

Service Manual

Microwave Oven

**FAMILY
SIZE**

NN-6400

NN-6450

NN-6500

NN-6550

NN-6700

NN-6750

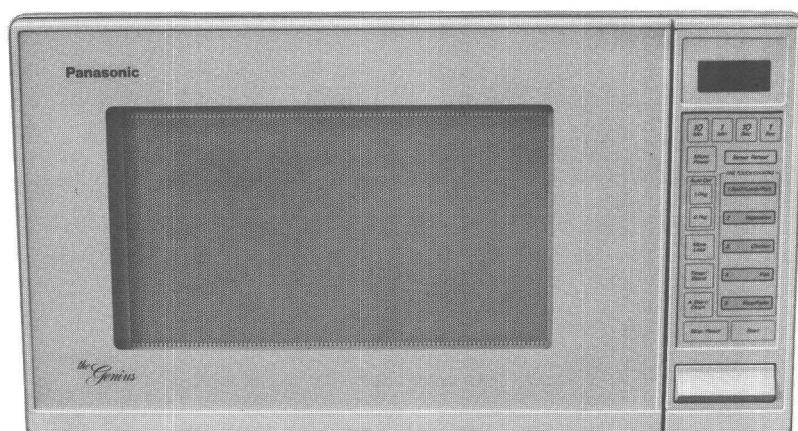
NN-6800

NN-6850

**FULL
SIZE**

NN-7750

NN-7850



Specifications

	FAMILY SIZE	FULL SIZE
Power Source :	230 V/240 V AC Single Phase, 50 Hz	
Power Requirement :	1,400 watts	
High Frequency Output :	750 watts : Full Power	
Microwave Frequency :	2,450 MHz	
Timer :	99 min. 99 sec.	
Outside Dimensions :	555 mm (W) × 425 mm (D) × 306 mm (H)	595 mm (W) × 415 mm (D) × 356 mm (H)
Oven Cavity Dimensions :	375 mm (W) × 395 mm (D) × 201 mm (H)	415 mm (W) × 385 mm (D) × 259 mm (H)
Weight :	17 kg	18.5 kg
Specifications subject to change without notice.		

This service manual covers products for following markets.

When troubleshooting or replacing parts, please refer to the country identifications shown below for your applicable product specification.

QPQ For Australia

JPQ For New Zealand

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FEATURE CHART

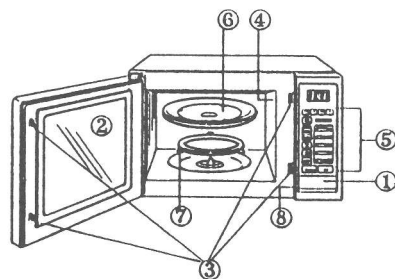
FEATURE	MODEL	NN-7850	NN-7750	NN-6550	NN-6450
		NN-6850	NN-6750	NN-6500	NN-6400
		NN-6800	NN-6700		
3-Stage Cooking		○	○	○	○
One Touch Cooking		○ 1~5	○ 2~4	—	—
Sensor Reheat		○	○	—	—
Auto Defrost		○	○	○	○
Auto Reheat		—	—	○	○
One Touch Menu		—	—	6	3
Auto Start		○	○	○	○
Timer/SandD		○	○	○	○
Digital Clock		○	○	○	○

PRODUCT DESTINATION

MODEL NO.	QPQ	JPQ
NN-7850	○	○
NN-7750	○	—
NN-6850	○	○
NN-6800	—	○
NN-6750	○	—
NN-6700	○	—
NN-6550	○	○
NN-6500	—	○
NN-6450	○	—
NN-6400	○	—

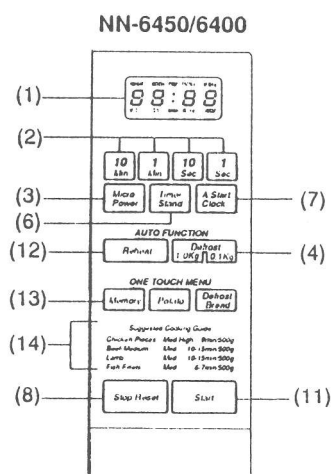
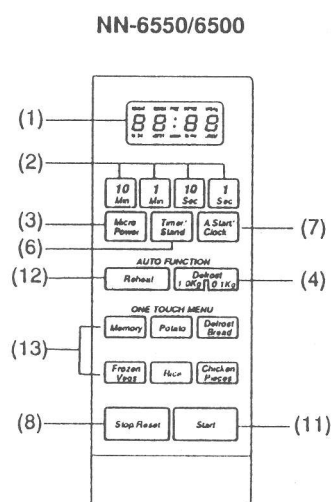
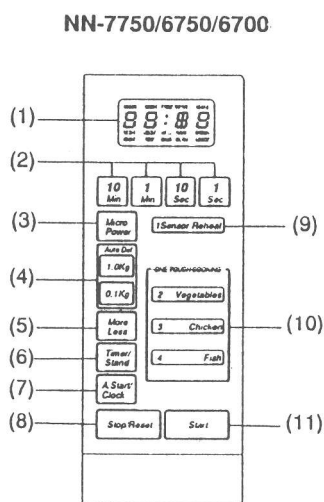
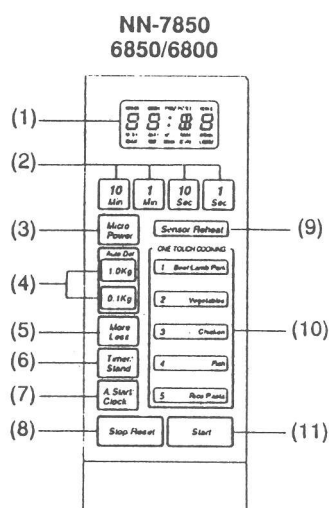
CONTROL PANEL

Feature Diagram



- ① Door Release Button
- ② Oven Window
- ③ Door Safety Lock System
- ④ Oven Air Vent
- ⑤ Control Panel
- ⑥ Glass Tray
- ⑦ Roller Ring
- ⑧ Identification Plate

Control Panel



Controls with Auto Count-Up Feature*

- (1) Display Window
- (2) Time Pads*
- (3) Micro Power Pad*
- (4) Auto Defrost
- (5) More / Less Pad
- (6) Timer / Stand Pad
- (7) Auto Start / Clock Pad
- (8) Stop / Reset Pad
- (9) Sensor Reheat Pad
- (10) One Touch Cooking Pads (Sensor Cook)
- (11) Start Pad
- (12) Auto Reheat Pad*
- (13) One Touch Menu Pads*
- (14) Cooking Guide
- (15) Micro Power Pads

OPERATION AND DIGITAL PROGRAMMER CIRCUIT TEST PROCEDURE

1. To Set Clock

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	88:88
2. Tap Clock pad.	* *
3. Enter time of day (TOD) by tapping appropriate Number pads.	1 1*25
4. Tap Clock pad. TOD has now been registered into the digital programmer circuit and will count up by minutes.	1 1:25

OPERATION	DISPLAY
7. When first stage cooking time has elapsed, oven automatically switches to 2nd stage cooking.	 10
8. When 2nd stage cooking time has elapsed, oven beeps 5 times and shuts off.	

2. Time Cooking For Two Stage

OPERATION	DISPLAY
1. Place a water load in the oven.	
2. Tap Power pad once for High power. (1st stage)	HI
3. Set for 5 seconds by tapping Number pad.	HI 5
4. Tap Power pad 3 times for Medium power. (2nd stage)	MED
5. Set for 10 seconds by tapping Number pad.	MED 10
6. Tap Start pad.	 5

3. Auto Weight Defrost

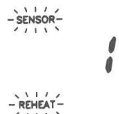
OPERATION	DISPLAY
1. Set the weight for 1 kg by tapping 1.0 pad.	
2. Tap Start Pad.	
3. Tap Stop/Reset Pad twice Oven shuts off.	TOD reappears in the display window.

4. Auto Reheat

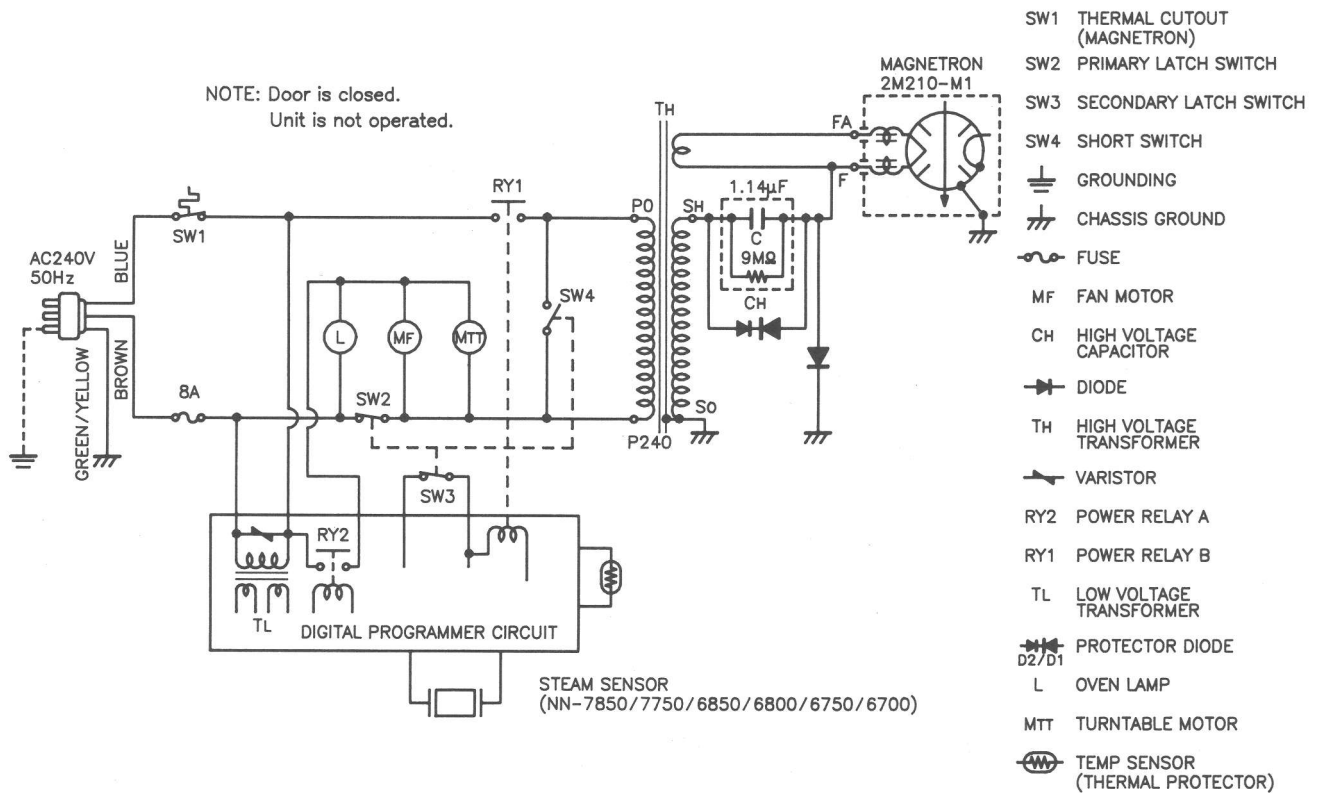
OPERATION	DISPLAY
1. Tap Auto Reheat Pad once.	
2. Tap Start Pad.	
3. When cooking time has elapsed. • Oven beeps five times and shuts off.	• TOD reappears in the display window.

5. Auto Sensor Cooking (One touch cooking)

NOTE: Make sure that the outer panel is installed before Auto Sensor Cooking Test, since Auto Sensor function does not operate properly without the outer panel.

OPERATION	DISPLAY
1. Pour 150 ± 15cc (4.5 ± 1/2 ozs) of room temperature water in a beaker, place the beaker in the center of the oven.	
2. Tap Auto Sensor Reheat Pad.	
3. Tap Start Pad.	
4. The steam sensor detects steam about 1 minute 30 seconds to 5 minutes after the Start Pad is tapped. Auto Sensor Cooking (T1) automatically switches to time cooking (T2). "1" disappears with beep sounds and the remainder of cooking time appears in display window. NOTE: Cooking time will vary depending on the water temperature, the shape of beaker or the power source voltage.	 NOTE: If 9 to 30 (9 seconds to 30 seconds) appears, AUTO SENSOR FUNCTION is normal.
5. When the balance of cooking time has elapsed, oven stops and beeps five times.	• TOD reappears in the display window.

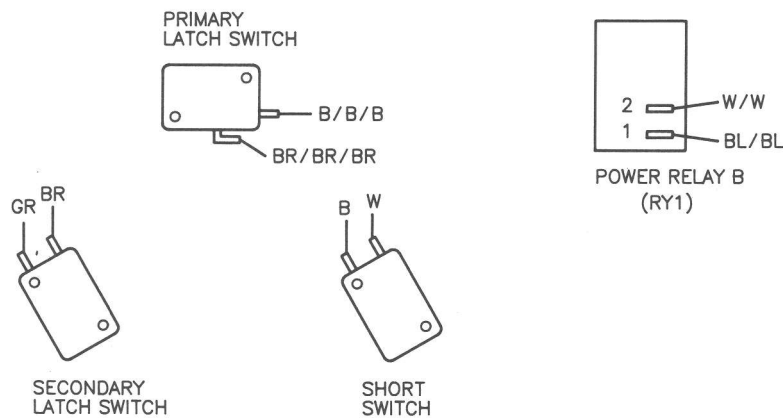
SCHEMATIC DIAGRAM (Touch Control models)(QPQ)



IMPORTANT SAFETY NOTICE: POTENTIALS ABOVE 250V IS PRESENT ON THE PARTS AND WIRING IN SECONDARY CIRCUIT OF HIGH VOLTAGE TRANSFORMER, WHEN THE OVEN IS ENERGIZED. EXTREMELY CARE SHOULD BE TAKEN DURING REPAIR.

