

Service

This manual is to be used by qualified appliance technicians only. Maytag does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

2001/2002 Convection **Domestic** Microwave Ovens

This Base Manual covers general information

This manual includes, but is not limited to the following:

> ACM1580AB ACM1580AC ACM1580AS ACM1580AW JMC9158AAB JMC9158AAQ

JMC9158AAS

JMC9158AAW



Important Information

Pride and workmanship go into every product to provide our customers with quality products. It is possible, however, that during its lifetime a product may require service. Products should be serviced only by a qualified service technician who is familiar with the safety procedures required in the repair and who is equipped with the proper tools, parts, testing instruments and the appropriate service manual. **REVIEW ALL SERVICE INFORMATION IN THE APPROPRIATE SERVICE MANUAL BEFORE BEGINNING REPAIRS.**

Important Notices for Consumers and Servicers



WARNING

To avoid risk of serious injury or death, repairs should not be attempted by an unauthorized personal, dangerous conditions (such as exposure to electrical shock) may result.



CAUTION

Maytag will not be responsible for any injury or property damage from improper service procedures. If performing service on your own product, assume responsibility for any personal injury or property damage which may result.

To locate an authorized servicer, please consult your telephone book or the dealer from whom you purchased this product. For further assistance, please contact:

Customer Service Support Center

CAIR Center

Web Site	<u>Telephone Number</u>
WWW.AMANA.COM	1-800-843-0304
WWW.JENNAIR.COM	1-800-536-6247
WWW.MAYTAG.COM	1-800-688-9900
CAIR Center in Canada	1-800-688-2002
Amana Canada Product	1-866-587-2002

Recognize Safety Symbols, Words, and Labels



DANGER

DANGER—Immediate hazards which **WILL** result in severe personal injury or death.



WARNING

WARNING—Hazards or unsafe practices which COULD result in severe personal injury or death.



CAUTION

CAUTION—Hazards or unsafe practices which **COULD** result in minor personal injury or product or property damage.

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Important Safety Instructions



Recognize this symbol as a SAFETY message



Recognize this symbol as a HOT SURFACE warning

A

WARNING

When using electrical equipment, basic safety precautions should be followed to avoid the risk of burns, electrical shock, fire or injury to persons.

- 1. READ all instructions before using the appliance.
- READ AND FOLLOW the specific "PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY."
- 3. This appliance MUST BE GROUNDED. Connect only to properly grounded outlet. See "GROUNDING INSTRUCTIONS."
- 4. Install or locate this appliance ONLY in accordance with the provided installation instructions.
- Some products such as whole eggs and sealed containers for example, closed glass jars may explode and SHOULD NOT be HEATED in this oven.
- 6. Use this appliance ONLY for its intended use as described in this manual. Do not use corrosive chemicals or vapors in this appliance. This type of oven is specifically designed to heat or cook. It is not designed for industrial or laboratory use.
- 7. As with any appliance, CLOSE SUPERVISION is necessary when used by CHILDREN.
- 8. DO NOT operate this appliance if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This appliance should be serviced ONLY by qualified service personnel. Contact nearest authorized service facility for examination, repair or adjustment.
- 10. DO NOT cover or block any openings on the appliance.

- DO NOT store this appliance outdoors. DO NOT use this product near water, for example, near a kitchen sink, in a wet basement, or near a swimming pool, etc.
- 12. DO NOT immerse cord or plug in water.
- 13. Keep cord AWAY from HEATED surfaces.
- DO NOT let cord hang over edge of table or counter.
- 15. See door cleaning instructions.
- 16. DO NOT operate any heating or cooking appliance beneath this appliance.
- 17. DO NOT mount unit over or near any portion of a heating or cooking appliance.
- 18. DO NOT mount over a sink.
- 19. DO NOT store anything directly on top of the appliance surface when the appliance is in operation.
- 20. Oversized foods or oversized utensils should not be inserted in a microwave/convection oven as they may create a fire or risk of electrical shock.
- DO NOT clean with metal scouring pads. Pieces can burn off the pad and touch electrical parts involving risk of electrical shock.
- 22. DO NOT use paper products when appliance is operated in convection or combination mode.
- 23. DO NOT store any materials, other than manufacturer's recommended accessories, in this appliance when not in use.
- 24. DO NOT cover racks or any other part of the oven with metal foil. Covered racks will cause overheating of the oven.

SAVE THESE INSTRUCTIONS

Important Safety Instructions



A CAUTION

To avoid personal injury or property damage observe the following:

- 1. Always press STOP/RESET before programming
- 2. Do not deep fat fry in oven. Fat could overheat and be hazardous to handle.
- 3. Do not cook or reheat eggs in shell or with an unbroken yolk. Pressure may build up and erupt. Pierce yolk with a fork or knife before cooking. Do not reheat previously cooked eggs in the microwave oven unless finely chopped or scrambled.
- 4. Pierce skin of potatoes, tomatoes, or other foods with a "skin" before cooking in microwave oven. Piercing skin allows steam to escape during cooking.
- 5. Do not home can in microwave oven. Home canning is generally done with metal lids. Since metal lids reflect heat, product may not be heated uniformly to 212°F or above. Food could deteriorate. USDA extension specialists do not recommend home canning in microwave ovens.
- 6. Remove excess fat from meats and poultry to prevent splattering.
- 7. Do not heat baby bottles in microwave oven.
- 8. Briskly stir or pour liquids before heating to prevent spontaneous boiling or eruption. Do not overheat. If air is not mixed into a liquid, liquid can erupt in oven or after removal from
- 9. All uncooked foods should be heated to a final internal temperature of at least 165°F. Some foods require higher temperatures. These recommended temperatures kill most food borne, disease causing organisms. Some common visual signs that indicate the cooking temperature has been reached:
 - Food steams throughout, not just around
 - · Center bottom of dish is very hot to the
- 10. If using a microwave popcorn popper, use according to manufacturer's instructions. Do not continue to heat after popping has stopped. Popcorn will scorch or burn. Do not leave oven unattended.

- 11. Use only popcorn in packages designed and labeled for microwave use. Pop according to package directions, beginning with the minimum amount of time recommended. Use caution when handling hot popcorn bag.
- 12. Microwave convenience foods are often packaged in specially designed packaging. Special plates, lids, containers, or other unique packaging materials may be used. Susceptor packing material (a thin, metalized plastic film) is frequently used to help brown and make crisp foods such as microwave pizzas, French fries, or fish sticks. Be sure to follow food package instructions carefully. Contact convenience food manufacturer with questions concerning these products. Amana does not endorse any brand of microwave convenience foods, or any type of microwave food packaging.
- 13. Do not operate microwave oven empty. This could damage the oven.
- 14. Do not use regular cooking thermometers in oven. Most cooking thermometers contain mercury and may cause "arcing", malfunction, and/or damage to oven.
- 15. Metal or ceramic accessories which are designed to absorb microwave energy to provide heat should be used with caution. Test device before use. Read and follow manufacturer's instructions provided with the accessory. Contact accessory manufacturer with questions concerning these accessories. Amana does not endorse any brand of accessory.
- 16. Do not use paper products not intended for cooking when oven is operated in convection or combination mode.
- 17. Pierce or open plastic bags (and other airtight containers) before heating in microwave oven. This allows steam to escape during cooking.
- 18. Containers may become hot and pot holders may be needed.
- 19. Closely supervise any use by children. Make sure they can read instructions and reach controls. Never allow them to lean or swing on oven door.

