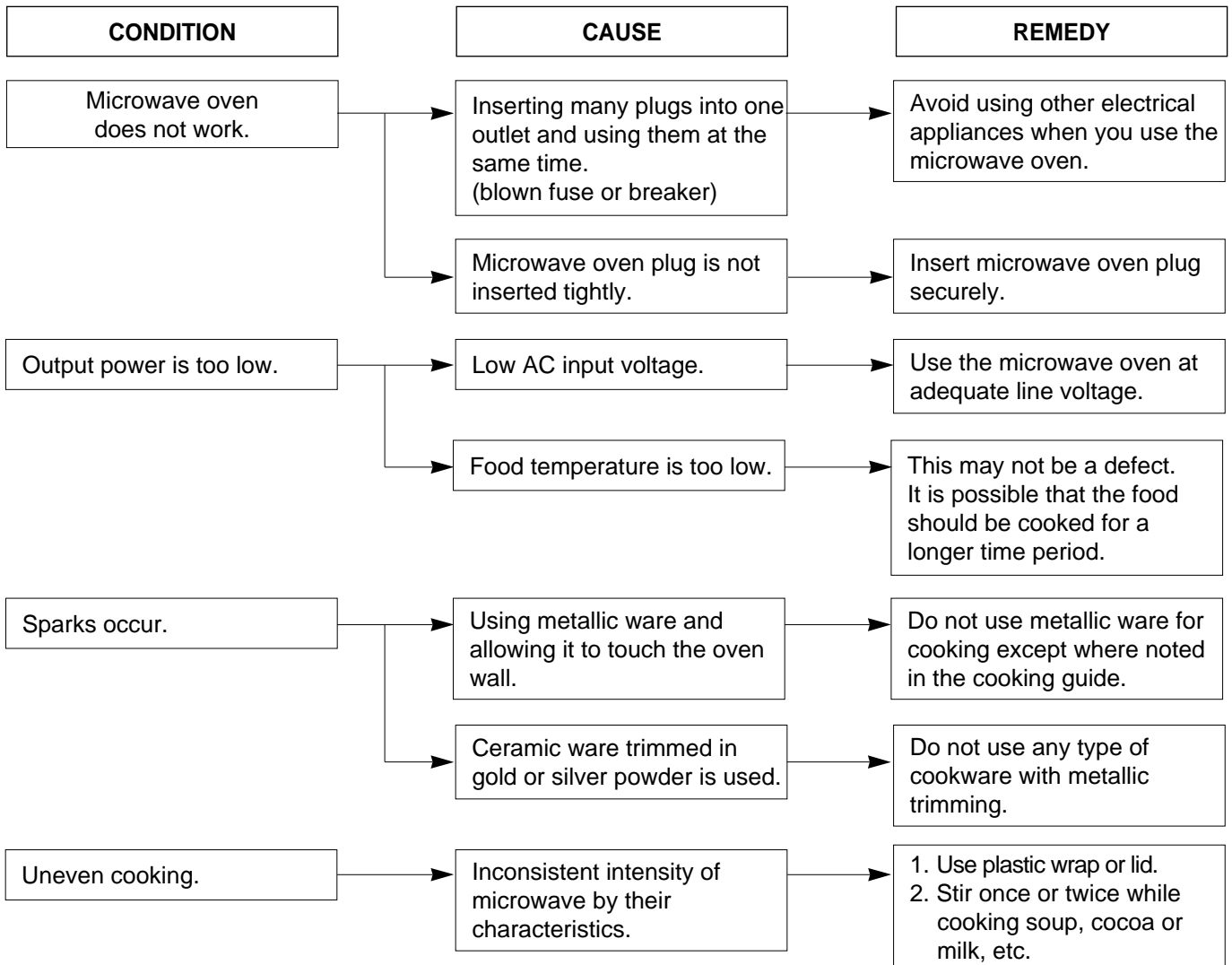
NOTE: A MICROWAVE ENERGY LEAKAGE TEST MUST ALWAYS BE PERFORMED WHEN THE UNIT IS SERVICED FOR ANY REASON.

C. TROUBLE SHOOTING

WHEN YOU GET A COMPLAINT FROM YOUR CUSTOMER, EVALUATE THE COMPLAINT CAREFULLY. IF THE FOLLOWING SYMPTOMS APPLY, PLEASE INSTRUCT THE CUSTOMER IN THE PROPER USE OF THE MICROWAVE OVEN. THIS CAN ELIMINATE AN UNNECESSARY SERVICE CALL.

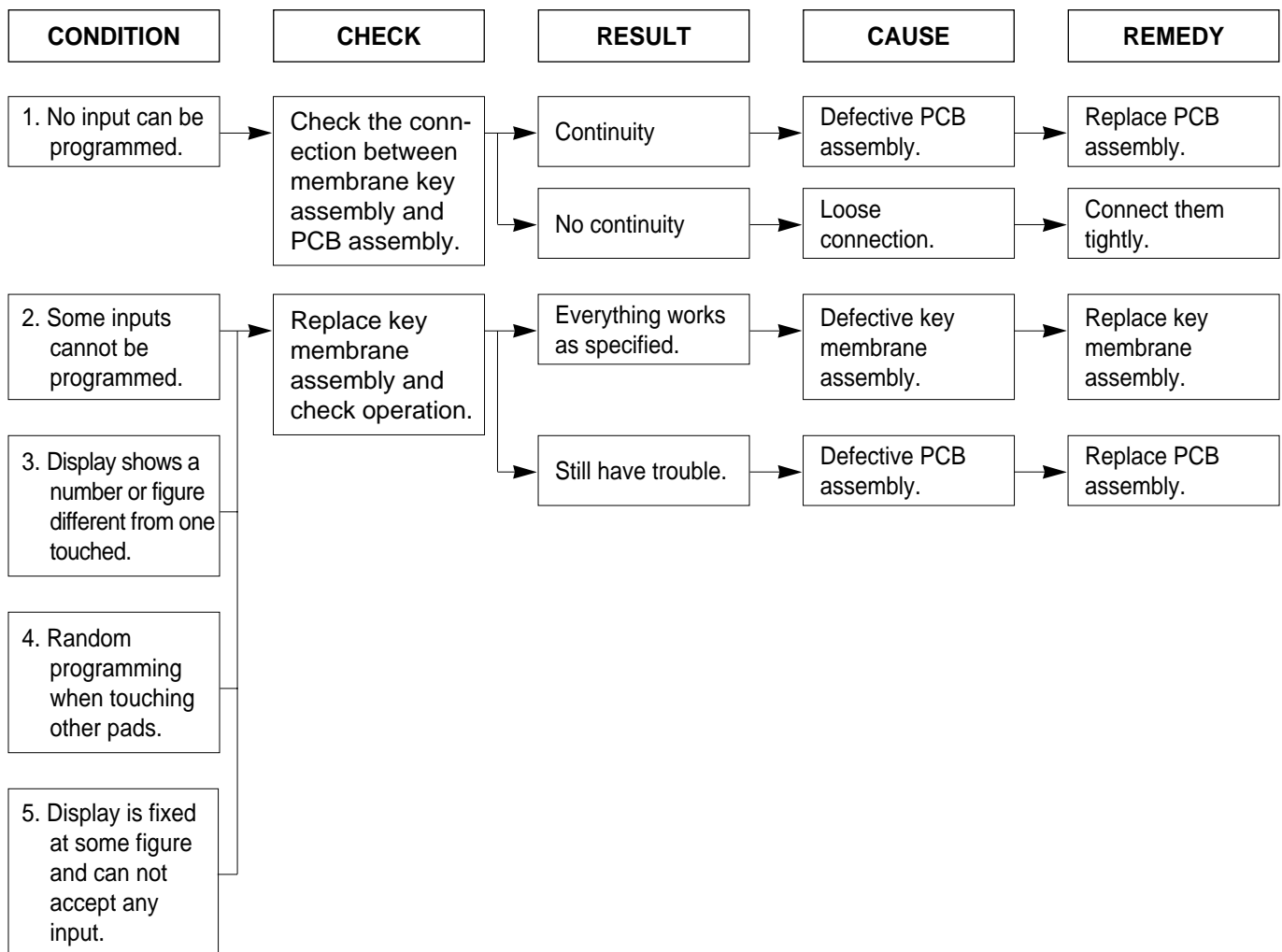
CAUTIONS

1. Check grounding before checking for trouble.
2. Be careful of the Inverter.
3. When checking the continuity of the switches or of the inverter, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
4. Do not touch any part of the circuit on the PCB 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. (Micom model only)