WIRING DIAGRAM

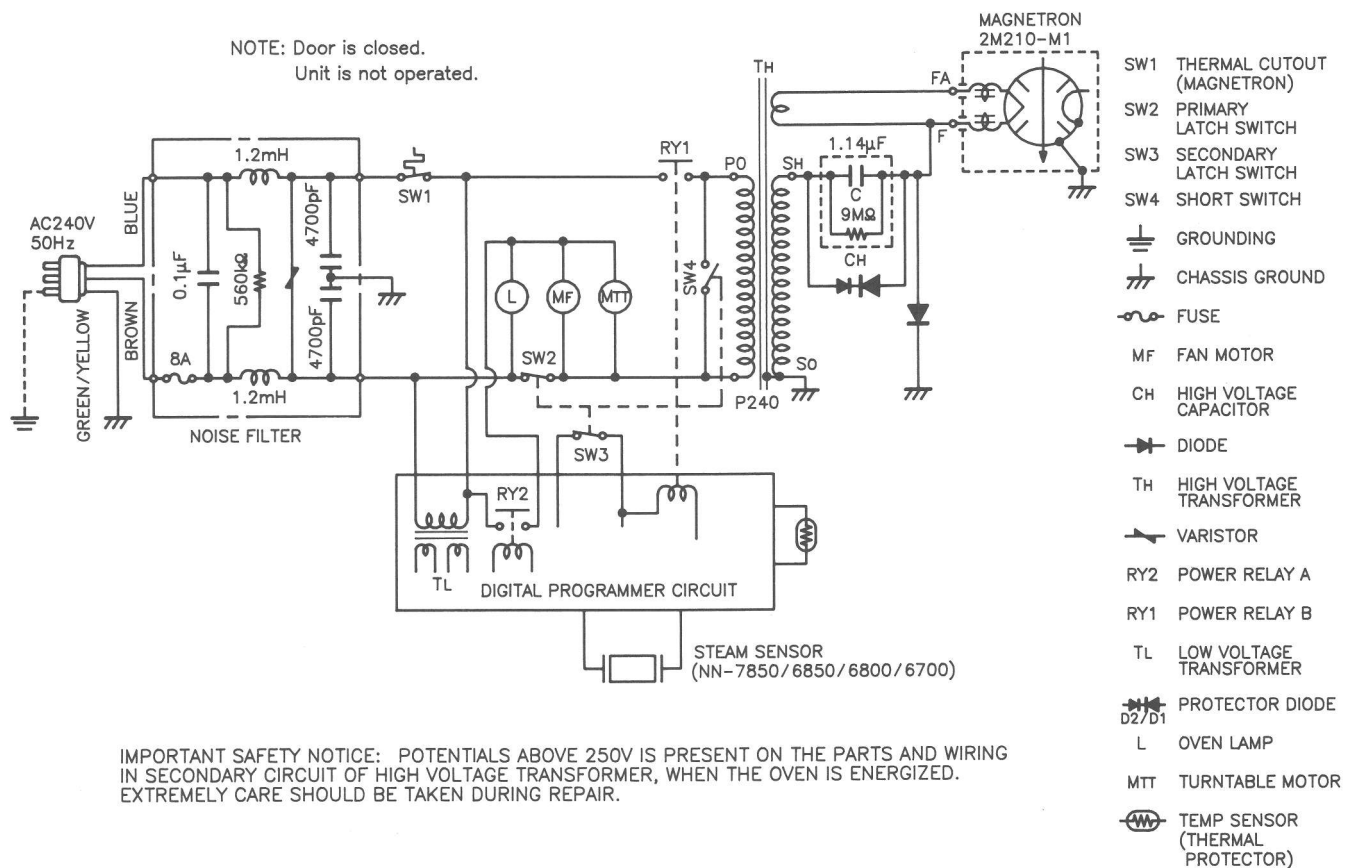
NOTE: When replacing, check the lead wire colour as shown.



SYMBOL	COLOUR
B	BLACK
BR	BROWN
BL	BLUE
W	WHITE
Y	YELLOW
GR	GRAY

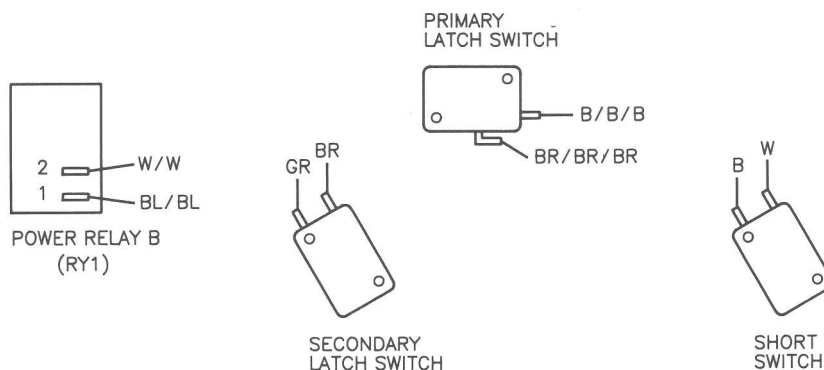
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SCHEMATIC DIAGRAM (Touch Control models)(JPQ)



WIRING DIAGRAM

NOTE: When replacing, check the lead wire colour as shown.



SYMBOL	COLOUR
B	BLACK
BR	BROWN
W	WHITE
BL	BLUE
Y	YELLOW
GR	GRAY

65-001

DESCRIPTION OF OPERATING SEQUENCE

1. Variable power cooking control

The coil of power relay B (RY1) is energized intermittently by the digital programmer circuit, when the oven is set at any power selection except for High power position. The digital programmer circuit controls the ON-OFF time of power relay B contacts in order to vary the output power of the microwave oven from "Warm" to "High" power. One complete ON and OFF cycle of power relay B is 22 seconds. The relation between indications on the control panel and the output of the microwave oven is as shown in table.

NOTE: The ON/OFF time ratio does not correspond with the percentage of microwave power since approximately 2 seconds are required for heating of magnetron filament.

2. Auto defrost, Auto reheat, One touch menu, control

When those Auto Control feature is selected and the Start Pad is tapped:
 (A) The digital programmer circuit determines the power level and cooking time to complete cooking and indicates the operating state in the display window.

Table shows the corresponding cooking times for respective serving by categories.

(B) When cooking time in the display window has elapsed, the oven turns off automatically by a control signal from the digital programmer circuit.

Touch Control Models

POWER SETTING	OUTPUT POWER(W) APPROX.	ON-OFF TIME OF POWER RELAY B (RY1)	
		ON(SEC)	OFF(SEC)
HIGH	750	22	0
MEDIUM-HIGH	530	17	5
MEDIUM	390	13	9
MEDIUM-LOW	220	8	14
LOW	90	4	18
DEFROST	220	8	14

Auto Defrost

WEIGHT SELECTED	TOTAL DEFROSTING TIME
1kg	21 min. 00 sec.

Auto Reheat

SERVING	COOKING TIME
1	2 min. 30 sec.

One Touch Menu

CATEGORY	SERVING	COOKING TIME
POTATO	1	2 min. 00 sec.
DEFROST BREAD	1	35 sec.

3. One touch cooking (Auto sensor cooking)

Auto sensor cooking is a revolutionary way to cook by microwave without setting a power level or selecting a time.

All that is necessary is to select an Auto Sensor Program before starting to cook.

Understanding Auto Sensor Cooking

As a food cooks, a certain amount of steam is produced. If the food is covered, this steam builds up and eventually escapes from the container. In Auto Sensor Cooking, a carefully designed instrument, called the steam sensor element, senses this escape of steam. Then, based upon the Auto Sensor Program selected, the unit will automatically determine the correct power level and the proper length of time it will take to cook the food.

NOTE: Auto Sensor Cooking is successful with the foods and recipes found in the Auto Sensor Cooking Guide. Because of the vast differences in food composition, items not mentioned in the Cooking Guide should be prepared in the microwave oven using power select and time features. Please consult Variable Power Microwave Cookbook for procedures.

Explanation of the Auto Sensor Cooking process

- 1) During the first 10 second period there is no microwave activity, and when calculating the T2 time by using the formula below make sure this 10 seconds is subtracted from the T1 time. In other words T1 time starts at the end of the 10 second period.
- 2) **T1 time**.....The total amount of time it takes the microwave oven to switch to T2 time after the 10 second period.
- 3) **T2 time**.....When the steam escapes from the cooking container placed in the oven, the steam sensor detects it and the microprocessor calculates the balance of cooking time. This T2 time is then shown in the display and begins counting down.

Balance of cooking time (T2 time)

The balance of cooking time which is called T2 time, can be calculated by the following formula.

$$T2 \text{ time (in sec.)} = T1 \text{ time} \times K \text{ factor}$$

NOTE: Remember, the T1 time starts after the 10 second period. The coefficient K is programmed into the microprocessor memory and they are listed in the following tables along with the P1 and P2 powers.

NOTE: When "More" or "Less" pad is selected, the K factor varies resulting in T2 time to be increased or decreased.

Example of calculating the T2 time

Example 1: If the T1 time is measured to be 2 minutes and 40 seconds after the 10 second period, and the Auto program selected is Fish:

$$\begin{aligned} T2 &= T1 \times K \\ &= 2 \text{ min. and } 40 \text{ sec.} \times 0.1 \\ &= 160 \text{ sec.} \times 0.1 \\ &= 16 \text{ sec.} \end{aligned}$$

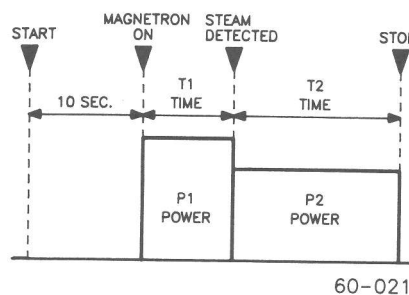
5. Auto Sensor Reheat

Auto Sensor Reheat is a quick and easy way to reheat refrigerator and room temperature foods.

Simply press the reheat pad. There is no need to select power level and cooking time.

NOTE: The Auto Sensor Reheat process is same as Auto Sensor Cooking process.

AUTO SENSOR COOKING/REHEAT PROCESS



One Touch Cooking (Auto Sensor Cook) NN-7850/7750/6850/6750/6700 QPQ

Category	P1 Power	P2 Power	K factor Standard
Fish	MED	MED	0.1

One Touch Cooking (Auto Sensor Cook) NN-7850/6850/6800 JPQ

Category	P1 Power	P2 Power	K factor Standard
Fish	HIGH	LOW	0.1

Sensor Reheat (All Sensor Models)

Category	P1 Power	P2 Power	K factor Standard
Sensor Reheat	HIGH	M.HIGH	0.1

CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

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 oven is turned off, an electric charge remains in the high voltage capacitor.

When replacing or checking parts, remove the power plug from the outlet and short the terminal of the high voltage capacitor (terminal of lead wire from diode) to chassis ground with an insulated handle screwdriver to discharge.

WARNING

There is high-voltage present, with high-current capabilities in the circuits of the high voltage winding and filament winding of the high voltage transformer. It is extremely dangerous to work on or near these circuits with oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

WARNING

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

3. When parts must be replaced, remove the power plug from the outlet.

4. Avoid inserting nails, wire, etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.

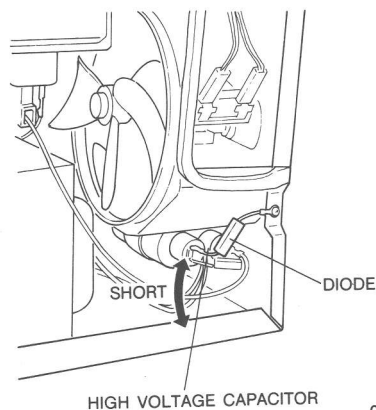
5. Confirm after repair

- (A) After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing.
 Microwaves might leak if screws are not properly tightened.
- (B) Make sure that all electrical connections are tight before inserting the plug into the wall outlet.

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, waveguides 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.



01-003

Touch chassis side first then short to the high voltage capacitor terminal.

DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

1. Magnetron

- Discharge the high voltage capacitor.
- Remove 2 screws holding magnetron thermal cutout.
- Remove 1 screw holding air guide A.
- Disconnect 2 high voltage lead wires from magnetron filament terminals.
- Remove 4 screws holding the magnetron.

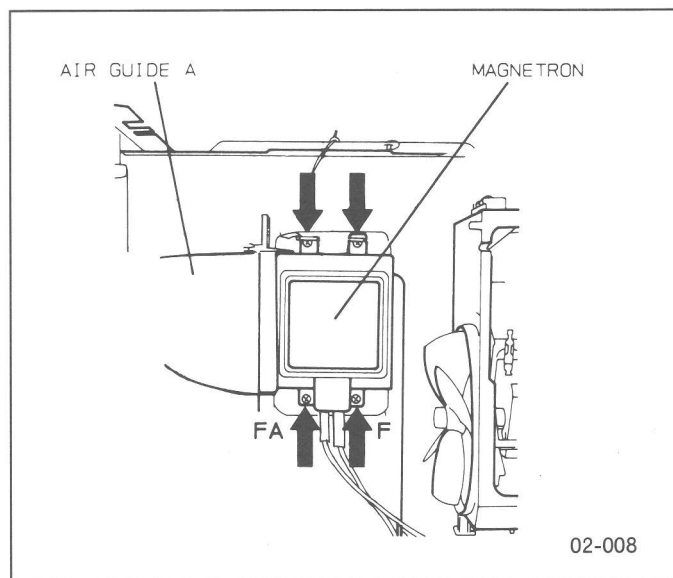
NOTE: After replacement of the magnetron, tighten mounting screws properly making sure there is no gap between the waveguide and the magnetron to prevent microwave leakage.

CAUTION

When replacing the magnetron, be sure the antenna gasket is in place.