SAVE THESE INSTRUCTIONS

Important Safety Instructions

A

CAUTION

To reduce the risk of fire in the oven cavity:

- a. DO NOT overcook food. Carefully attend appliance if paper, plastic, or other combustible materials are placed inside the oven to facilitate cooking.
- b. Remove wire twist-ties from paper or plastic bags before placing bag in oven.
- c. If materials inside the oven should ignite, keep oven door closed, turn oven off, and disconnect the power cord, or shut off power at the fuse or circuit breaker panel. IF THE DOOR IS OPENED THE FIRE MAY SPREAD!
- d. DO NOT use the cavity for storage purposes. DO NOT leave paper products, cooking utensils, or food in the cavity when not in use.



CAUTION

To avoid burns use utensils or protective clothing, like pan grips or dry oven mitts. Racks, utensils, and oven surfaces can become hot during or after use.

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- a. DO NOT attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.
- b. DO NOT place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
- c. DO NOT operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the: (1) door (bent), (2) hinges and latches (broken or loosened), (3) door seals and sealing surfaces.
- The oven should NOT be adjusted or repaired by anyone except properly qualified service personnel.

SAVE THESE INSTRUCTIONS

Specifications

Models	AMC1580A*	JMC9158A*
Power Source		
Voltage AC	120 VAC	120 VAC
Amperage (single unit)	30 A	30 A
Frequency	60 Hz	60 Hz
Single phase, 3 wire grounded	X	Х
Receptacle	6-20R	6-20R
Plug	6-20P	6-20P
Power Output	•	
Nominal microwave energy (IEC705)	1000 Watts	1000 Watts
Operating frequency	2450 MHz	2450 MHz
Power Consumption		
Cook condition microwave	1500 Watts	1500 Watts
Convection	1500 Watts	1500 Watts
Combination	1500 Watts	1500 Watts
Dimensions		
Cabinet		
Width	22 ⁵ / ₈ "	22 ⁵ / ₈ "
Height	14 ⁷ / ₈ "	14 ⁷ / ₈ "
Depth	20"	20"
Oven Interior		
Width	15 ¹ / ₄ "	15 ¹ / ₄ "
Height	10 7/8"	10 7/8"
Depth	15 ¹ / ₄ "	15 ¹ / ₄ "
Weight	1	•
Crated	59 lbs.	59 lbs.
Uncrated	52 lbs.	52 lbs.

Component Specifications

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CAUTION

Illustration	Component	Testing	Results
Secondary terminal Filament winding Primary terminals	High voltage transformer	Disconnect wires from terminals. Measure for continuity of following terminals: Ohmmeter set on R x 1 scale Primary winding Secondary terminal to ground Filament winding Ohmmeter set on R x 1000 scale Primary winding to ground Filament winding to ground	Approximately $0.3-0.6~\Omega$ Approximately $70-100~\Omega$ Less than $1~\Omega$ Infinite Infinite
	Magnetron	Disconnect wires from terminals. Measure for continuity of following terminals: Ohmmeter set on R x 1 scale Filament winding Ohmmeter set on R x 1000 scale Filament winding to ground	NOTE: When testing magnetron verify magnetron gasket is positioned correctly and verify gasket is in good condition. Less than 1 Ω Infinite Perform Microwave Power Test.
	High voltage capacitor	Discharge capacitor Remove wires from capacitor terminals and connect ohmmeter, set on highest resistance scale to terminals. Also check between each terminal and capacitor case.	Between Terminals: Meter should momentarily deflect towards zero then return to over 5 M Ω . If no deflection occurs, or if continuous deflection occurs, replace capacitor. Terminal to Case: Infinite resistance
Br. C. C. Sall	High voltage diode	Discharge capacitor Remove diode lead from capacitor and connect ohmmeter. Reverse leads for second test.	Infinite resistance should be measured in one direction and $50 \mathrm{K}\Omega$ or more in the opposite direction. NOTE: Ohmmeter must contain a battery of 6 volts minimum.
	Heating element	Disconnect wires from terminals. Measure resistance across heating element. Terminal to terminal	Approximately 9.6 Ω @ 68 – 86°F
	Damper motor	Disconnect wires from terminals. Measure for resistance: Terminal to terminal	Approximately 2930 Ω
	Turntable motor	Disconnect wires from terminals. Measure for resistance: Terminal to terminal	Approximately 3480 Ω

Component Specifications

A

CAUTION

Illustration	Component	Testing	Results
	Fan motor	Disconnect wires from terminals.	
		Measure continuity from:	
		Terminal to terminal	Approximately 49 Ω
	Heater fan motor	Disconnect wires from terminals. Measure continuity from:	
		Terminal to terminal	Approximately 29.5 Ω
₩ -	Relay 2	Disconnect wires from terminals.	
		Measure resistance at terminals:	
_		Idle state	Infinite
	<u> </u>	Microwave state	Continuity
	Relay 4	Disconnect wires from terminals. Measure voltage at terminals:	
		Idle stateConvection state	Infinite Continuity
	Oven lamp switch	Disconnect wires from terminals.	
NC NC		Measure continuity from:	
COM NO		COM to NO	Open infinite, Closed continuity
	Thermal cutout	Disconnect wires from terminals. Measure resistance across terminals	Continuity
		Oven TCO	
		This TCO will reset by itself: ACM1580	On an at 000% and alared at 140%
		JMC9158	Open at 230°F and closed at 140°F Open at 302°F and closed at 140°F
	Thermistor	Disconnect wires from terminals.	Open at 302 1 and closed at 140 1
		At room temperature. (68°F – 86°F)	
		Measure resistance across terminals.	
		Terminal 1 – 3	Approximately 255 KΩ
	Sensor assembly	Disconnect wires from terminals. Measure resistance across terminals.	
		Terminal 1 – 3	Approximately 3 KΩ
		Terminal 1 – 2	Approximately 6 K Ω
		Terminal 2 – 3	Approximately 3 KΩ
NC NC	Monitor interlock	Disconnect wires from terminals. Measure resistance at following terminals:	NOTE: When line fuse is blown replace monitor, primary, and secondary interlock switches.
COM NO		NC – COM	Door open continuity, door closed
			infinite.
	Primary interlock	Disconnect wires from terminals.	NOTE: When line fuse is blown replace
COM NO		Measure resistance at following terminals:	monitor, primary, and secondary interlock switches.
		NO – COM	Door open infinite, door closed continuity.
	Secondary interlock	Disconnect wires from terminals.	NOTE: When line fuse is blown replace
NC COM NO		Measure resistance at following terminals:	monitor, primary, and secondary interlock switches.
		NC – COM	Door open continuity, door closed infinite.

Component Specifications



CAUTION

ACM1580	Component	Testing	F	Results	
ACIVITOO	Membrane key panel	Disconnect ribbon from	<u>Pad</u>	Trace	Measurement
CONVECTION COOK AUTO BAKE AUTO BAKE AUTO BAKE AUTO BAKE AUTO COMBINATION ROAST BAKE Microwave SENSOR SENSOR COOK REHEAT DEFROST BAPD LASY COOK WARM HOLD MORE LESS 1 2 3 4 5 6 7 8 9 PROCRAM O FOWER LEVEL COOK LEVEL COOK CONTROL TIMER SETUP REMINDER RECALL HELP CLOCK CONTROL TIMER SETUP REMINDER RECALL HELP CLOCK CONTROL TIMER SETUP REMINDER RECALL HELP CLOCK CONTROL TIMER SETUP REMINDER RECALL HELP CLOCK CONTROL TIMER SETUP REMINDER RECALL HELP COOK CONTROL TIMER SETUP REMINDER RECALL HELP CLOCK CONTROL TIMER SETUP REMINDER TO TIMER SETUP REMINDER TO THE REMINDER OF TO THE RE					Measurement Continuity

Microwave Energy Leakage Testing



WARNING

Check for radiation leakage after servicing. Should the leakage be more than 4mW/cm² inform Amana immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S. and HEW regulations. This requirement must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while at the customer's location.