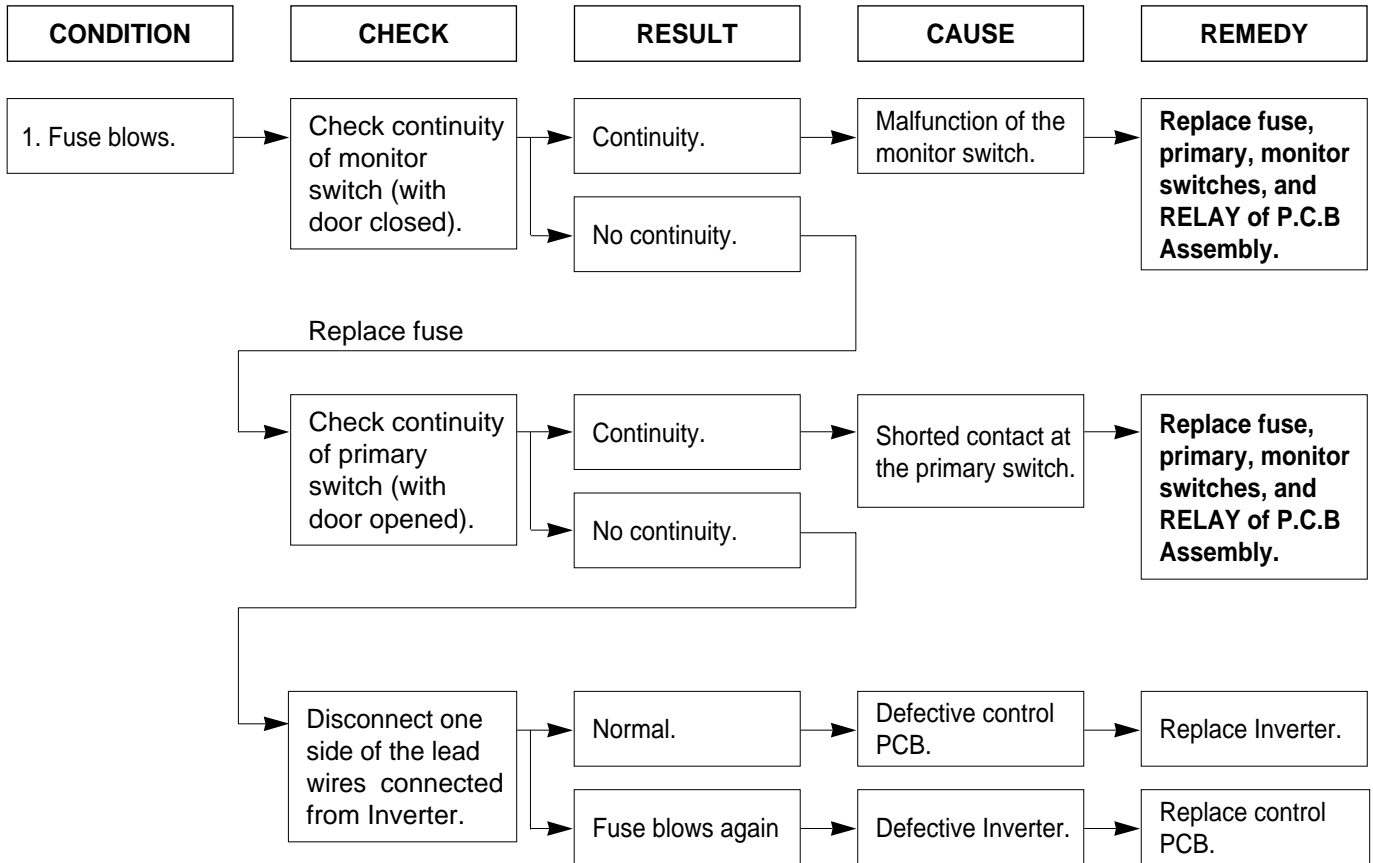


(TROUBLE 1) The following visual conditions indicate a probable defective control circuit.

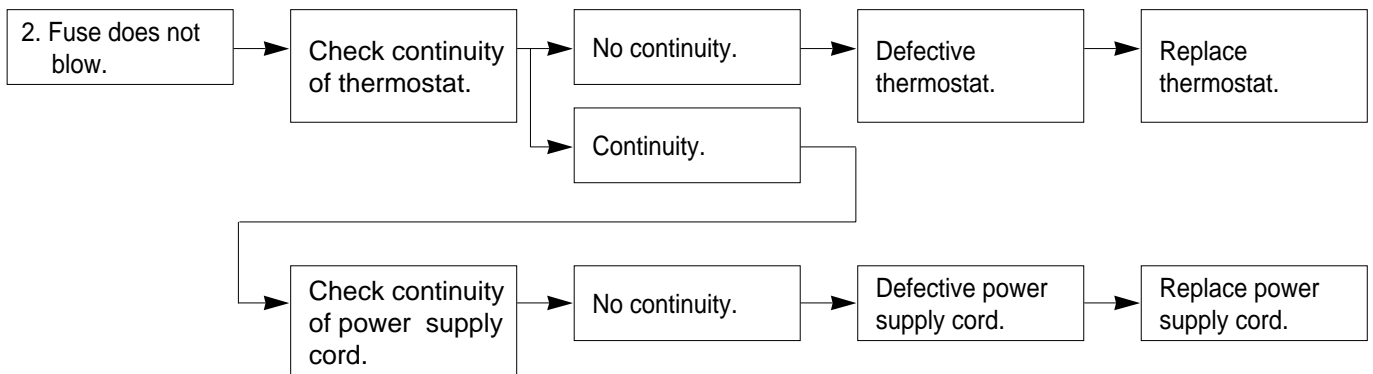
1. Incomplete segments.
 - Segment missing.
 - Partial segment missing.
 - Digit flickering (NOTE: Slight flickering is normal.)
2. Colon does not turn on or blink.
3. A distinct change in the brightness of one or more numbers in display.
4. One or more digits in the display are not lighting.
5. Display indicates a number different from one touched, for example, key in **5** and **3** appears in the display.
6. Specific numbers (for example 7 or 9) will not display when key pad is touched.
7. Display does not count down with time blinking or up with clock operation.
8. Display obviously jumps in time while counting down.
9. Display counts down too fast while cooking.
10. Each indicator light does not turn on after setting cooking cycle.
11. Display time of day does not reappear when cooking is finished.



(TROUBLE 2) Oven does not operate at all, Display window does not display any figures, and no input is accepted.



NOTE : All these switches must be replaced at the same time. Refer to page 18, 19



(TROUBLE 3) Display shows all figures set, but oven does not start cooking while desired program times are set and START pad is touched.

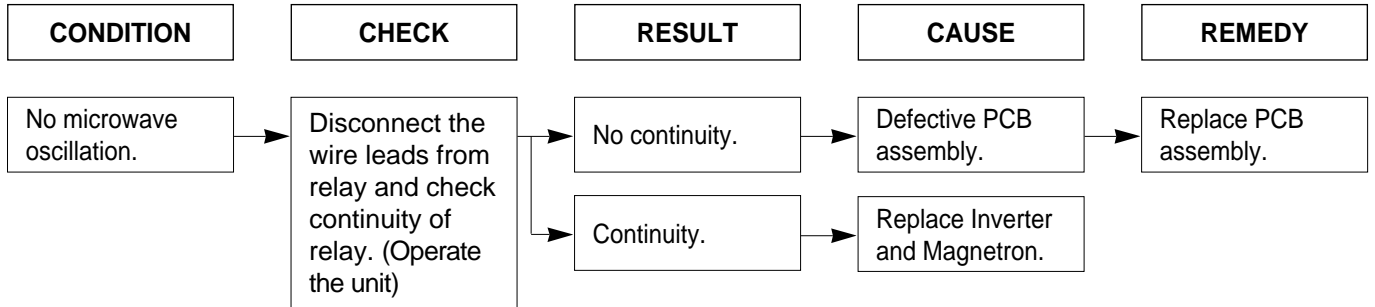
CONDITION	CHECK	RESULT	CAUSE	REMEDY
1. Setting time does not count down when touching START pad.	Check continuity of secondary switch (with door closed).	No continuity.	Defective secondary switch.	Replace secondary switch.
		Continuity.		
	Check the connection between CN1 connector and PCB assembly.	Continuity	Defective Power PCB assembly.	Replace Power PCB assembly.
		No continuity	Loose connection.	Connect them tightly.
2. Fan motor or oven lamp do not turn on.	Check fan motor.	Abnormal	Defective fan motor.	Replace fan motor.
	Check oven lamp.	Abnormal	Defective oven lamp.	Replace oven lamp.
		Normal		

(TROUBLE 4) Oven seems to be operating but little heat is produced in oven load.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
Output is low	Check the power source voltage.	Lower than 90% of rating voltage.	Decrease in power source voltage with load.	Suggest customer contact local electric power utility co. or qualified electrician.
		Normal		
			Defective Magnetron.	Replace Magnetron.

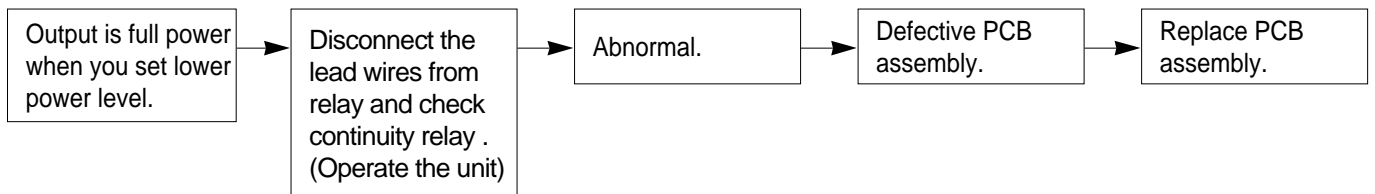
NOTE : Simple test of power output-conducted by heating one liter water for one min. if available. Minimum 8.5°C temperature rise is normal condition.

