ORDER NO. TAMC0103001C2
E10

Service Manual

Commercial Microwave Oven

NE-1024T, NE-1024TC

MODELS	APH	CPH
	USA	CANADA
NE-1024T	○	—
NE-1024TC	—	○
NE-1054T	○	—
NE-1054TC	—	○
NE-1064T	○	—
NE-1064TC	—	○

NE-1054T, NE-1054TC

NE-1064T, NE-1064TC

Specifications:

Models:	NE-1024T, NE-1024TC, NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
Power Source:	120 V AC Single Phase, 60 Hz
Power Requirements:	1500W (13.4A) •••• APH Models; 1500W (13.4A) •••• CPH Models
Output:	1000W (APH Models) full power; 1000W (CPH Models) full power (IEC705-88)
Microwave Frequency:	2,450 MHz
Timer:	6 Min. Rotary ••••••• NE-1024T, NE-1024TC 99 Min. 99 sec. ••••• NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
Outside Dimensions:	20⅛" (W) X 14⅜" (D) X 12" (H) 510mm (W) X 360mm (D) X 306mm (H)
Oven Cavity Dimensions:	13" (W) X 13" (D) X 8⅛" (H) 330mm (W) X 330mm (D) X 205mm (H)
Weight:	Approx. 34 lbs/15.4 kg
Output power: IEC705-88 Test procedure	
Specifications subject to change without notice	

Panasonic®

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

WARNING

1. This product should be serviced only by trained qualified personnel.
2. Though this product has been manufactured in compliance with:
   "Federal Performance Standard 21 CFR Subchapter J" (D.H.H.S.): U.S.A. models
   or "Radiation Emitting Devices Act" (Health and Welfare Canada): Canadian models
   it is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage".
4. If the unit cannot be repaired on site, advise the customer not to use until unit is repaired.
5. Any serviceman who learns of any accident pertaining to microwave radiation leakage including the oven operating with open door should immediately notify the appropriate address listed below and Center for Devices and Radiological Health, DHHS.

IN U.S.A. (PHCC)	Panasonic Home & Commercial Products Company One Panasonic Way, Panazip: 4A-5 Secaucus, New Jersey 07094 Attention: Service Engineering	IN PUERTO RICO (PSC)	PSC San Gabriel Industrial Park 65th Infantry Ave. Km.9.5 Carolina, Puerto Rico 00985 (787)750-4300
		IN CANADA (PCI)	Panasonic Canada Inc. 5770 Ambler Drive, Mississauga, Ontario, L4W2T3 (905) 624-5010

6. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ in the replacement parts list. It is essential that these critical parts should be replaced only with the manufacturer's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the original design.

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 power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.

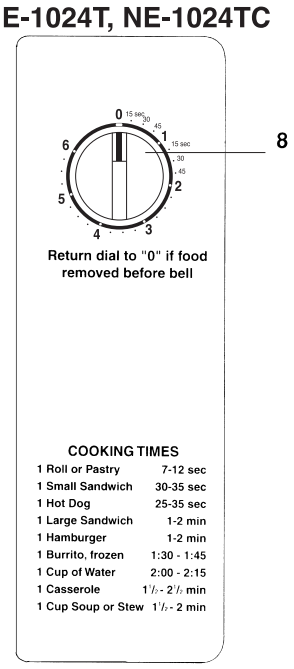
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

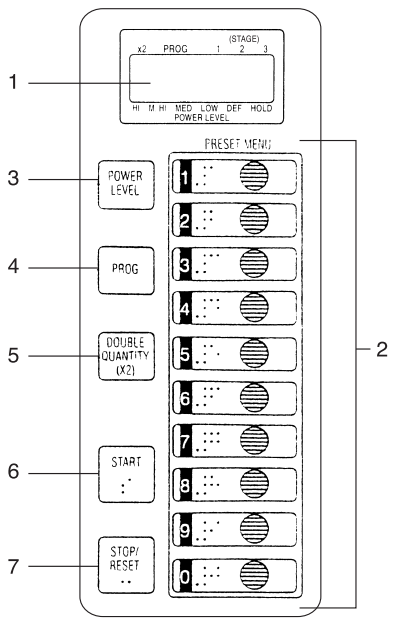
CONTENTS

CONTROL PANELS

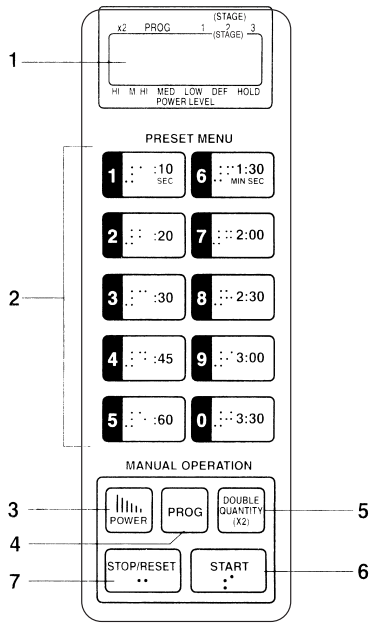
NE-1024T, NE-1024TC



NE-1064T, NE-1064TC



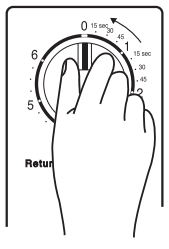
NE-1054T, NE-1054TC



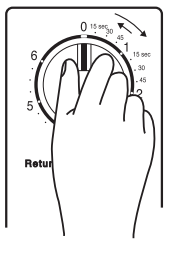
1. CLOSE THE DOOR securely, after placing food in the oven.
2. SET A DESIRED HEATING TIME.
   ➤ MICROWAVE HEATING BEGINS. Oven light turns on.
3. You may open the door while the oven is operating. As soon as the door is opened, the safety mechanisms stop microwave power and heating time.
   To continue heating, close door.
   Microwave heating begins again.
   If you wish to change the time during heating, simply adjust the timer to desired minutes.
4. When time has elapsed, a bell will ring and the unit will turn off.
   ➤ Oven light turns off.

NOTE:

1. If heating is completed BEFORE the timer time has elapsed, turn the TIMER TO “0” position. (The unit will operate until the timer returns to “0”.)

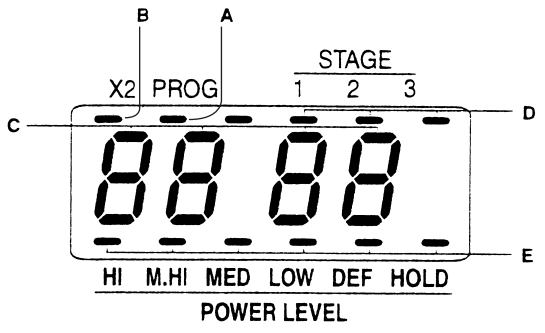


2. When setting timer for less than 30 sec, turn timer past 30 sec and then turn to the desired time.



3. If the timer has not reached zero and the door is opened and closed again, that the oven will continue to operate.

1 Digital Display Window
2 Memory Pads
3 Power Level Selector Pad
4 Prog (Program) Pad
5 Double Quantity Pad (X2)
6 Start Pad
7 Stop/Reset Pad
8 Timer Knob Control



A – PROG Indicator
B – DOUBLE QUANTITY (x2) Heating Indicator
C – Memory Pad Number and Heating Time Display (min. sec.) - each indicator 0-9
D – Stage Heating Indicator - 3 maximum
E – Power Level Indicator
HI (HIGH)
M. HI (MEDIUM HIGH)
MED (MEDIUM)
LOW
DEF (DEFROST)
HOLD (Power OFF)

OPERATION AND DIGITAL PROGRAMMER OPERATING INSTRUCTIONS (NE-1054T, NE-1054TC, NE-1064T, NE-1064TC)

1. Manual Heating for Single Stage

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	
2. Open the door. Place a water load in the oven and close the door.	0
3. Press Power pad once. (To set for HIGH power)	1 HI
4. Press 2, 0, 0 pads. (To set for 2 minutes)	1 2 00 HI
5. Press Start pad.	1 1 59 HI
6. When the time is up, you hear 5 beeps.	0
7. Open the door and take out the water load.	0
8. Close the door. 1 minute later, display will return blank.	

2. Manual Heating for 2nd Stage

OPERATION	DISPLAY
1. Follow step 1 to 4 for 1st stage	1 2 00 HI
2. Press Power pad 3 times. (To set for MEDIUM power)	1 2 MED
3. Press 1, 0, 0 pads. (To set for 1 minute)	1 2 1 00 MED
4. Press Start pad. (1st stage heating begins)	1 2 1 59 HI MED
5. When the first stage time is up, you hear one beep sound. (2nd stage heating begins)	2 59 MED
6. When the 2nd stage heating time is up, you hear 5 beeps.	0
7. Open the door and take out the water load.	0
8. Close the door. 1 minute later, display will turn blank.	

3. Memory Setting for Single Stage Operation
Oven is not in program lock mode.

OPERATION	DISPLAY
1 . Press Prog pad. NOTE: Display must be blank to start programming.	PROG
2 . Press 5 pad. (To set to memory pad 5)	When memory pad 5 is blank PROG 5
	When memory was programmed e.g. high power one minute single stage PROG 1 5
	PROG 1 1 00 HI
	PROG 1 5

OPERATION	DISPLAY
3. Press [Power] pad 3 times. (To set for MED power)	PROG 1 MED
4. Press [3], [0] pads. (To set for 30 seconds)	PROG 1 30 MED
5. Press [Prog] pad.	PROG 1 5
	PROG 1 30 MED
	X2 PROG 1 5
	X2 PROG 1 100 MED

4. Memory setting for 2nd stage

OPERATION	DISPLAY
1. Follow steps 1 to 4 for memory setting for single stage. (To set for MED power, for 30 seconds for 1st stage)	PROG 1 30 MED
2. Press [Power] pad 5 times. (Sets defrost power for 2nd stage)	PROG 1 2 DEF
3. Press [2], [0], [0] pad.	PROG 1 2 200 DEF
4. Press [Prog] pad.	PROG 1 2 5

OPERATION	DISPLAY
	PROG 1 30 MED
	PROG 2 200 DEF
This indicates double cooking time. Example: This means: If you press "5", oven will operate 30 sec-MED, 2 min-DEF. If you press "X2" and "5" oven will operate 1 min-MED, 4 min-DEF.	X2 PROG 1 2 5
	X2 PROG 1 100 MED
	X2 PROG 2 400 DEF

5. Memory Pad Heating

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	
2. Open the door. Place a water load in the oven and close the door.	0
3. Press [7] pad.	PROG 1 7
4. Press [Start] pad.	PROG 1 200 HI
5. When the time is up, you hear 5 beeps.	0

OPERATION	DISPLAY
6. Open the door and take out the water load.	0
7. Close the door, display will return blank after 1 minute.	

6. To Read Cycle Counter

OPERATION	DISPLAY
1. Open the door and leave it open.	0
2. While pressing Stop/Reset pad, press Power pad. eg. 0010 means the oven has been used 1,000 times. 9999 means the oven has been used 999,900 times.	0010
3. 2 seconds later, the display will return to "0".	0

7. To Select Beep Tone Options (ON of OFF of Beep Tone)

OPERATION	DISPLAY
1. Open the door and leave it open.	0
2. Press Prog pad.	0
3. Press 0 pad, to choose setting with beep tone on.	PROG 1 bE EP
4. Press 0 pad again, to choose setting with beep tone off.	PROG 2 bE EP

OPERATION	DISPLAY
5. Press Prog pad. You have completed programing the beep tone option.	PROG 2 bE EP
6. Display will return to 0 after 2 seconds.	0

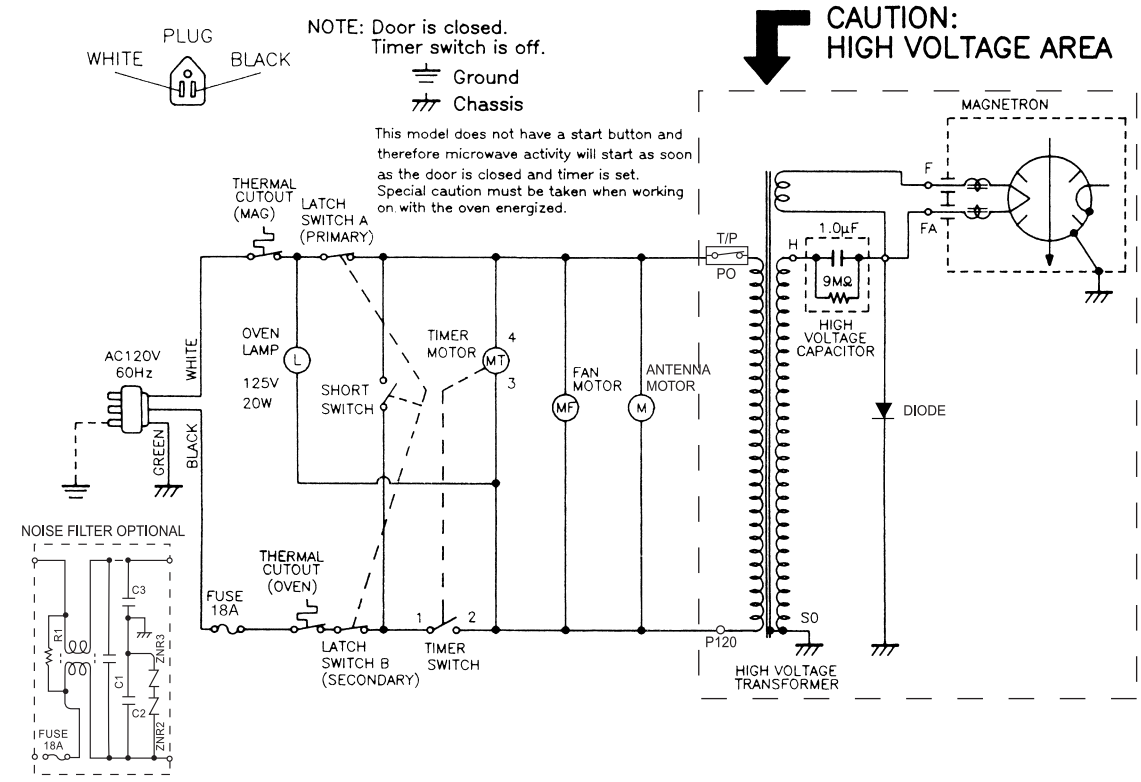
8. To Lock Program of Memory Pad

OPERATION	DISPLAY
1. Plug the power supply cord into the wall receptacle. Do not open the door. NOTE: Display must be blank to program.	
2. Press and hold in the Prog pad until the display shows "P" and "L". (Approximately 6 seconds) NOTE: When the oven is already in "program lock mode", display will not show anything and remain blank.	PROG PROG P L