Equipment

- Electromagnetic radiation monitor
- 600 cc glass beaker

Procedure For Measuring Radiation Leakage

Note before measuring -

- Do not exceed meter full scale deflection. Leak monitor should initially be set to the highest scale.
- To prevent false readings the test probe should be held by the grip portion of the handle only.
- The scan speed is equal to one inch per antenna revolution or one inch per second if antenna speed is unknown.
- Areas to be checked are all door seal areas and any venting parts.
- Leakage with the outer panel removed . . . 4mW/cm2 or less.
- Leakage for fully assembled oven with door normally closed . . . 4mW/cm2 or less.
- Leakage for a fully assembly oven (before the latch switch (primary) is interrupted) while pulling the door ... 4mW/cm2 or less.
- 1. Open the oven door and verify that there is only one rack in place on the bottom rack hooks.
- 2 . Pour 275 ± 15 cc (9 oz ± 1/2 oz) of 20 ± 5°C (68± 9°F) water in a glass beaker which is graduated to 600 cc and place the beaker in the center of rack.
- 3. Set the radiation monitor to 2450 MHz and use it following the manufacturer's recommended test procedure to assure correct results.
- 4. While measuring the leakage, always use the two inch (5 cm) spacer supplied with the probe.
- Press the start pad or turn on the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

Measurement With the Outer Case Removed



DANGER

To avoid risk of personal injury or death avoid contacting any high voltage components.

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

Measurement With a Fully Assembled Oven

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

Record Keeping and Notification After Measurement

- 1. 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.
- 2. A copy of the repair ticket and the microwave leakage reading should be kept by the repair facility.

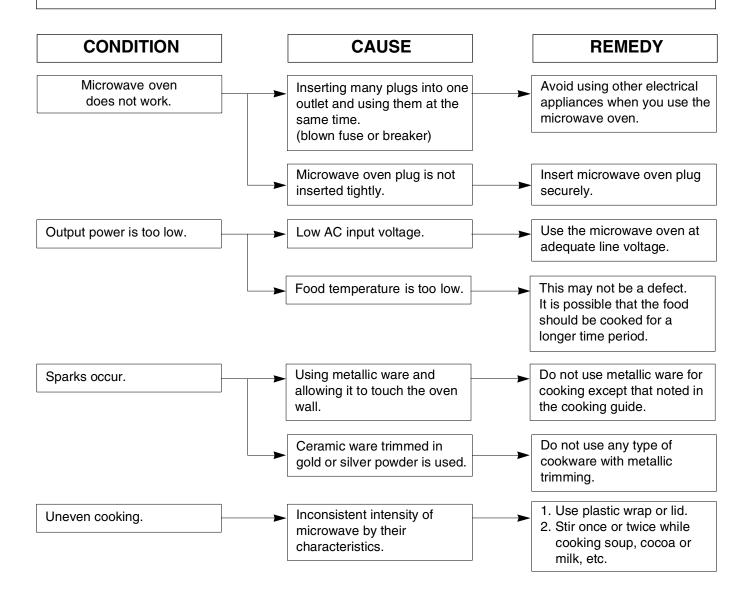
CAUTION

To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

CAUTIONS

- 1. Check grounding before checking for trouble.
- 2. Be careful of the high voltage circuit.
- 3. Discharge the high voltage capacitor.
- 4. When checking the continuity of the switches or of the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
- 5. Do not touch any part of the circuit on the P.C.B. since static electric discharge may damage this control panel.

Always touch yourself to ground while working on this panel to discharge any static charge built up in your body.

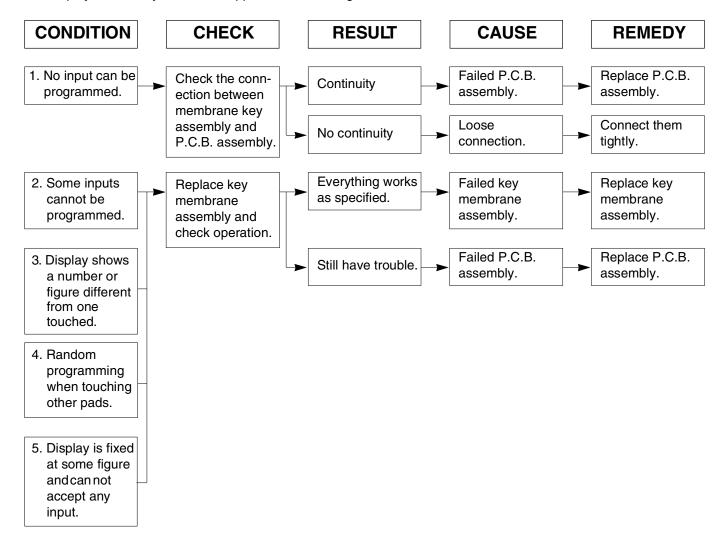




To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

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

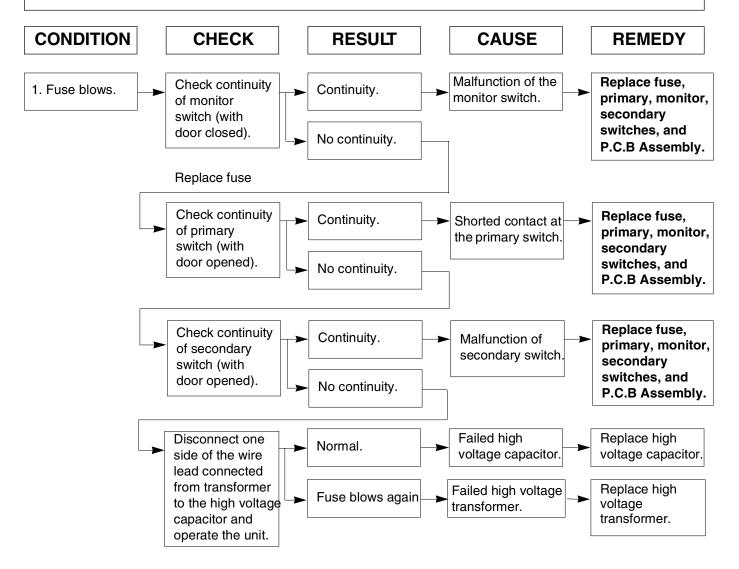
- 1. Incomplete segments.
 - Segment missing.
 - Partial segment missing.
 - Digit flickering (NOTE: Slight flickering is normal.)
- 2. Colon does not turn on or blink.
- 3. A distinct change in the brightness of one or more numbers in display.
- 4. One or more digits in the display are not lighting.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



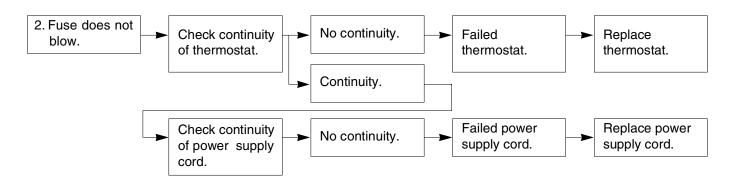
CAUTION

To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

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



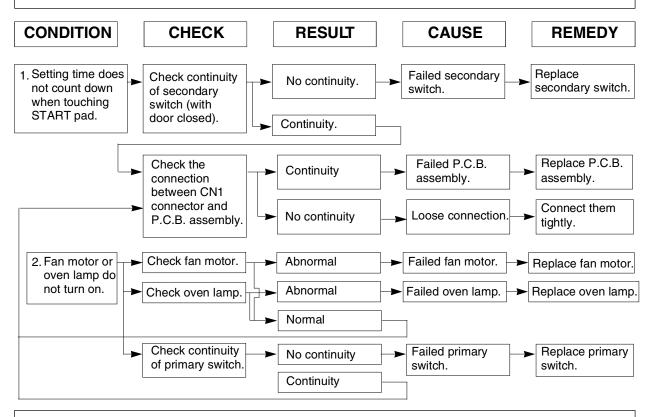
NOTE: All these switches must be replaced at the same time.