CAUTION

When connecting 2 filament lead wires to the magnetron terminals, be sure to connect the lead wires in the correct position. The lead wire of high voltage transformer should be connected to "FA terminal" and the lead wire from high voltage capacitor should be connected to "F terminal".



2. Digital programmer circuit (DPC) and membrane key board.

NOTE: Be sure to ground any static electric charge built up on your body, before handling the DPC.

- Disconnect all connectors from D.P.C.
- Remove 2 screws holding escutcheon base and slide the escutcheon base upward slightly.
- Release CN2 connector's lock of DPC by pushing both levers to inside and pull them upward, and remove flat cable of membrane key board.
- Remove 2 screws holding DPC.

To replace membrane key board (For Family size models)

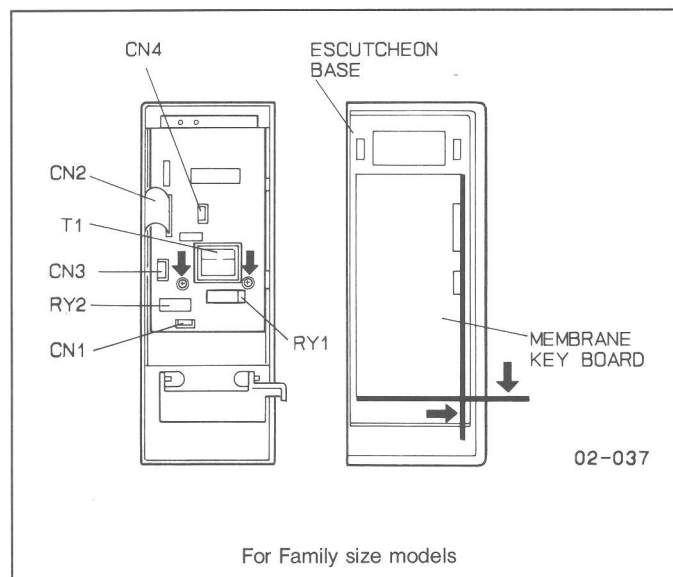
- Remove escutcheon bracket from escutcheon base by freeing 4 catch hooks on the escutcheon base.
- Peel off the tub of membrane key board from escutcheon base.
- Peel off the display filter from escutcheon base.
- Push the upper part of key board (display window portion) from back of escutcheon base and peel off membrane key board completely from escutcheon base.

To replace membrane key board (For Full size models)

- Remove escutcheon bracket from escutcheon base by freeing 4 catch hooks on the escutcheon base.
- Remove 1 screw holding tub of membrane switch.
- Peel off membrane key board from escutcheon base.

NOTE: 1. The membrane key board is attached to the escutcheon base with double faced adhesive tape.

- When installing new membrane key board, make sure that the surface of escutcheon base is cleaned sufficiently so that any problems (shorted contacts or uneven surface) can be avoided.
- Make sure that new membrane key board is aligned to the right/left and lower edges of the escutcheon base. (See figure)



For Family size models

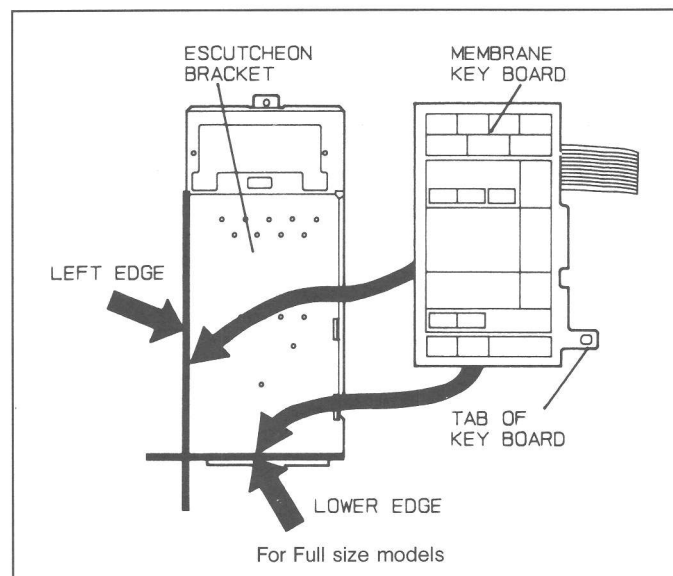
3. Low voltage transformer and/or power relays (RY1, RY2)

NOTE: Be sure to ground any static electric charge built up on your body before handling the DPC.

- Using solder wick or a desoldering tool and 30W soldering iron, carefully remove all solder from the terminal pins of the low voltage transformer and/or power relays.

NOTE: Do not use a soldering iron or desoldering tool of more than 30 watts on DPC contacts.

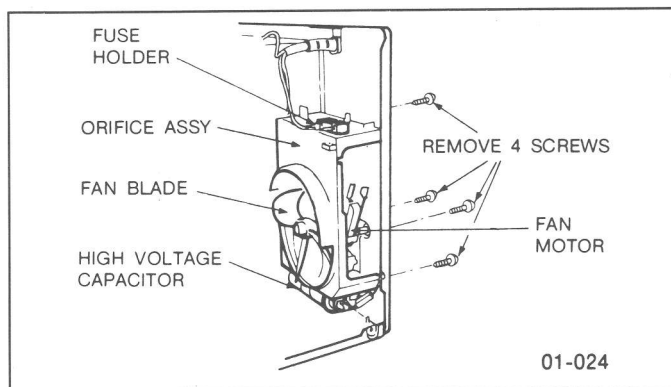
- With all the terminal pins cleaned and separated from DPC contacts, remove the defective transformer/power relays and install new transformer/power relays making sure all terminal pins are inserted completely. Resolder all terminal contacts carefully.



For Full size models

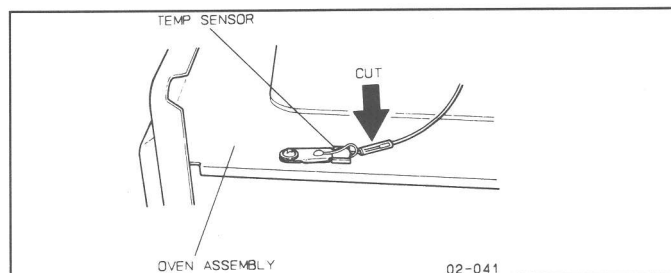
4. Fan motor.

- Disconnect 2 lead wires from fan motor terminals.
- Disconnect 2 lead wires from fuse holder terminals. (QPQ)
 Disconnect all lead wires from noise filter. (JPQ)
- Disconnect 4 high voltage lead wires from high voltage capacitor terminals.
- Remove 4 screws holding fan motor and orifice assy and detach the orifice assy with fan motor from oven assy.
- Remove fan blade from the fan motor shaft by pulling it straight out.
- Separate the fan motor from the orifice assy by freeing 2 catch hooks on the orifice assy.



5. Temp sensor (thermal protector)

- Cut lead wire at the top of sensor terminals.
- Remove 1 screw holding the temp sensor and replace with new one.
- Solder the lead wires securely to the sensor terminals.

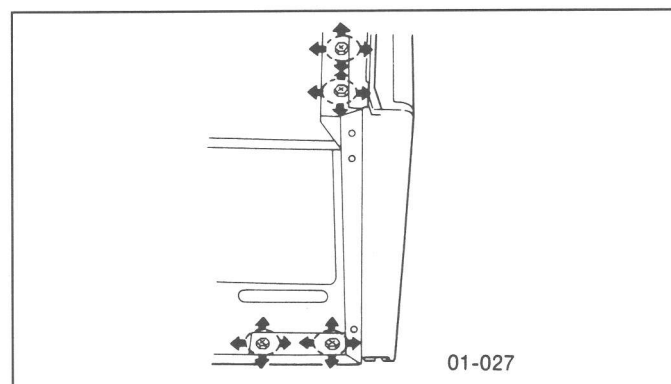
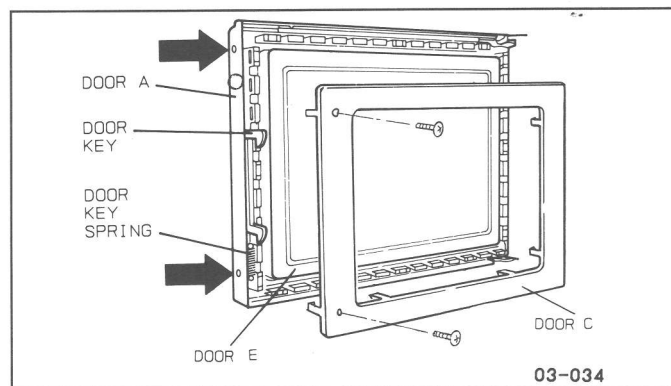


6. Door assembly

- Remove 2 screws holding door C for Family size models.
- Open the door and remove door C from door E by carefully pulling outward starting from upper right hand corner.
- Remove door key and door key spring.
- Remove 3 screws holding side and bottom frames of door A. (For Full size models)
 Remove 2 screws holding side frames of door A. (For Family size models)
- Separate the door A from the door E by freeing catch hooks on the door A using a flat screwdriver.

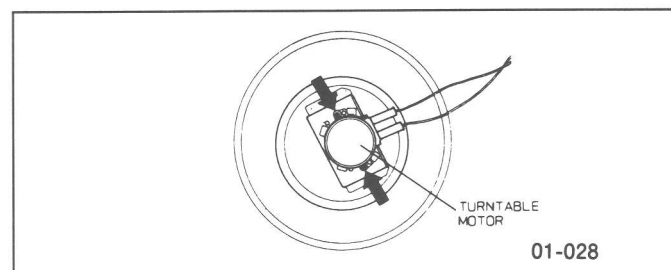
After replacement of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.

- When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
- Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave may leak from the clearance between the door and oven.
- Perform the microwave leakage test.



7. Turntable motor.

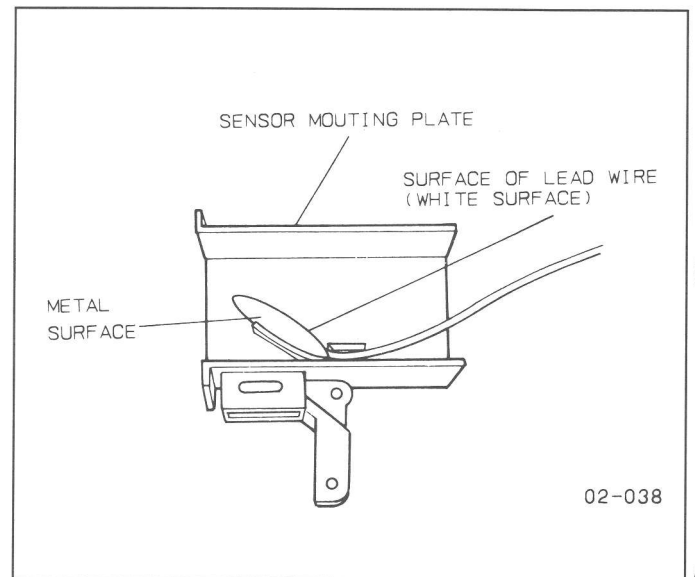
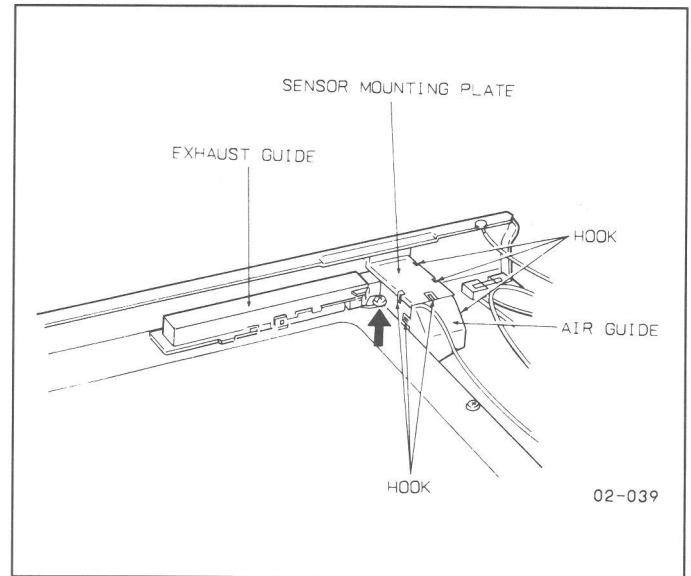
- Remove 2 screws holding motor cover.
- Disconnect 2 lead wires from turntable motor.
- Remove 2 screws holding turntable motor.



8. Steam sensor

- (A) Remove 1 screw holding steam sensor unit.
- (B) Disconnect CN4 connector from digital programmer circuit board.
- (C) Remove exhaust guide from steam sensor unit.
- (D) Remove catch hooks on sensor mounting plate and air guide.
- (E) Remove steam sensor from sensor mounting plate.

NOTE: When installing the steam sensor, make sure that the direction of steam sensor is as shown in figure.



COMPONENT TEST PROCEDURE

CAUTION

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook 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 high voltage capacitor.

1. Primary Latch Switch, Secondary (Secondary Latch Switch and Power relay B) Interlocks.

- (A) Unplug lead connectors to Power Relay B and verify continuity of the power relay B 1-2 terminals.
- (B) Unplug lead connectors to Primary Latch Switch and Secondary Latch Switch.
- (C) Test the continuity of switches at door opened and closed positions with ohm meter (low scale).
 Normal continuity readings should be as follows.

	Door Opened	Door Closed
Primary Latch Switch	$\infty \Omega$ (open)	0 Ω (close)
Secondary Latch Switch	$\infty \Omega$ (open)	0 Ω (close)
Power Relay B	$\infty \Omega$ (open)	$\infty \Omega$ (open)

2. Short Switch & Monitor Circuit

- (A) Unplug lead wires from H.V. transformer primary terminals.
- (B) Connect test probes of ohm meter to the disconnected leads which were connected to H.V. Transformer.
- (C) Test the continuity of short switch with door opened and closed positions using lowest scale of the ohm meter.
 Normal continuity readings should be as follows.