**(TROUBLE 5) No microwave oscillation even though oven lamp and fan motor run.
(Display operates properly)**



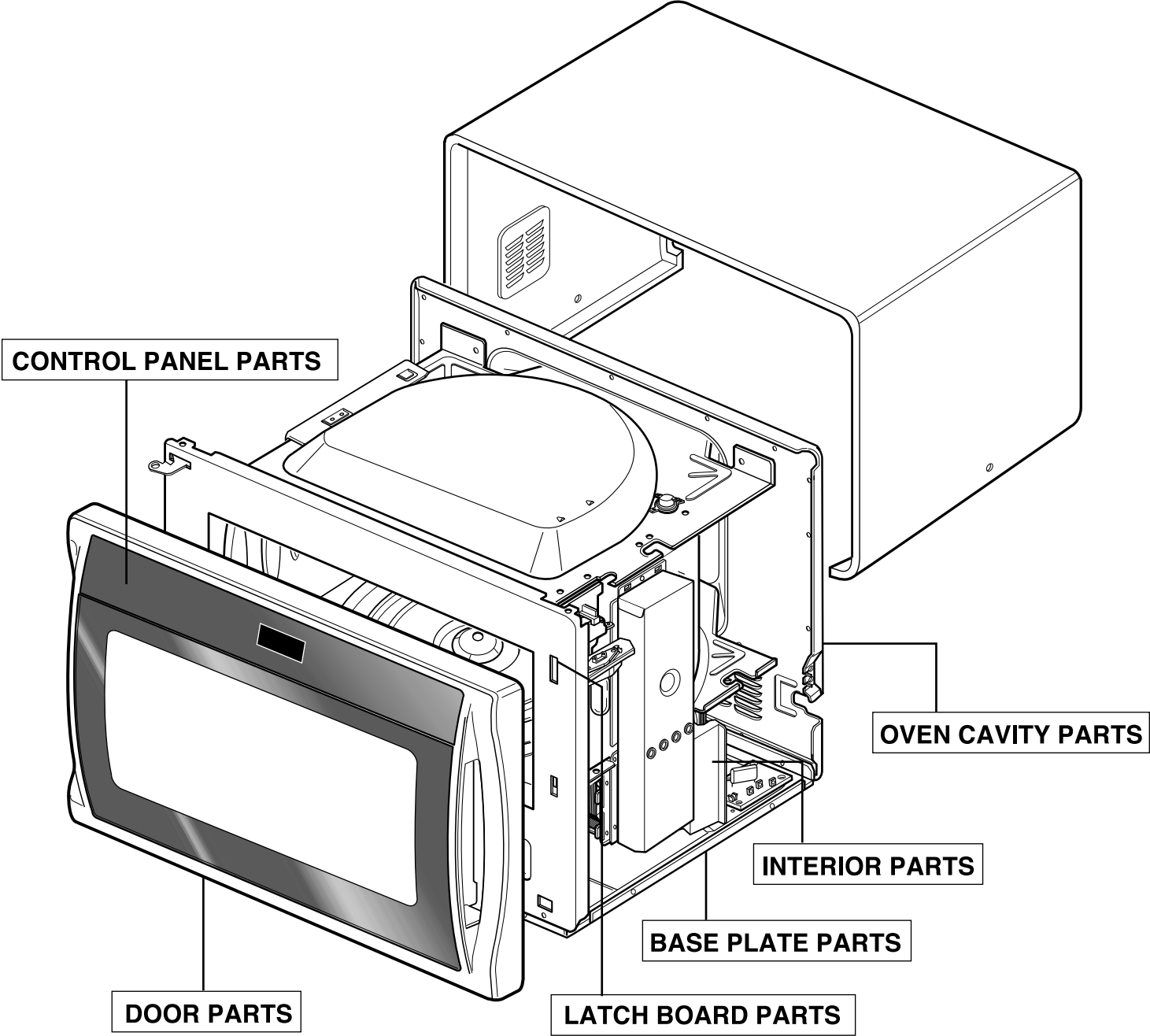
NOTE : • Make sure the wire leads correct position.

- When Removing the lead wires from the parts, be sure to grasp the connector, not the wires.
- When removing the magnetron, be sure to install the magnetron gasket in the correct position and in good condition.