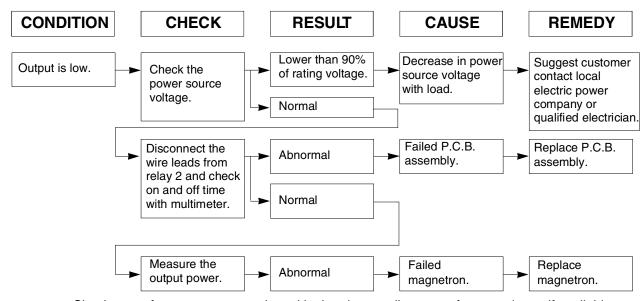
A CAUTION

To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

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



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

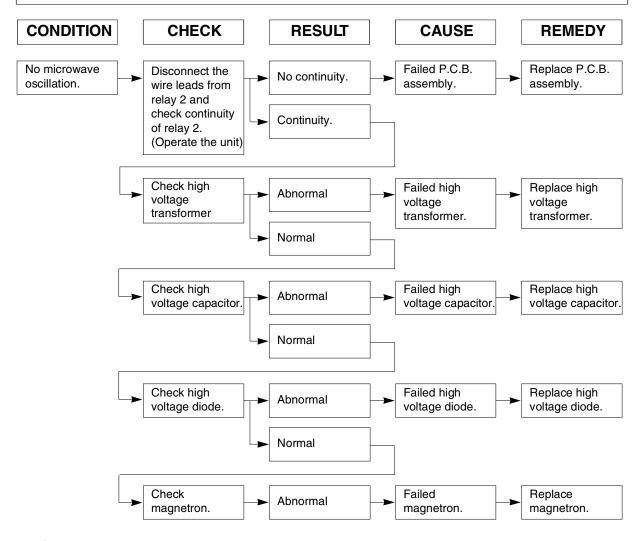


NOTE: Simple test of power output-conducted by heating one liter water for one minute, if available. Minimum 47°F (8.5°C) temperature rise is normal condition.

A CAUTION

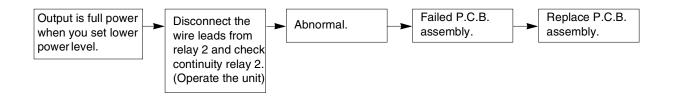
To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

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



NOTE: • Make sure the wire leads correct position.

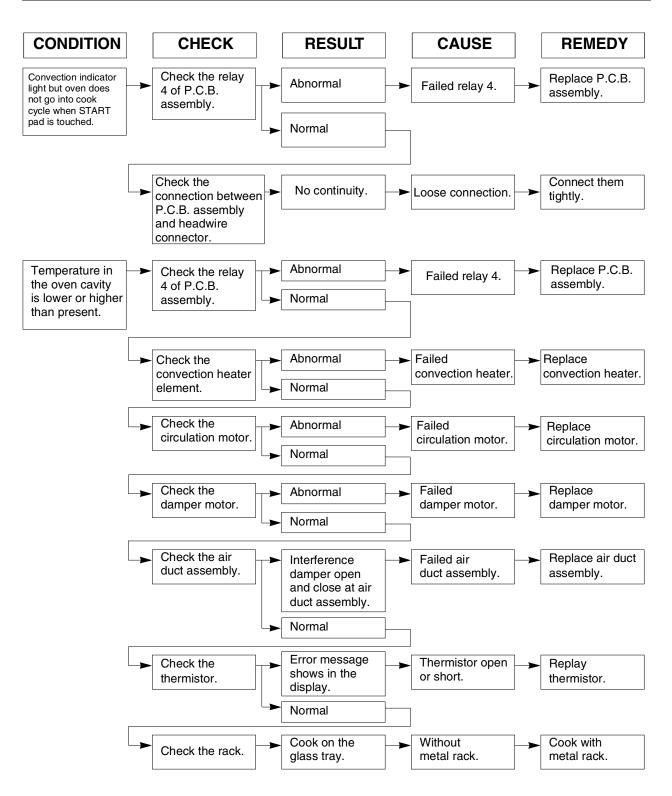
- When removing the wire leads from the parts, be sure to grasp the connector, not the wires.
- When removing the magnetron, be sure to install the magnetron gasket in the correct position and in good condition.



CAUTION

To avoid electrical shock, personal injury, or death, disconnect power to unit before servicing, unless testing requires power.

(TROUBLE 6) Convection oven does not operate at all or convection cook is bad.



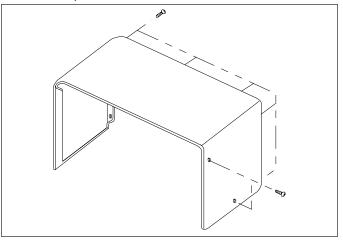


WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before following any disassembly procedures.

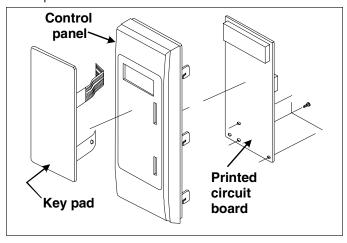
Outer Case Removal

- 1. Remove screws securing outer case to chassis.
- 2. Push outer case approximately 1 inch to the back of the unit, which will free case from front plate.
- 3. Lift outer case from chassis.
- 4. Reverse procedures to reinstall.



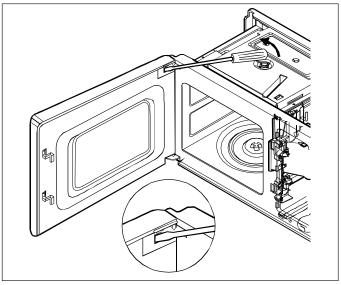
Control Panel Assembly and Printed Circuit Board Removal

- 1. Remove outer case, see "Outer Case Removal" procedure.
- 2. Disconnect wire leads from printed circuit board.
- 3. Remove screw securing ground wire to membrane key pad.
- 4. Remove screws securing front control panel to chassis.
- 5. Slide control panel upward to release plastic tabs.
- 6. Remove screws securing printed circuit board to control panel.
- 7. Replace and reassemble in reverse order.



Door Removal

- 1. Disconnect power to oven.
- 2. Open the oven door, remove choke cover cap, and slowly raise the door evenly. This disengages the pins located at the top and bottom.



NOTE: When aligning the door for assembly, the door must be opened as much as possible.

- 3. To place door back on unit, place bottom pin into slot first and then align the top pin. Once pins are aligned push door downward to lock into place.
- 4. Replace choke cover cap to complete assembly.