Models	Door closed	Door opened
Touch Models	$\infty \Omega$	0 Ω
Mechanical Models	Some Ohm See Note	0 Ω

NOTE: In this case, the ohm meter indicates some resistance of the part(s) such as oven lamp, blower fan motor, etc. connected in parallel with the monitor circuit.

3. High voltage transformer

- (A) Remove connections from the transformer terminals and check continuity.
- (B) Normal (cold) resistance readings should be as follows:
 Secondary winding..... Approx. 80 Ω ~ 120 Ω
 Filament winding..... Approx. 0 Ω
 Primary winding..... Approx. 0 Ω ~ 3 Ω

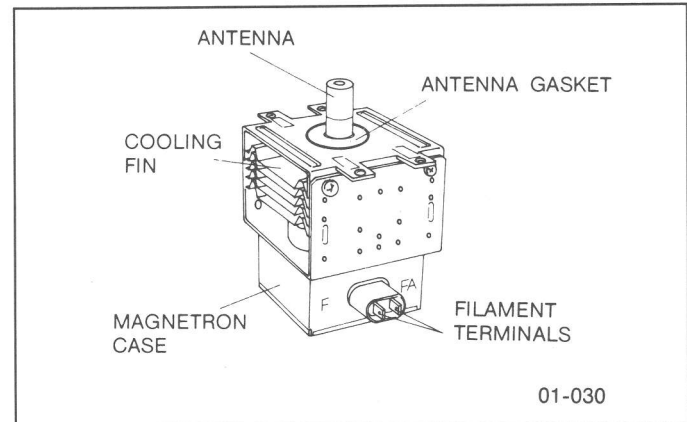
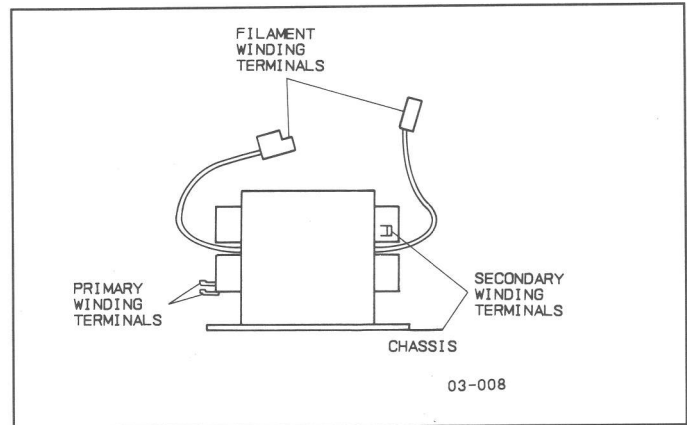
4. High voltage capacitor

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

5. Magnetron

Continuity checks can only indicate an 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 one ohm or less.
- (C) A continuity check between each filament terminal and magnetron case should read open.



6. 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-to-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
 A normal diode's resistance will be infinite in one direction and several hundred k Ω in the other direction.

7. Membrane key board (Membrane switch assembly)

Check continuity between switch terminals, by tapping an appropriate pad on the key board. The contacts assignment of the respective pads on the key board is as shown in digital programmer circuit.

8. Steam Sensor and digital programmer circuit

CAUTION

Do not touch any parts of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel.
 Always ground yourself while working on this panel to discharge any static charge built up on your body.

In order to determine if the steam sensor function of the digital programmer circuit is in working order or not, do the following test.

- 1) Place a water load (150 cc) in the oven.
- 2) Tap Sensor Reheat pad.
- 3) Tap Start Pad.
- 4) Steam Sensor detects steam about 1 minute 30 seconds to 5 minutes after the Start Pad is tapped.
- 5) T1 time cooking automatically switch to remaining time cooking. (T2)
- 6) The remaining of cooking time (T2) appears in display window. If the following cooking time appear Steam Sensor function is normal.

T1 TIME	T2 TIME (Remaining cooking time)
1Min. 30 sec. ~5 Min.	9 Sec. ~ 30 Sec.

9. Temp sensor (Thermal protector)

A temp sensor is mounted on top of the oven cavity at the left side. Its purpose is to automatically shut off the oven in case the cavity overheats for any reason.

The thermal protector will operate at 257°F (125°C).

The device is connected to the DPC on touch control models. When the thermal protector exceeds its temperature it will turn off the power to oven cavity and display will go to reset mode.

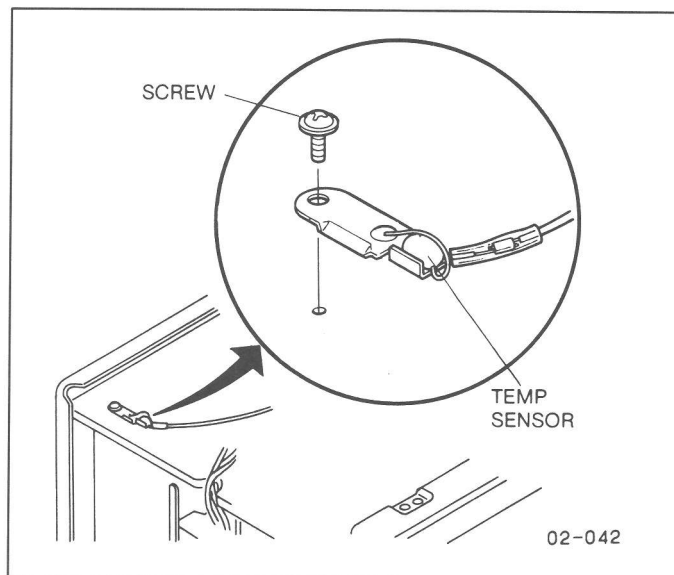
The cooking program can be reset after cool-down.

THERMISTOR RESISTANCE VALUE

30K-120K at 10°C-30°C (50°F-86°F)

10. Protector diode

- (A) Isolate the protector diode assembly from the circuit by disconnecting its leads.
 (B) With the ohmmeter set on the highest resistance scale, measure the resistance across the protector diode terminals.
 Reverse the meter leads and again observe the resistance reading. A normal protector diode's resistance will be infinite in both directions. It is faulty if it shows continuity in one or both directions.



MEASUREMENTS AND ADJUSTMENTS

1. Adjustment of Primary latch switch, Secondary latch switch and short switch

- (A) When mounting Primary latch switch, Secondary latch switch and short switch to door hook assembly, mount the Primary latch switch, Secondary latch switch and the short switch to the door hook assembly as shown in table.

NOTE: No specific adjustment during installation of Primary latch switch, Secondary latch switch and short switch to the door hook is necessary.

- (B) When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in table so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.
- (C) Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.

2. Measurement of microwave output

The power output of the magnetron can be determined by performing a simple water heating test as described below.

Necessary Equipment:

*1 liter beaker *Glass thermometer

*Wrist watch or stopwatch

NOTE: Check the line voltage under load. Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurate as possible.

- (A) Fill the beaker with exactly one liter of tap water. Stir the water using the thermometer and record the beaker's temperature (recorded as T1).
- (B) Place the beaker on the center of glass cook plate. Set the oven for High power and heat it for exactly one minute.
- (C) Stir the water again and read the temperature of the beaker (recorded as T2).
- (D) The normal temperature rise at High power position for each models is as shown in table.

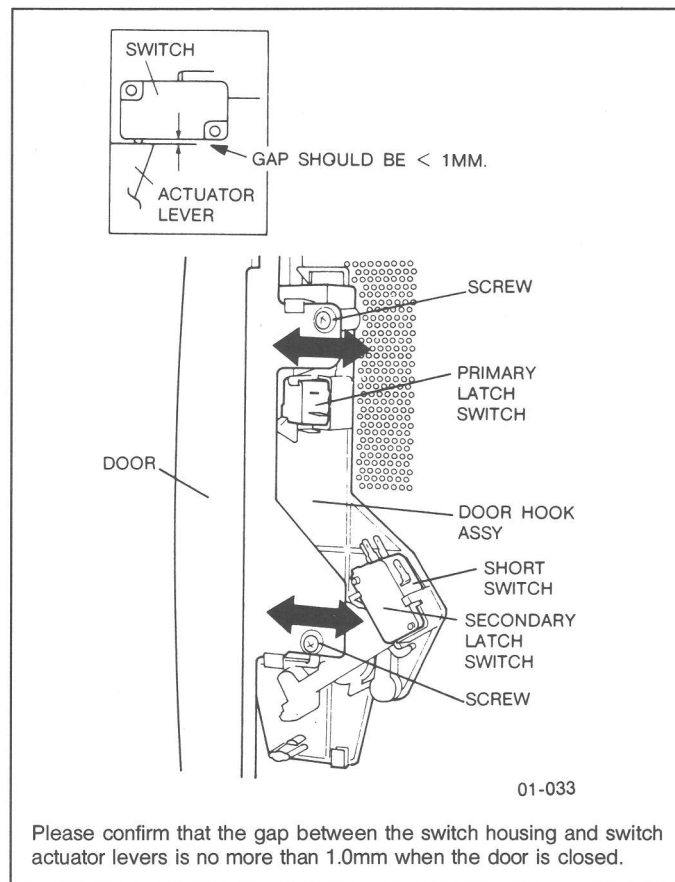


TABLE (1 ℓ -1min. test)

RATED OUTPUT	TEMPERATURE RISE
750W	7.5°C

TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge high voltage capacitor.
4. When checking the continuity of the switches or 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 a false reading or damage to your meter.
 When disconnecting a plastic connector from a terminal, you must hold the plastic connector instead of the lead wire and then disconnect it, otherwise lead wire may be open or the connector cannot be removed.
5. Do not touch any parts of the circuitry on the digital programmer 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 in your body.
6. A 230V/240V AC is present at the shaded area  of the digital programmer circuit (Terminals of power relay B and primary circuit of low voltage transformer). When troubleshooting, be cautious of possible electrical shock hazard.

First of all operate the microwave oven following the correct operating procedures in order to find the exact cause of any trouble.

[TROUBLE 1] Oven does not start cooking

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
Oven is dead. No display at all	1	Fuse	Blown	→ TROUBLE 2
			Normal	→ STEP 2
	2	Thermal cutout	Faulty (open)	Thermal cutout ※ Check fan motor when thermal cutout is defective
			Normal	→ TROUBLE 4
Display lit but timer not starts count down	1	Secondary latch switch (Door closed 0 Ω Door opened ∞ Ω)	Faulty	Secondary latch switch
			Normal	→ TROUBLE 4
Timer starts count down but no microwave oscillation	1	Primary latch switch (Door closed 0 Ω Door opened ∞ Ω)	Faulty	Primary latch switch
			Normal	→ STEP 2
	2	High voltage transformer primary voltage	No voltage applied	→ STEP 3
			Power supply voltage applied	→ STEP 4
	3	Is 18 (12)V DC applied to power relay B?	No voltage applied	→ TROUBLE 4
			Voltage applied	Power relay B
	4	Check high voltage component according to component test procedure H.V. Transformer H.V. Capacitor H.V. Diode Magnetron	Faulty	Replace faulty H.V. Component

[TROUBLE 2] Fuse is blown

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
Main fuse blown	1	Primary latch switch (Door closed 0 Ω Door opened ∞ Ω) and also power relay B (RY 2), when power relay B is located within monitor circuit.	Abnormal	Primary latch switch
			Normal	→ STEP 2
	2	Short switch (Door closed 0 Ω Door opened ∞ Ω)	Abnormal	Short switch
			Normal	→ STEP 3
	3	H.V.Capacitor	Faulty	H.V.Capacitor
			Normal	→ STEP 4
	4	H.V.Diode	Faulty	H.V.Diode with protector diode (※NOTE)
			Normal	→ STEP 5
	5	Magnetron	Faulty	Magnetron with protector diode (※NOTE)
			Normal	→ STEP 6
	6	Protector diode	Faulty	Protector diode
			Normal	H.V.Transformer
	※NOTE: Be sure to replace protector diode together with those H.V.Components. In this case, only D2 of protector diode may be shorted due to faulty H.V.Component. Therefore, if protector diode is not replaced together, high voltage transformer will be damaged (over heated).			

[TROUBLE 3] Other troubles

CONDITIONS	POSSIBLE CAUSE	NOTE
Microwave output power is low. First of all, check if output power is really low by following "Measure- ment of microwave output".	1. Decrease in power source voltage. 2. Aging change of magnetron.	
Oven lamp and fan motor turn on when door is open.	1. Shorted contacts of Primary latch switch.	
Oven lamp and fan motor turn on when power supply cord is plug- ged into wall receptacle.	1. Open Secondary latch switch. 2. Shorted contacts of power relay A. (RY2) 3. Defective digital programmer circuit. (See trouble 4)	
Microwave oven does not operate normally, when auto sensor cook- ing is selected.	1. Defective steam sensor. 2. Defective DPC. (See trouble 4)	
"88:88" appears in display window after 10 seconds elapsed in the auto sensor cooking mode.	1. Open or loose wiring of sensor terminals from DPC. 2. Open steam sensor. 3. Defective DPC. (See trouble 4)	
Microwave oven does not operate and "88:88" appears in display.	1. Defective temp sensor. 2. Open grounding circuit. (NOTE) 3. Defective DPC.	Check tighten screws on escutcheon base bracket, D.P.C. board and temp sensor.