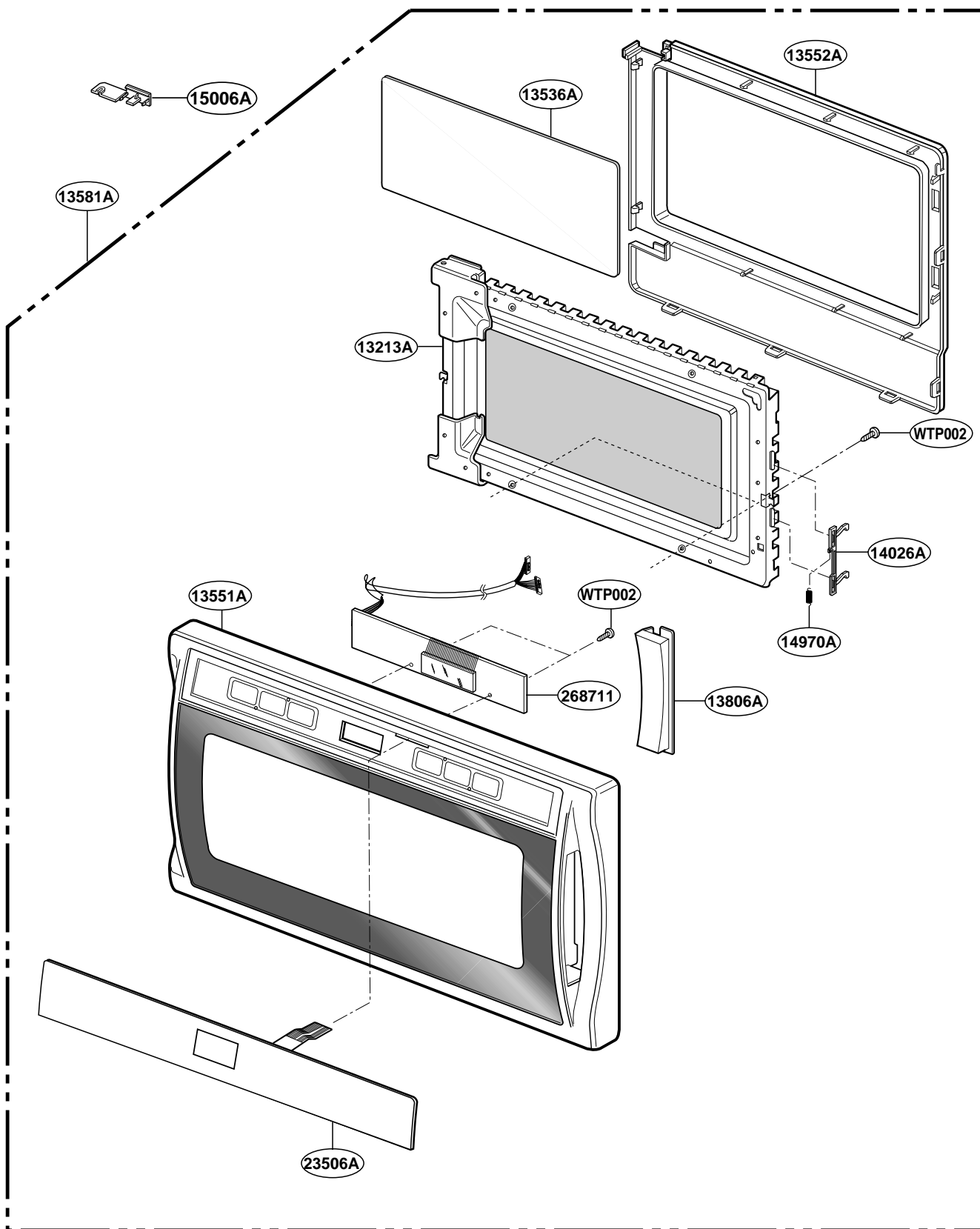


EXPLODED VIEW

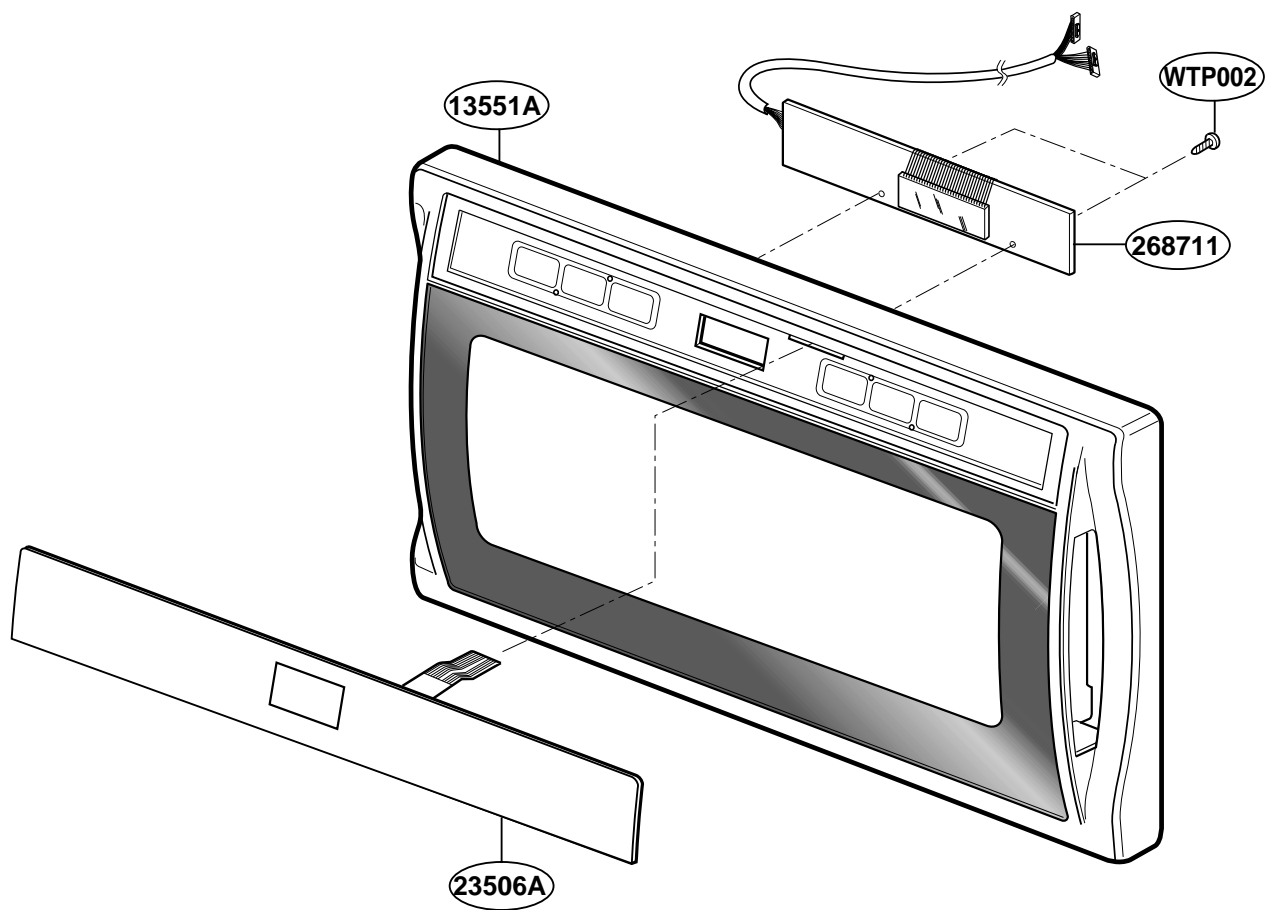
INTRODUCTION



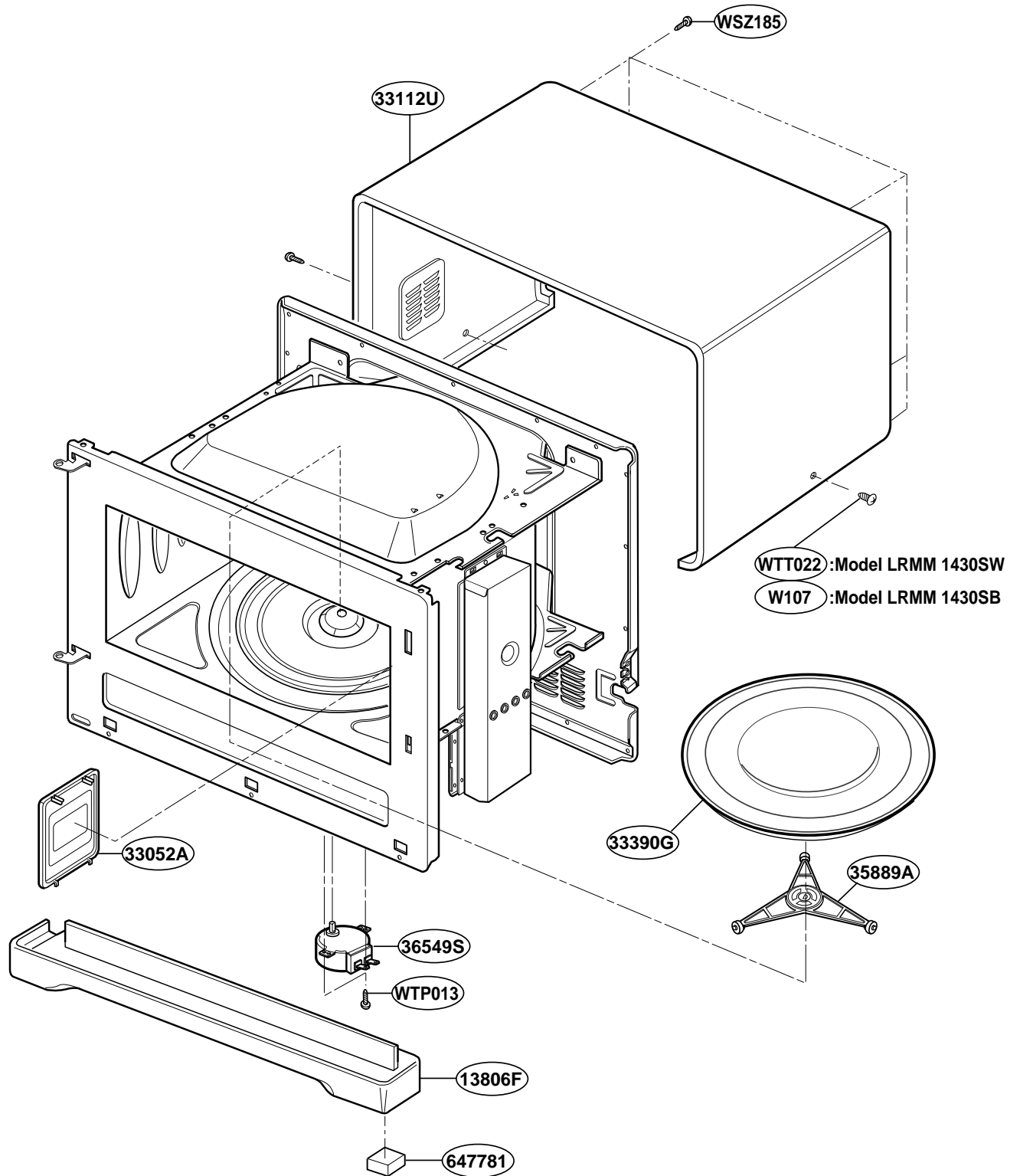
DOOR PARTS



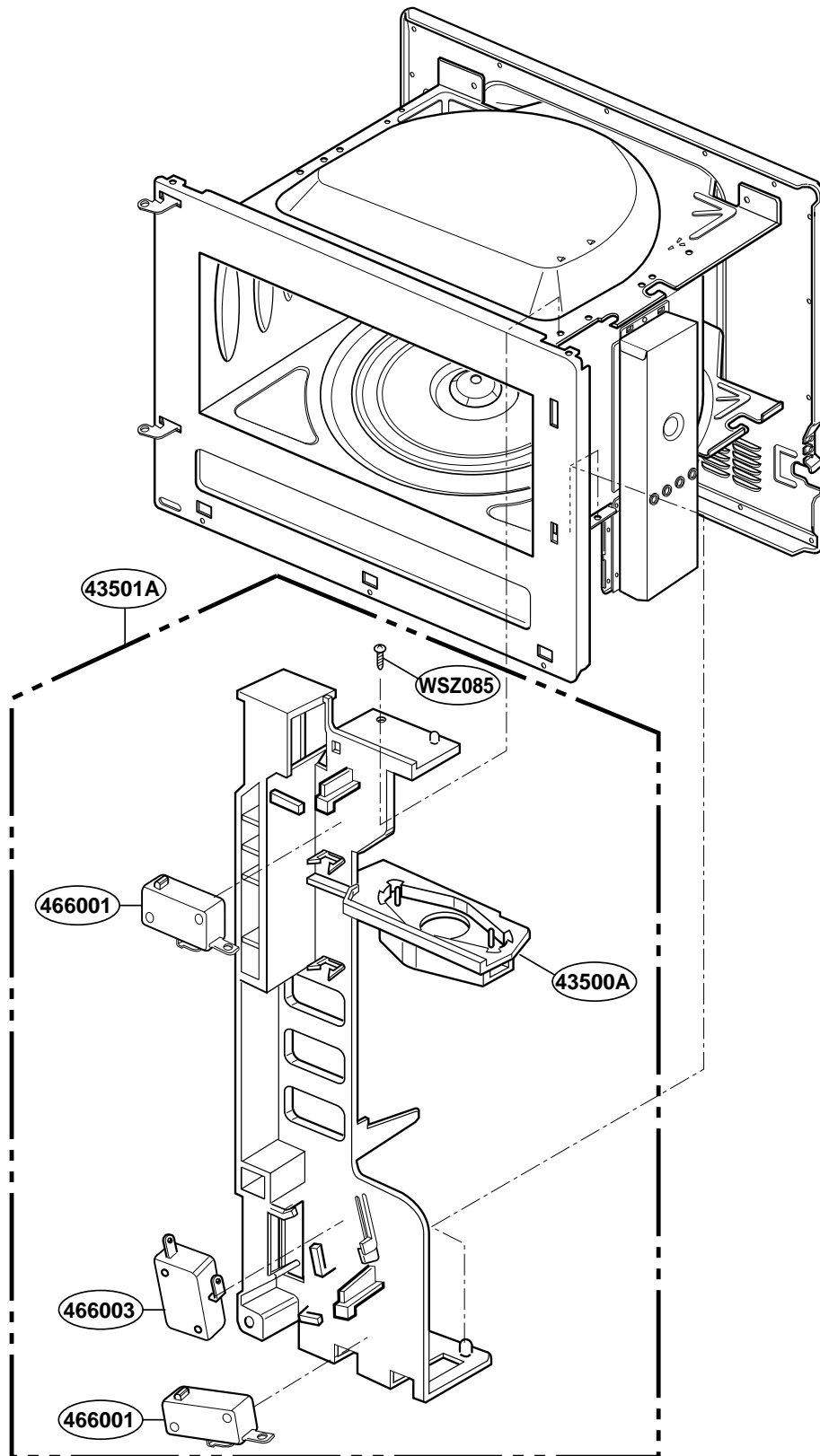
CONTROLLER PARTS



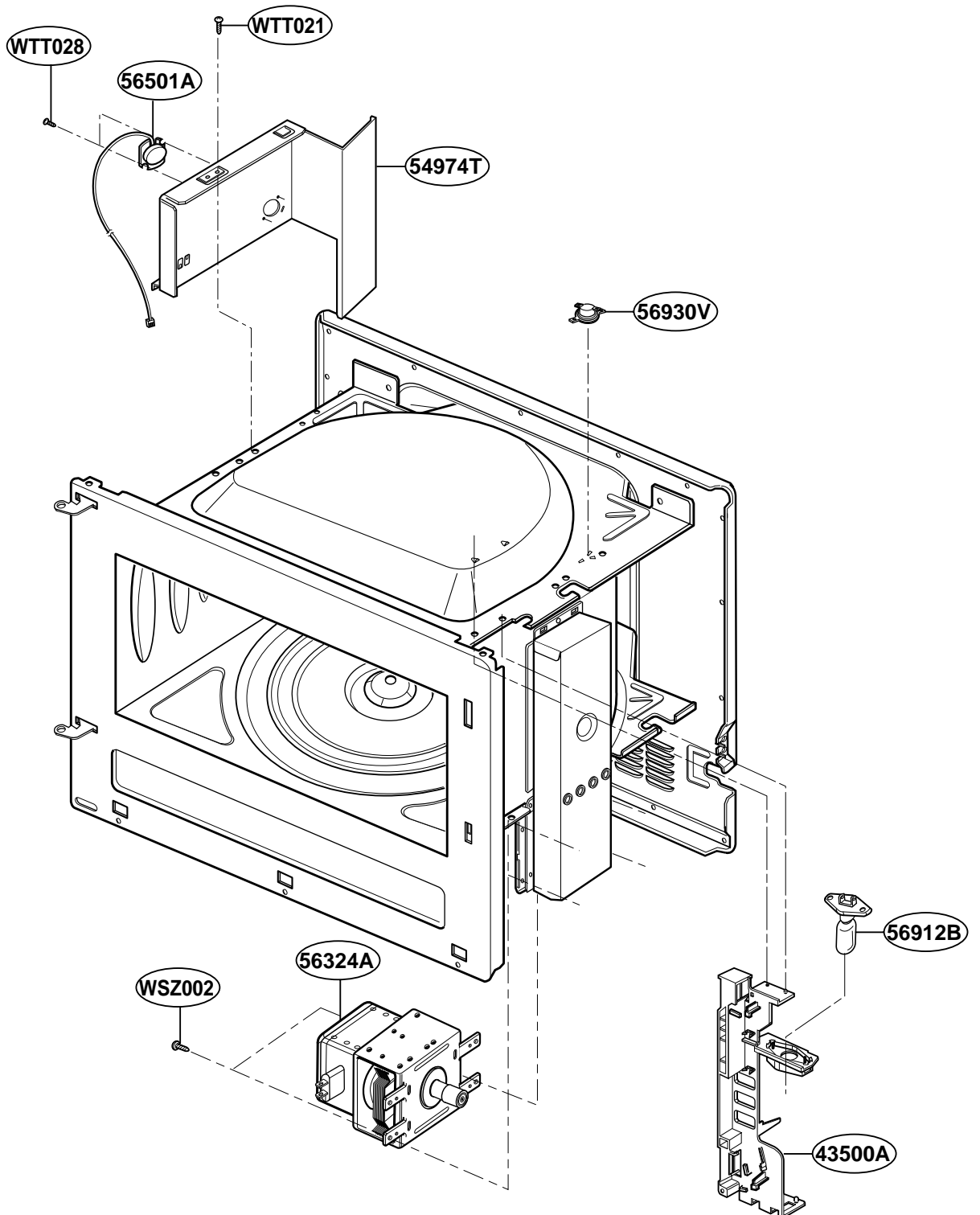
OVEN CAVITY PARTS



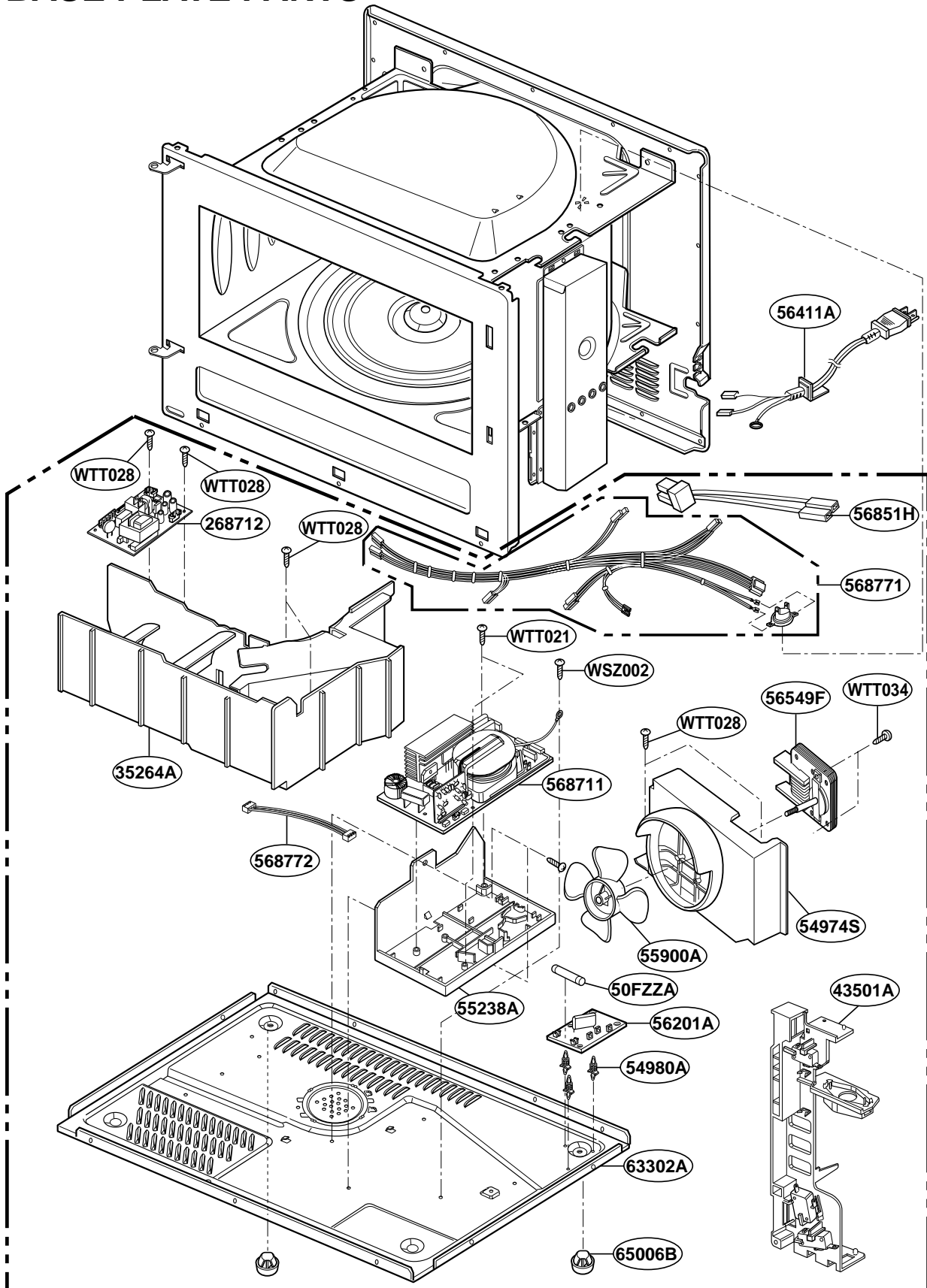
LATCH BOARD PARTS



OVEN INTERIOR PARTS



BASE PLATE PARTS



REPLACEMENT PARTS LIST

FOR MODEL : LRMM1430SB

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTER
*01	3828W5A3194	MANUAL,OWNERS	R	
*02	3828W5S3066	MANUAL,SERVICE	R	
*10	3890W3W376B	BOX,WHITE	R	
13213A	3213W0A008B	DOOR FRAME ASSEMBLY	R	
13536A	3536W1A002A	SEAL TAPE	S	
13552A	3552W0A009A	CHOKE COVER	R	
13581A	3581W0A077B	DOOR ASSEMBLY	R	
13806F	3806W1A062A	DECO,FRONT	R	
14026A	4026W1A025A	LATCH	R	
14970A	4970WRA001C	SPRING	R	
15006A	5006W1A005A	CAP,CHOKE COVER	R	
23506A	3506W1A443B	KEY MEMBRANE	R	
268711	6871W1S144C	PWB(PCB) ASSEMBLY,SUB	R	
268712	6871W1S145A	PWB(PCB) ASSEMBLY,SUB	R	
33052A	3052W3A015A	CANOPY,RESIN	R	
33112U	3112W0U048C	OUT CASE,U-BENDING	R	
33390G	3390W1A017A	TRAY,GLASS	R	
35264A	4974W0A006A	GUIDE,AIR	R	
35889A	5889W1A003A	ROTATING RING ASSEMBLY	R	
36549S	6549W1S015A	MOTOR(CIRC),SYNCHRONOUS	R	6549W1S011A
43500A	3500W0A002A	BOARD,LATCH	R	
43501A	3501W1A030A	BOARD ASSEMBLY,LATCH	R	
466001	6600W1K004C	SWITCH,MICRO	R	3B73362F
466003	6600W1K004B	SWITCH,MICRO	R	3B73361E
50FZZA	3B74133K	FUSE,DRAWING	R	3B74133H
54974S	4974W1A014A	GUIDE,SUCTION	R	
54974T	4810W1A079A	BRACKET,SENSOR	R	