9. To Release the Memory Pad Program Lock

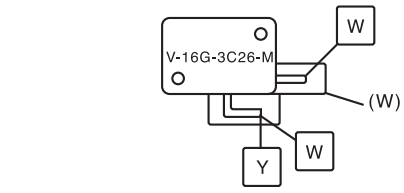
OPERATION	DISPLAY
1. Plug the power supply cord into the wall receptacle. Do not open the door. NOTE: Display must be blank to program.	
2. While pressing and holding in the Stop/Reset pad, press the Prog pad until the display shows "P". NOTE: When the oven is not in "program lock mode", display will not show anything and remain blank.	PROG P

SCHEMATIC DIAGRAM (NE-1024T) (APH)

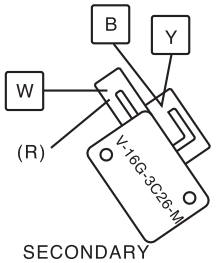


WIRING DIAGRAM

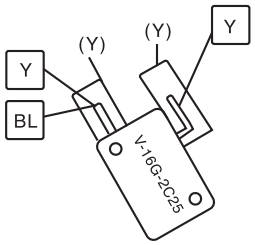
NOTE: ∗When replacing, check the lead wire color as ahown.
∗Colors shown with ( ) indicate colors of lead wire connector housing.



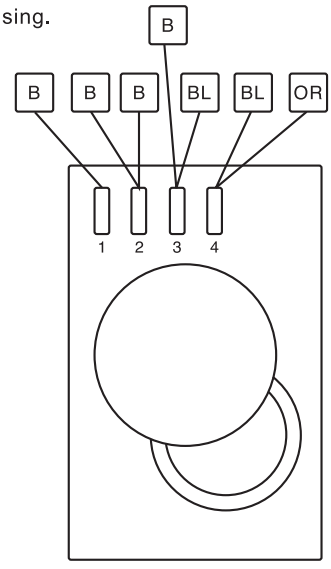
PRIMARY LATCH SWITCH
TOP



SECONDARY
LATCH SWITCH
BOTTOM (OUTSIDE)



SHORT SWITCH
BOTTOM (INSIDE)



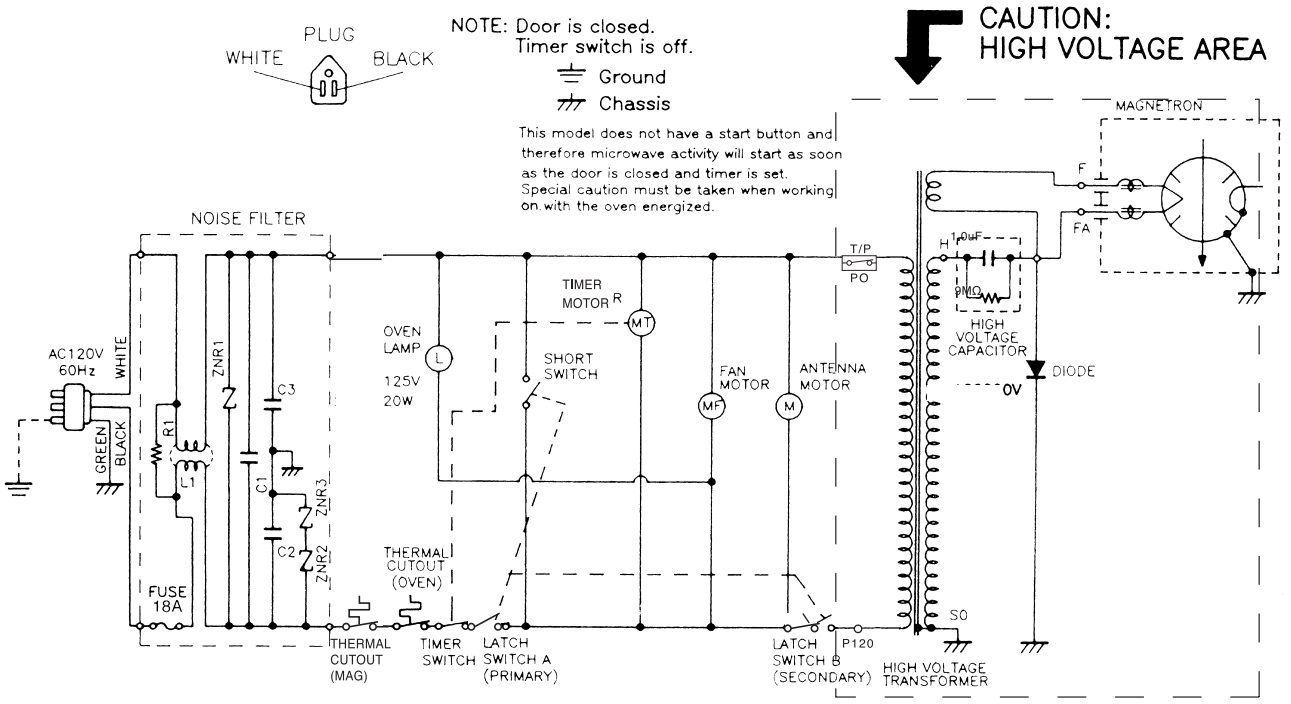
TIMER

	TERMINAL
TIMER MOTOR	3 - 4
TIMER SWITCH	1 - 2

SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-6P0 APH

SCHEMATIC DIAGRAM (NE-1024TC) (CPH)



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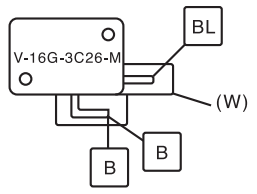
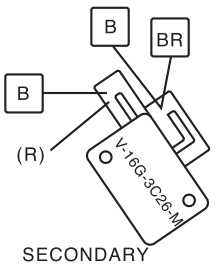
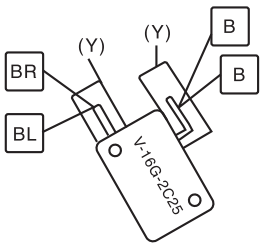


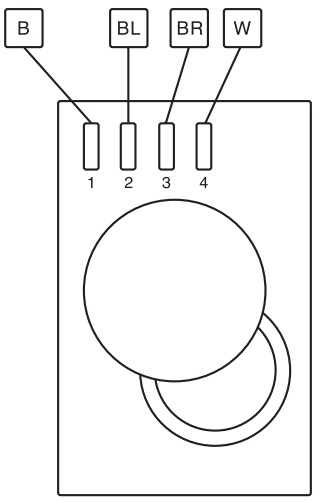
PRIMARY LATCH SWITCH
TOP



SECONDARY
LATCH SWITCH
BOTTOM (OUTSIDE)



SHORT SWITCH
BOTTOM (INSIDE)



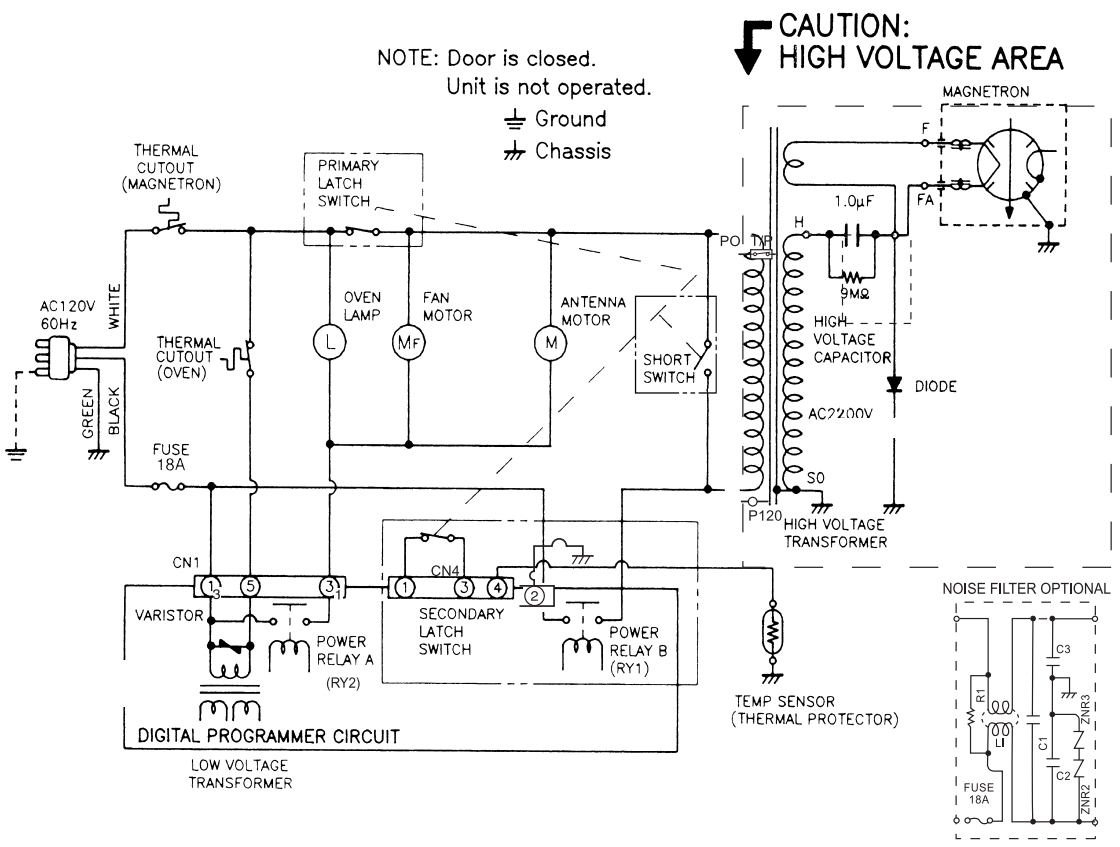
TIMER

	TERMINAL
TIMER MOTOR	3 - 4
TIMER SWITCH	1 - 2

SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-6P1 CPH

SCHEMATIC DIAGRAM (NE-1054T, NE-1064T) (APH)