(TROUBLE 4) Trouble related to Digital programmer circuit

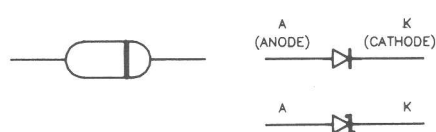
SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
No Display when oven is first plugged in	1	Low voltage transformer (LVT) secondary voltage	Abnormal 0V	LVT
			Normal	→ Step 2
	2	IC-1 pin 34 voltage (Emitter of Q1)	Abnormal	ZD1, Q1
			Normal = 5V	→ Step 3
	3	IC-1 pin 36 voltage (14 pin of IC-2)	Abnormal	IC-2
			Normal	→ IC-1, CX1, DISPLAY
No key input	1	Membrane switch continuity	Abnormal	Membrane switch
			Normal	IC-1
No beep sound	1	IC-1 pin 25 voltage	Abnormal	IC-1
			Normal	BZ
Power relay A(RY-2) does not turn on even though the program has been set and the start pad is tapped	1	IC-1 pin 3 voltage while operation	Abnormal	IC-1
			Normal = 5V	→ Step 2
	2	short circuit between pin 1 and pin 12 of IC-2	Still not turn on	RY-2
			RY-2 turns on	IC-2
No microwave oscillation at any power setting	1	IC-1 pin 6 and pin 14 voltages while operation at high power	Abnormal	IC-1
			Normal 6---5V, 14---5V	→ Step 2
	2	Q4 transistor	Abnormal	Q4
			Normal	IC-2, RY-1
Dark or unclear display	1	Replace display and check operation	Normal	DISPLAY
			Abnormal	IC-1
Missing or lighting of unnecessary segment	1	Replace IC-1 and check operation	Normal	IC-1
			Abnormal	DISPLAY

TO BE CONTINUED FOR AUTO SENSOR MODELS

Auto Sensor cooking does not operate normally. (Steam sensor does not detect steam from foods.)	1	Steam sensor terminal voltage by using high impedance tester (20k Ω /V), when breathe on metal surface of sensor	Abnormal = 0V	Steam sensor
			Normal $\geq 10\sim 30$ mV	IC-1, IC-3, C7, C9

HOW TO CHECK THE SEMICONDUCTORS USING AN OHM METER

Diode



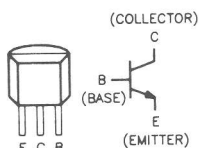
	FORWARD	REVERSE
A-K	SMALL	∞

Transistor

NPN Transistor

2SC.....

2SD.....

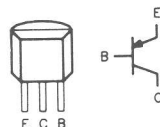


	FORWARD	REVERSE
B-E	SMALL	∞
B-C	SMALL	∞
C-E	∞	∞

PNP Transistor

2SA.....

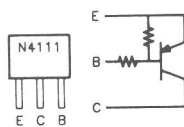
2SB.....



	FORWARD	REVERSE
E-B	SMALL	∞
C-B	SMALL	∞
C-E	∞	∞

Digital Transistor

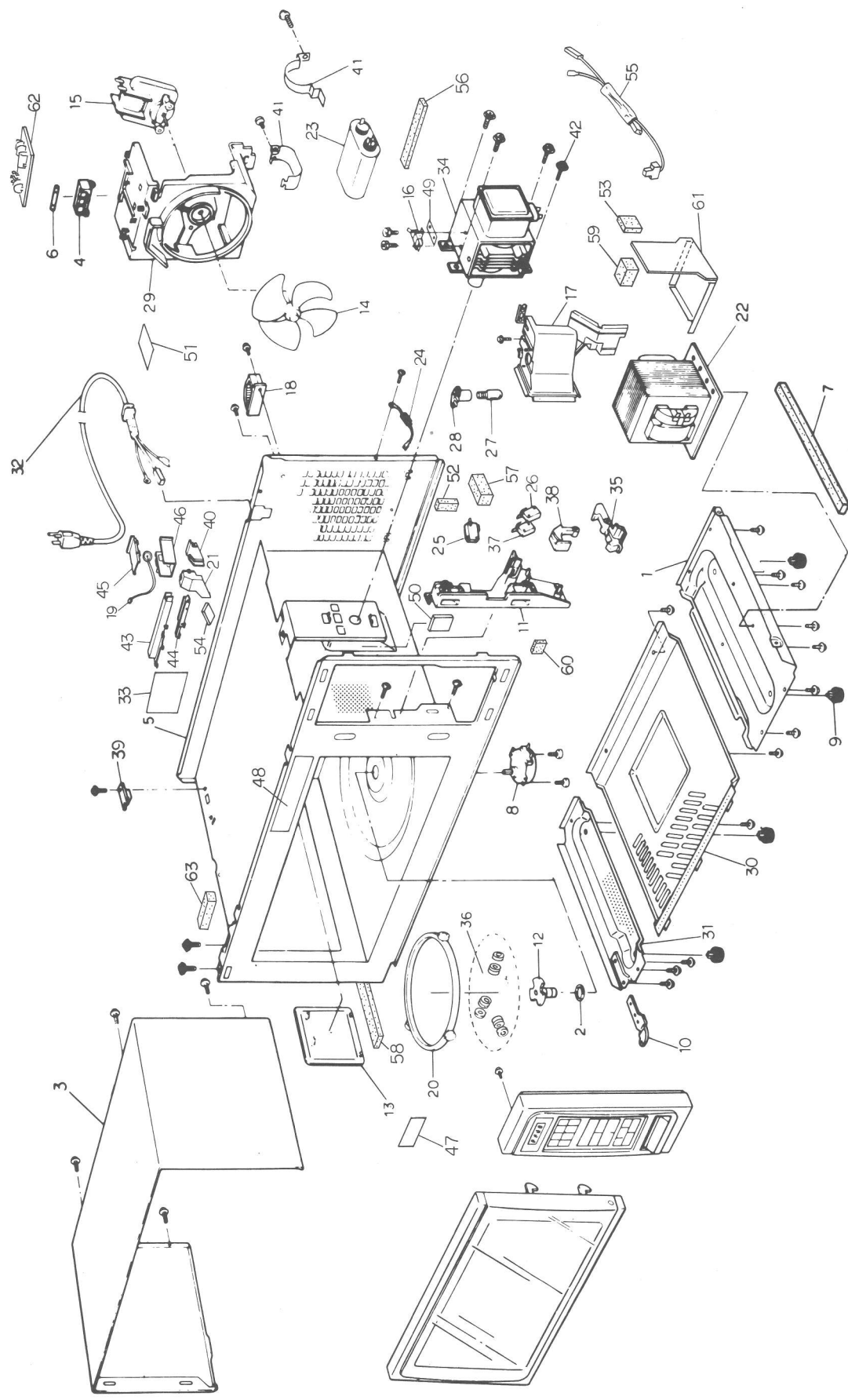
PNP Transistor



	FORWARD	REVERSE
E-B	10k Ω ~ 30k Ω	10k Ω ~ 30k Ω
C-B	50k Ω ~ 90k Ω	∞
C-E	40k Ω ~ 80k Ω	∞

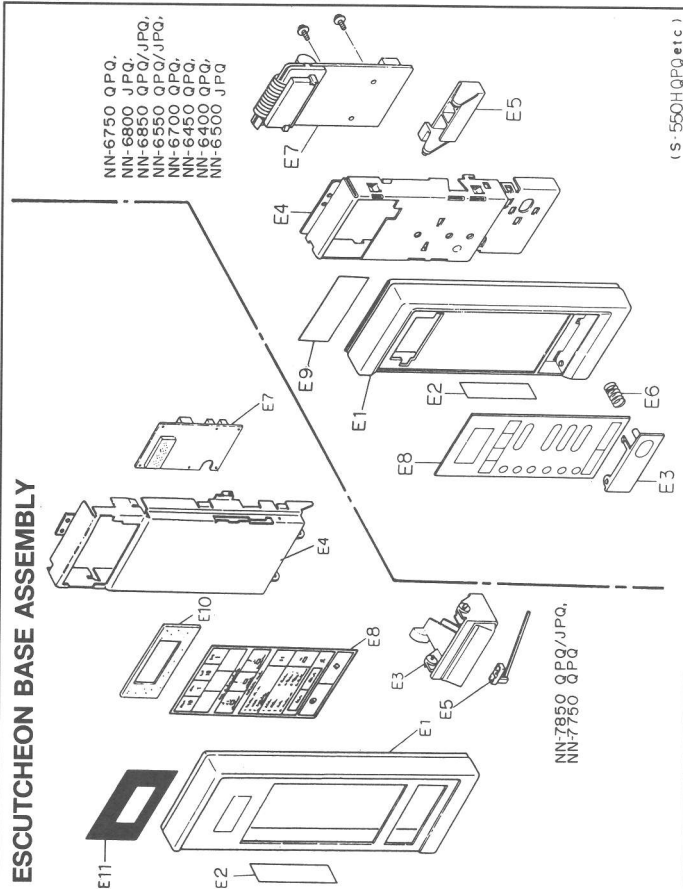
EXPLODED VIEW AND PARTS LIST

EXPLODED VIEW



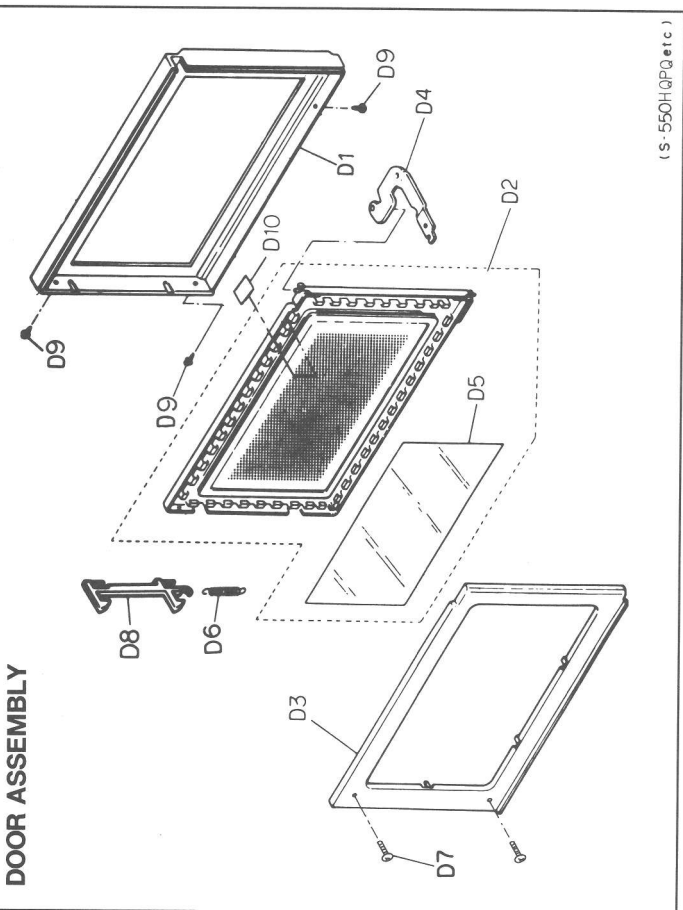
(S-550HQPQ etc.)

ESCUTCHEON BASE ASSEMBLY



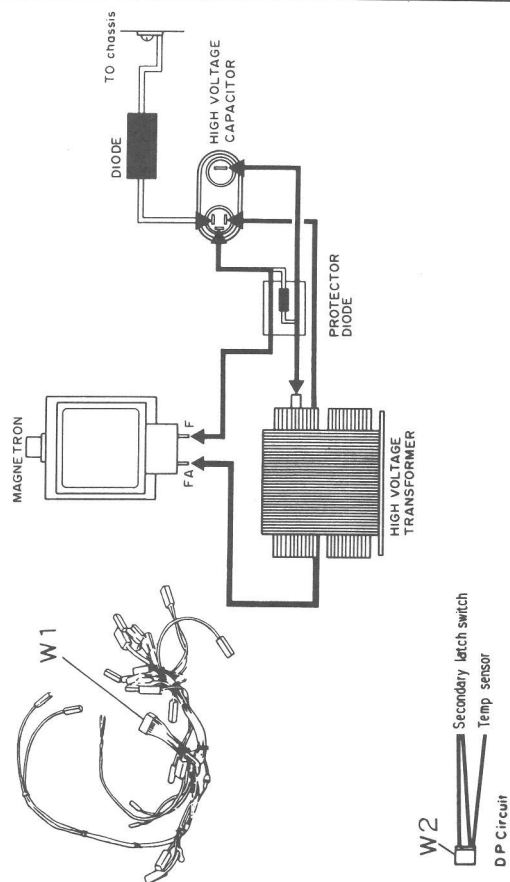
(S-550HQPQetc.)

DOOR ASSEMBLY



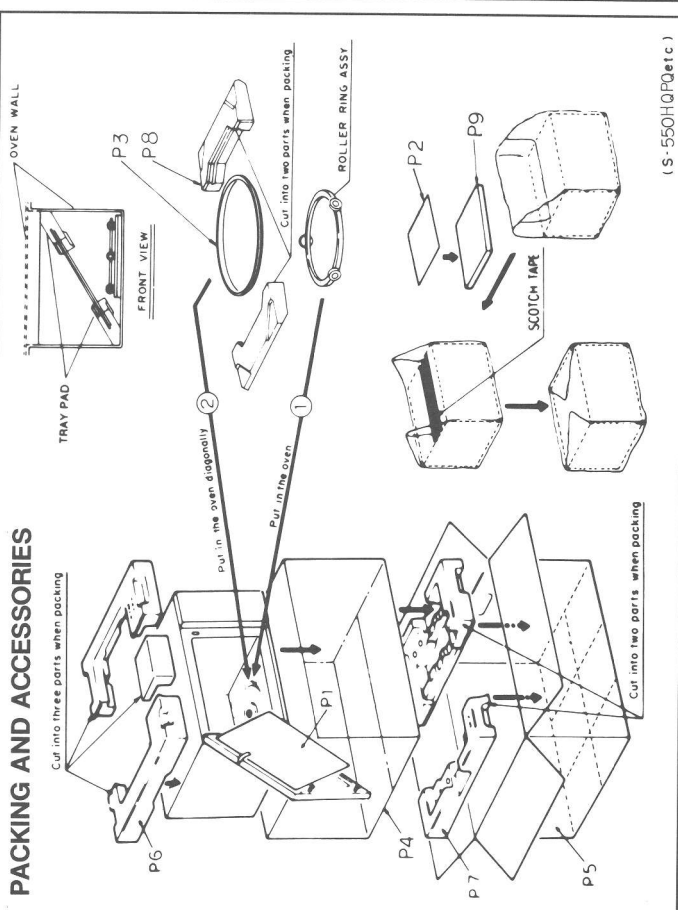
(S-550HQPQetc.)

