

**MAYTAG**

**Maytag**

**Microwave  
Service Manual**

16000030  
Issued 1992  
Revised 11/97

# **SAFETY PRECAUTIONS**

**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 needed.**
  - (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, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.**
- D.- Any defective or misadjusted components in the interlock, monitor, door seal and microwave generation and transmission systems shall be repaired, 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.**
- F.- Operate the oven from a properly grounded AC outlet capable of supplying 120 Volts at 15 amperes.**

**THIS MANUAL, AS WELL AS THE INFORMATION CONTAINED IN IT, IS TO BE USED ONLY BY A MAYTAG AUTHORIZED SERVICE TECHNICIAN FAMILIAR WITH AND KNOWLEDGEABLE OF PROPER SAFETY AND SERVICING PROCEDURES AND POSSESSING HIGH QUALITY TESTING EQUIPMENT ASSOCIATED WITH MICROWAVE, GAS, AND ELECTRICAL APPLIANCE REPAIR.**

**ALL INDIVIDUALS WHO ATTEMPT REPAIRS BY IMPROPER MEANS OR ADJUSTMENT, SUBJECT THEMSELVES AND OTHERS TO THE RISK OF SERIOUS OR FATAL INJURY.**

**USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.**

---

# Contents

<b>SECTION 1. INSTALLATION</b> .....	1-1
SAFETY INSTRUCTIONS .....	1-1
ELECTRICAL REQUIREMENTS .....	1-1
MOUNTING .....	1-1
<b>SECTION 2. OPERATION</b> .....	2-1
MICROWAVE ENERGY .....	2-1
MAGNETRON TUBE .....	2-2
FUNCTIONS .....	2-2
AUTOMATIC FAN .....	2-4
VENT BLOWER .....	2-4
<b>SECTION 3. COMPONENT ACCESS</b> .....	3-1
GRILL REMOVAL .....	3-1
CONTROL PANEL .....	3-1
SMART BOARD .....	3-2
DOOR ASSEMBLY .....	3-3
THE STIRRER .....	3-3
INTERLOCKS (DOOR LATCH SWITCHES) .....	3-4
REMOVING OVEN FROM WALL (2 People) .....	3-5
POWER TRANSFORMER REPLACEMENT .....	3-6
MAGNETRON BLOWER .....	3-6
HIGH VOLTAGE CAPACITOR .....	3-6
MAGNETRON .....	3-7
<b>SECTION 4. COMPONENT TESTING</b> .....	4-1
TAKING RESISTANCE MEASUREMENTS .....	4-1
MICROWAVE POWER TEST .....	4-1
KEY PANEL .....	4-2
FUNCTION PERFORMANCE TEST .....	4-3
MONITOR SWITCH .....	4-3
<b>SECTION 5. TROUBLESHOOTING GUIDE</b> .....	5-1
CME900 .....	5-1
CME900-01 .....	5-3
<b>SECTION 6. WIRING / SCHEMATIC • CME900</b> .....	6-1
<b>SECTION 7. WIRING / SCHEMATIC • CME900-01</b> .....	7-1

**Models Covered:**  
CME900  
CME900-01



---

# SPECIFICATIONS

	<u>CME900</u>	<u>CME900-01</u>
<b>PRODUCT RATING</b>	120 VAC 60 Hertz	120 VAC 60 Hertz
<b>POWER OUTPUT</b>	625 Watts 2450 MHz	625 Watts 2450 MHz
<b>CIRCUIT PROTECTION</b>	15 ampere fuse	15 ampere fuse
<b>VENTILATION</b>	Vertical, 247 cfm Horizontal, 239 cfm	Vertical, 240 cfm Horizontal, 260 cfm

# **CAUTION**

## **Warning to Service Technicians:**

To avoid possible exposure to microwave radiation or energy, visually check the oven for damage to the door and door seal before operating. Use an approved R.F. measuring device to check the amount of leakage before servicing.

### **NOTE**

***R.F. LEAKAGE CHECKING PATTERN AND SEQUENCE EXPLAINED ON FACING PAGE - MW/CM<sup>2</sup> AT 5 CM IS MAXIMUM ALLOWABLE R.F. LEAKAGE.***

If R.F. leakage exceeds this reading, appropriate repair must be made before continuing to service the unit. Check interlock function by operating the door latch. Any cooking cycle in progress, should be cut off before the door can be opened.

The door, door seal and latching assembly contain the radio frequency energy within the unit. Do **not** attempt to defeat the door safety interlock switches. Do **not** try to operate the oven with the door open.

Proper operation of the microwave oven requires that the magnetron be correctly assembled to the waveguide and cavity. Do **not** operate the magnetron unless it is properly installed. Use caution in the magnetron area because of microwave leakage.

Exercise all routine safety procedures as with any electrical device.

Untrained personnel should not attempt service without a thorough review of all test procedures and safety information contained in this manual.

If the oven operates with the door open, instruct the user not to operate the oven. Contact the manufacturer and CDRH immediately.

## **Monitoring System**

This microwave oven has a monitoring system designed to assure proper operation of the safety interlock system.

The interlock system includes a fuse and three switch sections within the interlock module; Primary Interlock, Secondary Interlock, and Monitor.

Before replacing a blown fuse, test the switches and relay for proper operation as described in Section VII, "Component Testing".

### **IMPORTANT**

***DO NOT ATTEMPT TO REPAIR STICKING CONTACTS OF ANY INTERLOCK SWITCH, SAFETY SWITCH, OR RELAY - REPLACE THAT COMPONENT SHOWING EVIDENCE OF STICKING CONTACTS DURING COMPONENT TESTING.***

Use only the exact rating of fuse as installed by the factory:

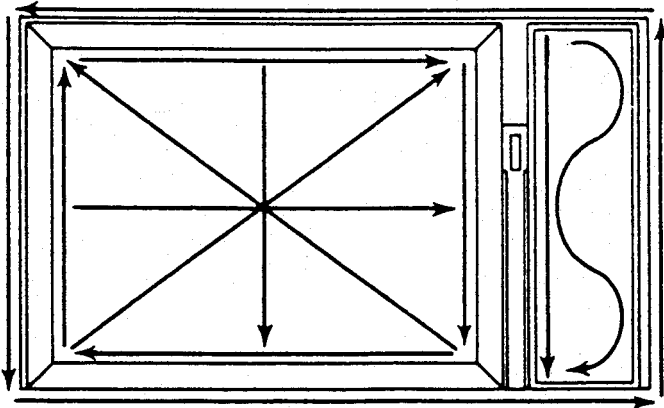
Original Run.....15 Amp.

# IMPORTANT

## **TESTING FOR MICROWAVE LEAKAGE**

Perform the microwave leakage test using an approved R.F. measuring device and following the steps outlined below:

1. Fill a 600 cc beaker with 275 ml. of water and place in the approximate center of oven cavity.
2. Close the door and activate the oven on full power.
3. While the oven is operating, check around the perimeter of the oven with the R.F. meter probe. Move the probe no faster than one (1) inch per second.
  - Check around the cabinet at the front.
  - Check around the door.
  - Check across the console panel.
  - Check horizontally across the door.
  - Check vertically across the door.
  - Check diagonally across the door.
  - Check across the air vents.
  - Check across the rear air louvers.
4. When the point of maximum leakage is found, rotate the probe until a peak reading is obtained; then apply pressure to the door edge to see if the reading increases. The maximum leakage shall not exceed  $4 \text{ mw/cm}^2$  for any microwave oven tested in the field. All surface and vent openings should be checked.
5. If the test indicates the leakage is below  $4 \text{ mw/cm}^2$ , the oven is operating normally and no repairs or adjustments are required.
6. If the test indicates leakage in excess of the  $4 \text{ mw/cm}^2$  limit, the oven should be repaired at once. The owner should be instructed not to use the unit until the oven has been brought into compliance.
7. If the test indicates leakage in excess of  $5 \text{ mw/cm}^2$ , then a report must be filed immediately with the manufacturer.

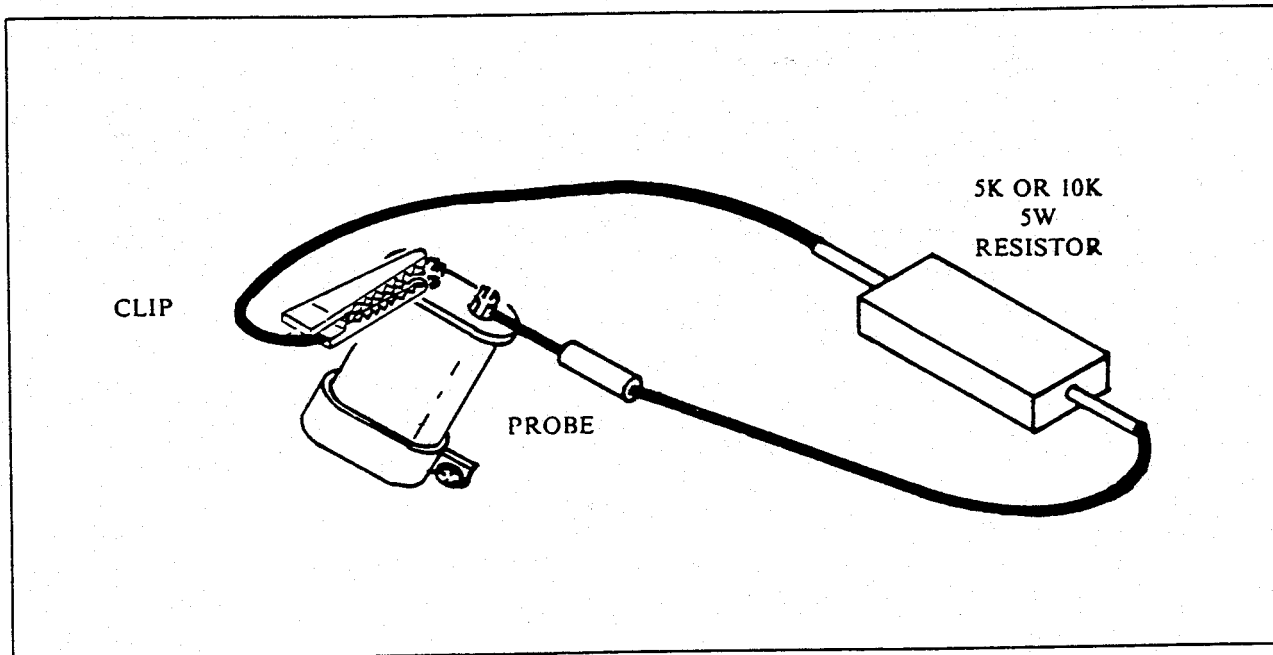


### Discharging the Capacitor

Before working on anything inside the microwave oven cabinet, the capacitor **MUST** be discharged. The sequence that should be followed before any internal servicing is attempted:

- Unplug the unit.
- Remove the panel.
- Discharge the capacitor.