WIRING DIAGRAM

NOTE: ∗When replacing, check the lead wire color as ahown.
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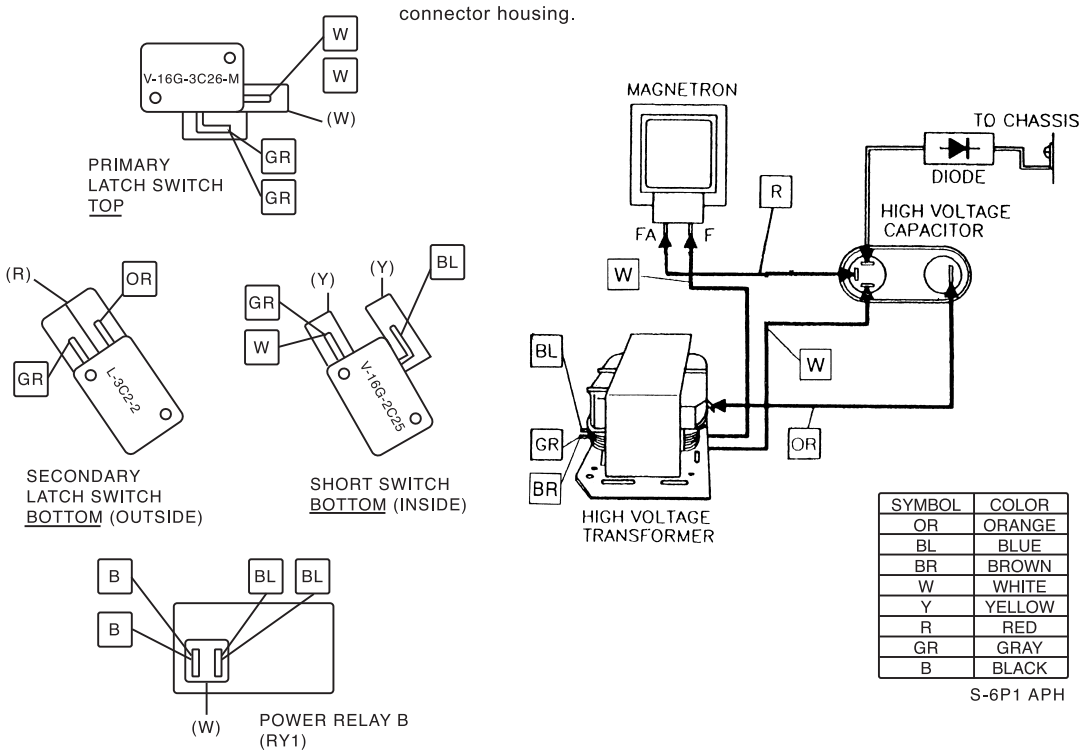
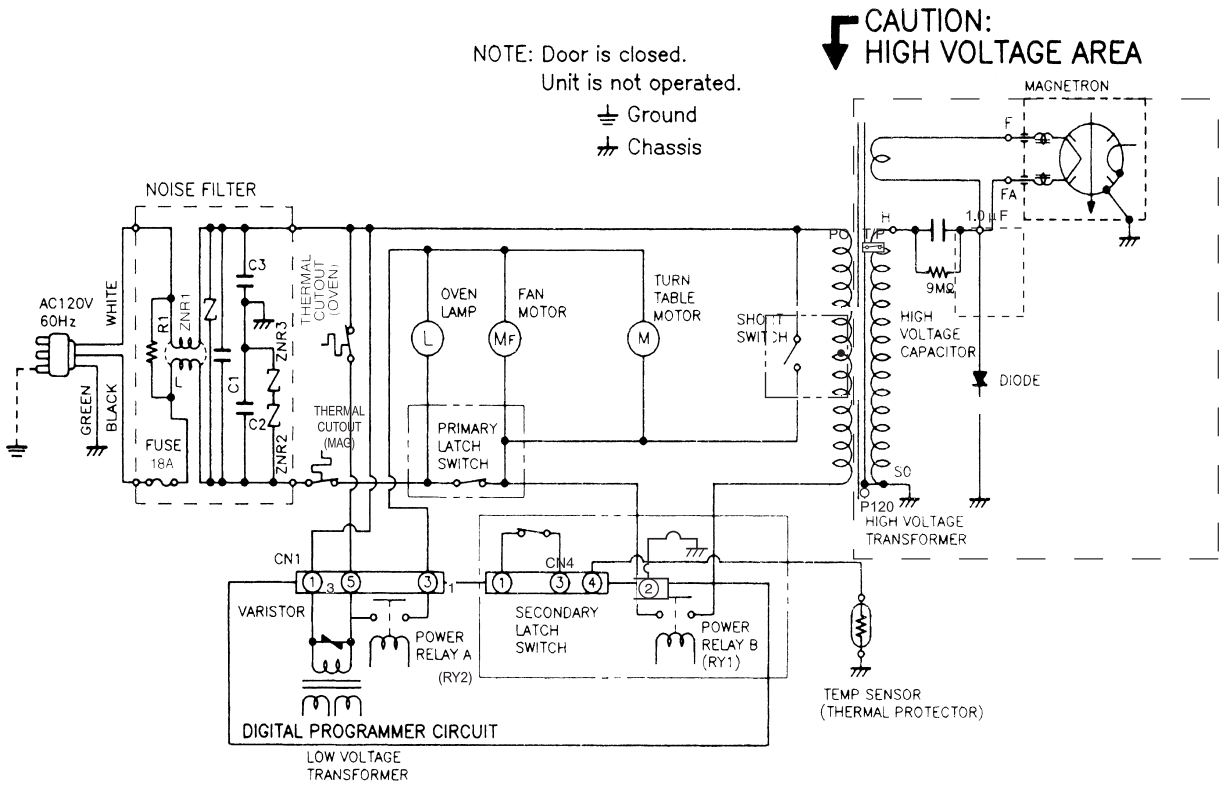


SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-6P1 APH

SCHEMATIC DIAGRAM (NE-1064TC, NE-1054TC) (CPH)



WIRING DIAGRAM

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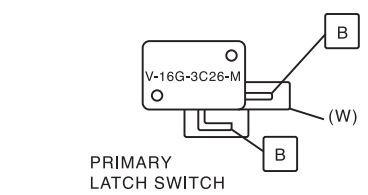
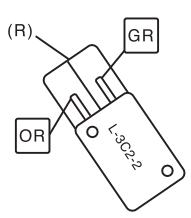
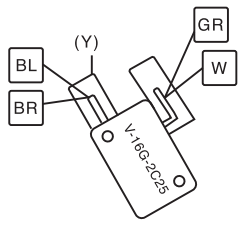


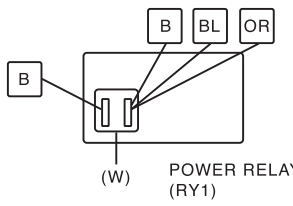
PRIMARY
LATCH SWITCH
TOP



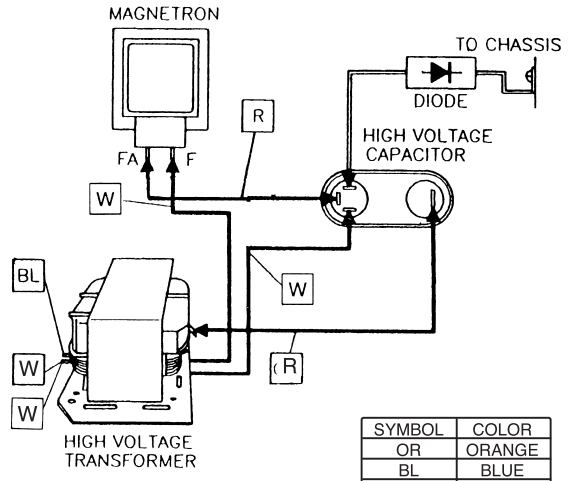
SECONDARY
LATCH SWITCH
BOTTOM (OUTSIDE)



SHORT SWITCH
BOTTOM (INSIDE)



POWER RELAY B
(RY1)



SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-6P2 CPH

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 "Low" 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.

POWER SETTING	OUTPUT POWER (W) APPROX.	ON-OFF TIME OF POWER RELAY B (RY1)	
		ON (SEC)	OFF (SEC)
HIGH	1000	22	0
MEDIUM-HIGH	773	17	5
MEDIUM	500	11	11
LOW	363	8	14
DEFROST	181	Cyclic Defrost	

✻IEC-705-88 test procedure.
Specifications subject to change without notice

2. Cyclic defrost (NE-1054T, NE-1054TC, NE-1064T, NE-1064TC)

When defrost power and defrosting time is selected and Start pad is touched:

(A) The digital programmer circuit (DPC) divides the total defrosting time into 8 equal periods, consisting of four defrosting periods, each followed by a standing period.

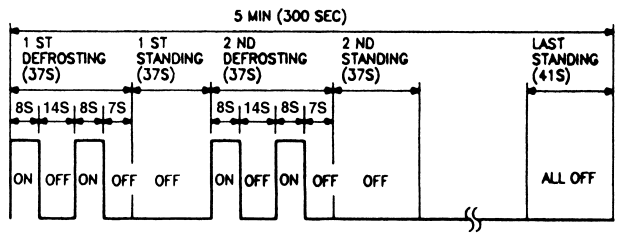
(B) During defrosting power periods, power relay B is energized for 8 seconds and de-energized for 14 seconds by DPC.

(C) During Standing periods, power relay B is always open resulting in no microwave power.

NOTE: Defrost time selected is converted into seconds by the DPC but display will show selected time in minutes and seconds as programmed. The total number of seconds is divided into 8 time periods. The remainder (seconds not equally divisible by 8) are added to the last standing time period.)

Example: If defosting time is selected for 5 minutes, each operating period will be as follows: (See **Figure**.)
5 minutes = 300 seconds
300/8 = 37 and remainder is 4 seconds.
The 4 seconds are added to the last time period.

NOTE: When defrosting time is selected for not more than 7 seconds, the power relay B will not be energized at all.



69-016

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 and rings 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. When the 18 Amp fuse is blown due to the operation of short switch:

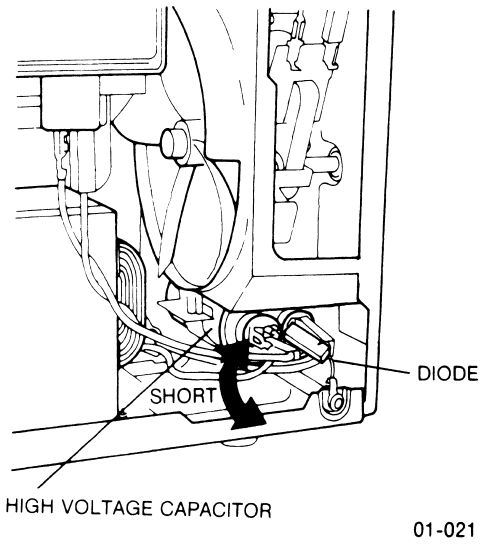
WARNING

When the 18 Amp. fuse is blown due to the operation of the short switch, you must replace power relay B, Primary latch switch and the short switch.

(A) This is mandatory. Refer to "Measurements and Adjustments" for these switches.
(B) When replacing the fuse, confirm that it has the appropriate rating for these models.
(C) When replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.

5. 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.



01-021

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

6. 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.
(C) Check for microwave energy leakage. (Refer to procedure for measuring microwave energy leakage.)

CAUTION

MICROWAVE RADIATION

DO NOT BECOME EXPOSED TO RADIATION FROM THE MICROWAVE GENERATOR OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

IMPORTANT NOTICE

1. The following components have potentials above 250V while the appliance is operated.
   - ✻ Magnetron
   - ✻ High voltage transformer
   - ✻ High voltage diode
   - ✻ High voltage capacitor

   Pay special attention on these portions.
2. When the appliance is operated with the door hinges or magnetron fixed incorrectly, the microwave leakage can reach more than 5mW/cm^3. After repair or exchange, it is very important to check if magnetron and the door hinges are correctly fixed.

DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

1. Magnetron

(A) Discharge the high voltage capacitor.
(B) Remove 2 screws holding magnetron thermal cutout.
(C) Remove 1 screw holding air guide A.
(D) Disconnect 2 high voltage lead wires from magnetron filament terminals.
(E) Remove 4 screws holding the magnetron.

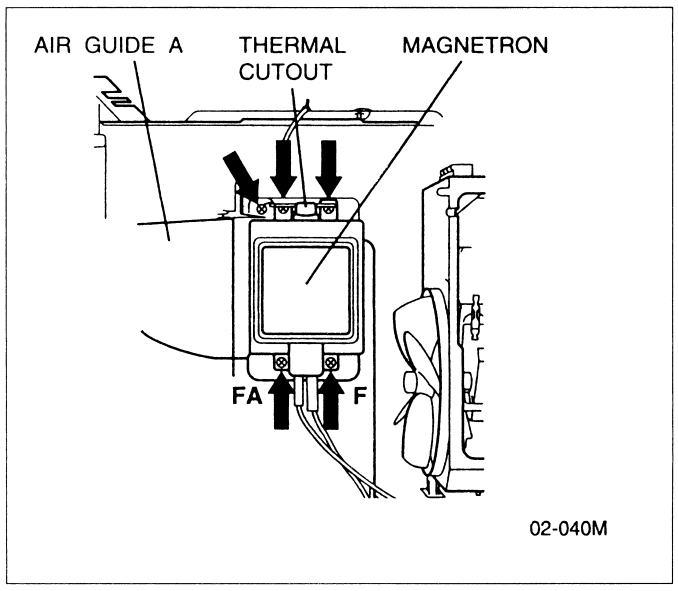
NOTE: After replacement of the magnetron, tighten mounting screws properly in an X pattern, making sure there is no gap between the waveguide and the magnetron to prevent microwave leakage.

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 "F terminal" and the lead wire from high voltage capacitor should be connected to "FA terminal".



2. Digital Programmer Circuit (DPC) and membrane key board.

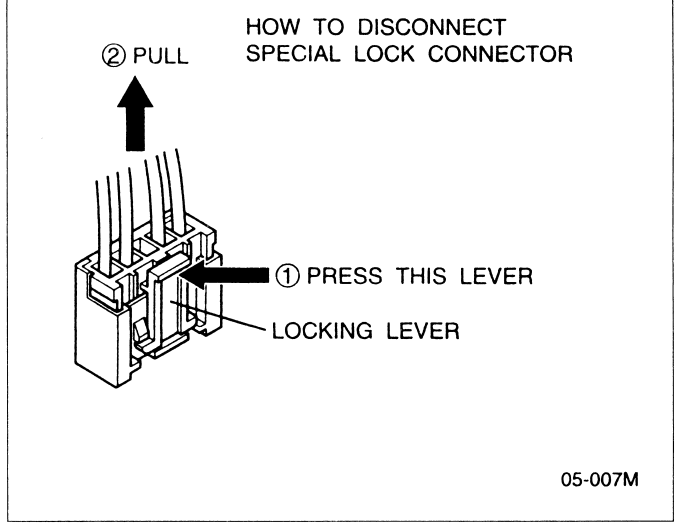
NOTE: Be sure to ground any static electric charge built up on your body before handling the DPC.

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

To replace membrane key board

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

NOTE: 1. The membrane key board is attached to the escutcheon base with double faced adhesive tape. Therefore, applying hot air such as using a hair dryer is recommended for smoother removal.
2. 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.
3. Alignment position of membrane key board is as follows (see figure);
Membrane key board: Right and upper edges
Escutcheon sheet: Right and lower edges



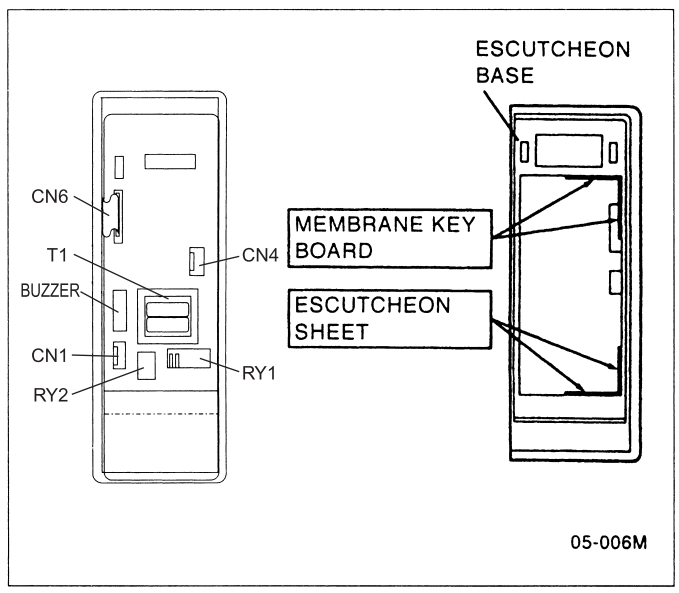
3. Low voltage transformer and/or power relays (RY1, RY2)

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

(A) 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.