WIRING MATERIAL



(S-550HQPQetc.)

PACKING AND ACCESSORIES



(S-550HQPQetc.)

PARTS LIST

NOTE 1: When ordering replacement part(s), please use part number(s) shown in this parts list. Do not use description of the part.

2: Important safety notice:

Components identified by $\triangle$ mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

3: Alphabet marks in Remarks columns (i.e. QPQ, JPQ, etc) indicate parts applicable to only specified country models as follows.

QPQ: For Australia, JPQ: For New Zealand, etc.

Parts without these marks can be used for all models.

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks	Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
1		A10015540AP	Base	1		25	$\triangle$	ANE61424L0AG	Micro switch	1	Primary latch switch (V-16G-3C26)
2		ANE2177-F80	Washer	1		26	$\triangle$	A61425180AP	Micro switch	1	Secondary latch switch (L-3C2-MR)
3		A110D5500HJJ	Cabinet bodyassy	1	NN-7850 QPQ/J PQ, NN-7750 QPQ	27		A60304080BP	Incandescent lamp	1	240V, 20W
3		A10095540GP	Cabinet bodyassy	1	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ	28		A61524000AP	Oven lamp socket	1	
3		A110D5540HGP	Cabinet bodyassy	1	NN-6750 QPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6450 QPQ	29		A41444000AP	Orifice	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
4		A62314000AP	Fuse holder	1	NN-7850, NN-7750, NN-6750, NN-6850, NN-6550, NN-6700, NN-6450, NN-6400/Q PQ	29		A41445540AP	Orifice	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
5	$\triangle$	A200A5500AP	Oven assy	1	NN-7850 QPQ/J PQ, NN-7750 QPQ	30		A10264000AP	Base C	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
5	$\triangle$	A200A5540AP	Oven assy	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ	30		A10265540AP	Base C	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
5	$\triangle$	A200A5630AP	Oven assy	1	NN-6550 QPQ/J PQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ	31		A11295540AP	Base B	1	
6	$\triangle$	ANE6230Z70BP	Fuse	1	250V, 8A	32		A900C4760JP	AC cord W/plug	1	240V
7		ANE000Z000AA	Cushion rubber A	1							NN-7850, NN-7750, NN-6750, NN-6850, NN-6550, NN-6700, NN-6450, NN-6400/Q PQ
8		A63264760JP	Turntable motor	1	AC, 3W, Single	32		A900C5500JP	AC cord W/plug	1	240V
9		ANE1008-3W0	Rubber foot	4		33		A00065460JP	Warning label	1	
10	$\triangle$	A30075180AP	Lower hinge	1	NN-7850 QPQ/J PQ, NN-7750 QPQ	34	$\triangle$	2M210-M1C	Magnetron	1	
10	$\triangle$	A30075540AP	Lower hinge	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ	35		A31374650AP	Hook spacer B	1	
11	$\triangle$	A30204310AG	Door hook A	1		36		A202K5850AP	Roller B assy	1	NOTE 4
12		A21315180AP	Pulley shaft	1	NN-7850 QPQ/J PQ, NN-7750 QPQ	37	$\triangle$	A61785180AP	Micro switch	1	Short switch (L-2C2-MR)
12		A21315540AP	Pulley shaft	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ	38		A31384650AP	Hook spacer C	1	
13		A20554000AP	Cover A	1		39	$\triangle$	A601L5180AP	Temp sensor	1	(Thermal protector)
14		ANE40086W0AP	Fan	1		40		A40315500AP	Air guide C	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
15		A400A5500QP	Fan motor	1		40		A40315540AP	Air guide C	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ
16		A61454760JP	Thermal cutout	1	For Magnetron	41		A61884060AP	Capacitor bracket	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
17		A40254760JP	Air guide A	1		41		A60374740AP	Capacitor bracket	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6550 QPQ/J PQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ, For Magnetron
18		A11404960AQ	Stopper A	1		42		XTWANE4+10RU	Tapping screw 4×10	4	
19		A607S5500AP	Steam sensor	1	NN-7850 QPQ/J PQ, NN-7750 QPQ, NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ	43		A64505500AP	Exhaust guide B	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
20		A290D5850GP	Roller ring assy	1		43		A64505540AP	Exhaust guide B	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ
21		A40265500AP	Air guide B	1	NN-7850 QPQ/J PQ, NN-7750 QPQ	44		A65435500AP	Exhaust guide C	1	NN-7850 QPQ/J PQ, NN-7750 QPQ
21		A40265540AP	Air guide B	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ	44		A65435540AP	Exhaust guide C	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/J PQ, NN-6700 QPQ
22	$\triangle$	A600B4760JP	H.V. Transformer	1	1.5KVA	45		A22135540AP	Sensor bracket A	1	NN-7850 QPQ/J PQ, NN-7750 QPQ, NN-6750 QPQ, NN-6800 JPQ,
23	$\triangle$	A60904080GP	H.V. Capacitor	1	(1.14μF, AC2100V)						
24	$\triangle$	A62024000AP	Diode	1	Si, 0.35A						

(S-550H QPQ)

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
46		A22145540AP	Sensor bracket B	1	NN-6850 QPQ/JPQ, NN-6700 QPQ
47		ANE0172L60JN	Caushion label	1	NN-7850 QPQ/JPQ, NN-7750 QPQ,
48		A03345500QP	Menu label	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6700 QPQ
48		A03345510QP	Menu label	1	NN-7850, NN-6800, NN-6850, NN-6550, NN-6500 /JPQ
49		A62384310AG	Spacer	1	NN-7850 QPQ/JPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ
50		ANE0928000BD	Cushion rubber C	1	NN-7750, NN-6750, NN-6700 /QPQ
51		ANE0033770XN	Fuse label	1	NN-7850 QPQ/JPQ, NN-7750 QPQ, NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ
52		ANE0904000BD	Cushion rubberA	1	NN-7850, NN-7750, NN-6750, NN-6850, NN-6550, NN-6700, NN-6450, NN-6400/QPQ
53		ANE0902000ED	Cushion rubberA	1	
54		ANE0925000BD	Cushion rubberC	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6700 QPQ
55		A606V4760JP	Protector diode	1	
56		ANE0902000DJ	Cushion rubberA	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
57		A41024760JP	Air guide cushion A	1	
58		ANE0928000BU	Cushion rubberC	1	
59		ANE10496P0GS	Cushion	1	
60		A09225500AP	Cushion rubber C	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
61		A21874760JP	Metal shild	1	
62		A692Y4060BP	Noise filter	1	NN-7850 JPQ
62		A692Y5540BP	Noise filter	1	NN-6800, NN-6850, NN-6550, NN-6500 /JPQ
63		ANE0905000FC	Cushion rubber C	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
		ANE0887L10AP	Cavity spray paint	1	Spray can, For repair of painted oven cavity
		ANE0887970AP	Touch-up paint	1	Bottle with brush, For repair of painted oven cavity

DOOR ASSEMBLY

D1	△	A302A5500HQP	Door A assy	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
D1	△	A302A5540HQP	Door A assy	1	NN-6750 QPQ, NN-6850 QPQ/JPQ
D1	△	A302A5540QP	Door A assy	1	NN-6800 JPQ, NN-6700 QPQ
D1	△	A302A5630HGP	Door A assy	1	NN-6550 QPQ/JPQ, NN-6450 QPQ
D1	△	A302A5630GP	Door A assy	1	NN-6400 QPQ, NN-6500 JPQ
D2	△	A302K4700HAP	Door E assy	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
D2	△	A302K5540HCP	Door E assy	1	NN-6750 QPQ, NN-6850 QPQ/JPQ,

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
D2	△	A302K5810AP	Door E assy	1	NN-6550 QPQ/JPQ, NN-6450 QPQ
D3	△	A30854660HJP	Door C	1	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ
D3	△	A30855810HCP	Door C	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
D3	△	A30855810AP	Door C	1	NN-6750 QPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6450 QPQ
D4	△	A30065000AP	Upper hinge	1	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ
D4	△	A300B5540AP	Upper hinge	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
D5	△	A31455180AP	Door screen A	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
D5	△	A31454740AP	Door screen A	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
D6		A30214000AP	Door key spring	1	NN-6750 QPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6450 QPQ
D7		XTBANE4+12FC	Tapping screw 4×12	2	For Door C
D7		XTBANE4+12FK	Tapping screw 4×12	2	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ
D8		A30184650AP	Door key A	1	For Door C
D9		XTBANE3+8BC	Tapping screw 3×8	3	NN-7850 QPQ/JPQ, NN-7750 QPQ, NN-6550 QPQ/JPQ, NN-6450 QPQ
D9		XTBANE3+8BC	Tapping screw 3×8	2	For Door A
D9		XTBANE3+8BZ	Tapping screw 3×8	3	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6700 QPQ
D10		A62385540AP	Spacer	1	For Door A
					NN-6400 QPQ, NN-6500 JPQ

ESCUTCHEON BASE ASSEMBLY

E1		A80344010HJJ	Escutcheon base	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
E1		A80345540HAQ	Escutcheon base	1	NOTE 5
E1		A80345540GP	Escutcheon base	1	NN-6750 QPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6450 QPQ
E2		A00075500HQP	Name plate	1	NOTE 5
E2		A00075500HJP	Name plate	1	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ
E2		A00075510HQP	Name plate	1	NOTE 5
E2		A00075570HQP	Name plate	1	NN-7850 QPQ
E2		A00075540JP	Name plate	1	NN-7850 JPQ
E2				1	NN-7750 QPQ
E2				1	NN-6750 QPQ
E2				1	NN-6800 JPQ

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
E2	A00075540HQP	Name plate	1	NN-6850 QPQ
E2	A00075540HJP	Name plate	1	NN-6850 JPQ
E2	A00075630HQP	Name plate	1	NN-6550 QPQ
E2	A00075630HJP	Name plate	1	NN-6550 JPQ
E2	A00075570QP	Name plate	1	NN-6700 QPQ
E2	A00075580HQP	Name plate	1	NN-6450 QPQ
E2	A00075580QJP	Name plate	1	NN-6400 QPQ
E2	A00075630JP	Name plate	1	NN-6500 JPQ
E3	A80724110HBP	Door opening button	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
E3	A80725540HAQ	Door opening button	1	NN-6500 QPQ, NN-6850 QPQ/JPQ, NN-6450 QPQ
E3	A80725540GP	Door opening button	1	NN-6800 JPQ, NN-6700 QPQ, NN-6400 QPQ, NN-6500 JPQ
E4	A800X4700AP	Bracket	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
E4	A81275540AP	Bracket	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
E5	A82564000AP	Door opening lever	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
E5	A82565540AP	Door opening lever	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
E6	ANE80378A0AG	Spring	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
E7	A603L5500QP	D.P.Circuit assy	1	NN-7850 QPQ, NN-7750 QPQ (W/Component)
E7	A603L5500JP	D.P.Circuit assy	1	NN-7850 JPQ (W/Component)
E7	A603L5540QP	D.P.Circuit assy	1	NN-6750, NN-6850, NN-6700/QPQ (W/Component)
E7	A603L5540JP	D.P.Circuit assy	1	NN-6800, NN-6850 JPQ (W/Component)
E7	A603L5630QP	D.P.Circuit assy	1	NN-6550, NN-6450, NN-6400 /QPQ (W/Component)
E7	A603L5630JP	D.P.Circuit assy	1	NN-6550, NN-6500/JPQ (W/Component)
E8	A64795500HQP	Membrane switch	1	NN-7850 QPQ/JPQ
E8	A64795510HQP	Membrane switch	1	NN-7750 QPQ
E8	A64795570HQP	Membrane switch	1	NN-6750 QPQ
E8	A64795540QP	Membrane switch	1	NN-6800 JPQ
E8	A64795540HQP	Membrane switch	1	NN-6850 QPQ/JPQ
E8	A64795630HQP	Membrane switch	1	NN-6550 QPQ/JPQ
E8	A64795570QP	Membrane switch	1	NN-6700 QPQ
E8	A64795580HQP	Membrane switch	1	NN-6450 QPQ
E8	A64795580QP	Membrane switch	1	NN-6400 QPQ
E8	A64795630QP	Membrane switch	1	NN-6500 JPQ
E9	A80025540AP	Display filter	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
E10	A83425500HQP	Cushion rubber B	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
E11	A80015500HQP	Escutcheon A	1	NN-7850 QPQ/JPQ, NN-7750 QPQ