NOTE: After replacing door, verify monitor, primary, and secondary switches are operating properly.

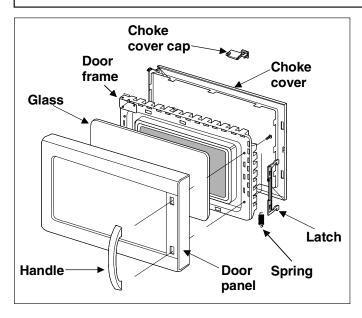
NOTE: Perform radiation leakage test to verify door is securely seated.

Door Disassembly

- 1. Remove door, see "Door Removal" procedure.
- 2. Pry chock cover off door frame assembly.
- 3. Remove and replace damaged piece.
- 4. Reassembly in reverse order.
- 5. Perform microwave leakage test.



To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before following any disassembly procedures.



Lamp Socket Removal

- Remove outer case, see "Outer Case Removal" procedure.
- 2. Remove wire leads from lamp socket terminals.
- 3. Remove screw securing lamp socket to air duct assembly.
- 4. Replace and reassemble in reverse order.

Magnetron Removal

- Remove outer case, see "Outer Case Removal" procedure.
- 2. Disconnect wire leads from the magnetron.
- 3. Remove screw securing air duct to magnetron.
- 4. Remove screws securing magnetron to wave guide.
- 5. Replace and reassemble in reverse order.

NOTE: When removing magnetron, verify dome does not hit any adjacent parts or damage may occur.

NOTE: When replacing magnetron, verify magnetron gasket is positioned correctly and in good condition.

Cooling Fan Removal

- Remove outer case, see "Outer Case Removal" procedure.
- 2. Remove screws securing fan guide assembly to back cover.
- 3. Slide fan guide assembly out to gain access to fan motor.
- 4. Disconnect wire leads from cooling fan.
- 5. Remove screws securing fan motor to fan guide assembly.
- 6. Replace and reassemble in reverse order.

High Voltage Capacitor and Diode Removal



WARNING

To avoid risk of electrical shock, personal injury or death; discharge capacitor before removing.

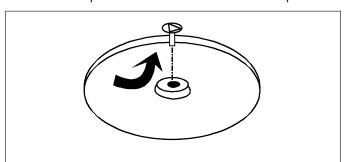
- 1. Remove cooling fan, see "Cooling Fan Removal" procedure, steps 1 through 3.
- 2. Disconnect wire leads from capacitor, transformer, and magnetron.
- 3. Remove screws securing capacitor bracket and diode to fan guide assembly.
- 4. Replace and reassemble in reverse order.

High Voltage Transformer Removal

- Remove outer case, see "Outer Case Removal" procedure.
- 2. Disconnect wire leads from capacitor, transformer, and magnetron.
- 3. Remove screws securing transformer to base pan.
- 4. Lift transformer out from chassis area.
- 5. Replace and reassemble in reverse order.

Turntable Motor Removal

- 1. Remove rack, turntable, rotating ring, and turntable shaft from inside oven cavity.
- 2. Lay unit on its back to gain access to motor.
- 3. Remove turntable motor cover from base pan, by cutting metal connection securing cover.
- 4. Disconnect wire leads from turntable motor.
- 5. Remove screws securing motor to oven cavity assembly.
- 6. Remove turntable motor.
- 7. After repairing/replacing motor, rotate cover to fit metal tabs into slots provided.
- 8. Use screw provided to secure cover to base pan.





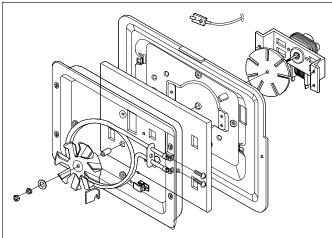
WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before following any disassembly procedures.

Convection Motor Removal

- Remove screws securing back cover and pull the top of back cover downward sliding metal tab on right side from oven cavity.
- 2. Disconnect wire leads from convection motor.
- 3. Remove nuts securing heater box to oven cavity.
- 4. Slide heater box upward to release metal tabs from oven cavity.
- 5. Remove hex nut, lock washer, and flat washer securing outer convection fan blade to convection motor shaft.
- 6. Remove metal spacer sleeve.
- 7. Remove screws securing convection motor bracket to heater box.
- 8. Slide inner convection fan blade off convection motor shaft
- 9. Remove hex nuts securing convection motor to bracket.
- 10. Replace and reassemble in reverse order.

NOTE: Make sure to tighten hex nut securely on outer fan blade when reassembling.



Heater Element Removal

- 1. See "Convection Motor Removal", perform steps 1 through 5.
- 2. Remove screws at and next to terminals securing wires and element to heater box.
- 3. Release metal clip securing element to heater box.
- 4. Remove element from heater box.
- 5. Replace and reassemble in reverse order.

Thermistor Removal

- Disconnect wire terminal plug from circuit board and release all wire clips securing wires back to the thermistor.
- 2. Loosen screw securing thermistor to heater box.
- 3. Pull thermistor out to remove.
- 4. Replace and reassemble in reverse order.

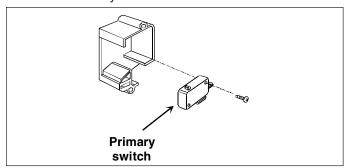
Sensor Removal

- Remove outer case, see "Outer Case Removal" procedure.
- 2. Disconnect wire terminal plug from circuit board.
- 3. Remove screw securing sensor to air tunnel.
- 4. Replace and reassemble in reverse order.

Primary Interlock Switch Removal

- 1. Remove outer case, see "Outer Case Removal".
- 2. Open oven door to release stress on interlock assembly.
- 3. Remove wire terminals from primary interlock switch.
- 4. Remove screws securing primary interlock switch bracket.
- 5. Slide bracket upward to release.
- Remove screw securing primary interlock switch to bracket.
- 7. Replace and reassemble in reverse order.
- 8. Perform adjustment procedure.

NOTE: When line fuse blows, replace monitor, primary, secondary interlock switches.



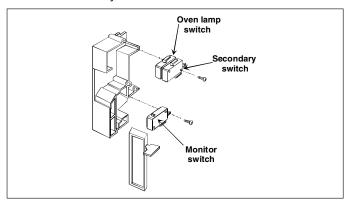


To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before following any disassembly procedures.

Secondary Interlock, Monitor, and Oven Lamp Switch Removal

- 1. Remove outer case, see "Outer Case Removal."
- 2. Open oven door to release stress on interlock assembly.
- 3. Remove wire terminals from secondary interlock, monitor, oven lamp switch.
- 4. Remove screws securing secondary interlock, monitor, oven lamp switch bracket.
- 5. Slide bracket upward to release.
- 6. Remove screw securing switch being removed to bracket.
- 7. Replace and reassemble in reverse order.
- 8. Perform adjustment procedure.

NOTE: When line fuse blows, replace monitor, primary, secondary interlock switches.



Adjustment Procedure for Interlock Switches



To avoid possible exposure to microwave energy leakage, the following adjustment of interlock switches should be performed only by an authorized service technician.



Microwave leakage test must always be performed when unit is serviced, for any reason.

- 1. Loosen screws securing primary interlock bracket to oven cavity front flange.
- 2. With oven door closed, adjust the bracket for a tight
- 3. Tighten screws securing primary interlock bracket.
- Loosen screws securing secondary interlock, monitor, oven lamp bracket to oven cavity front flange.
- With oven door closed, adjust the bracket for a tight fit.
- 6. Tighten screws securing primary interlock bracket.