54980A	4B73792B	SUPPORTER	R	
55238A	4974W1A013A	GUIDE,AIR	R	
55900A	2B72125A	FAN	S	
56201A	6201W1A008F	FILTER ASSEMBLY(CIRC)	R	
56324A	6324W1A002B	MAGNETRON	R	
56411A	6411W1A027A	POWER CORD ASSEMBLY	R	6411W1A027B
56501A	6501W1A006E	SENSOR ASSEMBLY	R	
56549F	6549W1F008B	MOTOR(CIRC),FAN	R	6549W1F005B
56851H	6850W1A001B	CABLE,HIGH VOLTAGE	R	
568711	6871W1S019A	PWB(PCB) ASSEMBLY,SUB	R	
568771	6877W1A434A	HARNESS	R	
568772	6631W3A003Q	HARNESS	R	
56912B	6912W3B002Q	LAMP,DRAWING	R	6912W3B002G
56930V	6930W1A001J	THERMOSTAT	R	6930W1A003A
63302A	3302W0A041A	BASE PLATE	R	
647781	4778W1A002A	LEG	R	
65006B	5006W3A016B	CAP,BASE PLATE	R	
W107	1TTL0402416	SCREW TAPPING, TRUSS HEAD	R	
WSZ002	1SBF0402418	SCREW TAP TITE(S),BINDING HEAD	R	
WSZ085	4B70188C	SCREW,DRAWING	R	
WSZ185	1SZZW2A002A	SCREW,DRAWING	R	

R,S: SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTER
WTP002	1TPL0302018	SCREW TAPPING,PAN HEAD	R	
WTP013	1TPL0402418	SCREW TAPPING,PAN HEAD	R	
WTT021	1TTL0402418	SCREW TAPPING,TRUSS HEAD	R	
WTT028	1TTL0402818	SCREW TAPPING,TRUSS HEAD	R	
WTT034	1TTL0403418	SCREW TAPPING,TRUSS HEAD	R	

R,S: SERVICE PARTS

FOR MODEL : LRMM1430SW

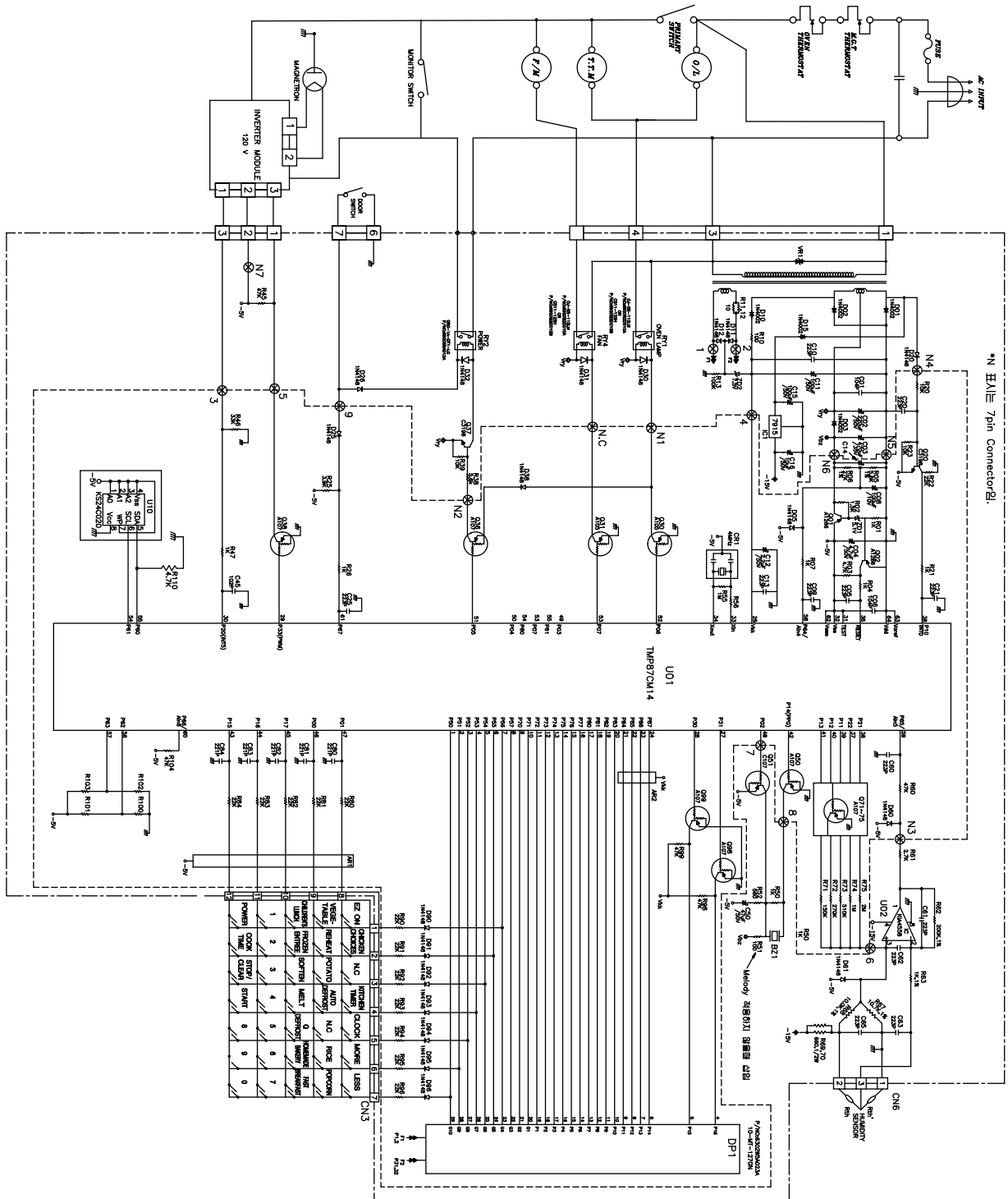
LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTER
*01	3828W5A3340	MANUAL,OWNERS	R	
*02	3828W5S3192	MANUAL,SERVICE	R	
*10	3890W3W377A	BOX,WHITE	R	
13213A	3213W0A008C	DOOR FRAME ASSEMBLY	R	
13352A	3352W1A144A	FRONT SCREEN	S	
13536A	3536W1A002A	SEAL TAPE	S	
13552A	3552W0A009A	CHOKE COVER	R	
13581A	3581W0A077E	DOOR ASSEMBLY	R	