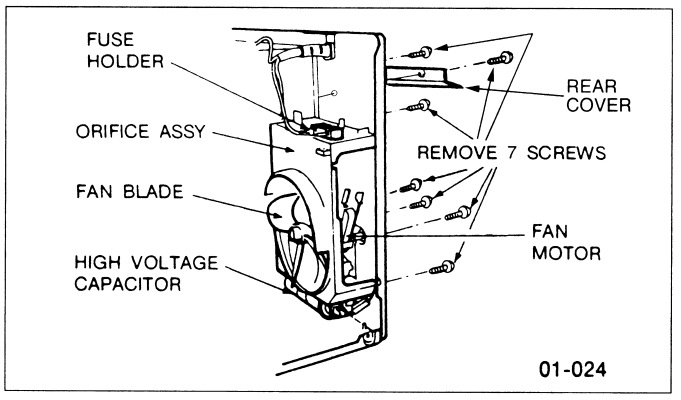
NOTE: Do not use a soldering iron or desoldering tool of more than 30 watts on DPC contacts.

(B) 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.



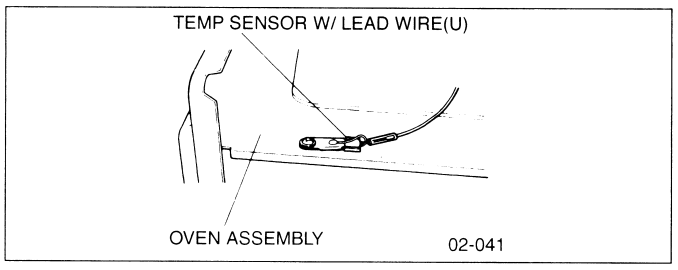
4. Fan motor

(A) Disconnect 2 lead wires from fan motor terminals.
(B) Disconnect 2 lead wires from fuse holder terminals.
(C) Disconnect 4 high voltage lead wires from high voltage capacitor terminals.
(D) Remove 2 screws holding rear cover, then remove 4 screws holding fan motor and orifice assy and detach the orifice assy with fan motor from oven assy.
(E) Remove fan blade from the fan motor shaft by pulling it straight out.
(F) Separate the fan motor from the orifice assy by freeing 2 catch hooks on the orifice assy.



5. Temp sensor (thermal protector) (NE-1054T, NE-1054TC, NE-1064T, NE-1064TC)

(A) Unplug socket of temp sensor with lead wire(U).
(B) Remove 1 screw holding the temp sensor with lead wire (U) and replace with new one.

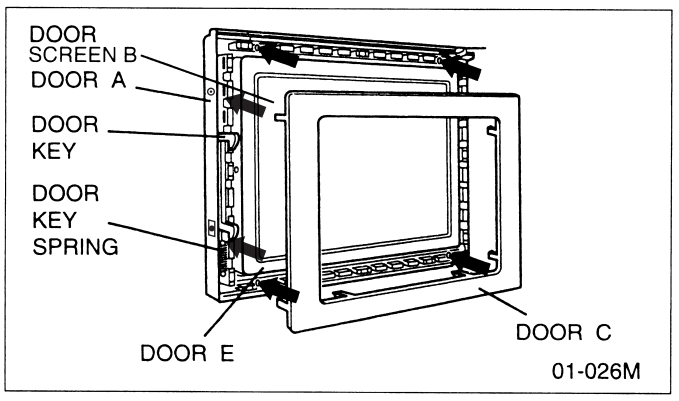


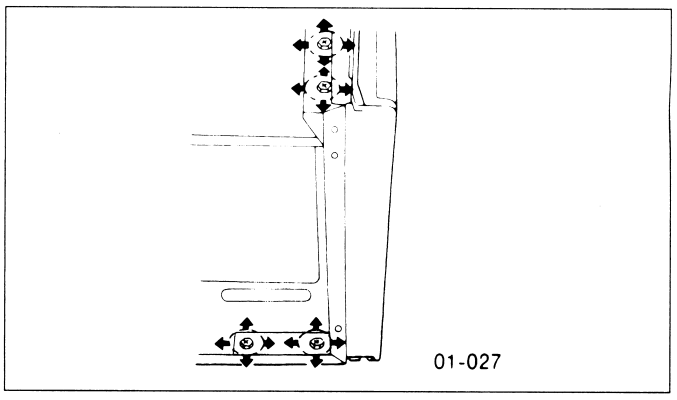
6. Door disassembly

(A) Remove door C from door E by carefully pulling outward starting from upper right hand corner using a flat blade screwdriver.
(B) Remove 6 screws holding door E to door A to separate door E from door A.
(C) Remove door screen B from door A.
(D) Remove door key and door key spring.

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 amount of microwave leakage.

(1) 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.
(2) 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 power may leak from the clearance between the door and oven.
(3) Perform the microwave leakage test.





7. Stirrer motor

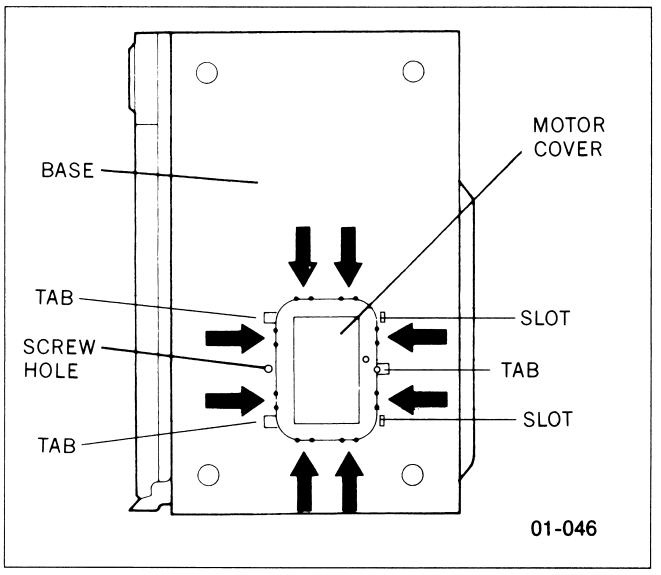
(A) Remove the motor cover by breaking off at the 8 spots indicated by arrows with a cutter or the like. (See Figure 01-046)

NOTE: After breaking off the motor cover, make sure that cut-off portions are properly trimmed off or bent to inside so that no sharp edges will be exposed to the outside.

(B) Disconnect 2 lead wires connected to the stirrer motor.

(C) Remove the stirrer motor by removing 2 screws.

NOTE: After reinstalling the new stirrer motor and reconnecting the 2 lead wires, reinstall the motor cover by rotating it around 180°, tucking the 2 tabs under the base into the 2 provided slots, then screw the single tab to the base using a 4 x 6 screw (not provided).



8. Floor shelf and/or moving antenna

(A) Insert a phillips type screwdriver or equivalent approx. 2" (5cm) in shaft length in the hole in the left side oven wall as shown in Figure 01-043.

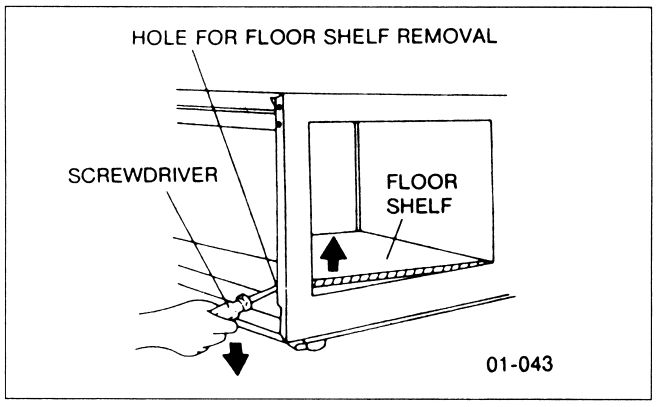
(B) Carefully lift up the floor shelf by prying up with the screwdriver until the floor shelf is lifted up over the level of oven front opening.

(C) Remove the floor shelf by lifting it out through the oven front.

<u>To replace moving antenna.</u>

(D) Remove the moving antenna by simply lifting it up off the stirrer motor shaft.

NOTE: When replacing the moving antenna, make sure the plastic stirrer spacers are correctly in place. They are necessary to stabilize the antenna by gliding around the oven bottom as the antenna turns.



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 the 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	∞ Ω (open)	0 Ω (close)
Secondary Latch Switch	∞ Ω (open)	0 Ω (close)
Power Relay B	∞ Ω (open)	∞ Ω (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	∞ Ω	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

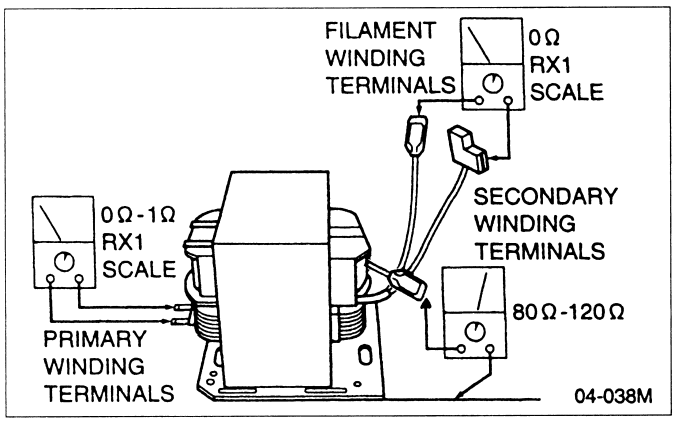
(A) Remove connectors from the transformer terminals and check continuity.
(B) Normal (cold) resistance readings should be as follows:
Secondary winding . . . . . Approx. 80Ω~120Ω
Filament winding. . . . . Approx. 0Ω
Primary winding . . . . . Approx. 0Ω~1Ω

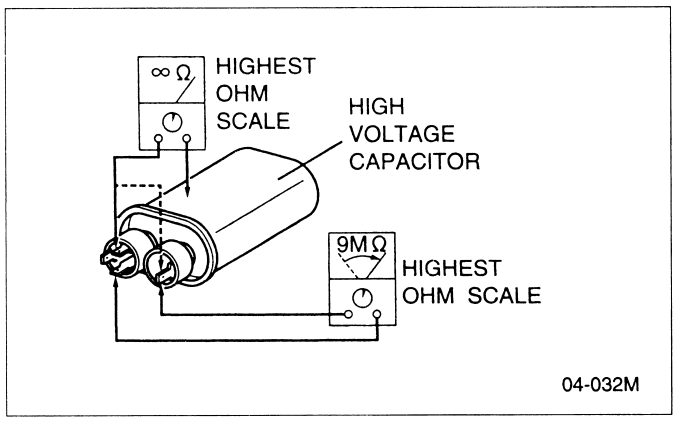
4. High voltage capacitor

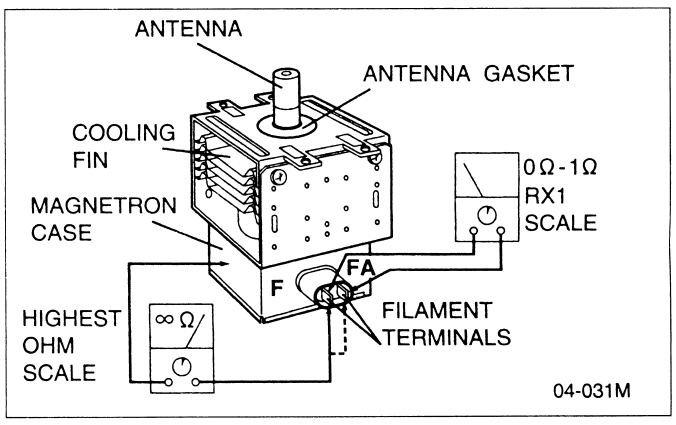
(A) Check continuity of capacitor with meter on highest OHM scale.
(B) A normal capacitor will show continuity for a short time, and then indicate 9MΩ once the capacitor is charged.
(C) A shorted capacitor will show continuous continuity.
(D) An open capacitor will show constant 9MΩ.
(E) Resistance between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





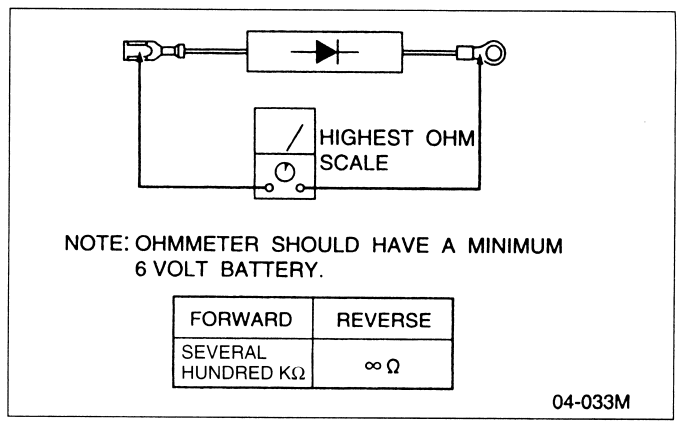


6. Diode

(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 KΩ 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. Temp sensor (Thermal protector) (NE-1054T, NE-1054TC, NE-1064T, NE-1064TC)

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.