The recommended method is to use a resistor which has been connected to an insulated alligator clip on one end, and an insulated test probe on the other.



### ELECTROLYTIC CAPACITOR

Place the alligator clip on one terminal of the capacitor. Then touch the other terminal with the probe. Repeat this procedure any time servicing is attempted after the unit has been turned on. Remove clip, resistor, and probe from area of capacitor.

#### WARNING

***Before attempting to service the microwave oven, disconnect the main power supply to the unit.***



# SECTION 1. INSTALLATION

## SAFETY INSTRUCTIONS

This product requires a three prong grounded receptacle. The installer must perform a ground continuity check on the power outlet box before beginning the installation to insure that the outlet box is properly grounded. If not properly grounded, or if the outlet box does not meet the electrical requirements noted, (under **ELECTRICAL REQUIREMENTS**), a qualified electrician should be employed to correct any deficiencies.

**CAUTION:** FOR PERSONAL SAFETY, REMOVE HOUSE FUSE OR OPEN CIRCUIT BREAKER BEFORE BEGINNING INSTALLATION TO AVOID SEVERE OR FATAL SHOCK INJURY.

**CAUTION:** FOR PERSONAL SAFETY, THE MOUNTING SURFACE MUST BE CAPABLE OF SUPPORTING THE CABINET LOAD, IN ADDITION TO THE ADDED WEIGHT OF THIS 85 POUND PRODUCT, PLUS ADDITIONAL OVEN LOADS UP TO 50 POUNDS OR A TOTAL WEIGHT OF 135 POUNDS.

**CAUTION:** FOR PERSONAL SAFETY THIS PRODUCT CANNOT BE INSTALLED TO CABINET ARRANGEMENTS SUCH AS AN ISLAND OR A PENINSULA. IT MUST BE MOUNTED TO BOTH A TOP CABINET AND A WALL.

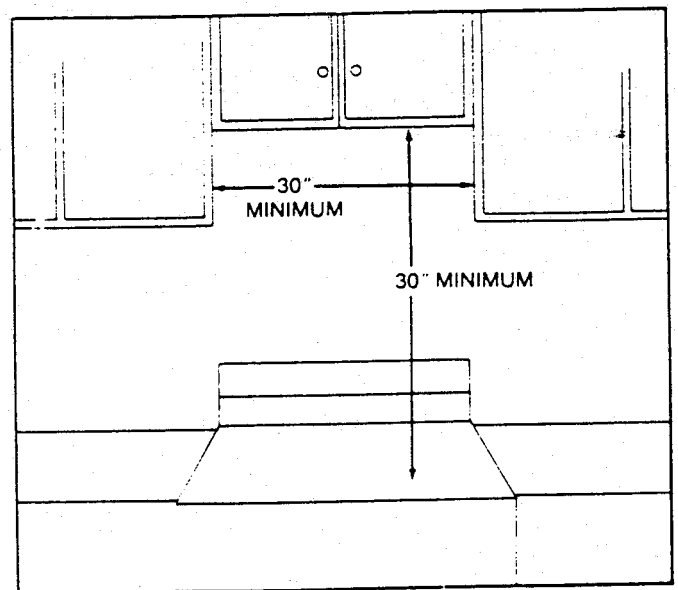
## ELECTRICAL REQUIREMENTS

Product rating is 120 volts AC, 60 Hertz, 11.2 amps, and 1.35 kilowatts. This

product must be connected to a supply circuit of the proper voltage and frequency.

Wire size must conform to the requirements of the National Electrical Code or the prevailing local code for this kilowatt rating. The power supply cord and plug should be brought to a separate 15 or 20 ampere branch circuit single grounded receptacle. The outlet box should be located near the cord entry point. The outlet box and supply circuit should be installed by a qualified electrician and conform to the National Electric Code or the prevailing local code.

## MOUNTING



### Mounting Space

This microwave oven requires a 30" minimum opening on a flat vertical wall.

The top surface of the unit must be a minimum of 30" above the cooktop.

**Wall Construction**

The oven should be mounted against and supported by a flat vertical wall. The wall construction must be capable of supporting a total weight of 150 lbs.

This product can not be mounted and supported by an island or peninsula cabinet only. It must be mounted to both a cabinet and wall.

The microwave must be attached to a minimum of one 2" x 4" wall stud.

---

## SECTION 2. OPERATION

---

### MICROWAVE ENERGY

#### *Types of Radio Frequency Energy*

Microwave energy is one form of **high frequency electromagnetic energy**. Some other forms you can hear - sonic waves; or see - solar rays, or light. And still other forms we know of, but can't detect without aid; radiowaves, infrared rays, ultraviolet rays, X-rays, gamma and cosmic rays. All of these are divided into two types of energy; ionizing and non-ionizing. Microwaves are non-ionizing which means a longer wave, and less energy than ionizing types. Some practical aspects of microwave energy:

*It is not stored or retained in the human body; It does not cause chemical changes in the human body; As sound waves stop when a radio is turned off, and light waves disappear instantaneously when a bulb is switched off, so too do microwaves cease immediately when production is stopped - there are no lingering microwaves; and it can create a rise in temperature!*

Some non-ionizing forms of radio frequency energy have waves so long - radio and TV waves - that they create heat in very few objects - only items larger than themselves that they come in contact with. Microwaves are of such a length and strength combined, that they can penetrate a surface and create heat at or below the surface. Microwave energy causes one of three reactions in anything it contacts, and brief descriptions follow.

#### *Principles of Reactions to Microwaves*

##### **Reflect**

When microwaves encounter a metal object, (such as oven walls, or the metal screen in the window, or aluminum foil) the energy will reflect or bounce off just as sunlight is reflected off a shiny object. The result is that no heating takes place inside the metal object. Additionally, arcing or sparks may occur.

##### **Transmit**

When microwaves come in contact with glass, paper or plastic the energy will pass through, or transmit through the material as if nothing had been encountered. No heat is generated in these materials - though some can be transferred back from anything that is heated.

##### **Absorb**

This is a reaction upon which microwave cooking is based. When microwaves come in contact with sugar, fat or water molecules in food, heat is generated. Microwave energy changes polarity every half cycle - and has an F.C.C. assigned frequency of 2,450 million cycles per second, or 2,450 MHZ so the food molecules are changing direction 4,900,000,000 times per second as they keep up with the changing microwave energy. This high speed oscillation causes friction between the molecules, converting the energy into heat.

## **Heating: Cooking**

This heating takes place on all sides of the food object at the same time, since the microwaves come toward, and contact the object from all sides and angles at the same time. But this heating starts in the outer layers of the food, because the microwaves only have enough energy to penetrate from  $\frac{3}{4}$ " to 2" from the surface, depending on density. Then as heat builds up in the outer layers, some of it is transferred inwards toward the center, thus spreading the cooking process. (This movement of heat is called "thermal conduction".)

Since the heating process is immediate as microwaves encounter a food object, no time is needed for oven preheating, and the thermal conduction happens faster than in a conventional oven. Additional time is saved since the molecules within the food object are generating the heat through friction as opposed to heat transfer from surrounding air in a conventional oven. So, microwave cooking is much faster than conventional radiant cooking.

---

## **MAGNETRON TUBE**

The source of microwaves within this microwave oven is the magnetron tube. It is comprised of three basic components: a cylindrical cathode, within a cylindrical anode, surrounded by a magnetic field.

The cathode of the magnetron is heated by the filament transformer winding, and electrons are attracted to the anode because of its relative positive charge. These electrons would normally travel a straight line from cathode to anode, but their path is changed by addition of the magnetic field. With permanent

magnets surrounding the anode, the electrons take an orbital path from cathode to anode. As they approach the anode, the electrons pass by small resonant cavities in part of the anode. The resulting interaction causes the resonant cavities to oscillate at 2450 megahertz. This R.F. energy is then radiated by the magnetron antenna into the waveguide. From the waveguide, the microwave energy passes the stirrer assembly into the oven cavity.

---

## **FUNCTIONS**

### **1. Clock**

- After plugging in the oven or after a power outage, the display will display five 8's, 18 power, and all the oven functions. After 15 seconds, all lights disappear and "Reset" comes on in the upper portion, set clock.
  - a. Push the Clear/Off pad
  - b. Push Clock Set pad
  - c. Set the time of day by pushing the appropriate numbers. "Start" will appear in the display window.
  - d. Push Start pad. The time of day clock will not be activated until the Start pad is pushed. Time will change in one minute increments.
- If set, the time of day will always be displayed when no other cooking function is being used.
- To check the time of day when programming your oven or cooking push the clock pad.
- To return to time of day after cooking open door or push the Clear/Off pad.

## 2. Timer

The Timer feature of this oven has two timing functions:

- It operates as a minute timer.

- Push the Min/Sec Timer pad
- Enter desired time
- Push the Start pad

- It can be used as a hold setting after defrosting.