13720D	3720W0D308A	PANEL,DOOR	R	
13806F	3806W1A062B	DECO,FRONT	R	
14026A	4026W1A025A	LATCH	R	
14970A	4970WRA001C	SPRING	R	
15006A	5006W1A005A	CAP,CHOKE COVER	R	
23506A	3506W1A443C	KEY MEMBRANE	R	
268711	6871W1S144C	PWB(PCB) ASSEMBLY,SUB	R	
268712	6871W1S145A	PWB(PCB) ASSEMBLY,SUB	R	
33052A	3052W3A015A	CANOPY,RESIN	R	
33112U	3112W0U048D	OUT CASE,U-BENDING	R	
33390G	3390W1A017A	TRAY,GLASS	R	
35264A	4974W0A006A	GUIDE,AIR	R	
35889A	5889W1A003A	ROTATING RING ASSEMBLY	R	
36549S	6549W1S015A	MOTOR(CIRC),SYNCHRONOUS	R	6549W1S011A
43500A	3500W0A002A	BOARD,LATCH	R	
43501A	3501W1A030A	BOARD ASSEMBLY,LATCH	R	
466001	6600W1K004C	SWITCH,MICRO	R	3B73362F
466003	6600W1K004B	SWITCH,MICRO	R	3B73361E
50FZZA	3B74133K	FUSE,DRAWING	R	3B74133H
54974S	4974W1A014A	GUIDE,SUCTION	R	
54974T	4810W1A079A	BRACKET,SENSOR	R	
54980A	4B73792B	SUPPORTER	R	
55238A	4974W1A013A	GUIDE,AIR	R	
55900A	2B72125A	FAN	S	
56201A	6201W1A010C	FILTER ASSEMBLY(CIRC)	R	
56324A	6324W1A005A	MAGNETRON	R	
56411A	6411W2A002R	POWER CORD ASSEMBLY	B	
56501A	6501W1A006E	SENSOR ASSEMBLY	R	
56549F	6549W1F008B	MOTOR(CIRC),FAN	R	6549W1F005B
56851H	6850W1A001F	CABLE,HIGH VOLTAGE	R	
568711	6871W1S019A	PWB(PCB) ASSEMBLY,SUB	R	
568771	6877W1A481A	HARNESS	R	
568772	6631W3A003Q	HARNESS	R	
56912B	6912W3B002Q	LAMP,DRAWING	R	6912W3B002G
56930V	6930W1A001J	THERMOSTAT	R	6930W1A003A
63302A	3302W0A041A	BASE PLATE	R	
647781	4778W1A002A	LEG	R	
65006B	5006W3A016B	CAP,BASE PLATE	R	
WSZ002	1SBF0402418	SCREW TAP TITE(S),BINDING HEAD	R	
WSZ085	4B70188C	SCREW,DRAWING	R	