PACKING AND ACCESSORIES

Ref. No.	Part No.	Part Name & Description	Pcs/ Set	Remarks
P1	ANE0107580AP	Door sheet	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
P1	A01075240AP	Door sheet	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
P2	A00035500QP	Instruction book	1	
P3	A06014000AP	Glass cooking tray	1	
P4	A01065200AP	Vinyl cover	1	
P5	A01025500HQP	Packing case, paper	1	NN-7850 QPQ
P5	A01025500HJP	Packing case, paper	1	NN-7850 JPQ
P5	A01025510HQP	Packing case, paper	1	NN-7750 QPQ
P5	A01025570HQP	Packing case, paper	1	NN-6750 QPQ
P5	A01025540JP	Packing case, paper	1	NN-6800 JPQ
P5	A01025540HQP	Packing case, paper	1	NN-6850 QPQ
P5	A01025540HJP	Packing case, paper	1	NN-6850 JPQ
P5	A01025630HQP	Packing case, paper	1	NN-6550 QPQ
P5	A01025630HJP	Packing case, paper	1	NN-6550 JPQ
P5	A01025570QP	Packing case, paper	1	NN-6700 QPQ
P5	A01025580HQP	Packing case, paper	1	NN-6450 QPQ
P5	A01025580QP	Packing case, paper	1	NN-6400 QPQ
P5	A01025630JP	Packing case, paper	1	NN-6500 JPQ
P6	A01045500AP	Upper filler	1	
P7	A01055500AP	Lower filler	1	
P8	A01134650AP	Tray styrol	1	NN-7850 QPQ/JPQ, NN-7750 QPQ
P8	A01134740AP	Tray styrol	1	NN-6750 QPQ, NN-6800 JPQ, NN-6850 QPQ/JPQ, NN-6550 QPQ/JPQ, NN-6700 QPQ, NN-6450 QPQ, NN-6400 QPQ, NN-6500 JPQ
P9	A000B5500JP	Cook book	1	NN-7850, NN-6800, NN-6850 /JPQ
P9	A000B5500QP	Cook book	1	NN-7850, NN-7750, NN-6750, NN-6850, NN-6550, NN-6700, NN-6450, NN-6400 /QPQ
P9	A000B5630JP	Cook book	1	NN-6550, NN-6500/JPQ
WIRING MATERIAL				
W1	A030A5500QP	Lead wire harness	1	NN-7850, NN-7750, NN-6750, NN-6850, NN-6550, NN-6700, NN-6450, NN-6400 /QPQ
W1	A030A5500JP	Lead wire harness	1	NN-7850, NN-6800, NN-6850, NN-6550, NN-6500 /JPQ
W2	A03535500AP	Lead wire	1	
Ref.No.62 Noise filter assy				
C1	ECQU2A104MN	Polyester capacitor	1	0.1μF, ±20%, 250V
C2,3	ECKDNS472MEX	Ceramic capacitor	2	(Single layer) 0.0047 μF, ±20%, 250V
L1	ANE621A7B0JN	Filter coil	1	
ZNR1	ERZC10DK621F	Varistor	1	
ZNR2,3	ERZC10DK112A	Varistor	2	
R2	ERD25FJ564S	Carbon film resistor	1	560KΩ, ±5%, 1/4W
	ANE6231Q50GN	Fuse holder	2	

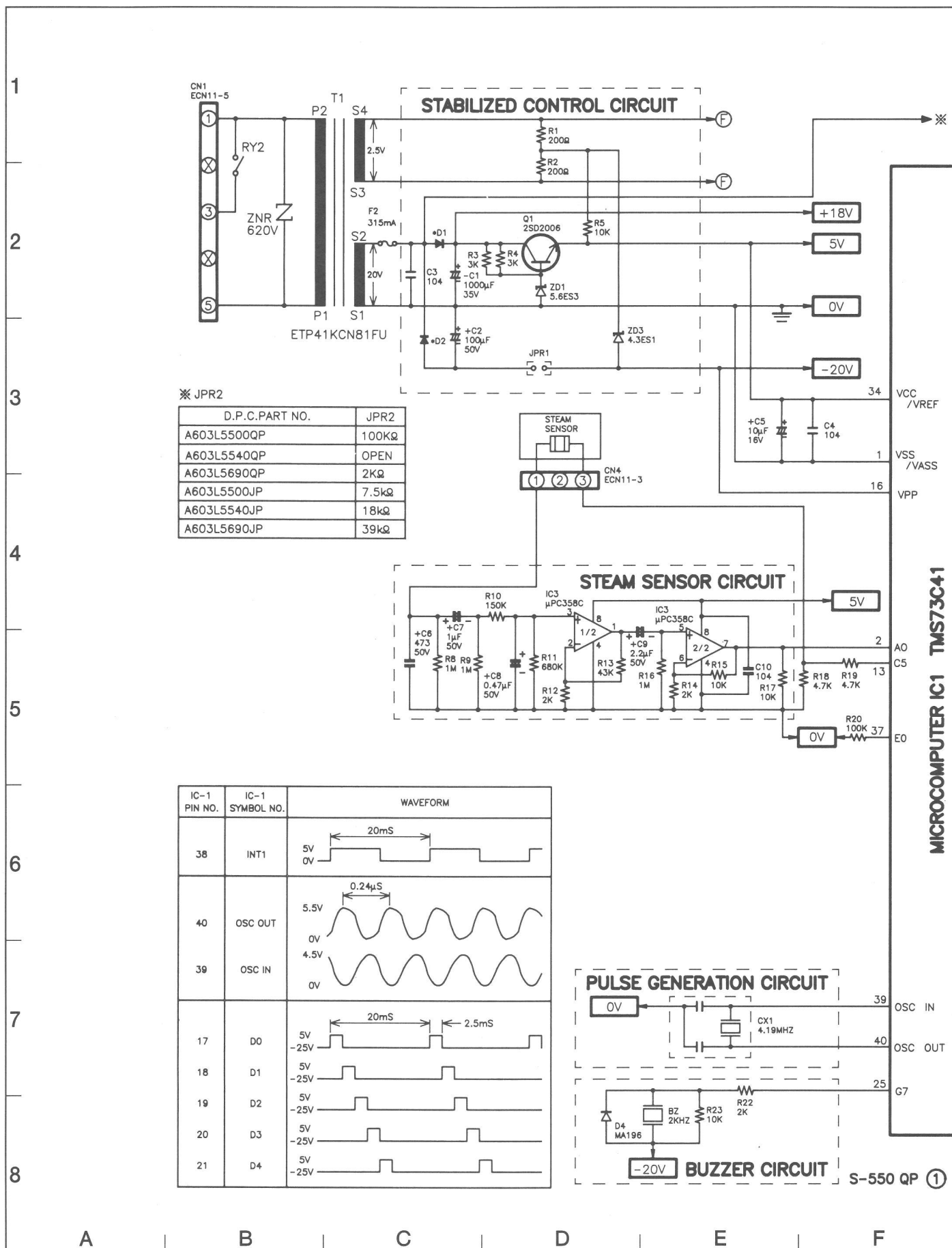
NOTE 4: When ordering the roller B assy, three rollers will be shipped.
 When replacing the roller B, three rollers should be replaced at the same time.

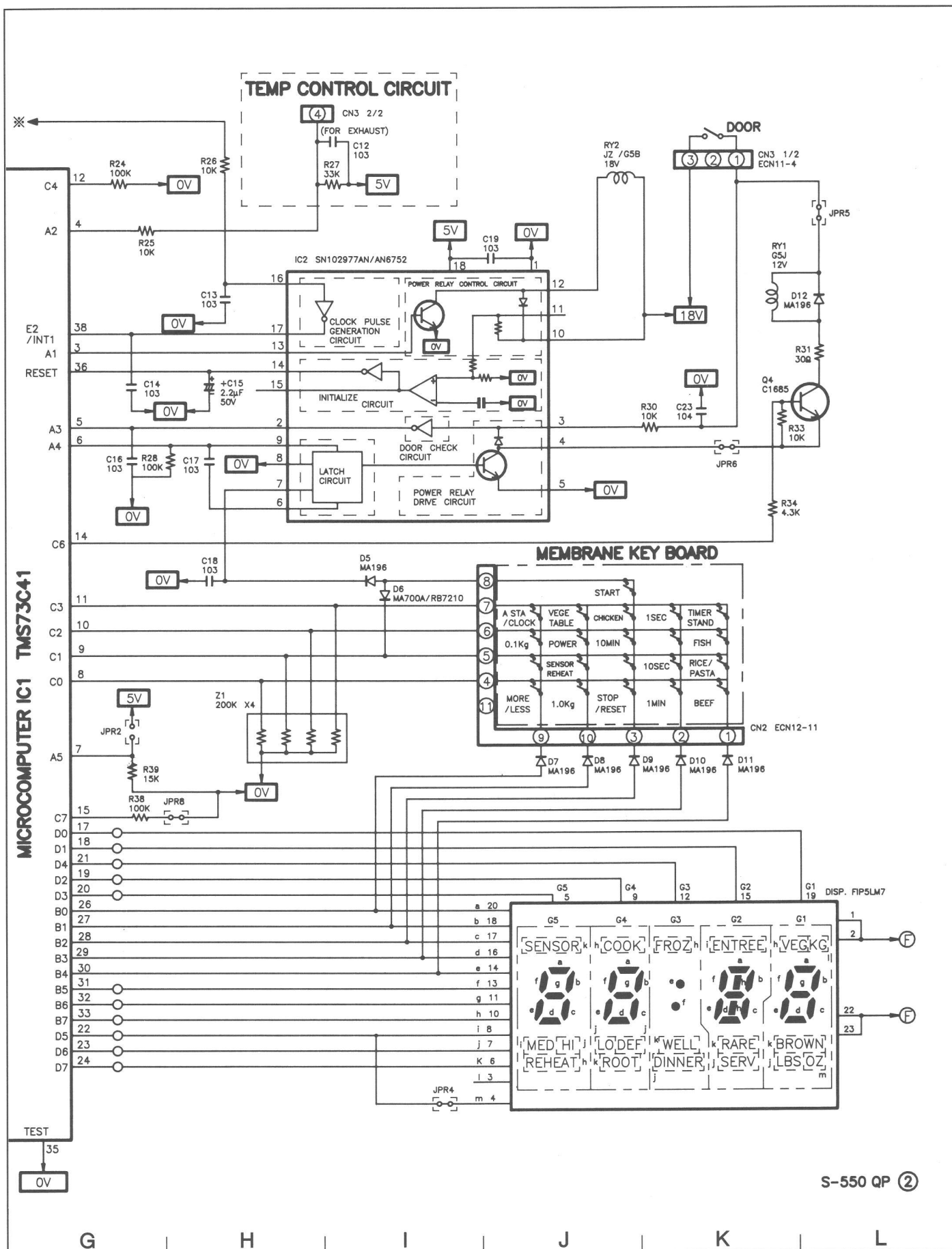
Otherwise the glass cooking tray may not turn smoothly.

5: Please order name plate together.

DIGITAL PROGRAMMER CIRCUIT (NN-7850/7750/6850/6800/6750/6700)