- Push the Time Defrost pad
- Enter desired defrost time
- Push the Min/Sec Timer pad
- Enter desired holding time
- Push the Start pad

## 3. Time Cooking

- Push the Time Cook 1 pad
- Enter cooking time
- Push the Start pad

## 4. Auto Start

- Enter desired cooking program
- Push Auto Start pad
- Enter the clock time you want the oven to start
- Push Start pad

## 5. Variable Power

- Push the Time Cook 1 pad or Temp Cook & Hold pad
- Enter cooking time or temperature
- Push the Power Level pad
- Enter power level
- Push the Start pad

## 6. Memories

- Two memories of this oven let you program two sequential operations.

- Any combination of time and variable power can be preprogrammed.

- Push Time Cook 1 pad
- Enter cooking time
- Push Power Level pad
- Enter Power Level
- Push Time Cook 2 pad
- Enter cooking time
- Push Power Level pad
- Enter power level
- Push Start pad

## 7. Time Defrost

- Enter the Time Defrost pad
- Enter defrost time
- Push the Start pad

## 8. Temperature Probe

- Insert Probe
- Push the Temp Cook & Hold pad
- Enter temperature
- Push the Power Level pad
- Enter power level
- Push Start pad

## 9. Make a Meal

### • *Inserting the Rack*

- Tip the rack down slightly in the back and fit back of the rack supports on the back oven wall.
- Set rack on the side wall supports near the front of the oven. To remove, lift up in front and then in back.
- The rack can be inserted in two ways to provide upper and lower rack positions.

- *Placing Food in the Oven:* In general, dense or long cooking foods are placed on the oven rack where they

will receive the most microwave energy when several foods are cooking together. Foods that cook or heat quickly are placed on the bottom where there is less energy and cooking is more gentle. Stagger food in oven whenever possible.

- **Important Rack Use Facts:** The rack should not be used when cooking a single item. Always remove the rack from the oven when you finish cooking multiple dishes. Operating the oven with the rack still in place and no food in the oven could result in damage to the oven or rack. Also, meat items like roasts and poultry should always be in a container on the rack - not directly on the rack itself. When cooking instructions specify placing meat or poultry on a rack or trivet, they are referring to a microwave cooking accessory which is placed in a dish to keep the food above fats and juices. The oven rack is not designed for that purpose.
- **Power Level:** Oven meals cook on HIGH because the increased quantity of foods decreases the microwave energy available to each food. If foods contain a number of sensitive ingredients, or are foods that pop or are less tender (such as certain cuts of meat), you may need to lower the setting to MEDIUM HIGH, just as you would do with a conventional oven.
- **Determining When Food is Done:** Since foods cook at slightly different

rates when more than one dish is being prepared, one food may need to cook a few extra minutes after others have been removed. Check foods for doneness at the minimum recommended cook time. Remove those that are done and continue to cook others at the same variable power.

---

## AUTOMATIC FAN

Cooking appliances installed under the oven might, under some heavy usage conditions, cause temperatures high enough to overheat some internal parts of the microwave oven.

To prevent overheating from taking place, the vent fan is designed to automatically turn on at low speed if excessive temperature occurs. Should this happen, the fan cannot be manually turned off, but it will automatically turn off when the internal parts have cooled. The fan may stay on up to approximately 30 minutes after the range and microwave oven controls have been turned off.

---

## VENT BLOWER

The vent or exhaust blower is located at the top of the oven. It is shipped for vertical exhaust but can be changed to rear exhaust.

## SECTION 3. COMPONENT ACCESS

**WARNING:** BEFORE ATTEMPTING TO SERVICE THE MICROWAVE OVEN, DISCONNECT THE MAIN POWER SUPPLY TO THE UNIT.

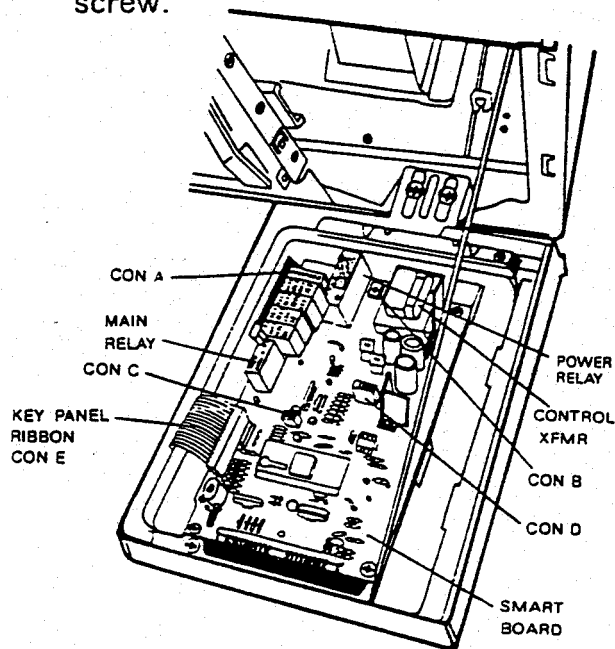
### GRILL REMOVAL

The top full-width grill is removable for oven installation and service to some components, such as; stirrer, run capacitor, removing oven from installation, and door removal.

#### To Remove Grill:

1. Disconnect power to oven.
2. Remove two (2) small Phillips-Head screws from grill.
3. Lift off grill.

lanyard and one (1) hinge mounting screw.



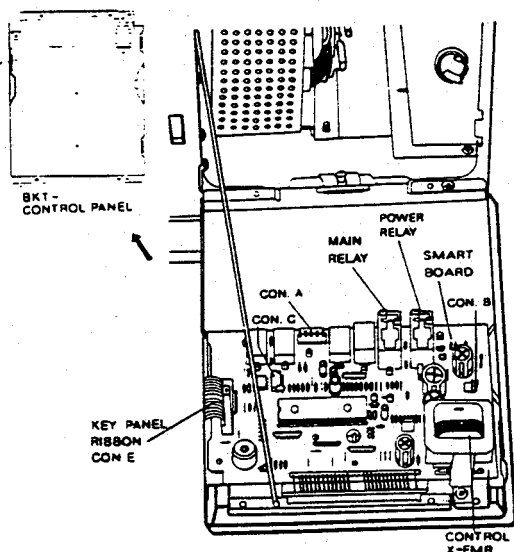
CME900

### CONTROL PANEL

The control panel is mounted by two (2) tabs on the R.H. side, and two (2) screws on the door handle side of the panel.

#### To Open the Control Panel:

1. Disconnect power to oven.
2. Open oven door and remove 2 control mounting screws on side of panel.
3. Slide control panel towards cavity to disengage tabs on the R.H. side.
4. Open control to service position. A wire lanyard limits the control opening. If necessary, remove lanyard, wiring and disconnect plugs to gain more access.
5. To totally remove control panel assembly, remove all leads, plugs,



CME900-01

## SMART BOARD

Smart board is used to serve as an electrical interface between the control and the oven.

The smart board is located on the back of the control panel assembly.

The smart board contains the power relay, vent blower and surface light relays, main relay, and other components to perform the proper switching circuits. Several disconnect plugs are also located on the smart board.

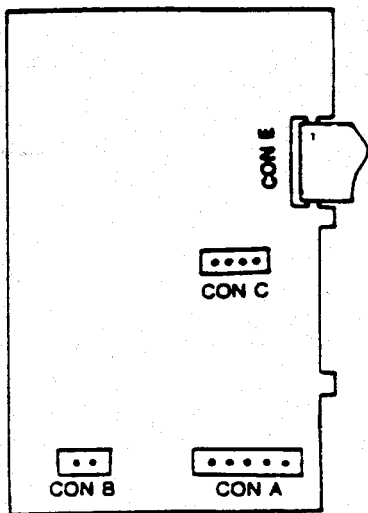
- Key pad line - 13 Pin Plug (CME900) or 12 Pin Plug (CME900-01) to connect smart board and key board panel.
- Terminal - 4 Pin Plug to probe socket.
- CON B - 2 Pin Plug to next to L.V. Transformer.
- CON 5P - 5 Pin Plug next to relays.

Many diagnostic circuit tests can be made at the disconnect plugs. (Refer to diagnosis flow chart and simplified schematic in mini-manual).

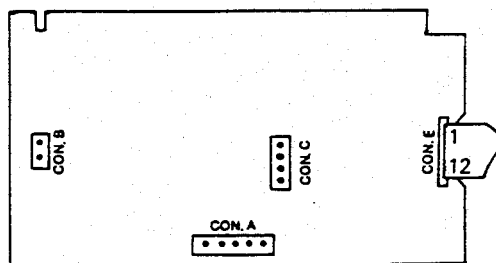
### To Remove Smart Board:

1. Disconnect power to oven. Open control panel and discharge capacitor.
2. Remove connectors and leads from board.
3. Remove three (3) smart board mounting screws. The screws mount the control transformer support bracket.
4. Slide down to disengage tabs and lift board out.

**NOTE: Do not flex board.**



CME900



CME900-01



## DOOR ASSEMBLY

This door assembly is serviced as a complete assembly. **DO NOT TRY TO DISASSEMBLE THE DOOR.** No service parts are available except the complete oven door assembly.

### MICROWAVE LEAKAGE TEST

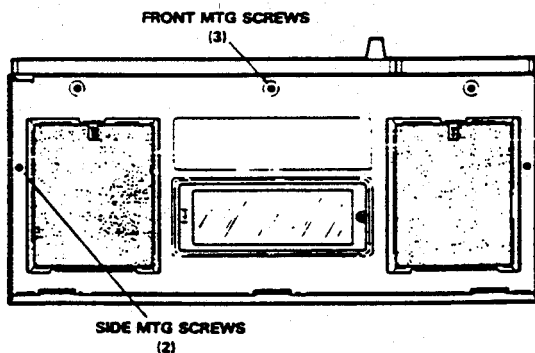
A Microwave leakage test must be performed anytime a door is removed, replaced, disassembled, or adjusted for any reason.