NOTE: Maximum amount of play allowed in the door, when closed is 0.02 inches.

NOTE: After adjustment, perform the following test, which should be performed by an authorized service technician.

- Maximum amount of play allowed in the door, when closed is 0.02 inches when latched. First verify primary interlock bracket, by pushing and pulling the upper portion of the door. Then verify secondary interlock, monitor, oven lamp bracket, by pushing and pulling the lower portion of the door. Results should be less than 0.02 inches of play.
- Verify door latch closes the monitor and oven light switches after the primary interlock switch is opened. This test is performed by opening the door very slowly.
- 3. Reinstall outer case and check for microwave leakage.

⚠ WARNING

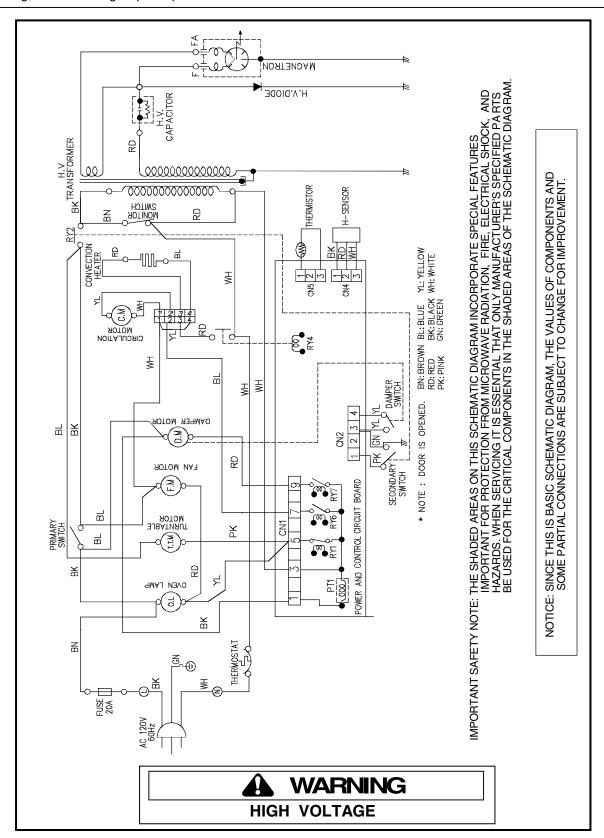
To avoid risk of electrical shock, personal injury or death; disconnect power to oven and discharge capacitor before following any disassembly procedures.

Noise Filter Removal

- 1. Remove outer case, see "Outer Case Removal" procedure.
- 2. Disconnect wire leads from noise filter.
- 3. Remove screws securing noise filter to chassis.
- 4. Replace and reassemble in reverse order.

Wiring Diagram and Schematic

A CAUTION

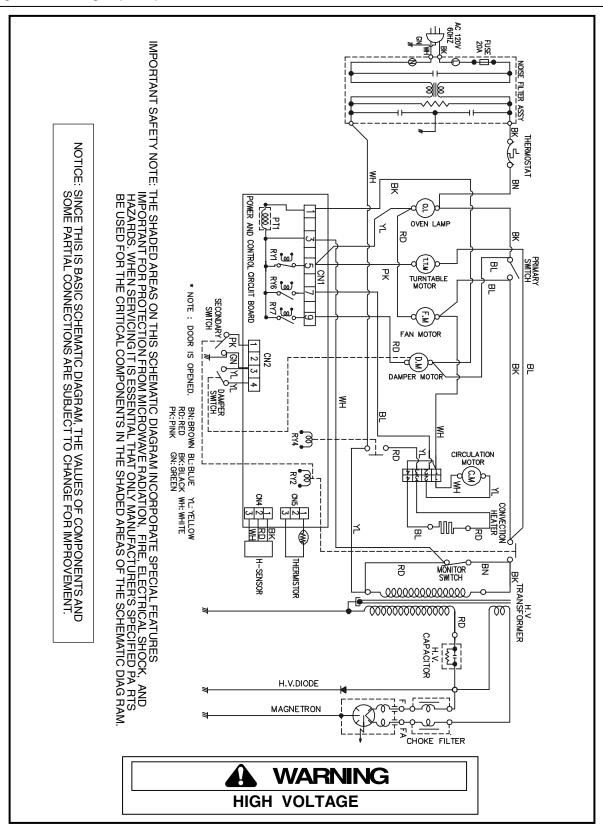


Schematic Diagram, Series 10

Wiring Diagram and Schematic

A

WARNING



Schematic Diagram, Series 11

Appendix A

Installation

Unpacking Oven

- Inspect oven for damage such as dents in door or inside oven cavity.
- Report any dents or breakage to source of purchase immediately.
 Do not attempt to use oven if damaged.
- Remove all materials from oven interior.
- If oven has been stored in extremely cold area, wait a few hours before connecting power.

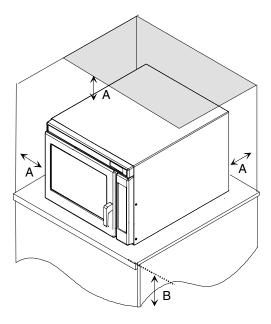
Radio Interference

Microwave operation may cause interference to radio, television, or a similar oven. Reduce or eliminate interference by doing the following:

- Clean door and sealing surfaces of oven according to instructions in *Care and Cleaning* section.
- Place radio, television, etc. as far as possible from oven.
- Use a properly installed antenna on radio, television, etc. to obtain stronger signal reception.

Oven Placement

- Do not install oven next to or above source of heat, such as pizza oven or deep fat fryer. This could cause microwave oven to operate improperly and could shorten life of electrical parts.
- Do not block or obstruct oven filter. Allow access for cleaning.
- Install oven on level countertop surface.
- Outlet should be located so that plug is accessible when oven is in place.





WARNING

To avoid risk of electrical shock or death, this oven must be grounded and plug must not be altered.





Grounding InstructionsOven MUST be grounded.

Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs. This oven is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

Consult a qualified electrician or servicer if grounding instructions are not completely understood, or if doubt exists as to whether the oven is properly grounded.

Do not use an extension cord.

If the product power cord is too short, have a qualified electrician install a three-slot receptacle. This oven should be plugged into a separate 60 hertz circuit with the electrical rating as shown in specifications table. When the combination oven is on a circuit with other equipment, an increase in cooking times may be required and fuses can be blown.

Display and Features



12-hour clock and timer

Oven is equipped with a 12-hour clock and a timer that can be set up to 99 minutes and 99 seconds.

To set clock:

- 1. Touch CANCEL/STOP pad.
- 2. Touch CLOCK pad.
 - ENTER TIME OF DAY scrolls through display.
- 3. Enter desired time by using digit touchpads.
 - TOUCH START scrolls through display.
- 4. Touch START/PAUSE.

To set timer:

- 1. Touch CANCEL/STOP pad.
- 2. Touch TIMER pad.
 - ENTER TIME IN MIN AND SEC. scrolls through display.
- 3. Enter desired time by using digit touchpads.
 - TOUCH TIMER scrolls through display.
- 4. Touch TIMER.
 - To cancel timer at any time, press TIMER pad.



User Option

This oven is designed for individual

preference such as language and volume control To change an option, Press the CONTROL SET UP pad and the pad for the option you want to change.