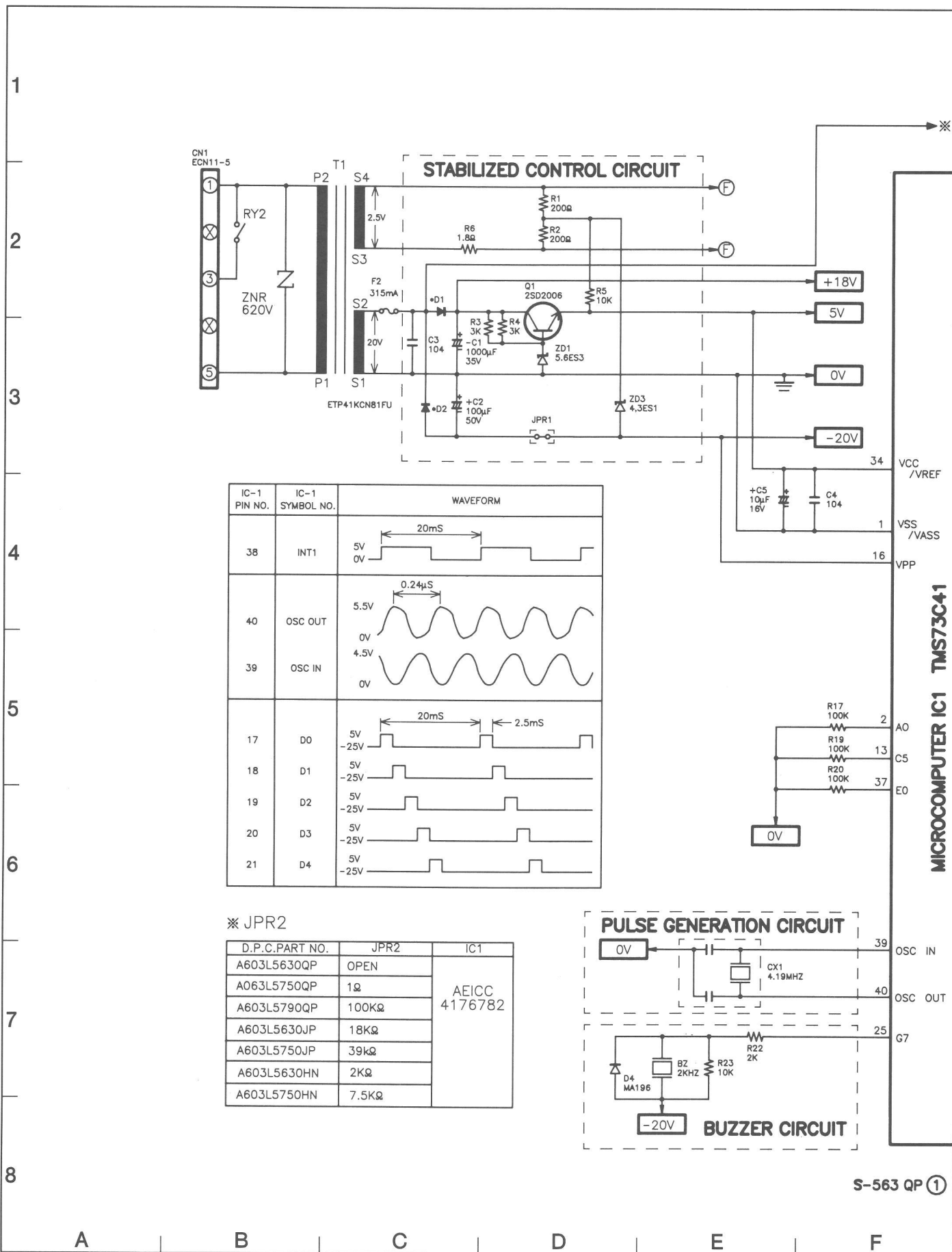
SCHEMATIC DIAGRAM

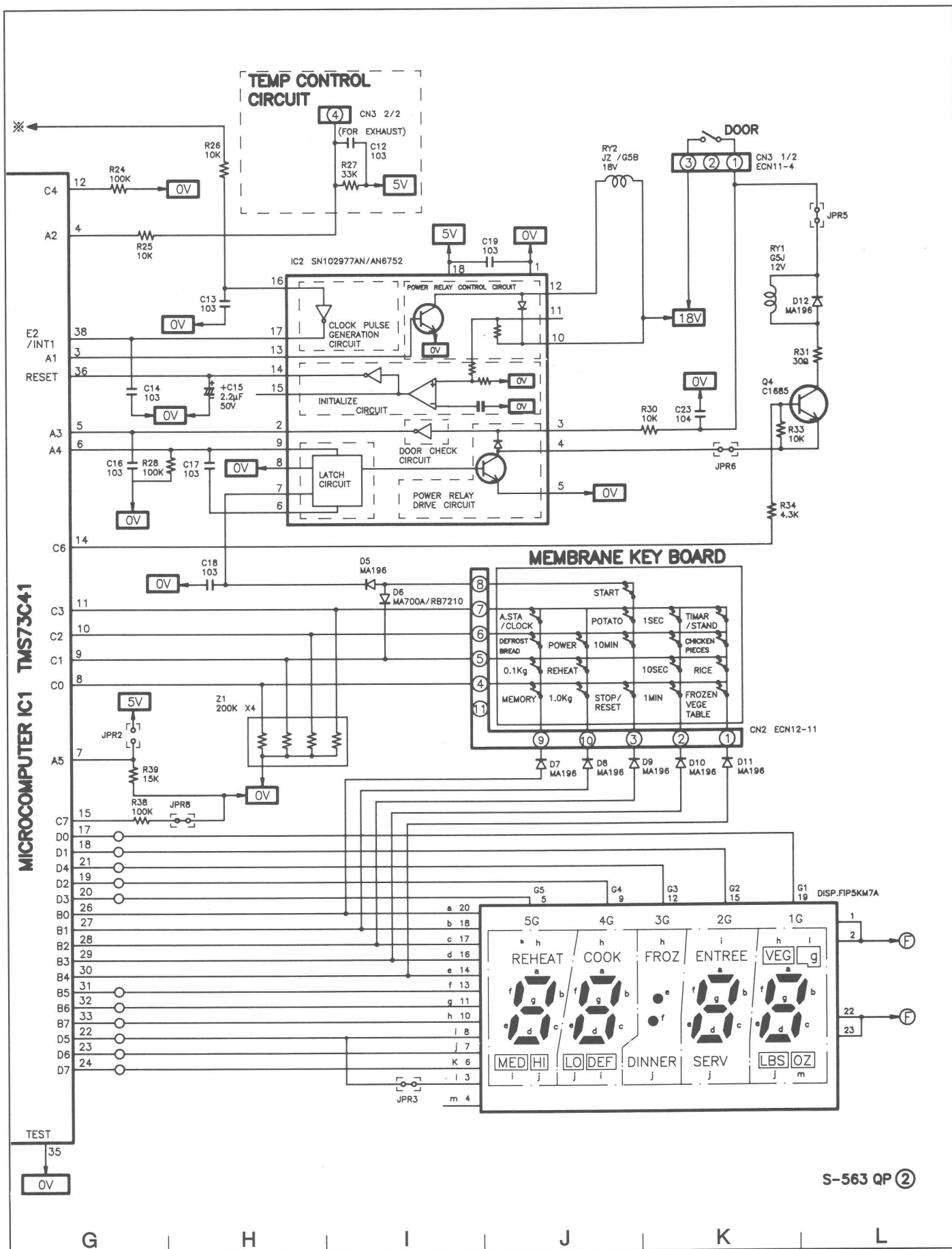




DIGITAL PROGRAMMER CIRCUIT (NN-6550/6500/6450/6400)

SCHEMATIC DIAGRAM





DIGITAL PROGRAMMER CIRCUIT

PARTS LIST (NN-7850/7750/6850/6800/6750/6700)

Ref. No.	Part No.	Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Description	Pcs/ Set	Remarks
DISP	A64565540AP	Fluorecent tube	1		C7	ECEA1HU010B	Electrolytic capacitor, Al	1	1.0 μ F, -10%+30%, 50V
SPACER	A82845540AP	Spacer cushion	1	For DISP	C8	ECEA1HUR47B	Electrolytic capacitor, Al	1	0.47 μ F, -10% + 30%, 50V
T1	A62495670BP	Low Voltage Transformer	1	4.6VA ETP41KCN81FU	C9,15	ECEA1HU2R2B	Electrolytic capacitor, Al	2	220 μ F, -10%+30%, 50V
CN1	AEEMMA01505W	5 pin connector	1		C12,13,14, 16,17,18, 19	ECBT1E103ZF5	Ceramic capacitor	7	(Single layer) 0.01 μ F, -20%+80%, 25V
CN2	AEEM11FDZBTM	11 pin connector	1		R1,2	ERDS2TJ201T	Carbon film resistor	2	200k Ω , $\pm$ 5%, 1/4W
CN3	AEEMMC00F04W	4 pin connector	1		R3,4	ERDS2TJ302T	Carbon film resistor	2	3.0k Ω , $\pm$ 5%, 1/4W
CN4	AEEMMC00703W	3 pin connector	1		R5,15,17, 23,25,26, 30,33	ERDS2TJ103T	Carbon film resistor	8	10k Ω , $\pm$ 5%, 1/4W
BZ	AEFB22EP2002	Buzzer	1	2kHz	R8,9,16	ERDS2TJ105T	Carbon film resistor	3	1M Ω , $\pm$ 5%, 1/4W
F2	ANE604K7J0BP	Week point element	1		R10	ERDS2TJ154T	Carbon film resistor	1	150k Ω , $\pm$ 5%, 1/4W
CX1	AEFFT4R19GWT	Ceramic Resonator	1	4.19MHz	R11	ERDS2TJ684T	Carbon film resistor	1	680k Ω , $\pm$ 5%, 1/4W
RY1	AEG5J1EG12B	Power Relay	1	(12V)	R12,14,22	ERDS2TJ202T	Carbon film resistor	3	2k Ω , $\pm$ 5%, 1/4W
RY2	AEBG5B18P-1	Power Relay	1	(18V)	R13	ERDS2TJ433T	Carbon film resistor	1	43k Ω , $\pm$ 5%, 1/4W
ZNR	ERZC10DK621F	ZNR	1		R18,19	ERDS2TJ472T	Carbon film resistor	2	4.7k Ω , $\pm$ 5%, 1/4W
IC1	AEICC4176792	L.S.I. (MOS Microprocessor IC)	1		R20,24,28, 38	ERDS2TJ104T	Carbon film resistor	4	100k Ω , $\pm$ 5%, 1/4W
IC2	AN6752	I.C. (Bipolar Linear IC)	1		R27	ERDS2TJ333T	Carbon film resistor	1	33k Ω , $\pm$ 5%, 1/4W
IC3	AEICUPC358C	I.C.	1		R31	ERDS2TJ300T	Carbon film resistor	1	30 Ω , $\pm$ 5%, 1/4W
Q1	2SD2006-R	Transistor, Si 1.2W	1	100MHz	R34	ERDS2TJ432T	Carbon film resistor	1	4.3k Ω , $\pm$ 5%, 1/4W
Q4	2SC1685-R	Transistor, Si 250mW	1	150MHz	R39	ERDS2TJ153T	Carbon film resistor	1	15k Ω , $\pm$ 5%, 1/4W
D1,2	AEDNERA1502	Diode, Si	2	(0.1A)	Z1	AEXBM4X204JT	Compound resistor	1	200k Ω $\times$ 4, $\pm$ 5%, 1/8W
D4,5,7, 8,9,10, 11,12	MA196	Diode, Si	8	(0.1A)	JPR2	ERD25VJ104T	Carbon film resistor	(1)	NN-7850QPQ, NN-7750QPQ 100k Ω , $\pm$ 5%, 1/4W
D6	MA700A	Diode, Si	1	(0.03A)		ERD25VJ752T	Carbon film resistor	(1)	NN-7850JPQ 7.5k Ω , $\pm$ 5%, 1/4W
ZD1	AEDZ5R6ES3T1	Zener Diode, Si	1	RD5.6ES3		ERD25VJ183T	Carbon film resistor	(1)	NN-6800JPQ, NN-6850JPQ, 18k Ω , $\pm$ 5%, 1/4W
ZD3	AEDZ4R3ES1T1	Zener Diode, Si	1	RD4.3ES1					
C1	ECEA1VU102E	Electrolytic capacitor, Al	1	1000 μ F, -10% + 30%, 35V					
C2	ECEA1HU101B	Electrolytic capacitor, Al	1	100 μ F, -10%+30%, 50V					
C3,4,10, 23	AECF50F104Z	Ceramic capacitor	4	(Single layer) 0.1 μ F, -10%+80%, 50V					
C5	ECEA1CU100B	Electrolytic capacitor, Al	1	10 μ F, -10%+30%, 16V					
C6	ECKR1H473ZF	Ceramic capacitor	1	(Single layer) 0.047 μ F, -20%+80%, 50V					

DIGITAL PROGRAMMER CIRCUIT

PARTS LIST (NN-6550/6500/6450/6400)

Ref. No.	Part No.	Description	Pcs/ Set	Remarks	Ref. No.	Part No.	Description	Pcs/ Set	Remarks
DISP	A64565630QP	Fluorescent tube	1		R5,23,25,	ERDS2TJ103T	Carbon film resistor	6	10k Ω , $\pm 5\%$, 1/4W
SPACER	A82845570AP	Spacer cushion	1	For DISP	26,30,33				
T1	A62495670BP	Low Voltage Transformer	1	4.6VA ETP41KCN81FU	R6	ERDS2TJ1R8T	Carbon film resistor	1	1.8k Ω , $\pm 5\%$, 1/4W
CN1	AEEMMA01505W	5 pin connector	1		R17,19,20,	ERDS2TJ104T	Carbon film resistor	6	100k Ω , $\pm 5\%$, 1/4W
CN2	AEEM11FDZBTM	11 pin connector	1		24,28,38				
CN3	AEEMMC00F04W	4 pin connector	1		R22	ERDS2TJ202T	Carbon film resistor	1	2k Ω , $\pm 5\%$, 1/4W
BZ	AEFB22EP2002	Buzzer	1	2kHz	R27	ERDS2TJ333T	Carbon film resistor	1	33k Ω , $\pm 5\%$, 1/4W
CX1	AEFFT4R19GWT	Ceramic Resonator	1	4.19MHz	R31	ERDS2TJ300T	Carbon film resistor	1	30k Ω , $\pm 5\%$, 1/4W
F2	ANE604K7J0BP	Week point element	1		R34	ERDS2TJ432T	Carbon film resistor	1	4.3k Ω , $\pm 5\%$, 1/4W
RY1	AEG5J1EG12B	Power Relay	1	(12V)	R39	ERDS2TJ153T	Carbon film resistor	1	15k Ω , $\pm 5\%$, 1/4W
RY2	AEBG5B18P-1	Power Relay	1	(18V)	Z1	AEXBM4X204JT	Compound resistor	1	200k Ω $\times$ 4, $\pm 5\%$, 1/8W
ZNR	ERZC10DK621F	ZNR	1		JPR2	ERD25VJ183T	Carbon film resistor	(1)	NN-6500, NN-6550JQ 18k Ω , $\pm 5\%$, 1/4W
IC1	AEICC4176782	L.S.I.	1						
IC2	AN6752	I.C. (Bipolar Linear IC)	1						
Q1	2SD2006-R	Transistor, Si 400mW	1	200MHz					
Q4	2SC1685-R	Transistor, Si 250mW	1	150MHz					
D1,2	AEDNERA1502	Diode, Si	2	(0.1A)					
D4,5,7, 8,9,10, 11,12	MA196	Diode, Si	8	(0.1A)					
D6	MA700A	Diode, Si	1	(0.03A)					
ZD1	AEDZ5R6ES3T1	Zener Diode, Si	1	RD5.6ES3					
ZD3	AEDZ4R3ES1T1	Zener Diode, Si	1	RD4.3ES1					
C1	ECEA1VU102E	Electrolytic capacitor, Al	1	1000 μ F, $-10\% + 30\%$, 35V					
C2	ECEA1HU101B	Electrolytic capacitor, Al	1	100 μ F, $-10\% + 30\%$, 50V					
C3,4,23	AECF50F104Z	Ceramic capacitor	3	(Single layer) 0.1 μ F, $-10\% + 80\%$, 50V					
C5	ECEA1CU100B	Electrolytic capacitor, Al	1	10 μ F, $-10\% + 30\%$, 16V					
C12,13,14, 16,17,18, 19	ECBT1E103ZF5	Ceramic capacitor	7	(Single layer) 0.01 μ F, $-20\% + 80\%$, 25V					
C15	ECEA1HU2R2B	Electrolytic capacitor, Al	1	2.2 μ F, $-10\% + 30\%$, 50V					
R1,2	ERDS2TJ201T	Carbon film resistor	2	200k Ω , $\pm 5\%$, 1/4W					
R3,4	ERDS2TJ302T	Carbon film resistor	2	3.0k Ω , $\pm 5\%$, 1/4W					

SERVICE FIXTURES AND TOOLS

EXTENSION CABLES

NOTE: To be used when repairing the DPC board assembly directly on the oven for easy access of the board.

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
	AT40M003	3 pin Extension Cable	1	Cable No. 36
	AT40M004	4 pin Extension Cable	1	Cable No. 16
	AT40M005	5 pin Extension Cable	1	Cable No. 17
	AT40E006	1 pin $\times$ 6 Extension Cable	1	Cable No. 9

DPC COMMON CHECKER AND ITS CABLE

NOTE: To be used only when DPC common checker is available.

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
	ANE600ZK70QP	DPC. Common Checker	1	
	AT30A5500AP	DPC. Checker Cable	1	NOTE