**THE MAXIMUM LEAKAGE ALLOWED IS 4 MW/CM<sup>2</sup>**

### Adjustment

(Alignment with Control Panel)

1. Remove top grill - 3 screws.
2. Remove bottom panel - 3 screws at front and 1 screw each side.
3. Loosen top and bottom 1/4" hinge screws. The front screw is a pivot screw, the other is slotted.
4. Align door and tighten screws.
5. Check interlocks and monitor.
6. Check door for leakage.



### Door Removal

#### IMPORTANT

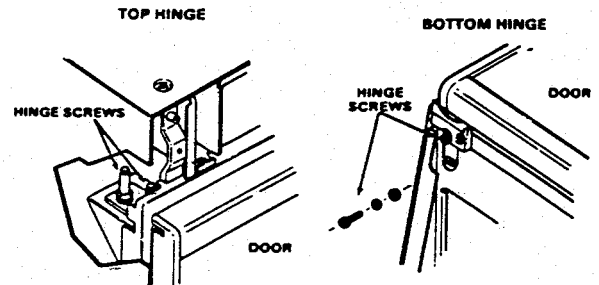
The door is serviced only as an assembly. Do not attempt to disassemble the door.

#### To Remove Door:

Remove top grill and bottom panel as for adjustment. Remove the hinge screws.

#### Warning:

Before attempting to service the microwave oven, disconnect the main power to supply to the unit.



## THE STIRRER

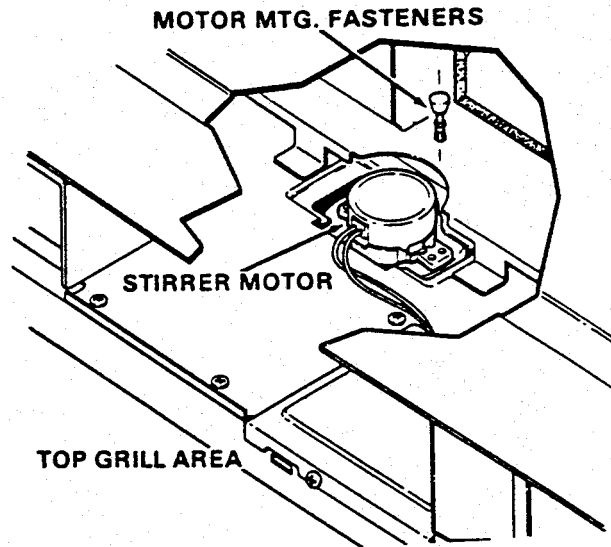
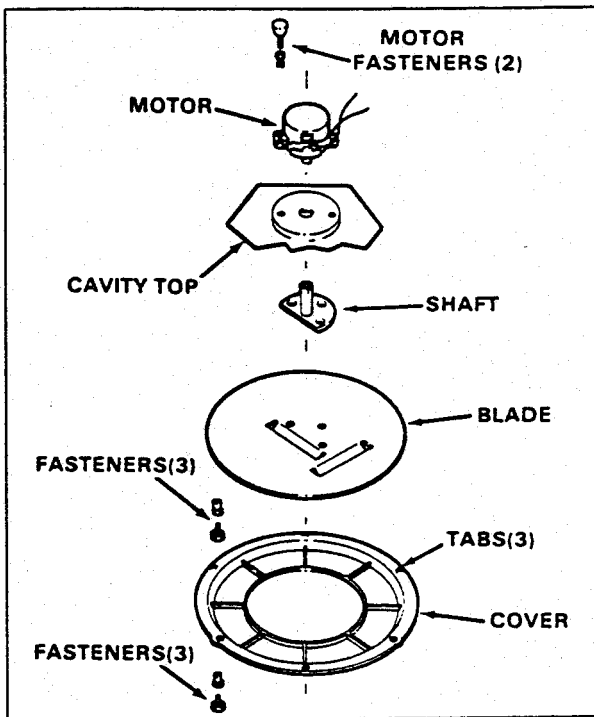
The stirrer is motor driven. The motor is located in the top of the oven.

#### To Remove The Stirrer Blade:

1. Remove stirrer cover at top of cavity. Three (3) Push-In plastic fasteners near the front, and three (3) tabs around rear of cover.
2. Insert screwdriver in blade slot next to shaft and pull off blade assembly - **DO NOT BEND BLADE.**

**CAUTION:**

Never operate the oven with the stirrer removed. The magnetron can overheat and be damaged.



**Warning:**

Before attempting to service the microwave oven, disconnect the main power to supply to the unit.

**INTERLOCKS (DOOR LATCH SWITCHES)**

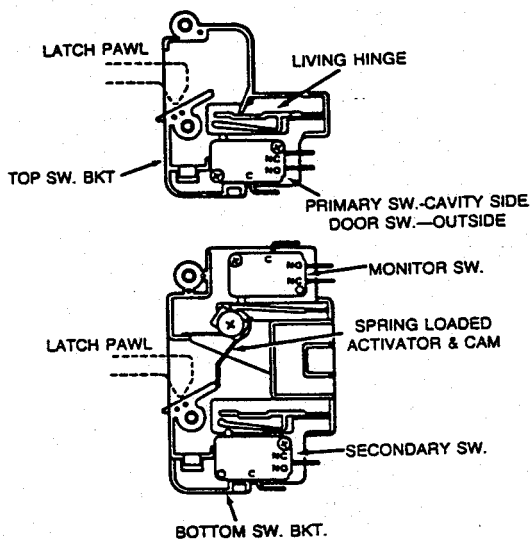
**To Remove Stirrer Motor:**

1. Disconnect power, remove stirrer cover and blade.
2. Remove grill.
3. Pry out motor plastic fasteners with screwdriver and needle nose pliers.
4. Disconnect motor plug.

Interlocks are designated as follows:

**Primary** - Cavity side switch of top two-switch assembly operated by top latch pawl - connected in line (L) side. (Outside side switch is door sense switch.)

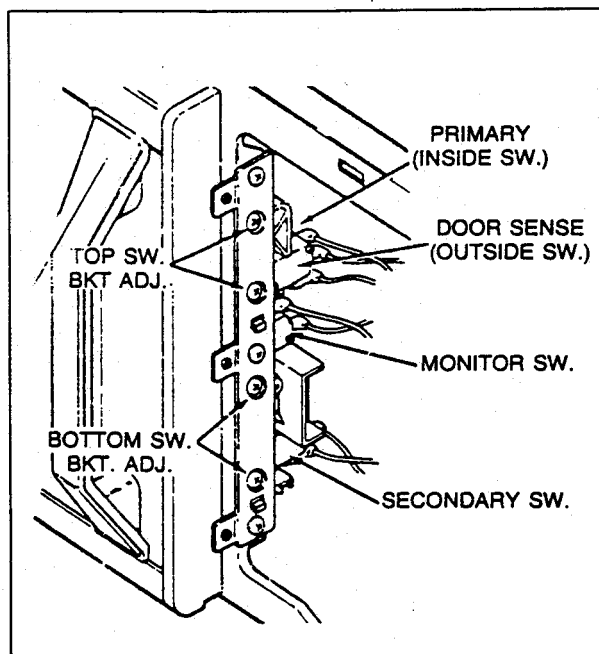
**Secondary** - Bottom switch operated by bottom latch pawl - connected in neutral (N) leg.



### To Adjust Interlocks:

The top and bottom switch housings are adjustable for door fit and switch operation.

1. Disconnect power, open control panel, and discharge capacitor.
2. Loosen both switch housing mounting screws at enlarged holes in vertical flange.
3. Adjust each switch housing for proper switch operation, and door fit. Retighten screws.
4. **Important - Check for microwave leakage after any adjustment.**



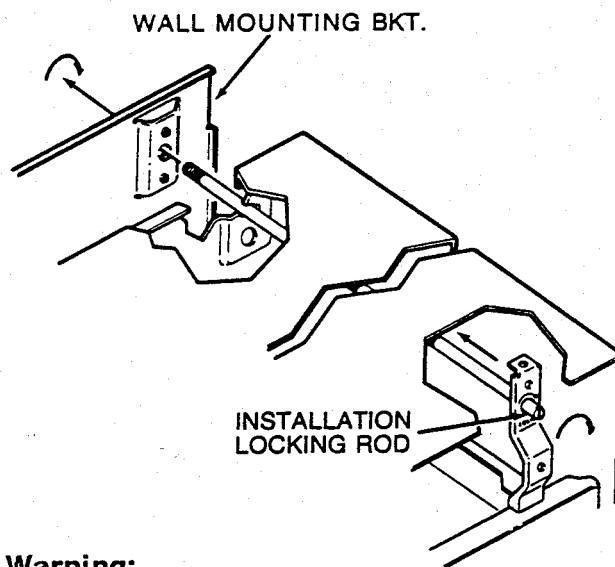
## REMOVING OVEN FROM WALL (2 People)

Oven is fastened to wall mounting plate and to cabinet. Oven is hooked on metal tabs at bottom of plate and at the top by special threaded locking rods.

### CAUTION:

*Requires two (2) people. Oven weighs 85 pounds. Support with suitable object before starting removal.*

1. Disconnect plug, remove top cabinet bolts, and remove top grill.
2. Hold oven against wall while unscrewing both lock rods until loose.
3. Carefully swing top of oven away from wall and lift from bottom hinge-type tabs.
4. **Caution** - When installing, be certain to hook bottom tabs and swing up to wall. Hold firmly while screwing in lock rods until tight.