R,S: SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SVC	ALTER
WTP002	1TPL0302018	SCREW TAPPING,PAN HEAD	R	
WTP013	1TPL0402418	SCREW TAPPING,PAN HEAD	R	
WTT021	1TTL0402418	SCREW TAPPING,TRUSS HEAD	R	
WTT022	1TTL0402422	SCREW TAPPING,TRUSS HEAD	R	
WTT028	1TTL0402818	SCREW TAPPING,TRUSS HEAD	R	
WTT034	1TTL0403418	SCREW TAPPING,TRUSS HEAD	R	

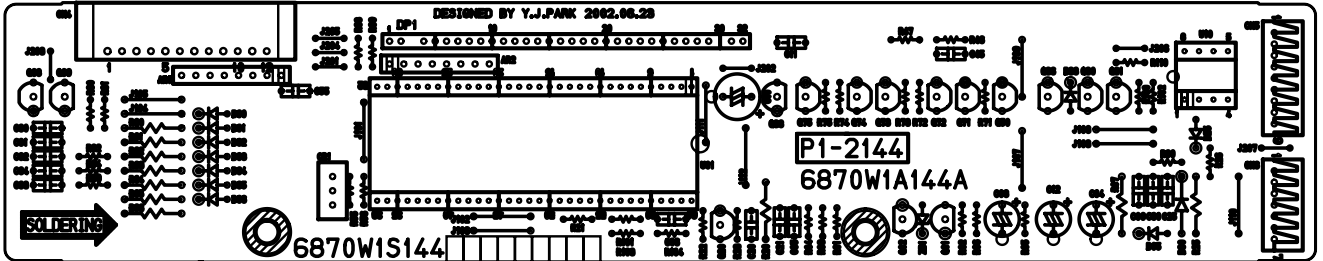
R,S: SERVICE PARTS

SCHEMATIC DIAGRAM OF P.C.B

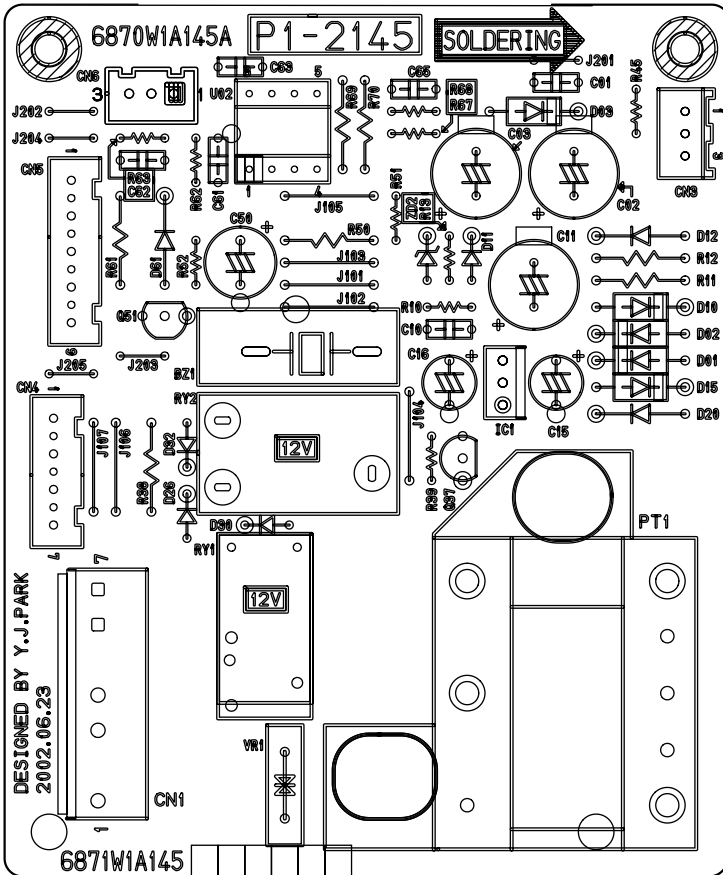


PRINTED CIRCUIT BOARD

KEY PCB



MAIN PCB



P.C.B. PARTS LIST

LOC. NO.	PART NO.	DESCRIPTION	SPECIFICATION	SVC	ALTER
AR1	0RZ1503G610	RESISTOR,DRAWING	150KOHM 1/4W 5% 3216 BULK 8 PIN	R	
BZ1	6908W3YA01C	BUZZER	TFM-57 CW NINGBO EAST PIEZO 2048HZ 70D	R	6908W3YA01A
C01	0CK1040K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	0.1UF D 50V 80%,-20% F(Y5V) TA26	R	
C02	0CE2276K618	CAPACITOR,FIXED ELECTROLYTIC	220UF SMS,SG 50V 20% FL TP 5	R	
C03	0CE4771J618	CAPACITOR,FIXED ELECTROLYTIC	470UF SM,SA 35V 20% FL TP 5	R	
C04	0CE4756K638	CAPACITOR,FIXED ELECTROLYTIC	4.7UF SMS,SG 50V 20% FM5 TP 5	R	
C05	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C06	0CK1040K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	0.1UF D 50V 80%,-20% F(Y5V) TA26	R	
C08	0CE1076D638	CAPACITOR,FIXED ELECTROLYTIC	100UF SMS,SG 10V 20% FM5 TP 5	R	
C09	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C10	0CK1040K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	0.1UF D 50V 80%,-20% F(Y5V) TA26	R	
C11	0CE1076K638	CAPACITOR,FIXED ELECTROLYTIC	100UF SMS,SG 50V 20% FM5 TP 5	R	
C14	0CK1040K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	0.1UF D 50V 80%,-20% F(Y5V) TA26	R	
C15	0CE1076K638	CAPACITOR,FIXED ELECTROLYTIC	100UF SMS,SG 50V 20% FM5 TP 5	R	
C16	0CE1066K638	CAPACITOR,FIXED ELECTROLYTIC	10UF SMS,SG(HR) 50V 20% FM5 TP 5	R	
C20	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C21	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C25	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C45	0CK1020K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	10KPF D 50V K B TA26	R	
C50	0CE4766K638	CAPACITOR,FIXED ELECTROLYTIC	47UF SMS,SG 50V 20% FM5 TP 5	R	
C60	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C61	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C62	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C63	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C65	0CK2230K948	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	22NF D 50V 80%,-20% F(Y5V) TA26	R	
C80	0CK2210K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	220PF D 50V 10% B(Y5P) TA26	R	
C81	0CK2210K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	220PF D 50V 10% B(Y5P) TA26	R	
C82	0CK2210K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	220PF D 50V 10% B(Y5P) TA26	R	
C83	0CK2210K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	220PF D 50V 10% B(Y5P) TA26	R	
C84	0CK2210K518	CAPACITOR,FIXED CERAMIC(HIGH DIELECTRIC)	220PF D 50V 10% B(Y5P) TA26	R	
CN5	6877W1A437A	HARNESS	CONTROLLER LGECW SEARS MS-1442KCSV	R	
CN6	6877W1A437A	HARNESS	CONTROLLER LGECW SEARS MS-1442KCSV	R	
CR1	6212W5M002A	RESONATOR,CERAMIC	CSTS0400 MURATA 4MHZ +/-0.5% TP 15PF	R	
CU4	4850W4C001A	CUSHION	3.5T 15W 40L RUBBER BLACK	R	
D01	0DD400209AA	DIODE,RECTIFIERS	1N4002 PYUNG CHANG TP26 DO41 100V 1A 30	R	
D02	0DD400209AA	DIODE,RECTIFIERS	1N4002 PYUNG CHANG TP26 DO41 100V 1A 30	R	
D03	0DD400209AA	DIODE,RECTIFIERS	1N4002 PYUNG CHANG TP26 DO41 100V 1A 30	R	
D05	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D10	0DD400209AA	DIODE,RECTIFIERS	1N4002 PYUNG CHANG TP26 DO41 100V 1A 30	R	
D11	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D12	0DD414809AA	DIODE,SWITCHING	1N4148 ROHM TP26 DO35 100V 450MA 2A 3NS	R	
D15	0DD400209AA	DIODE,RECTIFIERS	1N4002 PYUNG CHANG TP26 DO41 100V 1A 30	R	
D20	0DD414809AA	DIODE,SWITCHING	1N4148 ROHM TP26 DO35 100V 450MA 2A 3NS	R	
D25	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D26	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D30	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D32	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D38	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D60	0DD414809AA	DIODE,SWITCHING	1N4148 ROHM TP26 DO35 100V 450MA 2A 3NS	R	