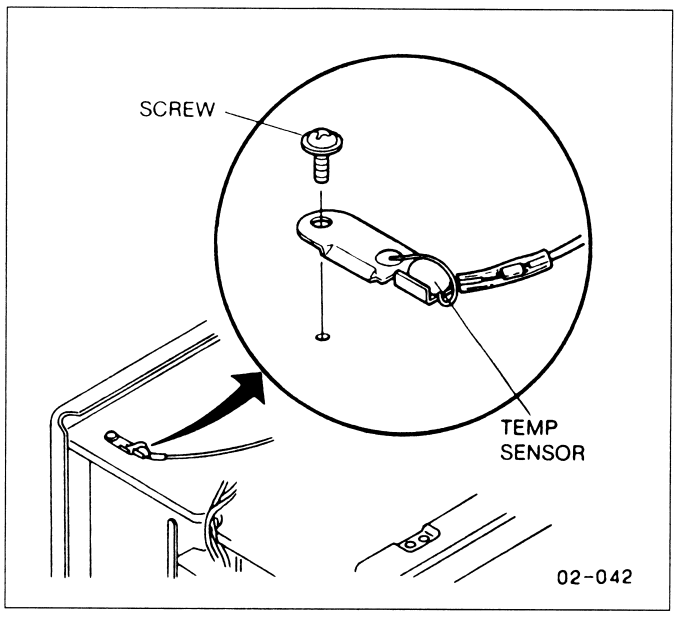
The thermal protector will shut the oven down when the temperature of the oven cavity reaches 257°F (125°C).

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)



MEASUREMENTS AND ADJUSTMENTS

WARNING

* For continued protection against radiation hazard, replace only with identical replacement parts as listed below.

SWITCHES	MODELS	NE-1054T, NE-1064T NE-1054TC, NE-1064TC	NE-1024T NE-1024TC
Primary latch switch	Part No.	ANE6142-1450	ANE6142-1450
	Type No.	V-16G-3C26-M	V-16G-3C26-M
Secondary latch switch	Part No.	A61425180AP	ANE6142-1450
	Type No.	L-3C2-2	V-16G-3C26-M
Short switch	Part No.	ANE6178420	ANE6178420
	Type No.	V-16G-2C25	V-16G-2C25

* When the 18 Amp. fuse is blown due to the operation of short, you must replace the following parts together.

	NE-1054T, NE-1064T NE-1054TC, NE-1064TC	NE-1024T NE-1024TC
Primary latch switch	Replace	Replace
Secondary latch switch	Check continuity and replace if there is shorted contacts	Replace
Short switch	Replace	Replace
Power relay B (RY1) Part No. Type No. G5G-1A	Check continuity and replace if there is shorted contacts (Terminals 1-2)	Replace

Then follow the adjustment procedures as shown below.

* Interlock switch replacement—When replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
* Refer to schematic diagram to ensure proper connection.

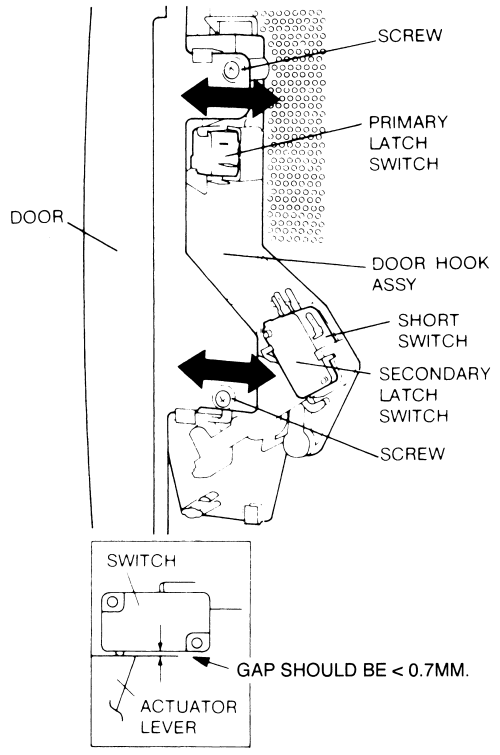
1. Installation of Primary latch switch, Secondary latch switch and Short switch.

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

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 the illustration 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, Primary & Secondary latch switches and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.



01-033

Please confirm that the gap between the switch housing and switch actuator levers is no more than 0.7 mm when the door is closed.

2. Measurement of microwave output

The output power of the magnetron can be determined by performing IEC standard test procedures. However, due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined 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 model is as shown in table.

TABLE (1ℓ -1min. test)

RATED OUTPUT	TEMPERATURE RISE
1000W (IEC705-88)	Min. 48.2°F (9.0°C)

PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

WARNING

Check for radiation leakage after every servicing. Should the leakage be more than 2 mW/cm² (1mW/cm² for Canada) inform PHCC, PSC, or PCI immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and Health and Welfare Canada regulation. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

NOTE: The U.S. Government standard is 5 mW/cm² while in the customer's home. 2 mW/cm² stated here is our own voluntary standard. (1 mW/cm² for Canada)

1. Equipment

*Electromagnetic radiation monitor
*Glass thermometer 212°F or 100°C
*600cc glass beaker

2. Procedure for measuring radiation leakage.

Note before measuring.

(1) Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.

(2) To prevent false readings the test probe should be held by the grip portion of the handle only and moved along the shaded area shown in Figure no faster than 1 inch/sec (2.5 cm/sec).

(3) Leakage with the outer panel removed ..... less than 5mW/cm².

(4) Leakage for a fully assembled oven with door normally closed..... less than 2mW/cm² (1mW/cm² for Canada).

(5) Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while pulling the door..... less than 2mW/cm².

(A) Pour 275 ± 15cc (9ozs ± 1/2oz) of 20 ±5°C (68 ± 9°F) water in a beaker which is graduated to 600cc, and place in the center of the oven.

(B) Set the radiation monitor to 2450MHz and use it following the manufacturer's recommended test procedure to assure correct results.

(C) When measuring the leakage, always use the 2 inch (5cm) spacer supplied with the probe.

(D) Tap the start pad or set the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

(1) Measurement with the outer panel removed.

Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron.

WARNING

Avoid contacting any high voltage parts.

(2) Measurements with a fully assembled oven.

After all components, including outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening and air inlet openings.

3. Record keeping and notification after measurement

(A) After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.

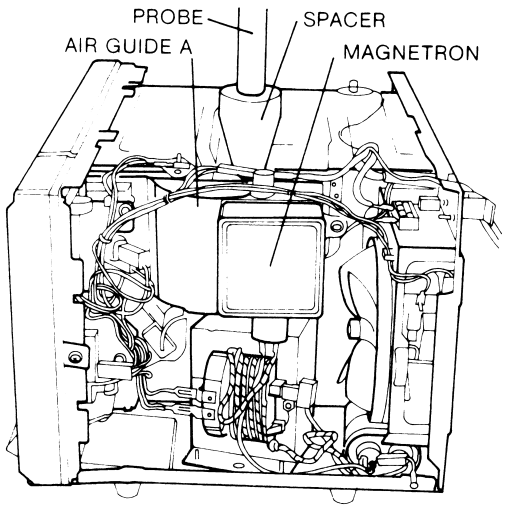
A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.

(B) Should the radiation leakage be more than 2 mW/cm² (1mW/cm² for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify PHCC, PSC or PCI.

4. At least once a year, have the radiation monitor checked for calibration by its manufacturer.

WARNING

AVOID CONTACTING ANY HIGH VOLTAGE PARTS.



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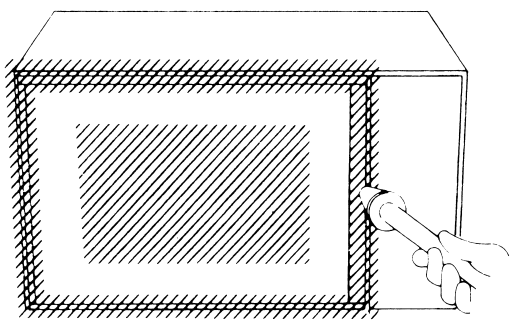


01-035

MOVE PROBE ALONG SHADED AREA (//////) AROUND EXHAUST OPENINGS (as shown) AND AROUND AIR INLET OPENING

TROUBLESHOOTING GUIDE (NE-1024T & NE-1024TC)

CAUTION

1. Ensure proper grounding before checking for trouble.
2. Be careful of the high voltage circuitry, taking necessary preacutions when troubleshooting.
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.

Before troubleshooting, operate the microwave oven following the correct operating procedures in the instruction manual in order to find the exact cause of any trouble, since operator error may be mistaken for the oven's malfunction.

(TROUBLE 1) Oven does not start cooking

SYMPTOM	STEP	CAUSE	CORRECTIONS	CORRECTIONS
Oven is dead.	1	Fuse	Blown	→ TROUBLE 2
			Normal	→ STEP 2
	2	Magnetron thermal cutout	Faulty (open)	Thermal cutout ❉ Check fan motor when thermal cutout is defective.
			Normal	→ STEP 3
	3	Oven thermal cutout	Faulty (open)	Thermal cutout
			Normal	→ STEP 4
	4	Secondary latch switch	Abnormal	Secondary latch switch
			Normal	Timer Loose lead wire
Oven lamp operates normally but fan motor does not rotate.	1	Primary latch switch	Abnormal	Primary latch switch
			Normal	Fan Motor Loose lead wire
Oven lamp and fan motor rotates normally but no microwave oscillation.	1	Check high voltage component according to component test procedure H.V. Transformer H.V. Capactor H.V. Diode Magnetron	Faulty	Replace faulty H.V. Component Loose lead wire

(TROUBLE 2) Fuse is blown

SYMPTOM	STEP	CAUSE	CORRECTIONS	CORRECTIONS
Main fuse blown.	1	Primary & Secondary latch switch (Door closed 0 Ω) (Door opened ∞ Ω)	Abnormal	Replace primary latch switch, secondary latch switch & sort switch together. (❋ NOTE)
			Normal	→ STEP 2
	2	Short switch (Door closed ∞ Ω) (Door opened 0 Ω)	Abnormal	Replace primary latch switch, secondary latch switch & short switch together. (❋ NOTE)
			Normal	→ STEP 3
	3	Check high voltage component according to component test procedure H.V. Capacitor H.V. Transformer H.V. Diode Magnetron	Faulty	Replace faulty H.V. Component
	❋ NOTE: All these switches must be replaced at the same time. (Refer to adjustment instructions.)			

(TROUBLE 3) Other troubles

CONDITIONS	POSSIBLE CAUSE	NOTES
Microwave output power is low. Check if output power is really low by following "Measurement of microwave output" on page 18.	1. Decrease in power source voltage. 2. Aging change of magnetron.	

TROUBLESHOOTING GUIDE (NE-1054T & NE-1054TC, NE-1064T & NE-1064TC)

CAUTION

1. Ensure proper grounding before checking for trouble.
2. Be careful of the high voltage circuitry, taking necessary preacutions when troubleshooting.
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. 120V AC is present on the digital programmer circuit (Terminals of power relay's and primary circuit of low voltage transformer). When troubleshooting, be cautious of possible electrical shock hazard.

Before troubleshooting, operate the microwave oven following the correct operating procedures in the instruction manual in order to find the exact cause of any trouble, since operator error may be mistaken for the oven's malfunction.

(TROUBLE 1) Oven does not start cooking

SYMPTOM	STEP	CAUSE	CORRECTIONS	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 does not start count down.	1	Secondary latch switch (Door closed 0 Ω) (Door opened ∞ Ω)	Faulty	Secondary latch switch
			Normal	→ STEP 4 Loose lead wire
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	→ STEP 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 Loose lead wire

(TROUBLE 2) Fuse is blown

SYMPTOM	STEP	CAUSE	RESULT	CORRECTIONS
Main fuse blown.	1	Primary latch switch Secondary latch switch (Door closed 0 Ω) (Door opened ∞ Ω) and also power relay B (RY 1), when power relay B is located within monitor circuit.	Abnormal	Primary latch switch, & short switch (❋ NOTE)
			Normal	→ STEP 2
	2	Short switch (Door closed ∞ Ω) (Door opened 0 Ω)	Abnormal	Primary latch switch & Short switch (❋ NOTE)
			Normal	→ STEP 3
	3	H.V. Capacitor	Faulty	H.V. Component
			Normal	→ STEP 4
	❋ NOTE: All these switches must be replaced at the same time. (Refer to adjustment instructions.) Check continuity of power relay B's contacts (between 1 and 2) and the secondary latch switch. and replace if there is a shorted contact(s).			

(TROUBLE 3) Other troubles

CONDITIONS	POSSIBLE CAUSE	NOTES
Microwave output power is low. 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 plugged into wall receptacle.	1. Open Secondary latch switch. 2. Shorted contacts of power relay A. (RY2) 3. Defective digital programmer circuit. (See trouble 4)	
"F33" appears in display window.	1. Open temp. sensor. 2. Defective D.P.C.	
"F34" appears in display window.	1. Short temp. sensor. 2. Defective D.P.C.	
"F01" appears in display window and oven beeps.	1. Food is overcooked and oven exhaust temperature too high.	