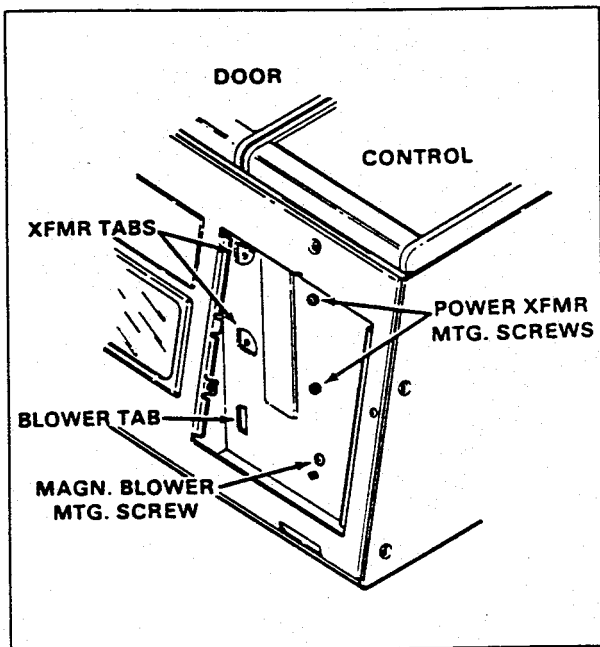


### Warning:

Before attempting to service the microwave oven, disconnect the main power supply to the unit.

## POWER TRANSFORMER REPLACEMENT

The high voltage power transformer can be serviced through the control compartment by lowering the control panel in the service position. Remove the transformer leads and two (2) mounting screws through the R.H. grease filter opening under the oven. The cavity side of the transformer is captured by raised lancements or flanges in the component compartment bottom.



## MAGNETRON BLOWER

The magnetron blower is located behind the power transformer and serviced by removing the power transformer first. Then the blower can be

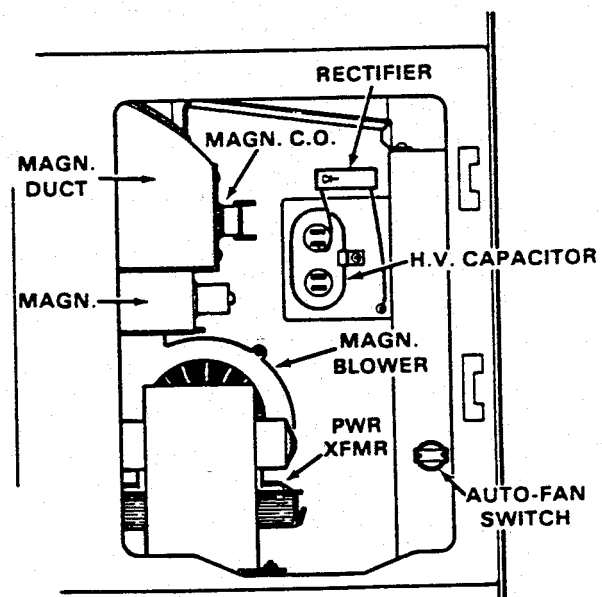
removed by removing one (1) screw behind the transformer through the R.H. grease filter opening.

## HIGH VOLTAGE CAPACITOR

The high voltage capacitor should always be discharged by shorting between the two (2) terminals with one (1) or two (2) screwdrivers. The capacitor has an internal discharge "shunt" resistor, but the mechanical discharge procedure should always be followed for personal safety.

### To Remove Capacitor:

1. Disconnect power. Lower control to service position.
2. Discharge capacitor.
3. Loosen mounting clip screw. Remove capacitor.



---

## MAGNETRON

Before removal of the magnetron, the oven must be removed from the installation.

### To Remove Magnetron:

1. Disconnect power and remove from installation.
2. Remove outer case and vent blower.
3. Open control panel and discharge capacitor.

4. Remove power transformer to make clearance for the magnetron removal.
5. Remove front plastic air duct from magnetron.
6. Remove magnetron mounting nuts.

### CAUTION:

*During replacement, be certain that RF anode gasket is in place and around anode stud.*



---

## SECTION 4. COMPONENT TESTING

---

### TAKING RESISTANCE MEASUREMENTS

Individual electrical components may be tested to determine if they are functioning correctly, or to verify indicated failure from symptom diagnosis. Use a good quality VOM for taking measurements. Make sure power to the unit is disconnected before taking resistance measurements.

Also, it is important to disconnect, (isolate) the component being measured for resistance. This requires no soldering or desoldering and can usually be done by disconnecting only one side of the component. If any voltage measurements are taken, follow all safety precautions appropriate for working around line and high voltage.

---

### MICROWAVE POWER TEST

1. Measure line voltage (loaded). This test is based on normal voltage variations of 105V to 130V. Low voltage will affect power and temperature rise.
2. Place a thin beaker containing exactly one liter (1000 ml. 59° - 75°) water in center of shelf. Record the starting temperature with an accurate glass thermometer (Robinar No. 12084).
3. Set at HIGH power - set time past 2-minute mark.
4. Turn oven "ON" and time for exactly two (2) minutes.
5. At the end of the 2-minute period, record the water temperature. The difference between the starting and ending temperature is the temperature rise.

Depending on the line voltage, the normal temperature rise should be:

<u>Line Volts</u>	<u>Normal Temp. Rise</u>
105V	25°F Min.
120V	28°F - 31°F

#### WARNING

**NEVER TOUCH OR SERVICE THE HIGH VOLTAGE CIRCUIT WITHOUT DISCHARGING CAPACITOR BY SHORTING ACROSS ITS TERMINALS. TO AVOID POSSIBLE ELECTRICAL SHOCK.**

# KEY PANEL

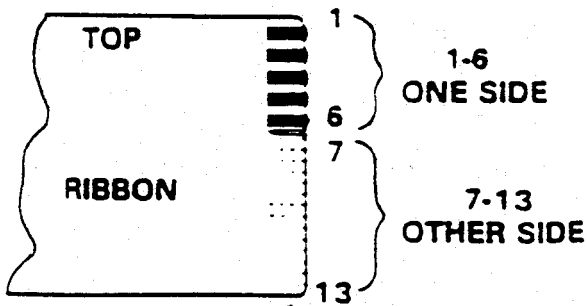
If necessary, the key panel pads can be verified by a continuity test. For ease of handling, the key panel, or control, should be removed and placed on a flat surface.

## RIBBON • CME900

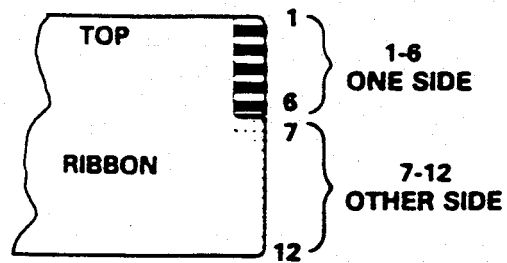
PAD	CONN	PAD	CONN
0	1-7	Temp Cook 1	3-11
1	1-8	Min/Sec.	4-7
2	1-9	Auto Start	4-8
3	1-10	Clock	4-9
4	1-11	Clear Off	4-11
5	2-7	Auto Def	5-8
6	2-8	Auto Roast	5-9
7	2-9	Light Off	5-11
8	2-10	Start	5-12
9	2-11	Light On	6-8
Power Level	3-7	Fan Off	6-9
Temp Cook	3-8	Fan Low	6-10
Defrost	3-9	Fan High	6-11
Time Cook 2	3-10	Night Light	6-13

## RIBBON • CME900-01

PAD	CONN	PAD	CONN
0	1-7	Temp Cook 1	3-11
1	1-8	Min/Sec.	4-7
2	1-9	Auto Start	4-8
3	1-10	Clock	4-9
4	1-11	Clear Off	4-11
5	2-7	Auto Def	5-8
6	2-8	Auto Roast	5-9
7	2-9	Light Off	5-11
8	2-10	Start	5-12
9	2-11	Light On	6-8
Power Level	3-7	Fan Off	6-9
Temp Cook	3-8	Fan Low	6-10
Defrost	3-9	Fan High	6-11
Time Cook 2	3-10	Night Light	6-7



CME900 • 13 Pin



CME900-01 • 12 Pin



---

## FUNCTION PERFORMANCE TEST

- Set Clock-Touch **Clock, Time-Of-Day & Clock**
- Alternately touch each function pad and enter time, temperature, or code selection for the function - also change power levels.
- Touch Clear-Off after each function test to clear that function.
- Repeat procedure for each function to exercise each pad.
- Control and Display should respond to each entry.
- Display should revert to **Time-Of-Day** after each **Clear-Off**.

---

## MONITOR SWITCH

The monitor switch is located between the top and bottom interlocks. The monitor switch is operated indirectly by the bottom latch pawl. The pawl operates a metal lever which operates a plastic cam, which in turn actuates the switch.

### How to Test Monitor:

1. Disconnect power, open control panel and discharge capacitor.
2. Disconnect monitor switch leads, and test at terminals:
  - Door closed - Infinite Ohms
  - Door Open - 0 Ohms
3. Test circuit operation:
  - a. Connect temporary jumper across relay contacts, primary

and secondary interlock switches to simulate shorted switch contacts. Locate convenient connections in circuit to be certain COM and N.O. terminals are used.

- b. Connect OHM meter (low scale) across the two line terminals of appliance power cord. Continuity must show:
    - Door Closed - Some Ohms
    - Door Open - 0 Ohms
  - c. Remove 15 amp fuse - circuit must open (infinite ohms). If not, check wiring of monitor and interlock circuits.
4. **Warning:** After testing, remove temporary jumpers.