Function	Pad	Option
Volume	1	Mute, low, medium, loud
Clock	2	On or off
Scroll Speed	3	Slow, normal or fast
Units	4	Lbs. and °F or Kg °C
Demo	5	On or off
Language	6	English or Spanish



Child Lock

This is a unique feature that prevents accidental programming by children or when cleaning the oven control. To set the child lock, press and hold the 0 pad until **LOCKED** appears in the display and tones are heard. During Child Lock mode, **LOCKED** displays when a touchpad is pressed. To cancel child lock, touch and hold 0 until **LOCKED** disappears from display. After child lock is turned off, the time of day displays and cooking functions return to normal.



EASY COOK

Electronic oven control is equipped with this time saving feature. Press the Easy Cook pad for each minute of microwave cooking time desired. At the end of the cooking cycle, tones will sound.

To use Easy Cook:

- 1. Touch CANCEL/STOP pad.
- 2. Touch EASY COOK pad for each minute of microwave time desired.
- 3. At the end of the cooking cycle, oven stops and tones sound.



HELP

HELP displays feature information and helpful hints. To use the HELP feature, simply press the HELP pad, and then the feature pad you would like information about.

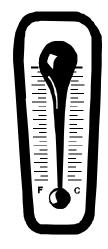
Display and Features (cont'd)



The reminder feature may be used as an alarm clock without starting the oven. The reminder time can be set to activate up to 12 hours later.

To program a reminder:

- Press CANCEL/STOP pad.
- 2. Press REMINDER pad.
 - ENTER REMIND TIME scrolls through display.
- 3. Enter desired time using the digit touchpads.
 - TOUCH REMINDER scrolls through display.
- 4. Touch REMINDER pad.
 - REMINDER SET scrolls through display once.
 - To cancel reminder program press REMINDER followed by the CANCEL/STOP pad.





WARM/HOLD

This feature safely keeps cooked food warm in your oven for up to 99 minutes using microwave energy. You can use WARM/HOLD by itself or to automatically follow a timed cooking cycle. Do not use more than one complete WARM/HOLD cycle on food.

To use WARM/HOLD:

- 1. Put hot cooked food in the oven and close the door.
 - · Food that is covered during cooking should be covered during WARM/HOLD.
 - Pastry items (pies, turnovers, etc.) should be uncovered during WARM/HOLD.
 - Complete meals kept warm on a dinner plate should be covered during WARM/HOLD.
- 2. Press CANCEL/STOP pad.
- 3. Press WARM/HOLD pad.
 - TOUCH START scrolls through display.
- 4. Press START/PAUSE pad.
 - WARM displays.
 - To cancel WARM/HOLD open oven door at any time or press the STOP/ CANCEL pad.

To use WARM/HOLD after another cooking cycle.

- 1. After entering the timed cooking cycle instruction, press WARM/HOLD before touching START/PAUSE pad.
- 2. When the last cooking cycle is over, tones sound and WARM displays. Oven will continue to run.

MORE



LESS MORE and LESS

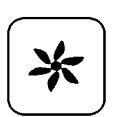
The MORE and LESS functions of this oven adjusts the cooking cycle's cook time. MORE adds 10 seconds to the cook time, LESS subtracts 10 seconds.

- MORE and LESS do not adjust cook time for the DEFROST and WARM/HOLD cooking cycles.
- Press MORE or LESS pads during active cooking cycle.
- For convection cooking, MORE or LESS are used as temperature selection pads. 16026267

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Cooking Methods







Microwave Cooking

Microwave cooking uses high frequency energy waves to heat the food. When cooking, microwave energy causes food molecules to move rapidly. This rapid movement between the food molecules creates heat, which cooks the food. Microwaves cook moist food and foods of varying fat content more quickly.

Convection Cooking

Convection cooking utilizes both a convection element and fan to evenly distribute heated air throughout the oven cavity. By circulating air, no hot or cold spots occur, creating a consistent temperature envelope around the food. These consistent temperatures cook food evenly and reduces cooking time. Oven will always operate in convection mode.

Combination Cooking

The combination mode uses both the speed of **microwave energy** and browning of **convection** cooking to yield fast, high quality food.

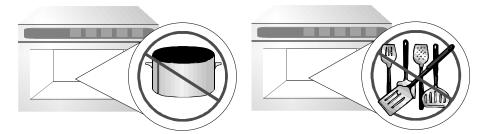
- Microwave cooking uses high frequency energy waves to heat the food.
 When cooking, microwave energy causes food molecules to move rapidly. This rapid movement between the food molecules creates heat, which cooks the food.
- Convection cooking uses the selected oven temperature to bake and brown foods. The circulating air surrounds food in an envelope of evenly heated air.

	Microwave	Convection	Combination
Heat source	Microwave energy.	Heated air, circulated in oven cavity.	Microwave energy and circulated heated air.
Heat Conduction	Heat produced within food by energy penetration	Heat conducted from outside of food to inside.	Food heats both through conduction from outside and within from energy.
Primary Benefit	Fast, high efficiency heating.	Browns foods and seals in flavors.	Shortened heating time from microwave energy, browning and crisping from convection.

What Should You Consider in Cookware?

Cooking method used determines the cookware that can be used. To simplify choices, use cookware that is approved for all three cooking methods: microwave, convection and combination.

Select	Avoid
Heat resistant glass	Non-heat resistant glass
Ceramics or china	Metal trimmed ceramics or china
Pyrex	Metal cookware
Heat resistant Teflon utensils, such as spatulas.	Metal cooking utensils.
Microwave cookware that is safe to 450•F	Paper products, straw, wicker and wood.
. Handles that are secure.	Cookware with loose or broken handles.



Do not use metal utensils or pots in the oven.

Cooking hints for your oven

Covering	A cover will trap heat and steam, causing food to heat more quickly. Always use a lid approved for both convection and microwave cooking.
Stirring	Redistributes heat in foods. Always stir from the outside toward the center of the dish.
Piercing	Pierce the shell, skin or membrane of foods before heating to prevent bursting.
Turning	Large foods should be turned so that the top and bottom heat evenly.
Arrangement	Do not stack food. Arrange in a single layer on a dish safe for combination heating
Standing Time	Foods often need to stand from 2 to 15 minutes after being removed from the oven. This finishes cooking. Normally an internal temperature will continue to rise approximately 5 to 10°F during standing time.
Spacing	Arrange individual foods, such as potatoes, in a circle and at least 1 inch apart. This helps food heat more evenly.

Microwave Cooking



Recall

This feature enables you to repeat the

previous cooking cycle without having to reprogram the oven. To use simply press CANCEL/STOP and then RECALL.

Manual Programming

To program the amount of time, power level, or temperature setting for a pad:

- 1. Press PROGRAM
 - ENTER COOKING TIME scrolls through display.
- 2. Enter desired cooking time using digit touchpads.
 - TOUCH START OR POWER scrolls through display.
- Press POWER LEVEL pad to change power level, if desired.
 - For a lower microwave power, press pads 1 (for 10%) through 9 (for 90%). 0 turns off microwave power completely.
- 4. Press START/PAUSE pad.
- 5. At end of cooking cycle, tones sound and oven will stop.









What is stage cooking?

Stage cooking enables different cooking cycles, or stages, to be used consecutively without repeated input from the user. Stage cooking can be set to to defrost food initially, then cook it, and then keep the food warm until serving time.

Example of Stage Cooking Conditions

	Stage 1	Stage 2
Power	H (high)	3
Time	2:30	1:30



Stage Cooking

Stage cooking allows consecutive cooking cycles without interruption. Two different cooking cycles can be used..