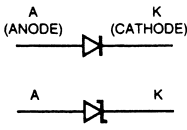
(TROUBLE 4) Trouble related to Digital programmer circuit

SYMPTOM	STEP	CAUSE	RESULT	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 16 voltage (Emitter of Q10)	Abnormal	ZD10, Q10
			Normal = 5V	DISPLAY
No key input.	1	Membrane switch continuity	Abnormal	Membrane switch
			Normal	IC-1

SYMPTOM	STEP	CAUSE	RESULT	CORRECTIONS
No beep sound.	1	IC-1 pin 29 voltage	Abnormal	IC-1
			Normal	BZ310, Q224
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 9 voltage while operation	Abnormal	IC-1
			Normal≒ 5V	Q223
No microwave oscillation at any power setting.	1	IC-1 pin 6 and pin 7 voltages while operating at high power	Abnormal	IC-1
			Normal≒ 5V	Q220, Q225, Q226
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

HOW TO CHECK THE SEMICONDUCTORS USING AN OHM METER

Diode



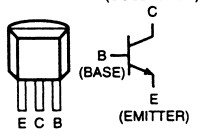
	FORWARD	REVERSE
A-K	SMALL	∞

Transistor

NPN Transistor

2SC·····

2SD·····

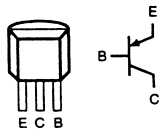


	FORWARD	REVERSE
B-E	SMALL	∞
B-C	SMALL	∞
C-E	∞	∞

PNP Transistor

2SA·····

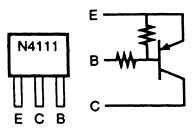
2SB·····



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

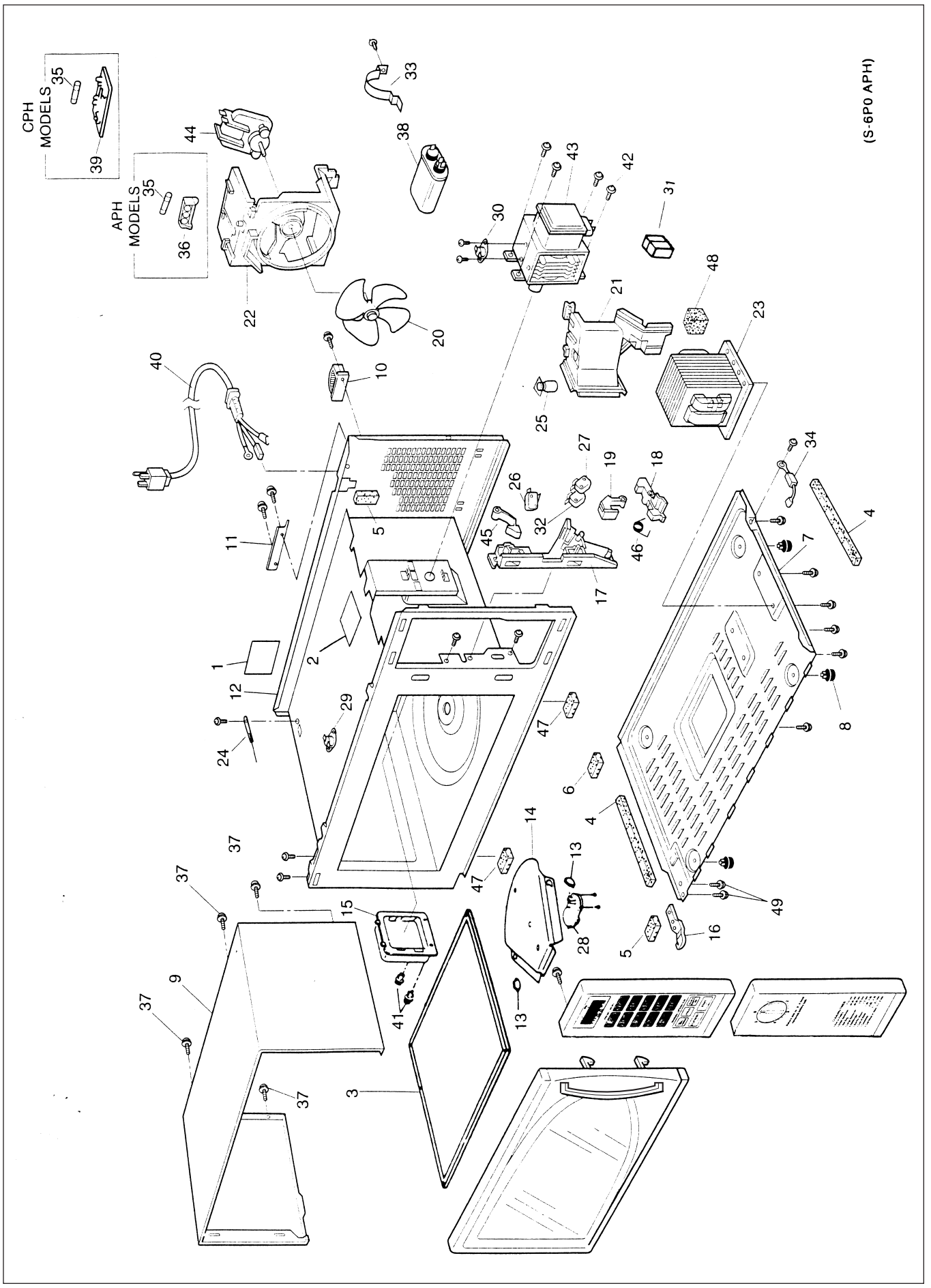
Digital Transistor

PNP Transistor



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

EXPLODED VIEW AND PARTS LIST



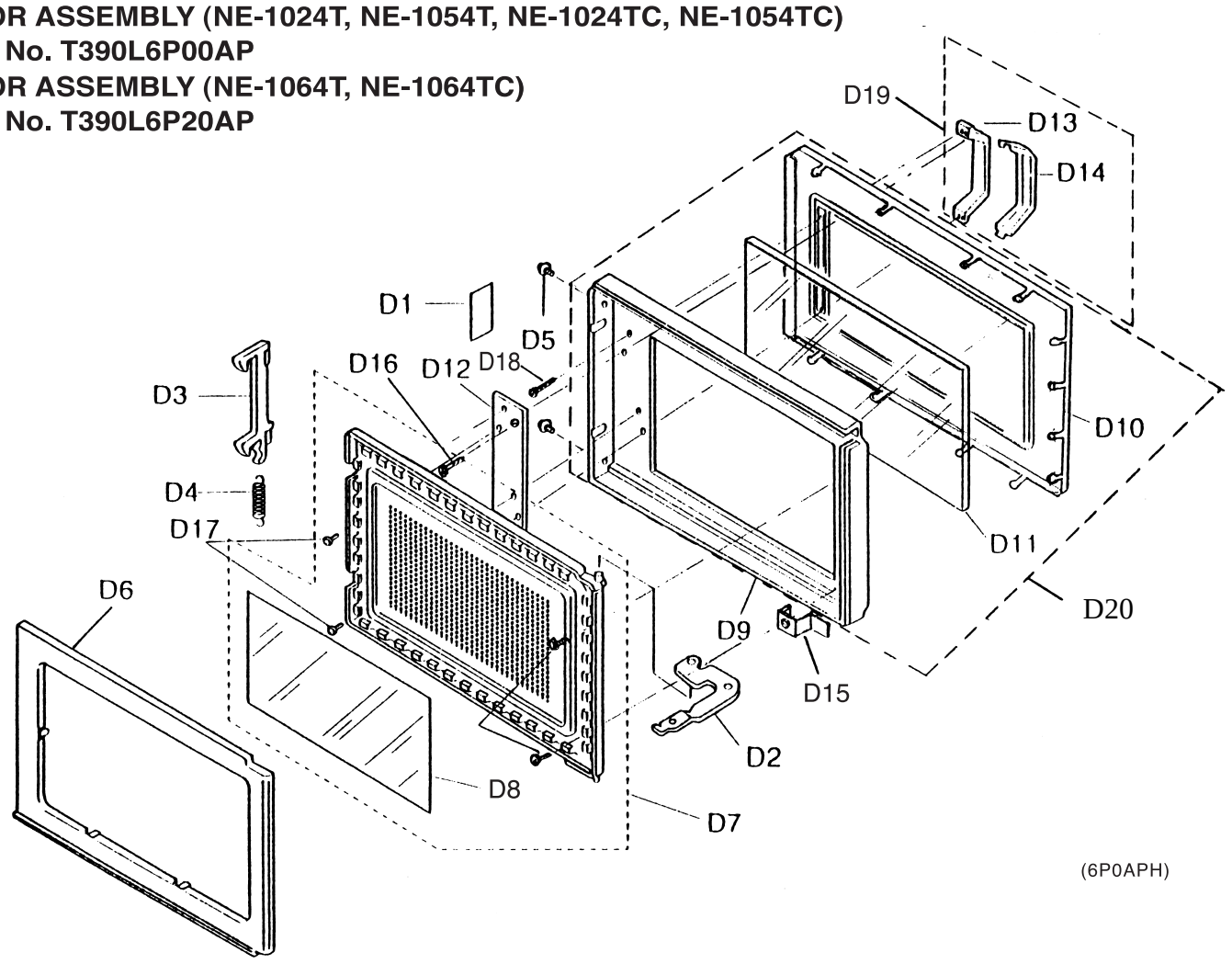
PARTS LIST

NOTES: • When ordering replacement part(s), please use part number(s) shown in this parts list.
Do not use description of the part.
• Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
• Items marked * supplied by TAMACO (Taiwan)
• Items marked # are new Part No's. for Pre I.G. (Initial Guidance) list.

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*1		A00063A00AP	CAUTION LABEL	1	APH MODELS
*1		A00066671CP	CAUTION LABEL	1	CPH MODELS
*2		A00333A00AP	FUSE LABEL	1	APH MODELS
*2		A00333A00CP	FUSE LABEL	1	CPH MODELS
3		A010T5690AQ	CERAMIC TRAY	1	
*4		AMQ0903000AG	CUSHION RUBBER A	2	
*5		AMQ0902000BA	CUSHION RUBBER A	1	
*6		AMQ0904000BB	CUSHION RUBBER A	1	
*7		B10017200SN	BASE	1	
8		A10081180	RUBBER FOOT	4	
*9#		T10096P00AP	CABINET BODY	1	NE-1024T, NE-1024TC, NE-1054T, NE-1054TC
*9		B10093A20AP	CABINET BODY	1	NE-1064T, NE-1064TC
*10		B11404960AQ	STOPPER A	1	
*11		B10613130AP	REAR COVER	1	
*12#	⚠	B201A3930AP	OVEN CAVITY	1	NE-1024T, NE-1024TC, NE-1054T, NE-1054TC
*12		B201A3700AP	OVEN CAVITY	1	NE-1064T
*12		B201A3700CP	OVEN CAVITY	1	NE-1064TC
*13		A20194211AQ	ANTENNA SPACER	2	
*14		B202K5001AP	MOVING ANTENNA	1	
*15		B20553131AP	CEILING COVER	1	
*16	⚠	B30077051AP	LOWER HINGE (B)	1	
*17		B3020-1480	DOOR HOOK	1	
*18		B3137-1480	HOOK SPACER B	1	
*19		B3138-1480	HOOK SPACER C	1	
*20#		A4008-1480	FAN BLADE	1	
*21		B40259391AP	AIR GUIDE A	1	
*22		B41447631AP	ORIFICE	1	
*23#	⚠	T600B6P00AP	H. V. TRANSFORMER	1	
*24#		B03533140AP	TEMP SENSOR W/LEAD WIRE (U)	1	NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
*25#		F612E4W00AP	INCANDESCENT LAMP	1	
26	⚠	ANE6142-1450	MICRO SWITCH	1	(V-16G-3C26-M) PRIMARY LATCH SWITCH
27	⚠	ANE6142-1450	MICRO SWITCH	1	NE-1024T, NE-1024TC (V-16G-3C26-M) SECONDARY LATCH SWITCH
27	⚠	A61425180AP	MICRO SWITCH	1	NE-1054T, NE-1054TC (V-16G-3C26-M)NE-1064T, NE-1064TC SECONDARY LATCH SWITCH
28		A61446030AP	ANTENNA MOTOR	1	(2.5W)
*29	⚠	B61454051AP	THERMAL CUTOUT	1	(FOR OVEN)
*30	⚠	B61456210AP	THERMAL CUTOUT	1	(FOR MAGNETRON)
*31	⚠	A50966520UP	FERRITE CORE	1	CPH MODELS
32		ANE6178420	MICRO SWITCH	1	(V-16G-2C25) SHORT SWITCH
*33		B61884060AP	CAPACITOR HOLDER	1	
*34		B62024001AP	DIODE, SI	1	
*35		A62307160AP	FUSE	1	(18A)
*36		A62314000AP	FUSE HOLDER	1	APH MODELS
*37		XTW4+12AD	SCREW	4	(4x12)FOR CABINET BODY
*38	⚠	A60905500AP	H.V. CAPACITOR	1	(1.0μF, 2100V AC)
*39		B692Y760BCP	NOISE FILTER (U)	1	CPH MODELS
*40	⚠	T900C7630AP	AC CORD W/PLUG	1	(120V)
41		ANE9082931AP	CLIP	2	(FOR COVER)
42		XTT4+8B	SCREW	4	(4X8) FOR MAGNETRON
*43	⚠	2M244-M1F1	MAGNETRON	1	APH MODELS
*43	⚠	2M244-M1G	MAGNETRON	1	CPH MODELS

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*44		B400A3700AP	FAN MOTOR	1	(120V, 24W, AC, SINGLE PHASE)
*45		B3136-1480	HOOK SPACER A	1	
*46		J3097-1480	LATCH SPRING	1	
*47		AMQ0902000BA	CUSHION RUBBER A	4	
*48		B10495690AP	SPACER CUSHION	1	
*49		XTW4+12TS	SCREW	2	

{ DOOR ASSEMBLY (NE-1024T, NE-1054T, NE-1024TC, NE-1054TC)
{ Part No. T390L6P00AP
{ DOOR ASSEMBLY (NE-1064T, NE-1064TC)
{ Part No. T390L6P20AP



Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*D1		A02453A00AP	DHHS LABEL	1	
*D1		A04115020CP	CSA LABEL	1	
*D2	⚠	B30067050AP	UPPER HINGE (A)	1	
*D3		B30188350AP	DOOR KEY A	1	
*D4		B30214000AP	DOOR KEY SPRING	1	
*D5		XTN3+8C	SCREW	2	
*D6	⚠	B30858340AP	DOOR C / BLACK	1	
*D7	⚠	B302K8340AP	DOOR E (U) / BLACK	1	
*D8	⚠	B31457200AP	DOOR SCREEN A	1	
*D9#	⚠	T30016P00AP	DOOR A / 1.5 BRACK	1	
*D10#		T30026P00AP	DOOR B (U)	1	(NOTE 1)
*D11		T31466P00AP	DOOR SCREEN B (PP)	1	
*D12		T32866P00AP	HANDLE BRACKET	1	
*D13#		T30706P00AP	HANDLE PIECE A	1	NE-1054, NE-1024, NE-1054TC, NE-1024TC
*D13#		A30703170GP	HANDLE PIECE A	1	NE-1064T, NE-1064TC
*D14#		T31346P00AP	HANDLE PIECE B	1	NE-1054, NE-1024, NE-1054TC, NE-1024TC
*D14#		ANE31348U1AP	HANDLE PIECE B	1	NE-1064T, NE-1064TC
*D15		T90096P00AP	EARTH PLATE	1	
*D16		XTN4+20BFX	SCREW	2	NE-1054T, NE-1024T, NE-1054TC, NE-1024TC
D16		XYN4+20S	SCREW	2	NE-1064T, NE-1064TC
*D17		XTN4+8J	SCREW	4	
*D18		XTN4+14CFX	SCREW	2	NE-1054T, NE-1024T, NE-1054TC, NE-1024TC
D19		T301F6P00AP	HANDLE U	1	NE-1054T, NE-1024T, NE-1054TC, NE-1024TC
D19		T301F6P10AP	HANDLE U	1	NE-1064T, NE-1064TC
D20		T390L6P10AP	DOOR A U	1	

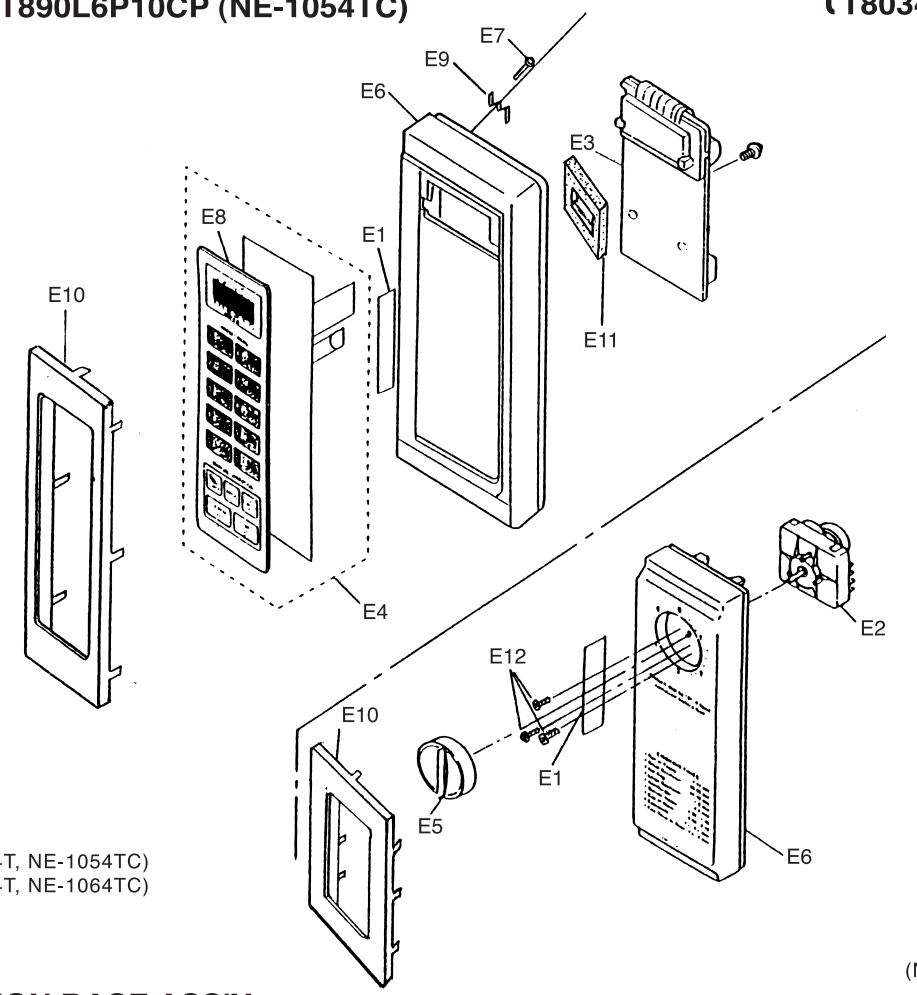
NOTE 1:Please order Door B and DHHSL Label or CSA Label together.

ESCUTCHEON BASE ASSEMBLY

Part No.: { **T890L6P00AP (NE-1024T/ TC)**
T890L6P10AP (NE-1054T)
T890L6P10CP (NE-1054TC)

TOUCH:
ESCUTCHEON BASE U = E6+E4+E10+E11

Part No.: { **T80346P11AP (NE-1054T/ TC)**
T80346P21AP (NE-1064T/ TC)



(NE-1054T, NE-1054TC)
(NE-1064T, NE-1064TC)

(NE-1024T, NE-1024TC)

TIMER:
ESCUTCHEON BASE U
= E6+E10
Part No.:T80346P01AP

ESCUTCHEON BASE ASS'Y

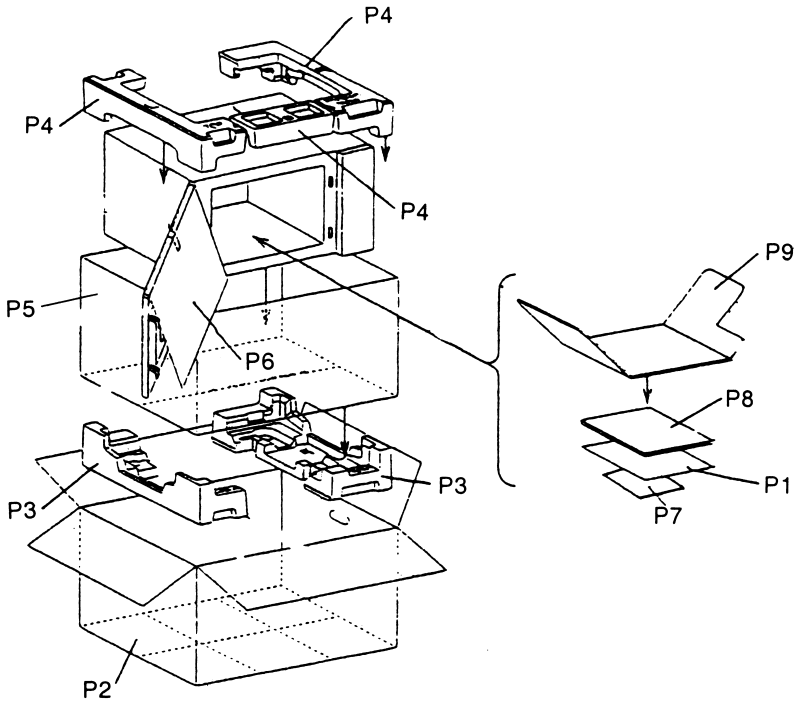
Part No.: { **T890L6P20AP (NE-1064T)**
T890L6P20CP (NE-1064TC)

(S-6P0 APH)

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*E1#		A00073A00AP	NAME PLATE	1	APH MODEL
*E1		A00073A00CP	NAME PLATE	1	CPH MODEL
*E2		T60016P00AP	TIMER SWITCH	1	NE-1024T, NE-1024TC
*E3		T603L6P10CP	D.P. CIRCUIT (U)	1	NE-1054TC, NE-1064TC (RTL (W/COMPONENETS)
*E3		T603L6P10AP	D.P. CIRCUIT (U)	1	NE-1054TC, NE-1064TC (RTL (W/COMPONENETS)
*E4#		T630Y6P10AP	MEMBRANE SWITCH (U)	1	NE-1054T, NE-1054TC (W/ESCUTCHEON SHEET)
*E4#		T630Y6P20AP	MEMBRANE SWITCH (U)	1	NE-1064T, NE-1064TC (W/ESCUTCHEON SHEET)
*E5		T80206P00AP	TIMER KNOB	1	NE-1024T, NE-1024TC
*E6#		T80346P00AP	ESCUTCHEON BASE	1	NE-1024T, NE-1024TC (NOTE 2)
*E6#		T80346P10AP	ESCUTCHEON BASE	1	NE-1054T, NE-1054TC, NE-1064T, NE-1064TC (NOTE 2)
*E7		XTW4+8AD	SCREW	1	NE-1064T, NE-1064TC, NE-1054T, NE-1054TC
*E8#		T83376P10AP	ESCUTCHEON SHEET	1	NE-1054T, NE-1054TC
*E8		T83376P20AP	ESCUTCHEON SHEET	1	NE-1064T, NE-1064TC
*E9		T90096P1CAP	EARTH PLATE	1	NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
*E10		T80356P00AP	ESCUT FACIA	1	
*E11		TMQ096P10AP	CUSHION	1	NE-1054T, NE-1064T, NE-1054TC, NE-1064TC
*E12		XTN3+10C	SCREW	3	NE-1024T, NE-1024TC

NOTE 2:Please order Escutcheon Base and Name Plate together.

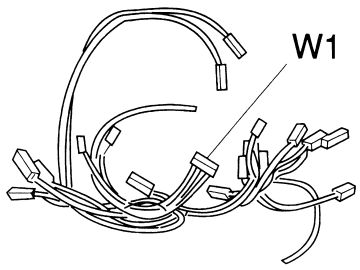
PACKING AND ACCESSORIES

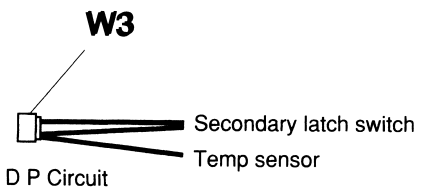


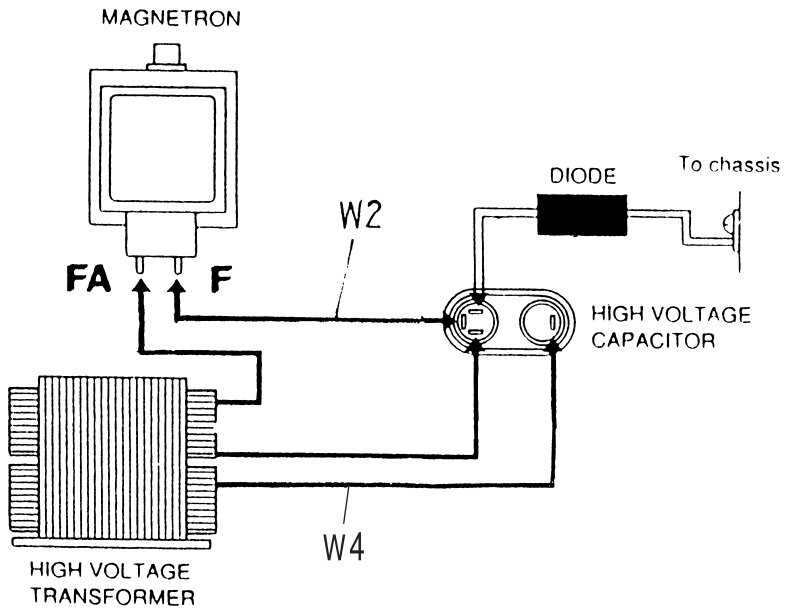
(S-6P0 APH)

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*P1#		T00036P00AP	INSTRUCTION BOOK (ENGLISH)	1	APH MODEL (NE-1024T, NE-1054T)
*P1#		T00036P10CP	INSTRUCTION BOOK (FRENCH)	1	CPH MODEL (NE-1024TC, NE-1054TC)
*P1#		T00036P20AP	INSTRUCTION BOOK	1	NE-1064T
*P1#		T00036P20CP	INSTRUCTION BOOK	1	NE-1064TC
*P2#		T01026P00CP	PACKING CASE, PAPER	1	NE-1024TC
*P2		T01026P00AP	PACKING CASE, PAPER	1	NE-1024T
*P2		T01026P10AP	PACKING CASE, PAPER	1	NE-1054T
*P2		T01026P10CP	PACKING CASE, PAPER	1	NE-1054TC
*P2		T10126P20AP	PACKING CASE, PAPER	1	NE-1064T
*P2		T10126P20CP	PACKING CASE, PAPER	1	NE-1064TC
*P3		T01053A00AP	LOWER FILLER	1	
*P4		T01043A00AP	UPPER FILLER	1	
*P5		B01064R00AP	P.E. BAG	1	
*P6		B01074P00AP	DOOR SHEET	1	
*P7		B03343141AP	MENU LABEL	1	NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
*P8#		T04206P10AP	OPERATING GUIDE (ENGLISH)	1	NE-1054T
*P8#		T04206P10CP	OPERATING GUIDE (ENGLISH/FRENCH)	1	NE-1054TC
*P8#		T04206P00RP	OPERATING GUIDE (SPANISH)	1	NE-1054T
*P8		T04206P20AP	OPERATING GUIDE (ENGLISH)	1	NE-1064T
*P8		T04206P20CP	OPERATING GUIDE (ENGLISH/FRENCH)	1	NE-1064TC
*P8		T04206P20RP	OPERATING GUIDE (SPANISH)	1	NE-1064T
*P9		T01083A00AP	TRAY PACKING	1	

WIRING MATERIALS







(S-6P0 APH)