### How To Test Interlocks:

1. Disconnect power.
2. Open control panel.
3. Discharge capacitor.

### PRIMARY:

Check continuity of COM and N.O.:

- Door Closed - 0 Ohms
- Door Open - Infinite Ohms

### SECONDARY:

Check continuity of COM and N.O.:

- Door Closed - 0 Ohms
- Door Open - Infinite Ohms

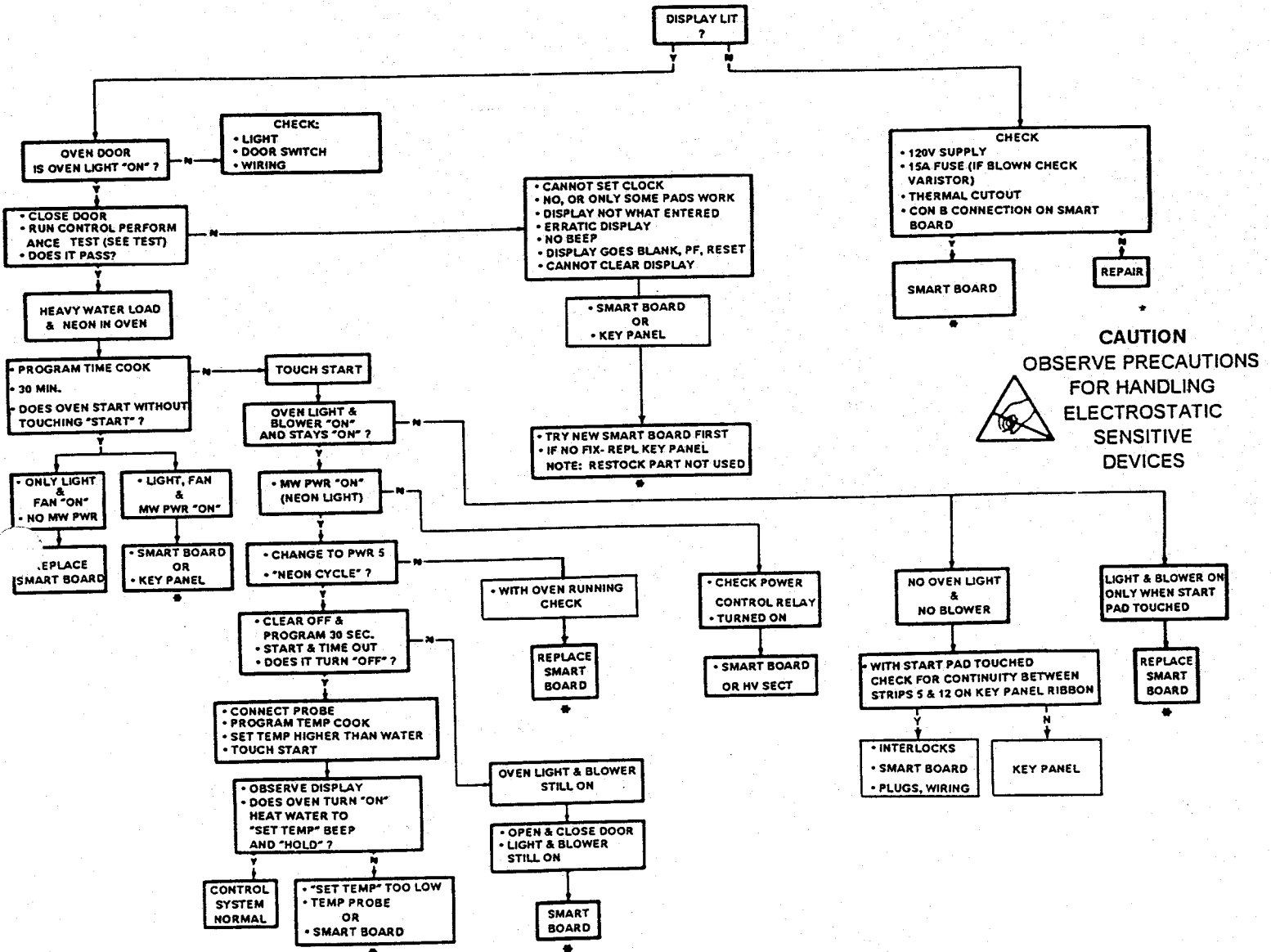
### To Test The Capacitor:

- Remove grill and disconnect one capacitor lead.
- Check continuity (high ohms scale) across capacitor terminals. Meter should indicate a charge.