To use stage cooking:

- 1. Press PROGRAM
 - ENTER COOKING TIME scrolls through display.
- 2. Enter desired cooking time using digit touchpads.
 - TOUCH START OR POWER scrolls through display.
- 3. Press POWER LEVEL
 - ENTER POWER LEVEL 1 10 scrolls through display.
- 4. Press digit touchpad to adjust microwave energy.
 - For a lower microwave power, press pads 1 (for 10%) through 9 (for 90%). 0 turns off the microwave power completely.
- 5. Touch PROGRAM.
 - ENTER COOKING TIME scrolls through display.
- 6. Enter desired cooking time using digit touchpads.
 - TOUCH START OR POWER scrolls through display.
- 7. Press POWER LEVEL
 - ENTER POWER LEVEL 1 10 scrolls through display.
- 8. Press digit touchpad to adjust microwave energy for second stage.
 - For a lower microwave power, press pads 1 (for 10%) through 9 (for 90%). 0 turns off the microwave power completely.
- 9. Press START pad.











Microwave Cooking (cont'd)

Auto Defrost

Four different preset defrost settings are available depending on food being defrosted. For added convenience, a built-in tone reminds you to check, turn over, separate or rearrange food during the defrost cycle.

- Press CANCEL/STOP
- 2. Press DEFROST AUTO/TIME once.
 - MEAT TOUCH 1 POULTRY TOUCH 2 FISH TOUCH 3
 BREAD TOUCH 4 scrolls through display.
- 3. Press appropriate digit pad.
 - ENTER WEIGHT scrolls through display.
- 4. Enter weight using digit touchpads.
 - Weight ranges for meat, poultry and fish are 0.1 to 6.0 lbs.
 - Weight range for bread is 0.1 to 1.0 lbs.
- 5. Press START/PAUSE pad.







This pad will start the function you set, or pause the oven temporarily during cooking or defrosting. Press again to restart oven from a pause.

Time Defrost

Defrost for a desired length of time.

- 1. Press CANCEL/STOP
- 2. Press DEFROST AUTO/TIME twice.
 - ENTER DEFROST TIME scrolls through display.
- 3. Press appropriate digit touchpads.
 - **TOUCH START** scrolls through display.
- 4. Press START/PAUSE pad.
- 5. At the end of the defrost time, tones sound and oven stops.







CANCEL
This pad cancels a currently running program and erases a cooking cycle being programmed.

Rapid Defrost

Preset to defrost one pound of frozen food..

- 1. Press CANCEL/STOP
- 2. Press RAPID DEFROST.
 - MEAT TOUCH 1 POULTRY TOUCH 2 FISH TOUCH 3 scrolls through display.
- 3. Press appropriate digit touchpads.
 - TOUCH START scrolls through display.
- 4. Press START/PAUSE pad.
- 5. At the end of the defrost time, tones sound and oven stops.





Convection Cooking





CAUTION

To avoid risk of burns, handle utensils, racks, and door with care. Allow oven, utensils, and racks to cool before cleaning. Oven, utensils, and racks, become hot during operation.

> To operate the oven for convection cooking only, you can use auto pads or manual time entry. The following instructions are for convection cooking only. For combination cooking, see that section.

CAUTION

To avoid risk of personal injury or property damage, do not use oven without turntable in place.

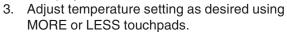
CAUTION

To avoid risk of personal injury or property damage, do not cover turntable or rack with aluminum foil.

Manual Programming with Preheat

To program the amount of time and heat for a cooking cycle allowing the oven to preheat.:

- 1. Press CANCEL/STOP
- 2. Press COOK pad under *Convection*.
 - 350F TOUCH MORE OR LESS FOR TEMP SET OR START OR ENTER COOKING TIME scrolls through display.



- Temperature range is 225°F to 450°F
- 4. Press START/PAUSE pad.
 - **PREHEAT** displays with selected temperature.
 - PLACE FOOD ON RACK displays when oven is preheated.
- 5. Open door, place food on convection rack, and close door.
 - ENTER COOKING TIME scrolls through display.
- 6. Enter desired cooking time using digit touchpads.
 - TOUCH START scrolls through display.
- 7. Touch START/PAUSE.
 - At the end of cooking time, tones sound and END displays.



CANCEL

STOP

COOK

LESS

MORE

Manual Programming without Preheat

To program the amount of time and heat for a direct cooking cycle:

- 1. Press CANCEL/STOP
- 2. Press COOK pad under Convection.
 - 350F TOUCH MORE OR LESS FOR TEMP SET OR START OR ENTER COOKING TIME scrolls through display.
- Adjust temperature setting as desired using MORE or LESS touchpads.
 - Temperature range is 225°F to 450°F
- 4. Enter desired cooking time using digit touchpads.
 - TOUCH START scrolls through display.
- 5. Touch START/PAUSE.
 - · At the end of cooking time, tones sound and **END** displays.







CAUTION

To avoid risk of property damage, do not use lightweight plastic containers, plastic wraps or paper products during a convection cooking cycle.

Care and Cleaning

Clean oven frequently to maximize oven life, performance, and efficiency. A dirty oven cooks inefficiently because moisture, spills, and grease absorb convection and microwave energy.



WARNING

To avoid electrical shock which can cause severe personal injury or death, unplug power cord or open circuit breaker to oven before cleaning oven.





CAUTION

To prevent burns, handle utensils, racks, and door with care. Allow oven, utensils, racks to cool before cleaning. Oven, utensils, and racks, become hot during operation.



Recommended Cleaning Schedule

- Schedule daily cleaning and clean after use.
- Clean interior, exterior, and door according to instructions.
- Clean spills immediately.
- Remove oven racks, and clean according to instructions.
- · Wipe dry after cleaning.

Cleaning Oven Exterior

Clean the door and other exterior surfaces with a clean cloth, sponge or nylon pad using a mild detergent and warm water solution. Wring cloth well to remove excess water before wiping oven.

- Do not use harsh or abrasive cleaners or cleaners containing ammonia.
- Do not use water pressure type cleaning systems.

Cleaning Oven Cavity

Wipe the oven inside with a soft cloth and a mild detergent solution. Rinse and wipe dry. Never use cleaning powders, abrasives or other rough pads.

Excessive oil splatters on the inside top will be difficult to remove if left to sit. Wipe splatters with a wet paper towel as soon as they occur.

NOTE: A plastic putty knife or equivalent may be used to remove baked on debris.

- Wear protective rubber gloves when cleaning oven.
- Use only a plastic putty knife, nylon scouring pad or equivalent, to aid in removing soil or build-up from the oven interior.
- Do not use knife, metal utensil, or steel wool pad to remove baked on material. This will damage the teflon coating.

Cleaning Oven Door

For best performance and safety, the inner door panel and the oven front frame should be free of food or grease build-up. Wipe often with a mild detergent and then rinse. Wipe dry with a soft cloth. Do NOT use cleaning powders, abrasives or other rough pads.

After cleaning the control panel, touch CANCEL/STOP pad to clear any entries that might have been accidentally made while cleaning. To avoid this problem, child lock may be set prior to cleaning.

Oven Turntable

The turntable and rotating ring are removable. They should be handwashed in warm (not hot) water and a mild detergent. Dry thoroughly with a soft cloth. DO NOT use cleaning powders, abrasives, steel wool, or other rough pads. DO NOT put in an automatic dishwasher.

- Turntable may be cleaned at the sink. Be careful not to chip or scratch the edges as this could cause the turntable to break during use.
- Rotating ring must be cleaned regularly.