R: SERVICE PARTS

LOC. NO.	PART NO.	DESCRIPTION	SPECIFICATION	SVC	ALTER
D61	0DD414809AA	DIODE,SWITCHING	1N4148 ROHM TP26 DO35 100V 450MA 2A 3NS	R	
D90	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D91	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D92	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D93	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D94	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D95	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
D96	0DD414809AB	DIODE	1N4148M PYUNG CHANG TP26 DO34 60V 0.5A 0	R	
DP1	6302W5A023A	DIGITRON	10-MT-127GN 9 MS-2142KSZ SEARS,2-LINE 3-	R	
IC1	0ISS791500A	IC,LINEAR	KA7915 FAIRCHILD 3PIN TO220 BK REGULARTO	R	0IKE791500A
PT1	6010W2P043P	TRANSFORMER,POWER	120V 60HZ DC 12V / AC 3.4V LGETA LEADER(R	6010W2P043A
Q01	0TR101509AB	TRANSISTOR,BIPOLARS	A1015(KTA12660) KEC TP TO92 50V 150MA	R	
Q02	0TR101509AB	TRANSISTOR,BIPOLARS	A1015(KTA12660) KEC TP TO92 50V 150MA	R	
Q20	0TR181509AB	TRANSISTOR,BIPOLARS	KTC1815-Y(KTC3198Y) KEC TP TO92 50V 150M	R	
Q30	0TR105009AD	TRANSISTOR,BIPOLARS	KRA105M KEC TP TO92 50V 100MA	R	0TRFC90002A
Q36	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q37	0TR181509AB	TRANSISTOR,BIPOLARS	KTC1815-Y(KTC3198Y) KEC TP TO92 50V 150M	R	
Q38	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q50	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q51	0TR107009AD	TRANSISTOR,BIPOLARS	KRC 107M KEC TP TO92M 50V 100MA	R	
Q71	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q72	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q73	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q74	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q75	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q98	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
Q99	0TR107009AE	TRANSISTOR,BIPOLARS	KRA107M KEC TP TO92M 50V 100MA	R	0TRFC900021A
R01	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5% TA26	R	
R02	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K OHM 1/6 W 5% TA26	R	
R03	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5% TA26	R	
R04	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5% TA26	R	
R05	0RN5601F408	RESISTOR,FIXED METAL FILM	5.6K OHM 1/6 W 1% TA26	R	
R06	0RN2702F408	RESISTOR,FIXED METAL FILM	27K OHM 1/6 W 1% A26	R	
R07	0RD1001G608	RESISTOR,FIXED CARBON FILM	1K OHM 1/4 W 5% TA26	R	
R10	0RD1000F608	RESISTOR,FIXED CARBON FILM	100 OHM 1/6 W 5% TA26	R	
R100	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R101	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5% TA26	R	
R103	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R104	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R11	0RD0102G608	RESISTOR,FIXED CARBON FILM	10 OHM 1/4 W 5% TA26	R	
R110	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K OHM 1/6 W 5% TA26	R	
R12	0RD0102G608	RESISTOR,FIXED CARBON FILM	10 OHM 1/4 W 5% TA26	R	
R13	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K OHM 1/6 W 5% TA26	R	
R20	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K OHM 1/4 W 5% TA26	R	
R21	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5% TA26	R	
R22	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R23	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K OHM 1/6 W 5% TA26	R	
R25	0RD3901G608	RESISTOR,FIXED CARBON FILM	3.9K OHM 1/4 W 5% TA26	R	
R26	0RD1001F608	RESISTOR,FIXED CARBON FILM	1K OHM 1/6 W 5% TA26	R	

LOC. NO.	PART NO.	DESCRIPTION	SPECIFICATION	SVC	ALTER
R38	0RD5601G608	RESISTOR, FIXED CARBON FILM	5.6K OHM 1/4 W 5% TA26	R	
R39	0RD1002F608	RESISTOR, FIXED CARBON FILM	10K OHM 1/6 W 5% TA26	R	
R45	0RD4702F608	RESISTOR, FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R46	0RD3302F608	RESISTOR, FIXED CARBON FILM	33K OHM 1/6 W 5% TA26	R	
R47	0RD1001F608	RESISTOR, FIXED CARBON FILM	1K OHM 1/6 W 5% TA26	R	
R50	0RD1001G608	RESISTOR, FIXED CARBON FILM	1K OHM 1/4 W 5% TA26	R	
R52	0RD5600F608	RESISTOR, FIXED CARBON FILM	560 OHM 1/6 W 5% TA26	R	
R55	0RD1004F608	RESISTOR, FIXED CARBON FILM	1M OHM 1/6 W 5% TA26	R	
R60	0RD4702F608	RESISTOR, FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R61	0RD2701G608	RESISTOR, FIXED CARBON FILM	2.7K OHM 1/4 W 5% TA26	R	
R62	0RN2003F408	RESISTOR, FIXED METAL FILM	200K OHM 1/6 W 1% TA26	R	
R63	0RN1001F408	RESISTOR, FIXED METAL FILM	1K OHM 1/6 W 1% TA26	R	
R67	0RN1072F408	RESISTOR, FIXED METAL FILM	10.7K OHM 1/6 W 1% TA26	R	
R68	0RN1002F408	RESISTOR, FIXED METAL FILM	10K OHM 1/6 W 1% TA26	R	
R69	0RD6600H608	RESISTOR, FIXED CARBON FILM	660 OHM 1/2 W 5% TA26	R	
R70	0RD6600H608	RESISTOR, FIXED CARBON FILM	660 OHM 1/2 W 5% TA26	R	
R71	0RD1503F608	RESISTOR, FIXED CARBON FILM	150K OHM 1/6 W 5% TA26	R	
R72	0RD2703F608	RESISTOR, FIXED CARBON FILM	270K OHM 1/6 W 5% TA26	R	
R73	0RD5103F608	RESISTOR, FIXED CARBON FILM	510K OHM 1/6 W 5% TA26	R	
R74	0RD1004F608	RESISTOR, FIXED CARBON FILM	1M OHM 1/6 W 5% TA26	R	
R75	0RD2004F608	RESISTOR, FIXED CARBON FILM	2M OHM 1/6 W 5% TA26	R	
R80	0RD2202F608	RESISTOR, FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R81	0RD2202F608	RESISTOR, FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R82	0RD2202F608	RESISTOR, FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R83	0RD2202F608	RESISTOR, FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R84	0RD2202F608	RESISTOR, FIXED CARBON FILM	22K OHM 1/6 W 5% TA26	R	
R90	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R91	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R92	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R93	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R94	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R95	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R96	0RD2202G608	RESISTOR, FIXED CARBON FILM	22K OHM 1/4 W 5% TA26	R	
R98	0RD4702F608	RESISTOR, FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
R99	0RD4702F608	RESISTOR, FIXED CARBON FILM	47K OHM 1/6 W 5% TA26	R	
RY1	6920W2D010A	RELAY	OJ-SS-112LM OEG 250VAC 3A 12VDC 1A NO VE	R	6920W2D010B
RY2	6920W5A012A	RELAY	G5G-1A-DT1-LG OMRON 250VAC 16A 12VDC 1A	R	
U01	0IZZW5A191B	IC, DRAWING	TMP87CM14N 64SDIP BK MS-1443ASV LGEUS MO	R	
U02	0IKE455800A	IC, LINEAR	KIA4558P KEC 8DIP BK LIN OPAMP	R	
VR1	6102W5V006A	VARISTOR	SVC271D-14A SAMWHA UL/CSA/VDE TP	R	
ZD1	0DZ510009AE	DIODE, ZENERS	UZ5.1BS/B GRADE 2 PERCENT TOLERANCE ROHM	R	
ZD2	0DZ750009AC	DIODE, ZENERS	UZ-7.5BS PYUNG CHANG TP26 DO34 500MW 7.5	R	

R: SERVICE PARTS



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