# SECTION 5. TROUBLESHOOTING GUIDE

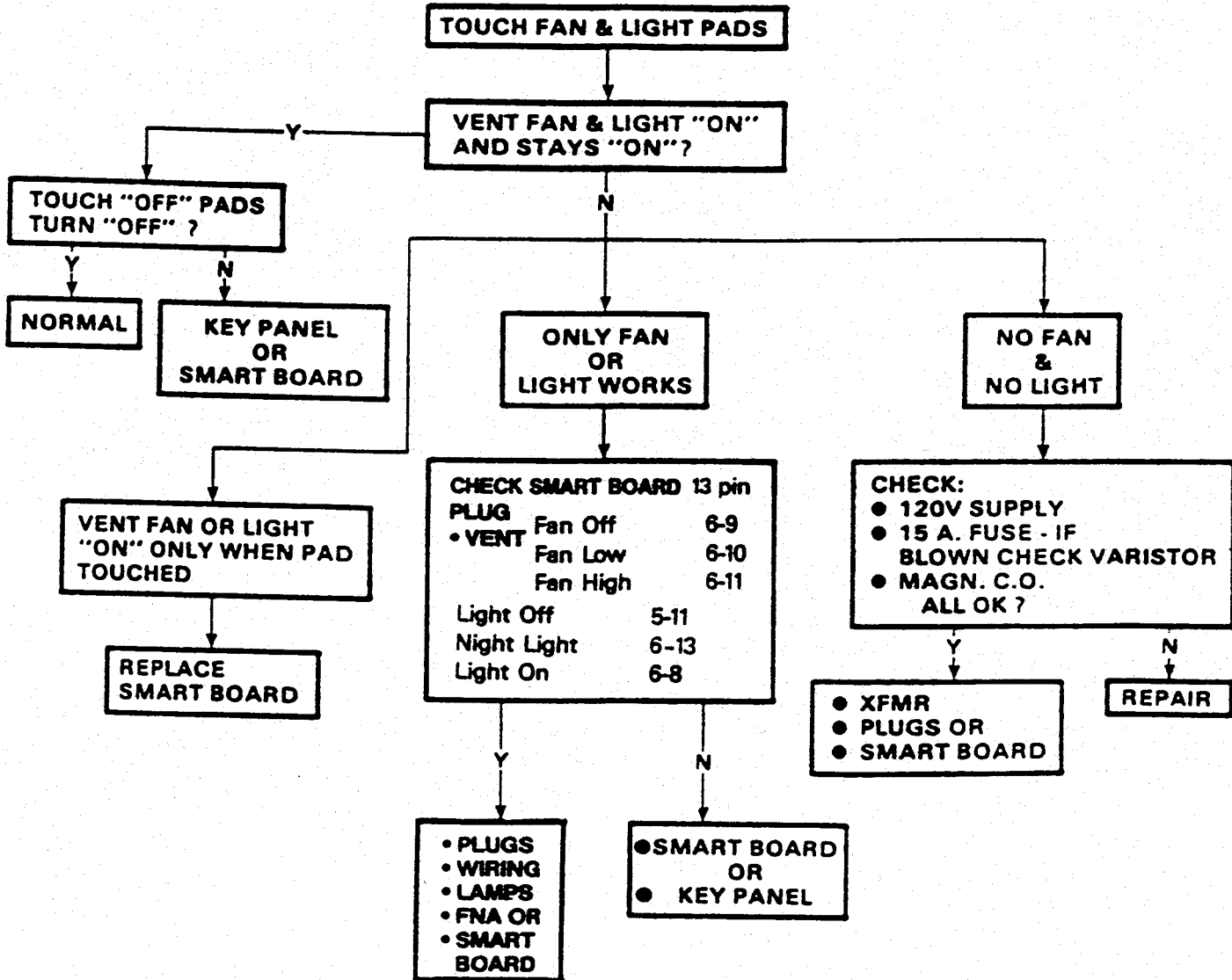
## CME900

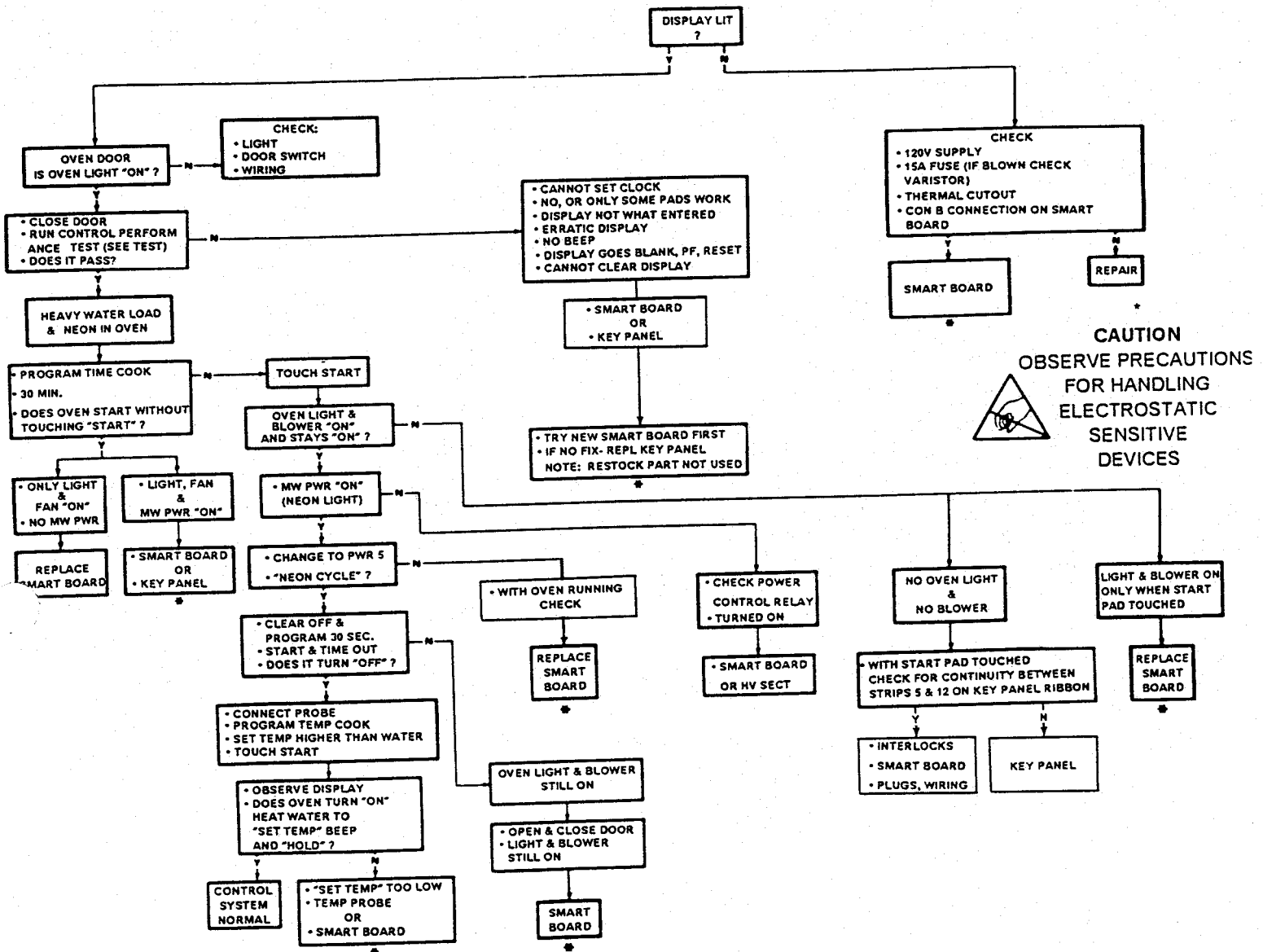


### FUNCTION PERFORMANCE TEST:

- Set Clock-Touch clock, Time-of-Day & Clock
- Alternately touch each function pad and enter time, temperature or code selection for the function - also change power levels.
- Touch Clear-Off after each function test to clear that function.
- Repeat procedure for each function to exercise each pad.
- Control and display should respond to each entry.
- Display should revert to Time-of-Day after each Clear-Off.

TROUBLESHOOTING GUIDE • CME900 (Continued)

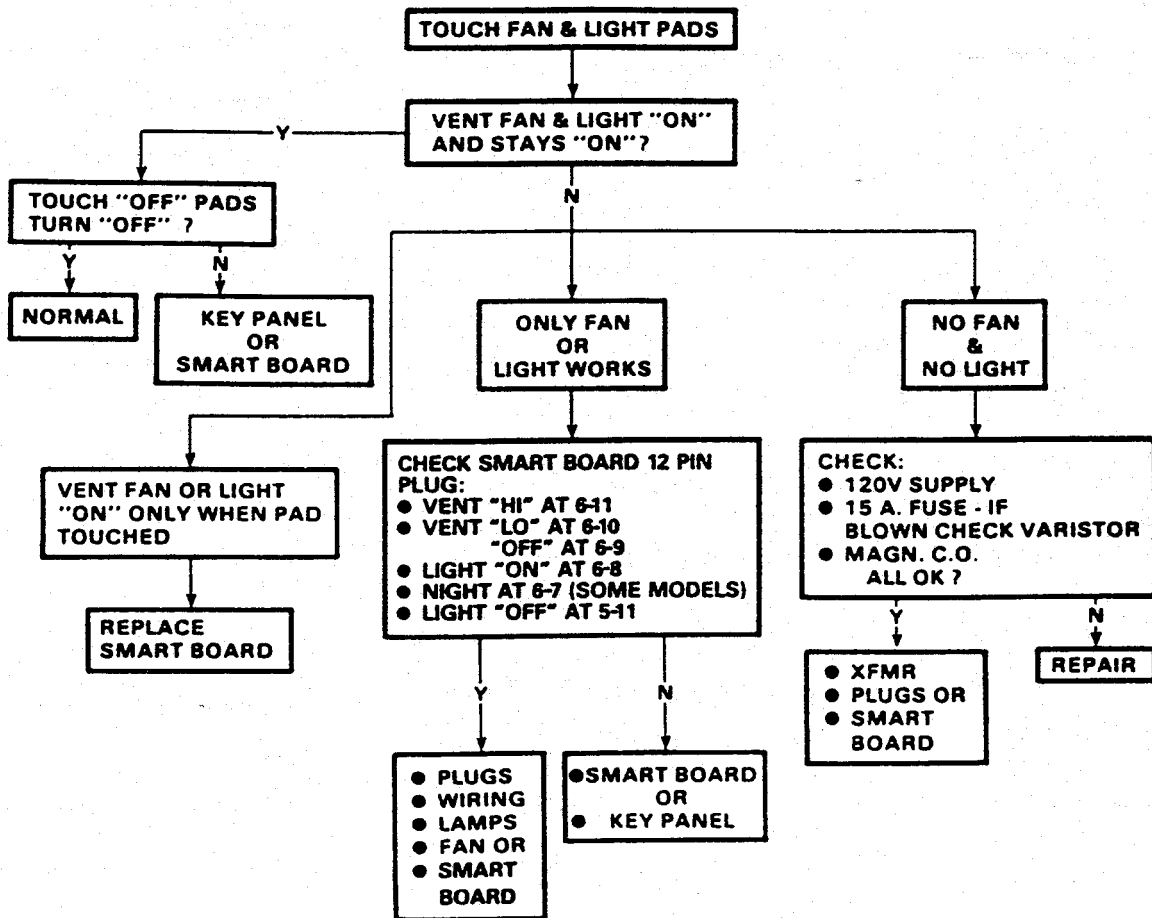




**FUNCTION PERFORMANCE TEST:**

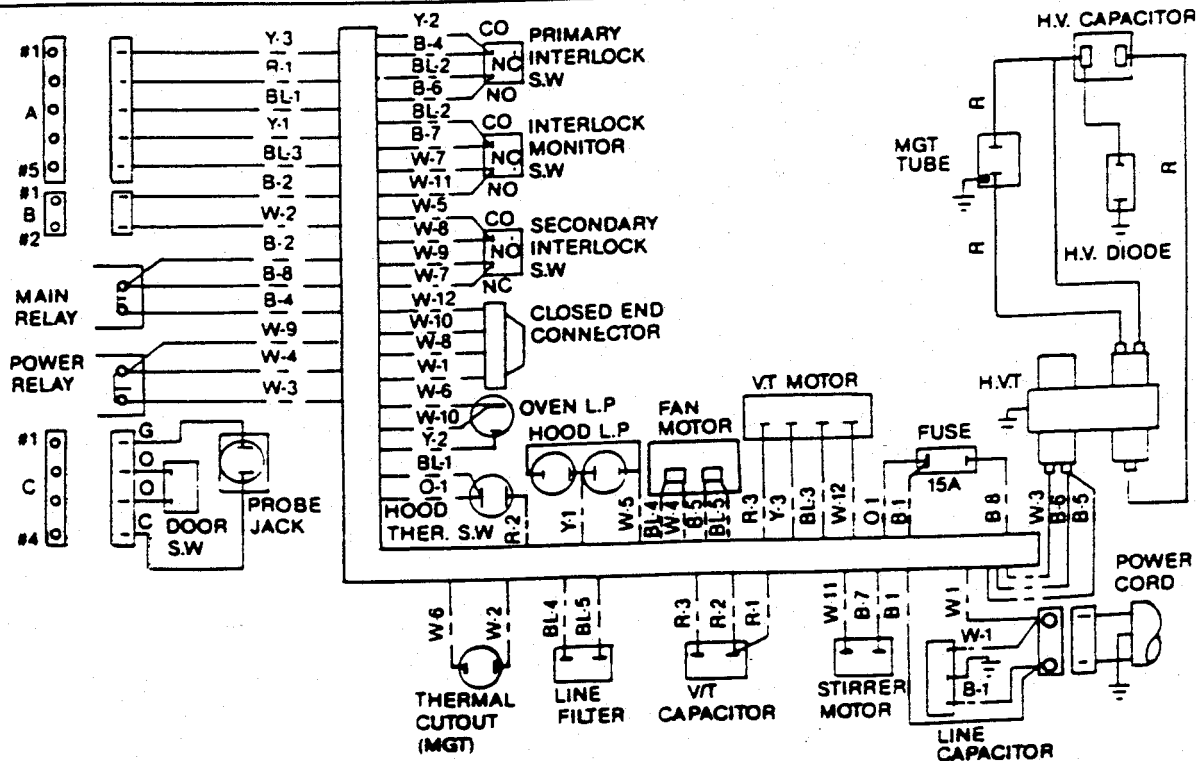
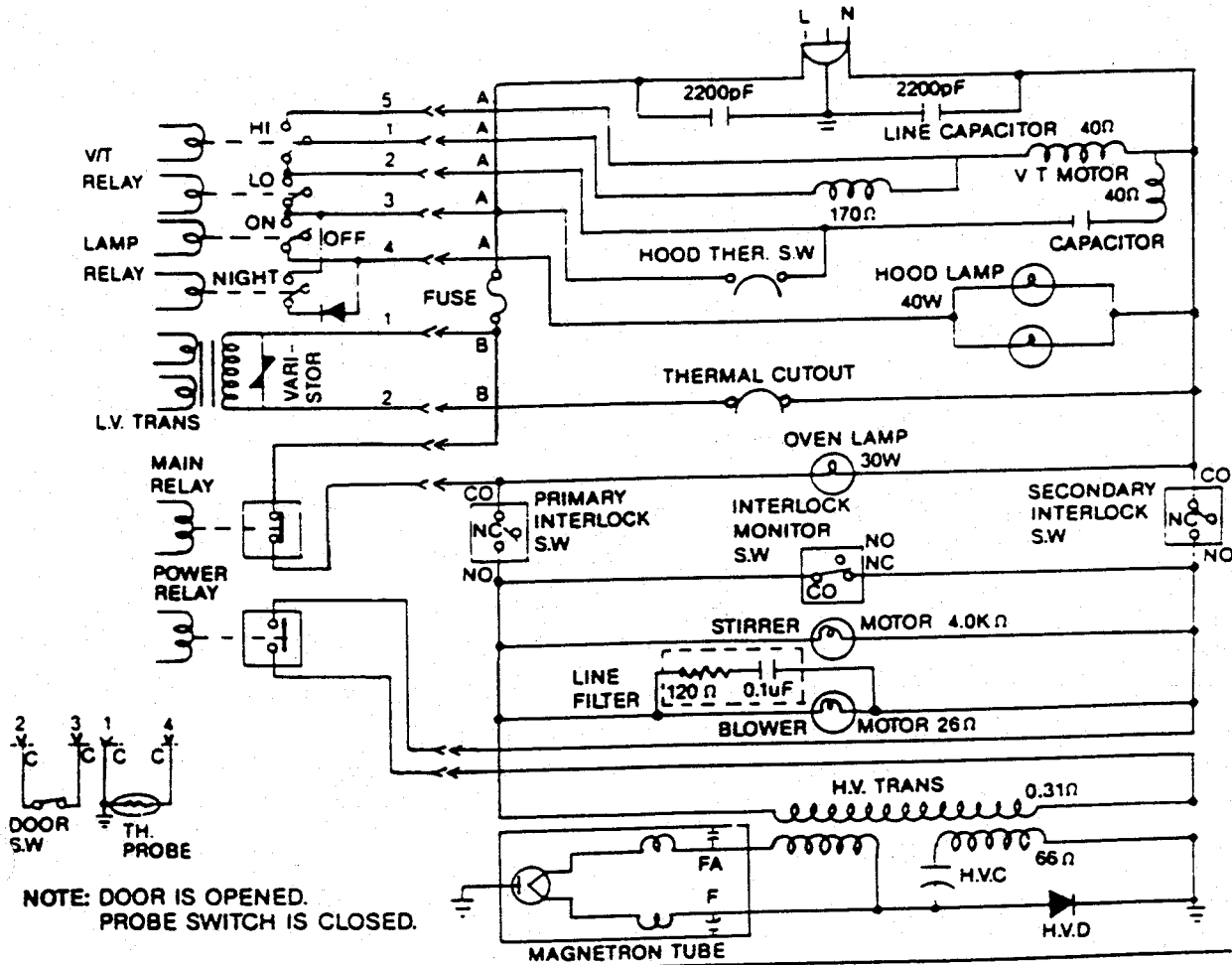
- Set Clock-Touch clock, Time-of-Day & Clock
- Alternately touch each display function pad and enter time, temperature or code selection for the function - also change power levels.
- Touch Clear-Off after each function test to clear that function.
- Repeat procedure for each function to exercise each pad.
- Control and display should respond to each entry.
- Display should revert to Time-of-Day after each Clear-Off.