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
*W1#		T030A6P00AP	LEAD WIRE HARNESS	1	NE-1024T
*W1#		T030A6P00CP	LEAD WIRE HARNESS	1	NE-1024TC
*W1#		T030A6P10CP	LEAD WIRE HARNESS	1	NE-1054TC, NE-1064TC
*W1		T030A6P10AP	LEAD WIRE HARNESS	1	NE-1054T, NE-1064T
*W2		T03536P00AP	H.V WIRE	1	
*W3#		B03533140AP	LEAD WIRE (U) W/TEMP SENSOR	1	NE-1054T, NE-1054TC, NE-1064T, NE-1064TC
*W4		T03536P20AP	H.V WIRE	1	

Ref.No.		Part No.	Part Name & Description	Pcs/Set	Remarks
			REF NO. 39 NOISE FILTER (U)		
C1		ECQU2A104MN	POLYESTER CAPACITOR	1	0.1MF, 250V, ±20%
C2,3	⚠	ECKDNS472MEX	CERAMIC CAPACITOR	2	0.0047MF, 250V, ±20%
F1		A62316010BP	FUSE HOLDER	2	
L1		A621A7600CP	FILTER COIL	1	
R1		ERD25FJ564S	CARBON FILM RESISTOR	1	560kΩ, 1/4W, ±5%
ZNR2,3		ERZC10DK112W	VARISTOR	2	
ZNR1		ERZC10DK471F	VARSITOR	1	(470V)

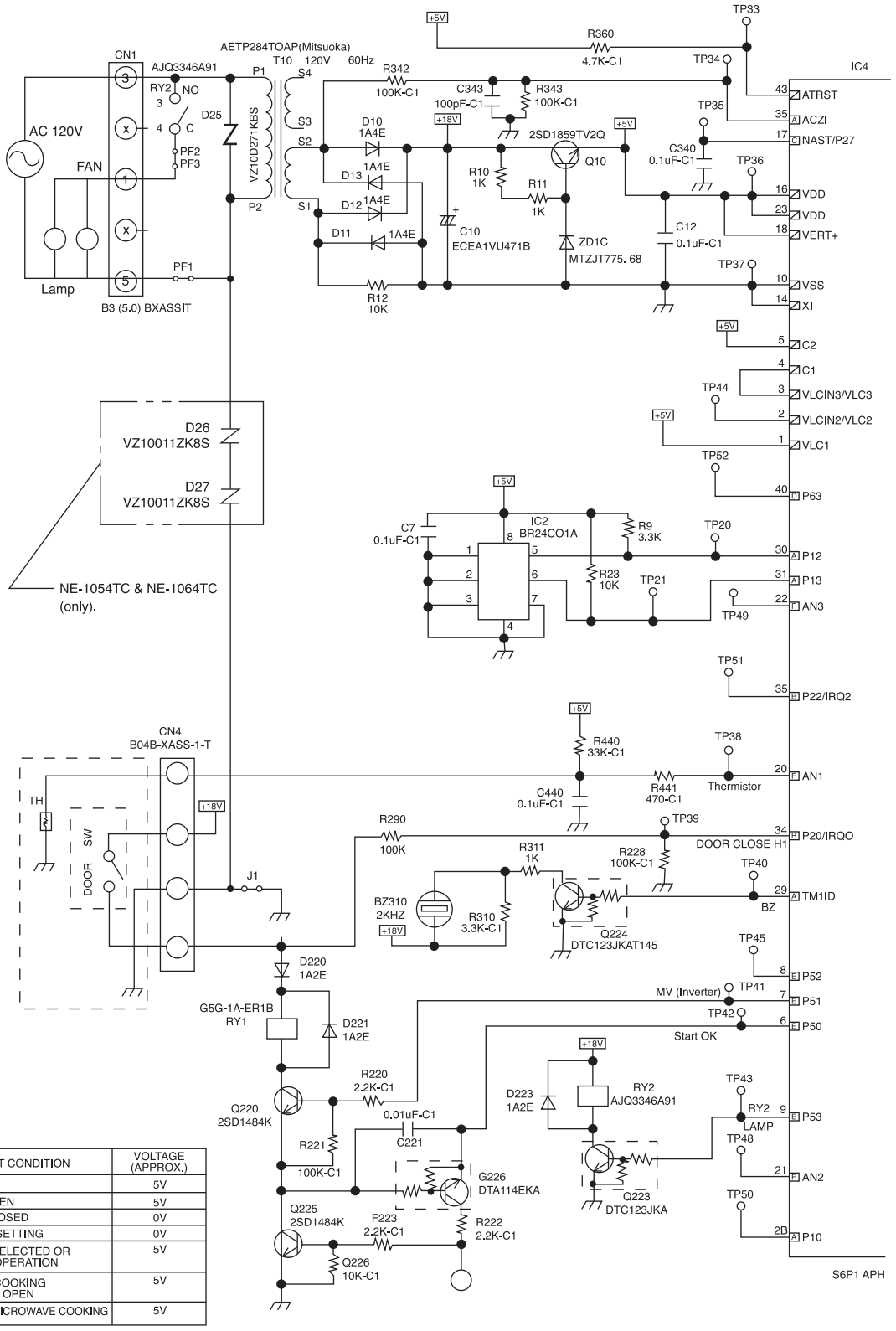
DIGITAL PROGRAMMER (NE-1054T & NE-1054TC, NE-1064T & NE-1064TC)

PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs/Set	Remarks
BZ310	E4091-050	BUZZER	1	
C10	ECEA1VU471B	ELECTROLYTIC CAPACITOR, AL.	1	470μF/ 35V
CN1	B3 (5.0) BXASS1T	CONNECTOR	1	
CN4	B04B-XASS-1-T	CONNECTOR	1	
CN6	08FDZ-BT-M (S)	CONNECTOR	1	
CX320	J4090-020T	CERAMIC RESONATOR	1	8MHz
D220, 221, 223, 331 -333, 441, -443	1A2E	DIODE, SI	9	
D10-D13	1A4E	DIODE, SI	4	
DISP110	E3902-030	LCD	1	
IC1	MN101C589EG1	I. C.	1	
IC2	E4083-180	I. C.	1	
Q10, Q180	2SD1859TV2Q	TRANSISTOR, SI, 1W	2	
R10, R11, R311	ERDS2TJ102T	CARBON FILM RESISTOR	3	1KΩ, 1/4W, ±
R12, R18, R180	ERDS2TJ103T	CARBON FILM RESISTOR	3	10KΩ, 1/4W, ±
R290	ERDS2TJ104T	CARBON FILM RESISTOR	1	1000KΩ, 1/4W, ±5%
R9	ERDS2TJ332T	CARBON FILM RESISTOR	1	3.3KΩ, 1/4W, ±5%
RY1	G5G-1A-ER18	POWER RELAY	1	(18V)
RY2	AJQ3346A91	POWER RELAY	1	(18V)
T10	AETP284T0AP	L. V. TRANSFORMER	1	
ZD10	MTZJT775. 6B	DIODE, SI	1	
D25	VZ10D271KBS	VARISTOR	1	
D26, D27	VZ10D112KBS	VARISTOR	2	ONLY USE IN NE-1054TC AND NE-1064TC
R226	ERJ3GEYJ103V	CHIP RESISTOR	1	10KΩ, 1/10W
R221, 228, 342, 343	ERJ3GEYJ104V	CHIP RESISTOR	4	100KΩ, 1/10W
R320	ERJ3GEYJ220V	CHIP RESISTOR	1	22KΩ, 1/10W
R220, 222, 223	ERJ3GEYJ222V	CHIP RESISTOR	3	2.2KΩ, 1/10W
R310	ERJ3GEYJ332V	CHIP RESISTOR	1	3.3KΩ, 1/10W
R440	ERJ3GEYJ333V	CHIP RESISTOR	1	33KΩ, 1/10W
R181	ERJ3GEYJ360V	CHIP RESISTOR	1	36KΩ, 1/10W
R441	ERJ3GEYJ471V	CHIP RESISTOR	1	470KΩ, 1/10W
R360	ERJ3GEYJ472V	CHIP RESISTOR	1	4.7KΩ, 1/10W
C343	0603N101J500NT	CHIP CAPACITOR	1	100pF/50V
C221	0603F103Z500NT	CHIP CAPACITOR	1	0.01μF/50V
C7, 12, 340, 440	0603F104Z250NT	CHIP CAPACITOR	4	0.1μF/25V
Q181, 220, 225	2SD1484KT146	CHIP TRANSISTOR	3	0.5A/50V/0.2W
Q226	DTA114EKAT146	CHIP TRANSISTOR	1	50mA/50V/10KΩ
Q182, 224, 223	DTC123JKAT146	CHIP TRANSISTOR	3	10mA/50V/(2.2, 4.7KΩ)
D180-D183	SML-210MTT86	CHIP LED	4	GREEN (200mA/9~18mcd)

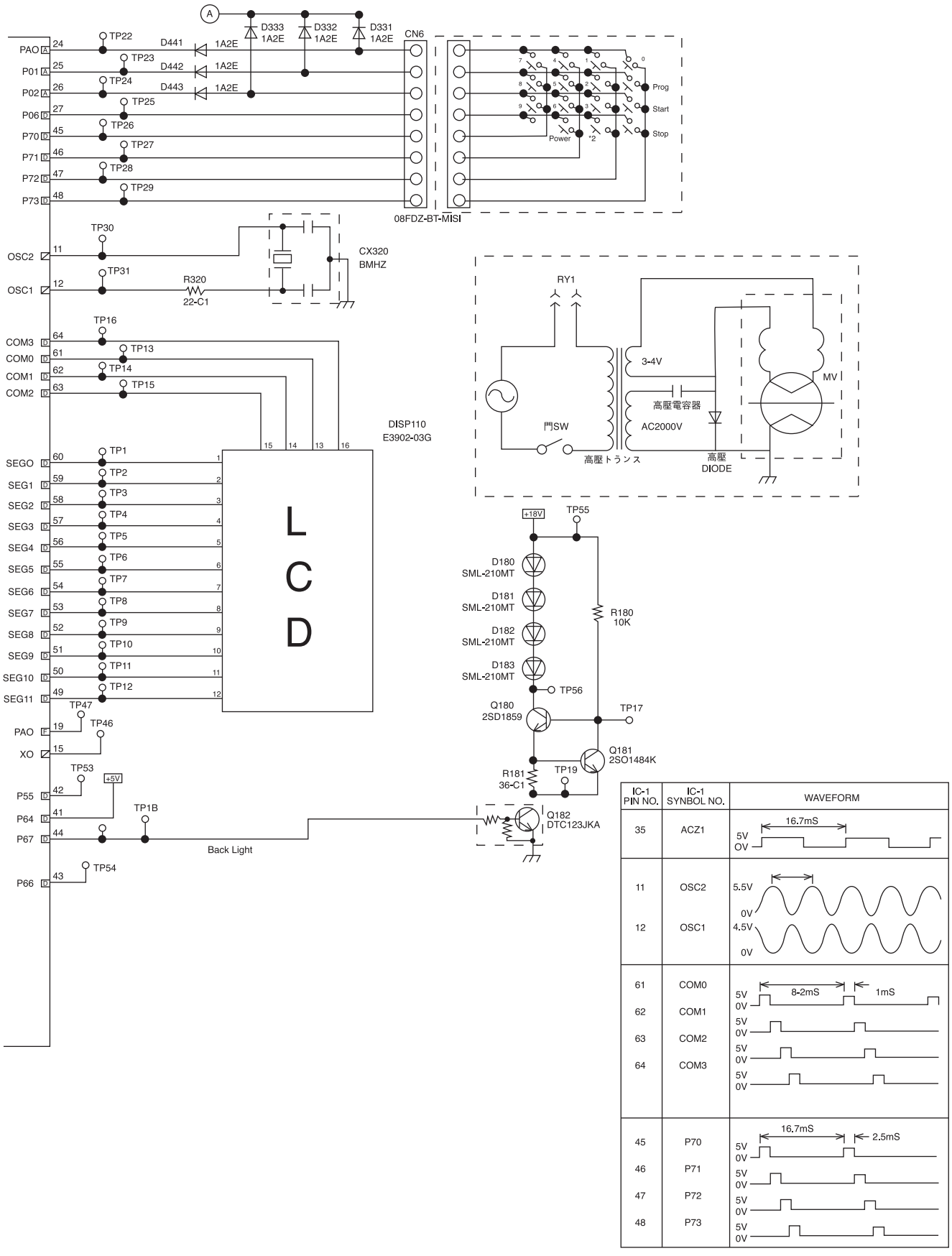
DIGITAL PROGRAMMER CIRCUIT (NE-1054T & NE-1054TC, NE-1064T & NE-1064TC)

SCHEMATIC DIAGRAM



VOLTAGE OF IC1 TERMINALS

IC1 PIN NO.	FUNCTION	TEST CONDITION	VOLTAGE (APPROX.)
27	RESET	NORMAL	5V
22	DOOR CHECK	DOOR OPEN	5V
		DOOR CLOSED	0V
20	LATCH CIRCUIT	BEFORE SETTING	0V
		POWER SELECTED OR DURING OPERATION	5V
12	RY3/OVEN LAMP	DURING COOKING OR DOOR OPEN	5V
10	RY1/MICROWAVE	OURING MICROWAVE COOKING	5V



IC-1 PIN NO.	IC-1 SYNBOL NO.	WAVEFORM
35	ACZ1	16.7mS, 5V, 0V
11	OSC2	5.5V, 0V
12	OSC1	4.5V, 0V
61	COM0	8-2mS, 1mS, 5V, 0V
62	COM1	5V, 0V
63	COM2	5V, 0V
64	COM3	5V, 0V
45	P70	16.7mS, 2.5mS, 5V, 0V
46	P71	5V, 0V
47	P72	5V, 0V
48	P73	5V, 0V

(S-6P0 APH)
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