TROUBLESHOOTING GUIDE • CME900-01 (Continued)



# SECTION 6. WIRING / SCHEMATIC • CME900

COLOR	SYMBOL
GRAY	C
WHITE	W
BLACK	B
RED	R
BLUE	BL
ORANGE	O
YELLOW	Y
GREEN	G

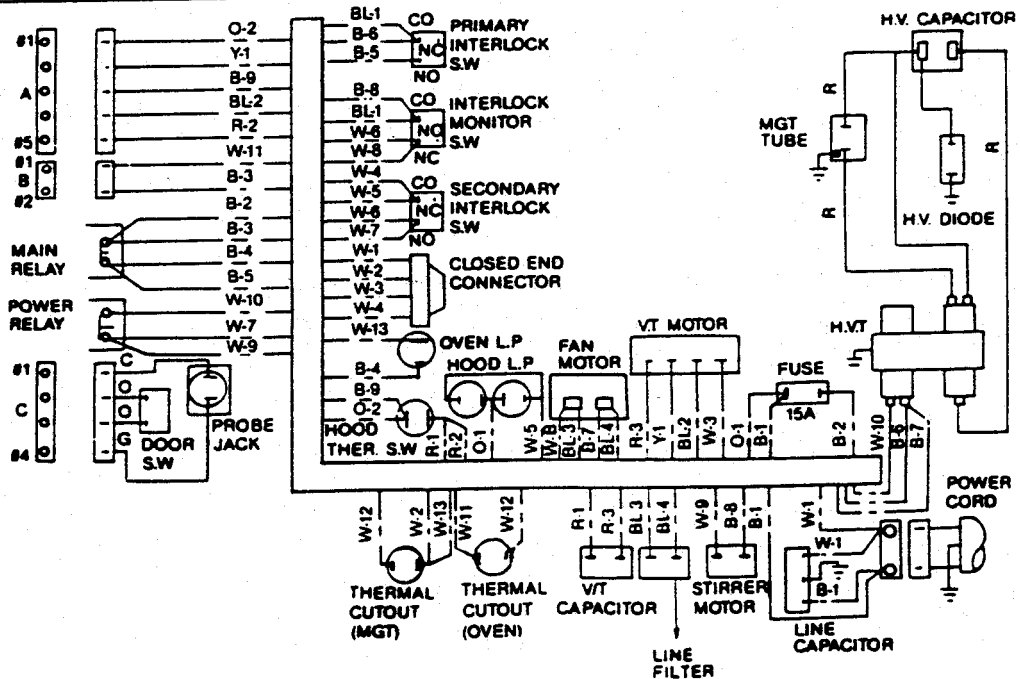
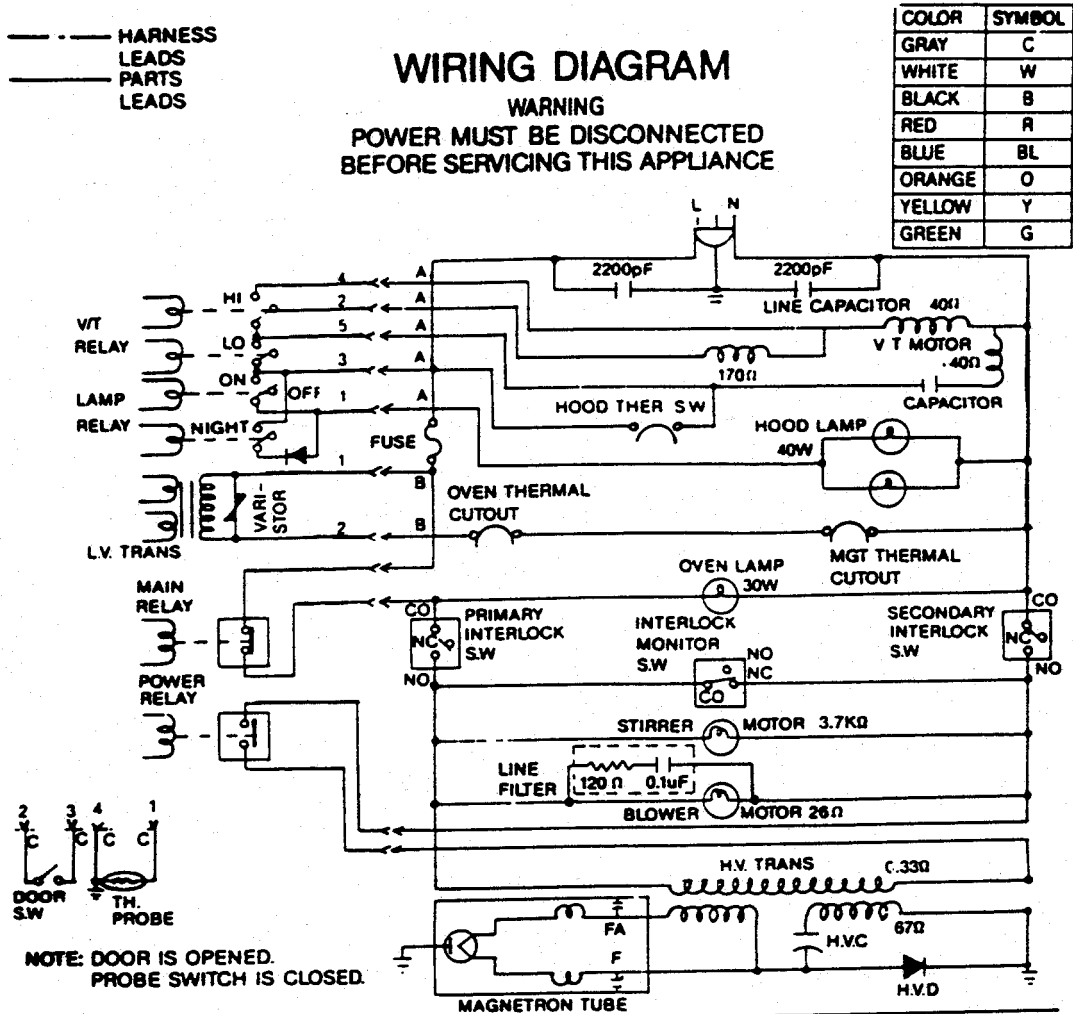


**Note:** FOR SERVICING REPLACEMENT USE 16GA, 105°C THERMOPLASTIC COVERED WIRE EXCEPT FOR HIGH VOLTAGE LEADS OR AS NOTED ON SPECIAL LEADS.





# SECTION 7. WIRING / SCHEMATIC • CME900-01



**Note:** FOR SERVICING REPLACEMENT USE 16GA, 105°C THERMOPLASTIC COVERED WIRE EXCEPT FOR HIGH VOLTAGE LEADS OR AS NOTED ON SPECIAL LEADS.



**MAYTAG**

---

Maytag Appliances Sales Company

Customer Service  
240 Edwards St.  
Cleveland, TN 37311